Chapter 3
Summary and Looking Ahead

After some four decades, the *Social and Political Dimensions of Mathematics Education* has become mainstreamed by its inclusion as a new Topic Study Group in ICME-13 for the first time. This topical survey demonstrates the diversity of scholarship and practice that has grown through five key areas that have been explored.

Summary of findings:

- Equitable access and participation in mathematics education, is achievable to a high a degree in some countries, such as Cuba and Finland. Ideology and theoretical perspectives shape to a great extent, the policies on equitable access and participation in mathematics education.
- It is evident that mathematics is increasing perceived as a negotiable field of social practices arising from specific needs and serving certain interests, which open or close possibilities for understanding and shaping our world.
- Extensive research on the lived experience in mathematics education has shed light on how and why students do and don't identify with mathematics. However, this research seems to re-entrench stereotypes about identities that excel at mathematics and also often falls into the trap of assuming a binary between structure and agency.
- What questions are researched, by whom, in what settings and for what purposes shapes and frames particular discourses, as they emerge, get taken up and become dominant or disappear. In this context the relations between activism, the material conditions of inequality and mathematics education has remained under-developed and under-represented.
- The nature of a society's economic structure influences not only public interactions, but also very localised social relations, including those in the classroom. The result of this is a marginalisation of learners from disadvantaged communities and specifically children in poor and working class households. Such learners suffer curriculum exclusion and an experience which places the

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responsibility for failure back upon the shoulders of the disadvantaged, rather than the affluent whose privilege everyone else pays for.

Looking ahead:

- Questions need to be asked about moving from definitions of quality of mathematics education in technical terms, independent of social context, to definitions of quality in terms of social practice that are embedded in socially constructed epistemological principles.
- Apart from gaining further insights on how mathematics educations contributes to reproducing social inequality, more research is needed on the political bias of central—and too often taken-for-granted—concepts and convictions of mathematics and mathematics education.
- Multiple, in depth case-studies are required that examine the policies, economic and material conditions, and the type of activism that are favorable to move toward more equitable access and participation in quality mathematics education.
- Most identity research draws on discourse studies of various kinds (language based). There is a great need for innovative different kinds of research methods (other than interview and survey) and different kinds of data (other than spoken or written responses) to really tap into the lived experience of mathematics students and teachers.
- Analysis of the influence of the economic superstructure upon mathematics achievement identified the extent to which income inequality affects fundamental principles of equity, social justice, and in turn achievement in mathematics. Therefore, a key strategy for those working in mathematics education concerned about levels of achievement has to be to work for a reduction in income inequality.

The crucial importance of this last area and its relevance in the current global context of rising inequality, unemployment (especially the youth) and increasing poverty may well require an acknowledgement through an explicit expansion of this Topic Study Group to a focus on the Social, Political *and Economic* Dimensions of Mathematics Education into the future.