Deena Skolnick Weisberg and David M. Sobel’s book is an outcome of their longitudinal research work with young children in both formal and informal learning spaces. As the authors mention in the book, many more questions and hypotheses have emerged from their research on the relation between causal reasoning and scientific thinking among the preschoolers in the US context. The authors employ multiple approaches, which are borrowed and extended from many experiments on causal reasoning and scientific thinking on children in the wider literature and at the same time grounded in psychological and philosophical understanding about causal reasoning and scientific thinking.

The book has three main parts and a concluding part. The first part includes four chapters that set up the larger context of the book with theoretical positions and conceptual understanding of analyzed categories (causal reasoning and scientific thinking) and the use of a causal graphic model framework to constitute causal reasoning, and it ends by tracing the reasons literature on causal reasoning and scientific thinking develops different trajectories. It describes experiments designed by the authors and at the same time reviews the gap in existing understanding of causal reasoning toward scientific thinking among young children. Part 2 has three chapters, which add more complexity to the study of understanding through empirical method by adding contextualization to the experiments, providing further evidence of the point the authors are trying to make through the book. These chapters use the research and analysis of the longitudinal study the authors conducted with selected school districts in United States. The third part of the book is a much more interesting and braver attempt, since it tries to analyze and articulate young children’s understanding about the abstract concepts (defining science) from their language and thought. The authors made enormous effort to examine the relation between causal reasoning and scientific thinking. In the concluding section, the authors reflect on the importance of experience and environment in developing scientific thinking among young children in both
formal and informal learning spaces, which they say will be the topic of their next book.

The study and the book miss engaging the question of the children’s social (background) environment, which plays a major role in shaping children’s thinking and developing scientific skills. The book also does not move beyond the conventional definition of science, which limits the authors’ analysis, but the first part of the book does make an attempt to question and raise concerns about these limitations, both in defining science as abstract and about the dominant psychologists’ narrative in limiting preschoolers to pre-causal thinking. If the authors had included multicultural and multiracial environments and groups of children in their study sample, it would have brought an interesting analysis and the results would have made a significant contribution to the literature pertaining to critical thinking among children. The authors point out in the concluding section that they plan to extend the study to try to understand the importance of environment in developing scientific thinking among young children.

The book would be a good read for all the stakeholders who engage with children; whether we are parents, teachers, teacher educators, or volunteers for children’s projects, it could enrich our understanding and push us to reflect on existing pedagogy and practices. It is also a critical book for students of education, and researchers whose interests lie in children’s science learning and teaching. I recommend the book, which provides a good review of literature on experiments and conceptual understanding of the relationship between children’s causal reasoning and scientific skill acquisition from a young age.

If there is additional discussion of this review, you may access it through the network, at https://networks.h-net.org/h-sci-med-tech

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