AVAILABLE POSITIONS, IDENTITIES AND DISCOURSES IN MATHEMATICS CLASSROOMS

David Wagner, University of New Brunswick
Annica Andersson, Malmö University
Beth Herbel-Eisenmann, Michigan State University

This symposium will engage participants in discussion and reflection relating to the positionings and identities available for people to take up in mathematics classrooms and the related available discourses. We will also consider our constraints as researchers to recognize available identities, positionings, and discourses. Participants will reflect on their experiences with these concepts in and out of research contexts.

SYMPOSIUM FOCUS

Together and separately, the three of us have analysed the positioning and identities of students and teachers in mathematics classrooms. We have become increasingly interested in the way research using these constructs uses the word *available*. There are many instances of researchers referring to "available identities", "available discourses" and "available positions" in the literature but we have not found these constructs sufficiently conceptualised. And so we invite our colleagues to join our conversation about these constructs in this symposium.

A number of theories connect to the questions we bring to the symposium. In particular, positioning theory says that people draw on known storylines to interpret their interactions and to position the people in the interaction (e.g., Davies & Harré, 1999). Contexts make some storylines available and others not. Within a storyline, certain positions are available while others are not. Similarly, in research on identity it is often important to identify discourses at play and the identities taken up by people. Again, what discourses are available and what identities are available within these discourses is often an important part of the analysis. The questions of focus for the symposium:

1. When students navigate mathematics classroom interactions, what positions and identities are available to them to take up? This question hinges on the available storylines and discourses.

2. How do our positions and identities as researchers constrain our analysis of mathematics classroom interaction? How do they impact what storylines, discourses, positions, and identities are available for us to notice?

3. How can we as researchers expand our vision to recognize more or deeper storylines, discourses, positions, and identities? In other words, how can we see things that have not been seeable for us?

4. How can mathematics classrooms be constructed to make more and/or "better" positions and identities available for students?

In J. Subramanian (ed.) (2019). *Proceedings of the Tenth International Mathematics Education and Society Conference*, Hyderabad, India. [available at: https://www.mescommunity.info/#conferences]

These questions are not new to us. Beth and Dave have raised questions like this before—for example, in an earlier unpublished draft of their elaboration on positioning theory used in mathematics education (Herbel-Eisenmann, Wagner, Johnson, Suh & Figueras, 2015), they criticized the progenitors of positioning theory who "did not state how they knew what the available positions might be within any given storyline, except that one knew these based on the grand narratives or stories we live by." The questions also surfaced in Annica and Dave's work on a forthcoming article. They decided to avoid the words 'available identities' and to leave the questions for future work. Because they are big questions. This led the three of us to bring this question to MES for discussion. We already know that available identities and positions are contingent on context. We expect that this situation-specific aspect of available identities and positioning will draw our conversation to some specificities of mathematics classroom contexts. We have also asked ourselves what might govern availability in a mathematics classroom context. Would there perhaps be a super-storyline or super-discourse that governs what is available?

We note that our claim about the lack of theorization and abundant use of "available xxx" is based on extensive literature searching, which we will not fully report on here for lack of space. We provide a couple of examples, however, that are perhaps the closest we have found to addressing these questions about theorizing these ideas in mathematics education. Evans, Morgan and Tsatsaroni (2006) interrogated group work in a mathematics classroom. Their analysis "identifies positions available to subjects in the specific setting [a mathematics classroom], using Bernstein's sociological approach to pedagogic discourse" (p. 209). The paper indeed identifies positions that are available and notes how they are related to different discourses, but is not clear on what makes a discourse or a position available. Nasir (2014), who has studied mathematics classrooms, described how students "simply take up available identities for which there are significant identity resources in both the local community and the broader society" (p. 143). She went on to point "out that identities always consist of the raw material that people find in the social contexts around them and occur in social interaction with others" (p. 143), but in this book she identified identities that are available in particular contexts without going into detail about how certain identities may be available or not in a given context.

SYMPOSIUM ACTIVITIES

The symposium will begin with an overview of the focus questions and how they are important to key theories used in our field. We will reflect on and discuss an experience common to all participants, drawing on something from the opening of MES or an agora. We will invite participants to describe the positions and identities that were available and taken up by them, and relate these to available discourses and storylines available. Are there discourses, identities and positions available at MES now that have previously been unavailable? Are different articles accepted/refused now than a decade ago? Whose texts are/were included and/or excluded?

Then, to help us think about how new positions and identities may become available for a person, we will form small groups to reflect on personal experiences. We will each think about a position, identity, storyline or discourse that we can recognize now, but which we remember not being able to recognize some time ago or an interaction when others assumed particular available identities/positions for us. Or perhaps we see an identity/position with a different perspective. We will reflect on what made it possible for us to see that which we could not see before. Possible areas for reflection might include gender, race, ability/disability, age, social class, caste, religion, immigration/emigration, language, literature/myth, etc.

For example, while at a national mathematics education conference in the U.S., Beth had a meeting in the evening near the bar with a senior male colleague to talk about some issues related to committee work for the organization. After the discussion, they both walked back to a large table of people they knew who were also attending the conference. Another senior male professor who Beth had never been formally introduced to (but knew from past conferences/presentations) looked at the male senior colleague and said, "Who's your girlfriend, [name]?" and laughed. Beth replied by introducing herself, stating her professional rank and affiliation, and telling the person that they would be attending a small meeting together soon. Another example: when Dave lived in Swaziland he got a little experience of what it is like to be vulnerable as a minority, but he is aware that aspects of his privilege made him less vulnerable than minorities in other contexts.

Finally, to apply this important reflection to our research practices, we will ask participants in their small groups to consider some of their research data or a memory of a mathematics classroom experience. For this it would be beneficial for participants to bring with them some transcripts, photos, or other data from their research if possible. We chose not to use our own data because we want participants to be familiar with the contextual details of the situations used for reflection.

In this second group work set, we will each ask ourselves the focus questions above. What positions and identities are available for the mathematics classroom participants to take up? etc. The tricky part will be to overcome the challenge of seeing the unseeable. In order to push ourselves to notice the constraints in our analysis (what positions, identities, discourses and storylines are available for us to see), we can think about what we can see that we think other researchers or participants in the classroom might not be able to see and why. And we can think about what we can see now, but which we think we would not have seen in a similar situation some years ago. What makes it possible for us to see such things now?

For example, in a research interview about ten years ago Ara, a 15-year-old Turkish man, pointed out to Annica that his interviewers, as Swedish people, would not be able to understand immigrants (he used other words) like him (see Andersson & le Roux, 2017). When conducting interviews in similar situations last year, Annica noticed that she did not heard statements in that vein. Reasons for one person saying this and others not might be that there are now new identities available for newcomers or other

identities no longer available, or discourses that allow people to talk about language and mathematics learning in ways that have not previously been available. Another example: Beth and Dave found that a new form of discourse analysis (lexical bundle work) made it possible for them to see interaction as strange though it once seemed natural (Herbel-Eisenmann & Wagner, 2010).

We aim for the small group interaction to be rich and meaningful in itself. Some of what we learn in the small group interaction will be shared in the large group, but we will not rehash everything. After these two sets of small group work and reporting back to the large group, we will bring two further questions forward for all.

1. What does this mean for research? We think of ethics, methodology, theory, …

2. What might we all do to sustain this conversation and thus bring greater depth to our own research and to our field, toward goals of humanizing this work?

We reiterate here that participants are encouraged to bring a piece of data/text from recent work/reflection. This may be an artifact (e.g., transcript, photo, …) or a vivid reflection on an experience in a mathematics classroom.

REFERENCES

Andersson, A. & le Roux, K. (2017). Toward an ethical attitude in mathematics education research writing. *Journal of Urban Mathematics, 10*(1), 74-94.

Davies, B. & Harré, R. (1999). Positioning and personhood. In R. Harré & L. van Langenhove (Eds.), *Positioning theory: Moral contexts of intentional action* (pp. 32-51). Blackwell: Oxford.

Evans, J., Morgan, C., and Tsatsaroni, A. (2006). Discursive positioning and emotion in school mathematics practices. *Educational Studies in Mathematics, 63*(2), 209-226.

Herbel-Eisenmann, B., & Wagner, D. (2010). Appraising lexical bundles in mathematics classroom discourse: Obligation and choice. *Educational Studies in Mathematics, 75*(1), 43-63.

Herbel-Eisenmann, B., Wagner, D., Johnson, K., Suh, H. & Figueras, H. (2015). Positioning in mathematics education: revelations on an imported theory. *Educational Studies in Mathematics*, 89(2), 185-204.

Nasir, N. (2014). R*acialized identities: Race and achievement among African American youth*. Stanford University Press.