

**AN INVESTIGATION OF THREE GREEK  
MATHEMATICS TEACHERS' CONCEPTIONS  
OF THE ASSESSMENT OF PUPIL ATTAINMENT  
IN MATHEMATICS  
AND ITS SOCIO-POLITICAL DIMENSION**

**Submitted by Aristides Mouzakitis to the University of Exeter**

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## **ABSTRACT**

The present study is located within a broader problematic of how inequality is generated and legitimated within schools. It has as its centre of focus three Greek mathematics teachers who are seen as mediating forces between state curricular intentions and the learners. Having social justice as my primary motive for conducting this thesis research, I use the critical theoretic research paradigm as a guiding framework in order to investigate the teachers' conceptions of the socio-political dimension of the assessment of pupil attainment in mathematics. Through an analysis of the socio-political role of educational assessment I argue that the investigated issue may be considered as a privileged window that can provide a broad perspective from which I can observe how the participants of this study are positioned with respect to the role of mathematics education in the reproduction of unequal class relations.

To obtain answers to my assessment-related research questions, through a series of interviews I examine the teachers' theoretical positions but in addition to that I observe their classroom cultures in the formation of which they play a protagonistic role. Through the teachers' discourses and their annotated actions, I try to uncover the ways they respond to the contradictions and the dilemmas that might be posed to them by the given educational reality, as well as the tensions they might experience whenever they perceive the incompatibility of what they espouse and what they can achieve.

Moving beyond the cognitive and psychological approaches that characterise most of research literature on teacher beliefs into the realm of ideology critique, I use Fairclough's critical discourse analysis to depict teacher discourses as parts of social practices that are conditioned by social-historical factors and try to show what reproductive effects these discourses can have on social structures, sustaining them or contributing to their transformation.

## DEDICATION

To my mother

For her self-sacrificial devotion to my well being

To the memory of my father

From whom I inherited the musical talent, to whom I owe my confidence in my mathematics ability, and who laid the foundations for the growth of my democratic sensitivities and of a critical consciousness

To my wife Alexandra

Who encouraged me to undertake this research project and provided the indispensable emotional environment through our relationship without which it would have been impossible for me to be in a creative mood

To my beloved daughter Helen

Whom I deprived of my active presence in a time very crucial for her development

To all the people who have helped me and stood by me

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Four distinguished mathematics educators whose research interests were akin to the topic I was investigating kindly offered to provide a critical analysis of a pilot study that preceded the thesis research. Peter Gates gave particularly encomiastic comments that encouraged me to conduct my thesis research with confidence. Peter Appelbaum also gave encouraging laudatory remarks and provided extensive suggestions on how to conduct my research from a critical point of view. Paul Andrews provided crucial critical remarks of methodological nature that had decisive influence on the favourable outcome of this research project. Finally, Giorgos Philippou, who is knowledgeable of the Greek education system, was also very helpful in bringing up issues of methodological nature for me to consider. I thank them all and I am grateful for their kindly offered assistance. I would also like to thank Elias Daskalakis especially for his valuable insights in our discussions on the ideological part of my analysis and interpretations.

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