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Afterword

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From the moment that authors from different parts of the world began to question the absence of sociocultural bases in the formation of mathematical knowledge, inside and outside the academic universe, a fertile field was opened to face truths that had long been ignored in discourses about the nature of mathematics. This problem was addressed directly and creatively by the Brazilian educator and mathematician Ubiratan D'Ambrosio in 1977. In a talk at the annual meeting of the American Association for the Advancement of Science, D'Ambrosio introduced the term "ethnomathematics." He coined the term to break through the mythology of an absolute mathematics independent of cultural and historical contexts. This came in an atmosphere of sociological challenges to Platonic notions of mathematics constructed in the writings and lectures of David Bloor, Donald MacKenzie, and Sal Restivo. They built on the foundations of the remarks on numbers and culture by Oswald Spengler and Ludwig Wittgenstein. These views had classical precursors in the works of Karl Marx and Emile Durkheim

In the wake of his 1977 lecture, D'Ambrosio struggled with an etymological abuse of the term "ethnomathematics." He pointed out that he meant the terms "ethno" and "mathema" to represent the analytic categories, and "tics" to refer to "techne." In spite of the confusion about this term and about the meaning of "the social construction of mathematics," the essence of the game that was afoot was the inevitable break with the historical scenario of

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linear and universalist interpretation, which is especially important in the academic-scientific environment. More generally, the Platonic foundations of mathematics had been broken up, and even logic itself became sociologized in the works of Lotze, Restivo, and the feminist theorist of logic, Andrea Nye. We now began to realize the meaning of Spengler's slogan (1991), "There is no mathematik, only mathematics," echoing Lotze 1843 slogan, "There is no Logik, only logics."

With the new production of knowledge, there was a confrontation with conceptions that, in their bases, not only devalued cultures, but excluded them from any process that referred to the construction of mathematical knowledge. With each new step in theorization, the complexity of the theme became clear, as well as the multiplicity of dimensions that opened up as a source for analysis.

At the same time that prejudices and historical manipulations became evident, there were also contradictions, inconsistencies and boundaries that challenged, and still challenged, researchers, educators and all those who led a movement in favor of the construction of the field of ethnomathematics. In this construction, as claimed by Ferreira (2005), the postures that assume and respect the difference are valued, leaving no space for social behaviors of a universal character, since in the distinct position that stands, the relativity of any forms of knowing is understood and revered.

However, in general, the recognition and validation of any knowledge is determined by the necessity of insuring that the economic machine remains well-oiled and functional. Žižek (1997) talks about the devastating impact of modernity - capitalism, combined with the hegemony of scientific discourse. "The reductions necessary to make objects amenable to mathematization coincided with the ideological requirements of [capitalism]" (Restivo, 1983). Capitalism and the mathematics of objects are reciprocally reinforcing. There is, indeed, a formal correspondence between the calculus and the need to represent the labor process mathematically (Dickson, 1979). Because of this alliance, knowledge is valued only to the extent that it is compatible with and contributes to the needs of a mythical market independent of the behaviors of economic actors. Knowledge is valued as long as it is aligned with the needs of capitalist economics, or as long as it does not present any serious threat to

it. In our current multicultural society, it is normal to recognize other knowledges, but such recognition only fortifies the myth of "participation", while at the same time guarantees that no fundamental change either in scientific research or in society occurs.

This incorporation of ethnomathematical ideas into the capitalist dynamics is possible through the deployment of an ideological injunction in which we are willing to accept another knowledge deprived of its otherness, insofar as it fits into our symbolic order. In fact, any other knowledge needs both to integrate the intersubjective symbolic network that structures our sense of reality (Lacan, 2001), and to keep a safe distance, the distance that prevents us from reaching its non-symbolic dimension. I love another knowledge (of the fisherman, of the indigenous, of the children in street situation) precisely because it is oppressed and utterly helpless, needing protective care. For instance, in South Africa, a whole knowledge industry was developed around the idea of Indigenous Knowledge Systems (IKS), of which ethnomathematics is one component.

Knowing the knowledge of an invisible other is a postmodernist tool to promote corporification (Mesquita, Restivo, & D'Ambrosio, 2011) by not being responsible for his or her acts, making unusable his or her strategies, and "accepting them" in a process of multicultural racism (Žižek, 1997). Instead of recognizing the local knowledge in itself, the increasing pressure of the market uses it as part of its machinery. By using such tool, the communities are weakened, and become docile, or even ghettoized in their cultural manifestations (increasing the invisible groups). Let us be clear. Western mathematics and Western science do not escape the web of ethnomathematics and ethnoscience. Western knowledge systems self-definitions instantiate absolutism, universalism, and Platonism. These features are generated during the processes of imperialism and colonialism. The Eastern and Southern Other have always been a part of "Western" knowledge systems. Today, the power of the Other is finally matching and even over-matching the traditional power of the West as knowledge systems across the globe intersect with new levels of collective self-awareness. New modes of living and new modes of doing science and mathematics are on the horizon (Restivo and Louglin, 2000).

This volume is identified by the editors as a small contribution to breaking up hegemonic and addicted scientific discourse. They take into account the emergency of rethinking the concepts of participation, completeness, and recognition within the ethnomathematics processes through work experiences fostering collaboration, reciprocity, and agency and bartering (Mesquita, 2017; Parra, 2017). These processes are facilitating the decolonization not only of mathematics but of science more generally.

Immerse on a geographical, cultural, historical, and social diversity, the authors of this volume shared their own processes of rethinking ethnomathematics concepts. Clareto and Miarka presented us with a profound reflection on ethnomathematics in its functioning, territorialization, demands for institutionalization and apparatus. Lipka invited us to connect global and local behavior and to realize the disconnections between our actions and their impacts, promoting an understanding over the urgent needs to work under social-cultural-ecological systems approach. Muthemba, Guambe, and Matavele throwed us to the mathematical classroom and its deep connection with the recognition of the local symptoms and the respect for the multiplicity of languages. Alangui shaked us discussing the pitfalls of the anthropological notion of culture when used in the field of ethnomathematics and alerts the dangers of decontextualization and knowledge colonization in this field.

In fact, this volume has dared to critically problematize the context in which new paradigms enable the generation of knowledge that comes to denounce old and manifest principles, loaded with conceptions that over time have unequivocally violated individuals and societies. However, this problematization also sought to focus on the aforementioned contradictions, inconsistencies and border regions concerning ethnomathematical productions themselves. After all, they have been commonly avoided, and even neglected, by a significant part of the authors of this new field of knowledge.

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