

# RACIAL INEQUALITY IN MATHEMATICS EDUCATION

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# RACIAL INEQUALITY IN MATHEMATICS EDUCATION

Exploring Academic Identity as a  
Sense of Belonging

BY

**THIERRY ELIN-SAINTINE**

*Stockton University, USA*



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INVESTOR IN PEOPLE

*This project is dedicated to my wife Rachel and my son Gabriel. This journey would never have made it past a dream, and bar stools banter without their unconditional love, support, patience, and Rachel's unyielding commitment to a more equitable tomorrow. I would be remiss if I did not take this opportunity to also thank Rachel for the countless feedback and always constructive criticism. Thank You. I love you.*

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### **Praise for *Racial Inequality in Mathematics Education***

“This book skillfully unpacks the complexities of race, academic identity, and learning in a Philadelphia high school classroom. Saintine asks: what does it mean to be a “math person” and why is this problematic myth so durable? As a mathematics professor with an impressive background in performing arts, creative writing, and urban education, Saintine rejects the dualistic and overly simplistic idea that the world can be parsed into math persons and nonmath people. This is a wonderful ethnography that elevates Black and Latinx students’ voices and reflections on themselves and their school. The book calls for a new social imaginary that begins with a reconceptualization of math education in urban schools.”

**Will J. Jordan**, Temple University, USA

“This text is a must-read for preservice and in-service teachers of mathematics to examine the ways in which mathematics education continues to limit opportunities for Black students. Myths about who is and who is not a math person are pervasive and continue to dissuade historically excluded students from persisting in mathematics as a discipline. Elin-Saintine presents the results of an ethnographic study that examines academic identity and sense of belonging among a group of Black high schools students in an honor’s precalculus class. The counterstories that emerge from this study challenge age-old assumptions and help teachers to understand the complex nature of mathematics learning in a race-based society. Most importantly, the text offers teaching strategies to foster the development of academic identity in Black students who, as a racial/ethnic group, have the brilliance to succeed in advanced mathematics courses.”

**Jacqueline Leonard**, PhD, University of Wyoming, USA

“This book is a very welcome addition to recent scholarship on race, identity, and mathematics education. Pushing back on stereotypes and commonsense ideas about who can do mathematics, this book makes explicit how concepts like ability and competence are not innate traits of a select few but are contested and negotiated opportunities that are

readily made available to some students and denied to others. This book – through the voices and experiences of young people – ask readers to think about who gets to be considered a legitimate doer of mathematics, under what circumstances, and with what material consequences. This intellectually honest case study will challenge teachers to rethink their roles in these negotiations. More broadly, this book will appeal to mathematics education researchers, graduate students, in-service and preservice teachers, school administrators, policy makers, and others who are interested in the realities of race in schools but who are also willing to engage in antiracist practice. For all who pick up this book, I urge three things: listen, hear, and act.”

**Danny Bernard Martin**, University of Illinois at Chicago

“Professor Elin-Saintine’s work demonstrates clearly how identity is central to the learning process. Further, he shows that ideas about race are not just attitudes that individuals have about other individuals, but that racism is built into the structure of our educational institutions and the culture of math education. And those attitudes flourish because they are disguised behind ideas of what it means to be good at math. As such, this work stands to advance our understanding of how to support students of mathematics from diverse backgrounds. Further, it will be a support for practitioners in the field seeking to better understand how to mentor their students.”

**Wesley Shumar**, Professor, Department of Communication,  
Affiliated Faculty, School of Education, Drexel University



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## SERIES EDITOR PREFACE

Thierry Saintine's book, *Racial inequality in mathematics education: Exploring academic identity as a sense of belonging*, is a second book to be published in the *Studies in Educational Ethnography* book series most recently focused on African American boys and their academic achievement in the science, technology, engineering, and mathematics (STEM) context of schooling and education in the United States. Saintine tackles age-old race-based narratives and myths about ability and ideologies about success in mathematics among Black students, while interrogating beliefs and notions about a racial pyramid of academic ability in general. His ethnographic study provides counterstories and narratives of academic identity and sense of belonging among a group of Black students that society most easily casts off and forgotten, despite their brilliance.

Saintine's work extends the new directions in educational ethnography in the 21st century and the purpose of this reconstituted book series and international and student advisory board development over the last 5 years to study classrooms and educational communities with a concomitant reading of broader structural forces, giving meaning to these complex neighborhood, community, and global contexts. His book contributes to larger conversations about the forces and systems that contribute to mathematics, STEM broadly, and inequities in American education.

The birth of the series in the mid-2000s by Prof. Geoffrey Walford (Oxford University) spearheaded ethnographic research, perspectives and methodologies featured that would extend our understandings of sociocultural educational phenomena and their global and local meanings. One important community of scholars of ethnography was through Ethnography and Education conferences initially held at St. Hilda's College. *Racial inequality in mathematics education: Exploring academic identity as a sense of belonging* is the third book in the new volume home within the College of Education, University of Illinois-Urbana Champaign. Located in the Quantitative and Qualitative Methodology, Measurement, and Evaluation (QUERIES), Department of Educational Psychology, the College of Education has been the academic home to multiple traditions of research and evaluation scholarship in humanities and social sciences for

decades and the International Congress of Qualitative Inquiry (ICQI) which hosts hundreds of scholars and practitioners who travel from around the world to the cornfields of Illinois.

Just as Walford utilized UK and European networks to expand the reach of the series, the volume here takes advantage of the special interest groups, divisions, and associations such as the Ethnography of Education Forum at the University of Pennsylvania, Council on Anthropology and Education/American Anthropological Association and the American Educational Research Association (AERA) and other associations in the US and North America.

Further details about the book series are available through the Emerald website or from the Series Editor.

Rodney Hopson  
*Series Editor*

## ABOUT THE AUTHOR

**Thierry Elin-Saintine** is an Assistant Professor of Mathematics at Stockton University, USA. He holds a PhD in Urban Education, concentration in mathematics education, from Temple University. Elin-Saintine's research interests revolve around the idea of academic learning as a social practice; he focuses on academic identity defined as a sense of belonging.

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## FOREWORD

This book is based on data collected for my dissertation during the 2015–16 academic year. At the time, a book seemed like a fantasy, a very distant and nearly unimaginable possibility. Receiving the 2017–18 Concha Delgado Gaitán’s Presidential Fellowship, and joining the Council on Anthropology and Education (CAE) community provided me the confidence, support – special thanks to Dr. Rodney Hopson – space, and clarity necessary to begin this project. The CAE community helped me realize that the stories of 11 Black and Brown teenagers from northeast Philadelphia seeking to make sense of their classrooms’ experiences in relationship to the mythical “math person” are part of the fight for more “anti-oppressive” educational experiences.

My path to the field of mathematics education is a bit unusual and unorthodox. I hold a PhD in Urban Education from Temple University, and a Master’s of Arts in mathematics education and a Master’s of Fine Arts in creative writing and literature from the City College of New York. Prior to my many years in graduate school, I was actively pursuing a career in theatre arts and film. My disparate professional experiences and mismatched credentials are not here to suggest or imply something “special” or “unique” about me. They’re here to explain *belonging*. Being an immigrant, Black, with an incongruous set of academic and work experiences developed in predominantly white institutions (PWIs), belonging has always been central and foundational to my self-concept and emerging identity as a researcher.

Belonging is now one of the guiding principles of how I think about and study inequity in education. Framing and exploring academic identity as belonging in this book was not much of a leap. It was out of necessity, a need to understand and toil with some of the muted truths about the American education experiment.

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I need to acknowledge another very special person in my life, my mother, Marie B. Bonhomette. Words can only betray the depth of my gratitude for the sacrifices, the love, and boundless caring. Still, I thank you for the human you have allowed and challenged me to become.

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Finally, I want to thank the Temple University's Urban Education and Teaching and Learning Departments. Special thanks to Dr. Will J. Jordan who has been integral to my academic development and emerging identity as a researcher. I am grateful for Drs. Maia Cucchiara, Carol Brandt, and Kristie Newton for the research assistantship opportunities that have undoubtedly provided me the skills and confidence needed to complete this project.

This would not be possible without the students and teaching staff who agreed to be part of this study. Thank you for your time and for making me a part of your community.