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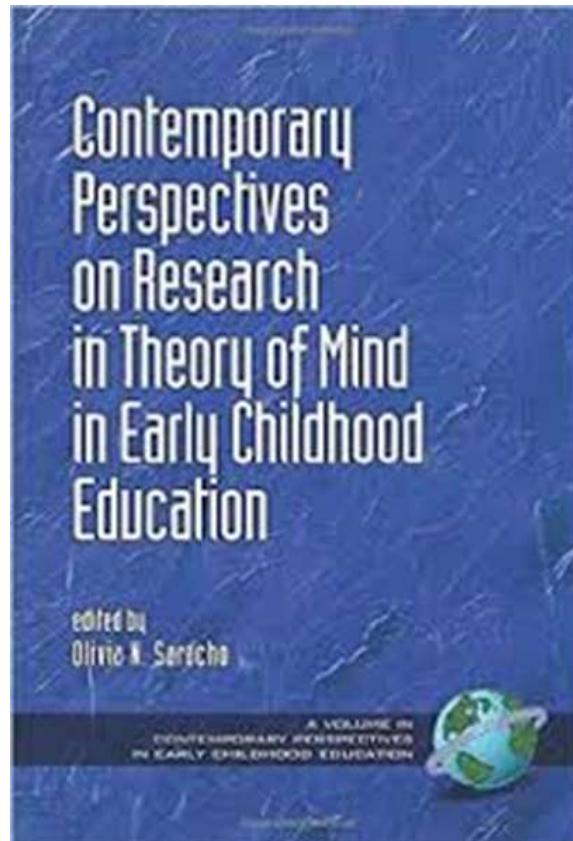
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I selected *Contemporary Perspectives on Research in Theory of Mind in Early Childhood Education* to review because I worked as a School Psychologist for several years and my role involved consulting with teachers, evaluating students, and developing and implementing interventions in preschool classrooms. Now, I teach courses related to human development to undergraduates and I draw on my experiences as a school psychologist. Thus, I was interested in reviewing the research on the educational connections to, and implications of, theory of mind development specific to early childhood populations to enhance student learning.

Theory of mind is a complex construct numerous definitions with variations in scope and content. Some examples from this text include:

Theory of mind (ToM) comprises one's understanding that mental states such as desires, beliefs, knowledge, intentions, and emotions underlie actions (p. 45).

According to Wimmer and Perner (1983), the great skill that children



acquire in theory of mind is the representation of another person's wrong belief in relation to their own knowledge of what is true in the world (p. 122).

A theory of mind is the ability to attribute internal or mental states such as desires, emotions, and cognitive states (e.g., ‘think’ “believe”) to oneself and others (Premack & Woodruff, 1978, p. 291).

The central focus of theory of mind research is on the individual’s understanding of intentional behavior and use of that understanding in explaining his/her own and others’ actions (p. 343).

Theory of mind is the ability to consider the contents of one’s own and others’ minds (Baron-Cohen, 2000, p.409).

As it relates to various dimensions of mental states—feeling, thinking and behaving—theory of mind has implications for assessment, education, and various social and cultural perspectives and interactions. Taking on this complicated task of defining and identifying this multi-faceted concept, the purpose of *Contemporary Perspectives on Research in Theory of Mind in Early Childhood Education* is “to share a collection of research strands on theory of mind research” (p.4). The book is broken down into seven sections (called parts), with Part I serving as an introduction and Part II containing three chapters focused on foundational elements of theory of mind. The first chapter is a discussion of several terms related to the topic. The second chapter provides an overview of research on theory of mind (ToM) related to infants and proposes that the conclusions of each study may demonstrate that infants are skilled predictors of actions, rather than having innate understanding of mental states. In addition, the second chapter also examines social

factors influential in the development of ToM. The final chapter of Part II highlights children’s understanding of their learning process and persuasion.

Part III includes four chapters related to assessment. The first chapter provides a variety of direct and indirect methods of assessing aspects of ToM. Through the discussion of the research on various assessments, it is brought to light that ToM is not a singular construct, but rather a “series of skills that are acquired gradually and that develop and improve throughout a child’s school life” (p. 95). In the second chapter, the authors explain three specific areas of ToM, including false-belief understanding, the role of language, and perspective-taking. The third chapter expands on elicited-response versus spontaneous-response in false-belief tasks and includes some research on primates, as well as some information learned from neuroimaging. The final chapter of Part III explores research on our understanding of signs, photographs and false-beliefs.

Part IV includes two chapters related to mental processes. In the first chapter, the authors explain neurocognitive research on ToM in adults and behavioral research related to infancy through age 7 proposing neural correlates to complex cognitive processes and ToM. The second chapter describes the role of introspective abilities in the development of ToM. The authors explain the developmental changes children demonstrate in relation to their ability to describe their own thought processes and the strategies they are using when solving problems.

Part V includes four chapters related to emotions, relationships, and education. The authors of the first chapter account developmental changes in ToM between the ages of 3 and 10 related to emotional understanding, emotional regulation, relationships and social competence as predictors of success in school. The second chapter in this section presents how children understand the learning and teaching process and the research related to learning and

teaching differences in children with Autism Spectrum Disorders (ASD). The third chapter delves into maternal influences on the development of ToM and the links between ToM and academic success. Finally, the fourth chapter discusses ToM as it relates to teaching, tutoring, and emotions.

Part VI included three chapters related to cultural and social elements. The first chapter details how socialization efforts differ from one culture to another and how these differences influence differences in the development of ToM in children. The second chapter takes an ecological-systemic view and proposes several variables related to family as influential on ToM. Variables are broken into systemic levels based on Bronfenbrenner's (2005) ecological framework. The final chapter in this section describes how our assumptions may be inaccurate if we evaluate Japanese children in the same way we evaluate children in the US, proposing that the unique cultural and linguistic framework that dictates social understanding in Japanese children might be referred to as *theory of relation*. Part VII is a one chapter conclusion entitled, "Theory of Mind: inferences and Future Research Directions" in which the authors make suggestions for future studies in this area.

The title *Contemporary Perspectives on Research in Theory of Mind in Early Childhood Education* was a little misleading. The book definitely contained a thorough overview of research on Theory of Mind (ToM) from a variety of different perspectives. I was, however, expecting more focus on early childhood education, as presented in the title. Specifically, the research bounced between various developmental stages including infants/toddlers, preschoolers, school-aged children, adolescents and even adults. With my background as a School Psychologist, I tend to differentiate between infants and toddlers (0-2) and early childhood populations; however, I would have embraced the inclusion of children 0-8 years in an early childhood education book. But the inclusion

of children beyond eight, adolescents, and adults seemed to be out of context. I think the inclusion of a much broader age range would have been more feasible if there was more cohesion across the chapters of the book and/or an explanation of the connection between groups was explicit. The chapters read like a series of well-written, and very detailed manuscripts, but not as one unified book. Possibly the research could have been presented as chapters related to each developmental stage with subsections for research in the various specializations presented (neuroscience, cognition, emotion/interaction, social/cultural, education, etc.), or if all similar content was grouped together (and referenced back to as needed in the subsequent chapters) it would have minimized the repetition, and apparent contradictions. Finally, an index at the end of the book would have been extremely advantageous.

As a researcher, I would use this book as a resource when evaluating the connection between the various topics presented and ToM. For example, my research relates to social competence, and while the connection between social competence and ToM was included, the information was presented across chapters rather than as a cohesive whole. Other examples of this are the discussion on maternal/parental influences, as well as the influence of siblings on ToM development (chapters 3, 13, and 16) and learning/ teaching related (chapters 4, 10, 11, 12, 13, and 14). While each of the authors are clearly knowledgeable and provided detailed research, the collaboration of similar content areas across chapters would have minimized repetition and increased clarity for the reader.

Similarly, since the authors of each chapter chose to include varied information on similar topics, reading the book as a cohesive whole presented some apparent contradictions. For example, in chapter three, the authors discussed literature on ToM in infants stating, "below we discuss the paradigmatic studies, arguing that the results do not provide clear evidence that infants

understand mental states and instead, can just as easily be interpreted as indicating that infants are skilled at predicting actions" (p.46). This statement seemed to indicate that this would be the stance of the authors throughout the text. However, in the subsequent chapters there were several references to the research related to infants, giving varying degrees of credence to the inferences made by the authors of study. For example, in chapter 6, the authors seem to begin in agreement with the statement on page 46, but then give credence to the research on infant ToM by stating "the shift from implicit to explicit lends credibility to the study of infants' understanding of the world of the mind" (p.117). Thus, this lacked consistency. Overall, research on ToM related to infant populations seems to be inconclusive, so the researchers should have limited the inclusion of this topic.

Another example of lack of agreement was presented in chapters 12 and 13. In chapter 12, the authors rely on the premise that "teaching, arguably, can only be intentional" (p.274) which is in alignment with what is presented by the authors of many of the other chapters. However, in chapter 13, the authors state that teaching is innate but then seem to go on to refute their own statement. If the two chapters were meant to express two opposing sides, the connection is not explicitly made by the authors of the latter chapter. If they are in agreement, then the beginning of the chapter presented as the opposite of what the authors are attempting to say is quite confusing.

Furthermore, having a background in statistics, I would have liked to know more about the research presented (sample sizes, procedure, how the data was gathered and analyzed, variables of influence potential not included in the analysis) than just the results. In fact, potential issues with the included studies due to methodological constraints (small sample size, potential confounding factors that could influence the results, etc.) are missing throughout the book. For

example, in the discussion on pg. 272-273, the authors describe a body of evidence that demonstrates that there is a developmental progression in the learning process that goes from learning based on desire (less mature) to learning based on intention and attending to pertinent information (more mature). Thus, attention seems to play a role in the differentiation between desire and intention in the learning process. However, chapter 13 highlights a study where the researchers surmise infants have an awareness of an adult who has knowledge of an action versus an adult who does not (Song, Baillargeon, & Fisher, 2005); although, when reading this actual study, the researchers report that 32% of a small sample were eliminated from the analysis due to attentional issues. This methodological issue with the study is not addressed by the authors of the chapter.

Finally, the various implications for education and advice to teachers sections could have included specific interventions or programs that could be used to enhance ToM, or detailed recommendations on *how* the authors suggest implementing the theoretical ideas. Most of the suggestions were general and theoretical in nature limiting the practical application.

There were also several favorable aspects of *Contemporary Perspectives on Research in Theory of Mind in Early Childhood Education*. First, as mentioned above, the amount of research related to ToM included is quite extensive. Thus, for someone with a foundational understanding of ToM who wants to expand their understanding in the area, this would be a great place to start. Secondly, the use of person-first language in many of the chapters was most impressive. According to the Department of Health and Human Services website, "People first language is used to speak appropriately and respectfully about an individual with a disability. People first language emphasizes the person first not the disability". . I teach this concept to my college students because I've worked with students with disabilities for

many years and understand the need for greater sensitivity in this area. . Thus, I was pleased that for most of the book, I saw the wording in the form person with disability, rather than disability person (e.g., children with Autism). It is unfortunate that this respectful wording is not used more in texts and videos, and I appreciated the efforts of this group of authors.

The explanation of ToM as a progression of skills was also a welcome topic presented in several chapters. Often ToM is minimized to what is measured by false-belief tasks. However, this book included ToM as a series of abilities developed over time. “Wellman and Lui (2004) found that the validated ToM task battery revealed a progression of conceptual achievements that mark social cognitive understanding in normally developing preschool children and also provided a method for measuring that development accurately and informatively” (p.98). This showed that children move through a progression from the earliest ability, Diverse Desires (DD) through a five step series to the most advanced ability, Hidden Emotion (HE). Many additional examples were also included. In chapter 10, the authors discussed the developmental progression of introspective abilities. Also, chapter 12 demonstrated the changes in intentionality as it relates to teaching in a developmental progression.

Next, the authors included a great deal of information related to children with various disabilities. There has been a consistent link between deficits in ToM development and children with Autism. Thus, the inclusion of various studies demonstrating this connection was certainly warranted. The authors provided an abundance of research in this area included in chapters 5, 7, 8, and 12. One question addressed by the authors is “Does the diminished capacity for mental-state understanding in children with ASD affect these children’s understanding of the processes of learning and teaching” (p. 280)? The authors also included research related to

the development of ToM in children with various other disabilities.

Another area of strength was the documentation of cultural differences. As mentioned above, there is a chapter dedicated the differences seen in Japanese children on ToM tasks due to cultural influences. Also, chapter 5 compares developmental sequences of US preschoolers, Chinese preschoolers, and deaf children. And in chapter 16, the authors present various sociocultural influences on ToM including attachment, parenting style, language about mental states, siblings, parental stress, scaffolding, decontextualization, social maturity, quality of nonparental care, parental interest in social development, academic stimulation, SES, educational level of parents, parents’ occupational level, family income, materials for stimulating learning, quality of physical contact, and bilingualism.

Additionally, the various authors make connections between language development and ToM. “Other important elements to consider in the assessment of ToM are language development, which is considered a fundamental vehicle in interactions with other people...” (p.93). In chapter 6, the authors describe children moving from understanding literal language to figurative language allowing them to then understand metaphors, irony, and white lies. Additionally, the authors express, “A significant body of work on the relation between theory of mind and language development has shown that during the preschool period, theory of mind understanding, as measured by false-belief tasks, is dependent upon language development” (p.125). This statement is followed by a variety of studies confirming this connection.

In conclusion, this book had several strong points including the breadth of research covering a large number of content areas which could be quite useful to educators interested in expanding their theory of mind knowledge base. Also, researchers interested in studying theory of mind could use this

resource as a review of the research completed in this area and gain direction for future studies. Some of the other strengths of the book were the inclusion of research related to children with disabilities, differences across cultures, and the connection between ToM development and language development. The main limitation is the lack of connection between the various chapters,

so without an index it is very tough to find all of the information in one specific content area. Also, increased methodological information on the included studies and specific recommendations for implementation of ideas in educational settings would have made the book more useful on a practical level.

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