

Preface to “A Socio-Political Look at Equity in the School Organization of Mathematics Education”

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Whenever we place our attention on the issue of equity in mathematics education, we are addressing a broad social, political, economic, and cultural problem that is related to how societies create and set in place mechanisms that differentiate, include, and exclude certain peoples from valued resources, either material or symbolic. My main point in this paper is to provide evidence that it is not possible to assume that “equity” is a matter that only and exclusively emerges and is reproduced inside mathematics classrooms. Since “problems of equity” in mathematics are a part of general problems of equity, inclusion, and exclusion in society at large (Pais and Valero 2011), I intend to focus on how the notions of ability/disability associated with the exclusion of certain children emerge in the practices and discourses inside the school organization. Of course, the school organization, again, is only one site in which mechanisms of inclusion and exclusion operate in society.

In the ZDM article there were two central arguments. The first had to do with a particular understanding of the term “mathematics education”. My proposal of thinking about mathematics education from a social and political perspective revolved around the notion of a *network of mathematics education practices*. Such a perspective highlights the idea that whatever counts as the meaning of “mathematics education” in a given historical time is a complex construction that involve many participants, practices, and discourses. I further elaborated on the notion of a network of mathematics education practices in Valero (2010). In this paper, I examined the idea that in the historical constitution of mathematics education research, there has been a different understanding of the practices of mathematics education. My proposal tried to open up a space so that the field of research embraces as legitimate objects of study the links and connections between micro-processes of teaching and learning and the rest of contextual or macro-processes, factors, and elements that contribute to the constitution of those practices. In the particular case of research with a concern for issues of equity, the view of a network of mathematics education

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practices would precisely provide a possibility of seeing equity in mathematics education as being strongly connected to larger processes of inclusion and exclusion in society.

My second argument in the ZDM article had to do with the illustration of the first argument through the examination of two concrete cases in Denmark and in South Africa. I would like to come back to one particular element that has bothered me from the time this paper was first published. It was the working definition that I provided for the term “power” and how it could be seen in relation to the cases examined. I wrote that in a view of power inspired by the work of Foucault, power could be viewed as “a relational capacity of social actors to position themselves in different situations, through the use of various resources. Power is not an intrinsic and permanent characteristic of social actors; rather, it is their capacity to participate by taking and defining the positions and conditions for engaging in social practice” (Valero 2007, p. 226). This formulation was not accurate and now needs further clarification. In discussions about how the notion of “power” has been used in the mathematics education research literature (Valero 2009), I have identified three main theoretical trends, namely: the liberal tradition that views power as an intrinsic capacity and characteristic of both mathematics and of those who learn mathematics successfully; a Marxist tradition that posits power also as a capacity but that depends on a structural imbalance of knowledge control; and a post-structural tradition that views power as a distributed positioning in the network of social practices and related systems of reason that regulate what is possible to do and think in mathematics education. It was the third trend that I tried to inscribe my analysis in the ZDM paper.

However, the fundamental difference that I now see in relation to the type of analysis that I showed in the ZDM article has to do with *the construction of subjectivities* in and through the practices of mathematics education. In other words, by constructing particular positioning of students in relation to school mathematics, the practices of mathematics education set in place categories of ability/disability and processes of inclusion/exclusion. As students face and insert themselves in those practices, they are not only learning “school mathematics”, they are mostly learning to become certain type of people and take as theirs the categories available in those practices. Being excluded from school mathematics and fitting in a category of exclusion—either in terms of one’s ability, gender, race, religion, ethnicity, etc.—is a social and organizational construction that subjectifies students in particular ways.

Back to the work of Foucault, the importance of studying the micro-physics of power has to do *not* in recognizing structures of power but rather in understanding the effects of power in the constitution of subjectivities (Foucault 1982). Looking back to the ZDM paper in these terms, I tried to show how in a network of mathematics education practices systems of reason are created that make possible the shaping of certain subjectivities in relation to school mathematics. A very important form of becoming in relation to mathematics is that of being “school mathematics incapable”. Not being able to cope, participate, or succeed in the demands of school mathematics is in no way a characteristic of the individual learner, but it is a result of how the whole set of participants in the practices and discourses of school mathematics subjectify certain students.

After the seminal work of Walkerdine in the late 1980s (see, for e.g., Walkerdine 1988), many studies in recent years have pointed to similar directions and have helped in substantiating the implications of school mathematics in the constitution of students’ identities and subjectivities (Knijnik and Wanderer 2010; Lange 2009; Martin 2010; Mendick 2008; Moreau et al. 2010; Stentoft and Valero 2010). These studies, from my point of view, contribute to a deeper understanding of how and why mathematics education touches many people in deep ways and not all of them in the most positive sense. Studies of equity in mathematics education that follow these lines enable us to go deeper in unraveling the political constitution of mathematics education.

References

- Foucault, M. (1982). The subject and power. *Critical Inquiry*, 8(4), 777–795.
- Knijnik, G., & Wanderer, F. (2010). Mathematics education and differential inclusion: A study about two Brazilian time–space forms of life. *ZDM*, 42(3–4), 349–360.
- Lange, T. (2009). *Difficulties, meaning and marginalisation in mathematics learning as seen through children’s eyes*. Aalborg: Aalborg University—Department of Learning and Philosophy.
- Martin, D. B. (2010). Not so strange bedfellows: Racial projects and the mathematics education enterprise. In U. Gellert, E. Jablonka & C. Morgan (Eds.), *Proceedings of the sixth international mathematics education and society conference (MES6)* (pp. 57–79). Berlin: Freie Universität Berlin.
- Mendick, H. (2008). Subtracting difference: Troubling transitions from GCSE to AS-level mathematics. *British Educational Research Journal*, 34(6), 711–732.
- Moreau, M.-P., Mendick, H., & Epstein, D. (2010). Constructions of mathematicians in popular culture and learners’ narratives: A study of mathematical and non-mathematical subjectivities. *Cambridge Journal of Education*, 40(1), 25–38.
- Pais, A., & Valero, P. (2011). Beyond disavowing the politics of equity and quality in mathematics education. In B. Atweh, M. Graven, W. Secada & P. Valero (Eds.), *Mapping equity and quality in mathematics education* (pp. 35–48). New York: Springer.
- Stentoft, D., & Valero, P. (2010). Fragile learning in mathematics classrooms: How mathematics lessons are not just for learning mathematics. In M. Walshaw (Ed.), *Unpacking pedagogies. New perspectives for mathematics* (pp. 87–107). Charlotte, USA: IAP.
- Valero, P. (2007). A socio-political look at equity in the school organization of mathematics education. *Zentralblatt für Didaktik der Mathematik. The Intentional Journal on Mathematics Education*, 39(3), 225–233.
- Valero, P. (2009). What has power got to do with mathematics education? In P. Ernest, B. Greer & B. Sriraman (Eds.), *Critical issues in mathematics education* (pp. 237–254). Greenwich, USA: IAP.
- Valero, P. (2010). Mathematics education as a network of social practices. In V. Durand-Guerrier, S. Soury-Lavergne & F. Arzarello (Eds.), *Proceedings of the sixth congress of the European society for research in mathematics education* (pp. LIV–LXXX). Lyon: Institut National de Recherche Pédagogique.
- Walkerdine, V. (1988). *The mastery of reason: Cognitive development and the production of rationality*. London, New York: Routledge.