IN RESPONSE TO POWELL: IS ETHNOMATHEMATICS = MATHEMATICS = ANTIRACISM?

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Introduction

This paper is a response to Powell's paper entitled 'Ethnomathematics and the challenges of racism in mathematics education' (Powell, 2002). In my view, Powell's paper does not go beyond advocacy for ethnomathematics. The paper has three parts. First, he uses the *Adamastor* episode as a metaphor for racial and political dimension of ethnomathematics. He does this in order to explain what ethnomathematics is and its political role in the teaching and learning of mathematics. Second, he gives an exemplar of how ethnomathematics can be used in the teaching and learning of algebra. Here he focuses on the Ahmose mathematics papyrus. Third, he moves on to ask the question 'who is learning and who is not even in the classroom?' Here he focuses specifically on small-group learning, which he seems to suggest, is consistent with ethnomathematics and antiracist teaching practices.

This paper challenges Powell's definition of ethnomathematics and discusses the implications of constructing ethnomathematics as a discipline/institution separate and different from mathematics. Furthermore, the paper argues that there exist no necessary relationship between ethnomathematics, small group work and antiracist teaching.

Ethnomathematics = Mathematics?

In his paper, Powell uses D'Ambrosio's (2001) definition of ethnomathematics:

> *Ethnomathematics is the mathematics practiced by cultural groups such as urban and rural communities, labour groups, professional classes, children of a certain age bracket, indigenous societies, and many other groups that identify themselves through objects and traditions common to the groups (in Powell, 2002: 17).*

Furthermore, Powell theorises that in ethnomathematics, the prefix "ethno" not only refers to a specific ethnic, national, or racial group, gender, or even professional group but also to a cultural group defined by a philosophical and ideological perspective. Given Powell's theorisation ethnomathematics can be defined as the mathematics practiced by a cultural group defined by philosophical and ideological perspective. The question here therefore is how different is this from mathematics? In my view, mathematics is also practiced by a cultural group defined by philosophical and ideological perspective. According to Fairclough (1995), institutions (such as ethnomathematics or mathematics) construct their philosophical, ideological and discoursal subjects. They construct them in a sense that they impose philosophical, ideological and discoursal constraints upon them as a condition for qualifying them to act as subjects. For example, to be a mathematics educator one is expected to master the philosophical (ways of being), ideological (ways of seeing) and discursive (ways of talking) norms which the mathematics education community attaches to that position. These ways of being, seeing and talking are

inseparably intertwined in the sense that in the process of acquiring the ways of being which are associated with a subject position, one necessarily also acquires its ways of seeing and talking. But of course this is not a one-way process. Mathematics educators talk and act the way they do because they are mathematics educators but being a mathematics educator is what it is because there are people who talk and act in the way mathematics educators do. The 'mathematics education world' both pre-exists and shapes how mathematics educators talk and act in and on it and it means what it means and has the shape it does because mathematics educators talk and act in and on it as they do. The same can be said about ethnomathematics.

The question to ask here is, are the philosophical, ideological and discursive norms of ethnomathematics different from those of mathematics? Vithal & Skovsmose (1997) have argued,

> *Almost all definitions or descriptions of 'ethnomathematics' feature the term mathematics in various ways as 'mathematical knowledge', 'mathematical ideas', 'mathematical activities' or 'mathematical practices'. (p. 13).*

Powell's definition of ethnomathematics also suggests that ethnomathematics is a special type of mathematics. What does it mean therefore to construct ethnomathematics as an institution separate and different from mathematics?

There is no doubt that the construction of ethnomathematics as an independent and different discipline/institution from mathematics has created an opportunity for ethnomathematics researchers to organise and mobilise. It has also led to a creation of a social identity for all the researchers involved in ethnomathematics research. There are now international conferences and publications focusing on ethnomathematics. This has raised awareness of the contribution that non-European communities have made to mathematics. Naming, however, creates boundaries and emphasises difference and thus can be counter-productive. Naming in this case has created the perception that ethnomathematics is different from mathematics and thus inferior. In my view, ethnomathematics is mathematics and therefore to construct it as separate from mathematics is to marginalize it. It is important that ethnomathematics moves from the margins into the centre of mathematics.

Ethnomathematics = Antiracism?

Powell argues that ethnomathematics has a political focus; it is imbued with ethics, and focused on the recuperation of cultural dignity of human beings. I agree with Powell that ethnomathematics challenges the universal conception of mathematics knowledge that privileges the dominant groups. Powell's example of how he uses ethnomathematics in his teaching assumes that bringing cultural contexts into the mathematics classrooms is unproblematic and in fact reconciles differences and affirms learners from marginalized communities. What Powell is not considering is that bringing the learners' cultural backgrounds into the classroom has a potential to reproduce the inequalities that exist in the broader society. It is therefore important to ask whether there has been any

confirmation that knowledge of ethnomathematics results in action against oppression and domination.

In his paper, Powell argues that ethnomathematics has a potential of ensuring that the 'African' is not only present but also learning in a mathematics classroom. In his elaboration of this argument, Powell suggests small-group discussion as a useful pedagogy. While I agree with Powell about the merits of small-group work in mathematics teaching, it is not clear from Powell's paper what small-group work has to with ethnomathematics or antiracist teaching and learning practice. My questions to Powell here are: Is there a necessary relationship between small-group learning and ethnomathematics? Is there a necessary relationship between anti-racist teaching and practices and ethnomathematics? From my experience as a mathematics learner, educator and researcher there is anti-racist teaching and learning practices taking place in many non-ethnomathematics classrooms.

In Conclusion

I believe that it is time that the ethnomathematics community re-evaluates its agenda. Ethnomathematics emerged, in part, as a consciousness movement within mathematics education, critiquing the conception of mathematics knowledge that privileges the dominant groups. There is a need for ethnomathematics to turn the critique inward (Vithal & Skovsmose, 1997: 22).

References

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