# *I* AND *THEY* POETIC VOICES IN LEARNING TO LISTEN TO A STUDENT LABELLED AS LOW ATTAINING IN MATHEMATICS

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## Darren's *I* poem

*Stanza 1*
I done
then I did
so I went on
but I did not do
I left it until
I could have got better
I am trying
whatever I can get
I want
but I am not just

*Stanza 2*
I hated it
I wasn't that good
I didn't really try
I probably prefer it now
I just feel like I can
I just couldn't
I think
I knew
now I feel
I don't know I matured

*Stanza 3*
in the exams I don't
in class I am good
in exams I am not
I don't know I prefer
I can just see
I can just do
I can see
I have to write it all down
I get confused
I prefer
I don't really
if I was to
I would
I can
I think I do well
I can like see how well I am doing
I feel like all my knowledge goes out the window
I don't know…
I can double check
I have got
I have to
I will be
I will be
I need to do more
I have to
I start questioning

I will leave it
I will see
I know but I don't know fully
I will leave it
I get to
if I have got it wrong
I can correct myself
I think
I can like look
I can see
I have done
I don't know

*Stanza 4*
I need I think
I just need to
I don't really revise
I have got to
I have got to

*Stanza 5*
I get loads
I have got
I got to
I have got to

*Stanza 6*
I do it in my head
I know how to
if I have to explain
I know how I am
I just leave it
I know how to
I need to
I need to
I know how I am doing it
if I have to
I can't really explain
I knew
I just leave it
I know how I got

*Stanza 7*
so I just
I think
I think I need to
if I get into the habit
I will
I just need to
I just to
I will get into the habit

## The teacher's *they* poem

| | |
|---|---|
| *Stanza 1* | He is in |
| | He is |
| | He told me |
| | He knows he has |
| | He wants this year |
| | |
| *Stanza 2* | He is not building my ego |
| | The one he is |
| | He is someone who I think |
| | |
| *Stanza 3* | He can see |
| | He has decided |
| | |
| *Stanza 3 sub poem* | Some people will |
| | They have |
| | They are |
| | They drop off |
| | They might be |
| | They might drop off |
| | They reached |
| | When they come |
| | They feel more inclined |
| | The best they can |
| | Some people cope |
| | Some people don't |
| | They are not |
| | They will come back |
| | They think they are |
| | They have all |
| | They have got all |
| | They will come back |
| | Some people will never |
| | Some people haven't |
| | They might |
| | They might |

| | |
|---|---|
| *Stanza 3 cont.* | He has now realised |
| | He is |
| | He has got |
| | He is doing |
| | He wants |
| | He now understands |
| | He had to do |
| | He had to do |
| | He has |
| | He had |
| | |
| *Stanza 4* | When he came in |
| | He thought |
| | He is now |
| | He is doing |
| | He is turning up |
| | He is turning up |
| | |
| *Stanza 5* | He was 'I can....' |
| | He went 'well I will...' |
| | He is like 'well why should I...' |
| | |
| *Stanza 6* | He smokes |
| | I think he smokes |
| | He is also |
| | He likes |
| | |
| *Stanza 7* | He said |
| | He kind of looked at me |
| | He is |
| | He will |
| | He doesn't realise |
| | He has taught me |

Students who are labelled as low attaining [1] in mathematics are often seen as a homogeneous group and as such can be assigned learning attributes by others that observe their identity work in the classroom. In my experiences as a mathematics teacher and educational researcher, I have noticed that one of the discourses around the identity work of those labelled as low attaining suggests a deficient positioning, predominantly through the lens of others, that goes on to affect the teaching and learning experiences of students (Darragh, 2016; Helme, 2019). However, in the interpretation of a student's "ways of talking, acting, and being" (Bishop, 2012, p. 39), the voices of the students themselves can be silent and therefore, both as teachers and researchers, there is not always the opportunity to hear, and respond to, a possible counter-narrative from the student's own viewpoint. I argue that by giving attention to an otherwise marginalised voice, it may be possible to challenge the discourse of deficiency, and influence the teaching and learning experiences of students who are labelled as low attaining.

In this article I reflect on the use of poetic structures to analyse the narrative of Darren, one of a class of students labelled as low attaining. From my observations, it was evident that Darren had difficulties related to showing written workings out when attempting class work, and this was being positioned by his teacher as due to lack of effort. As a result, there was an impact on Darren's teaching and learning experiences in the classroom as the dialogue with his teacher consistently focused on encouraging Darren to try harder to overcome this barrier. Darren was subsequently interviewed to listen to his experiences of learning mathematics and for his interpretation around the difficulties he presented around showing written workings out. In the process of analysis, I used the poetic structure of an *I* poem within the Listening Guide method (Gilligan, Spencer, Weinberg & Bertsch, 2006) to enable me to focus on the intertwining of the hitherto unheard coexisting voices of the student. The analysis seemed to illuminate a narrative that challenged the teacher's positioning of this student, however, the two voices that were exposed seemed to be in juxtaposition. Wortham (2001), in discussing the work of Bahktin, states that in analysing a narrative, a monologic approach is not sufficient and that any utterance must be seen as contextual, echoing both the past words of others and the anticipation of future words. The contribution of this article is to introduce, into the methodology of the Listening Guide, the novel poetic structure of a *they* poem, found in the narrative of the teacher talking about this student, as a contextual foil. By giving attention to the voices in dialogue

(Ohito & Nyachae, 2019), I am able to consider the influence of contextualisation and the potential for re-voicing by the student that could explain the apparent contrast in the voices exposed by the *I* poem.

## Poetic structures

The use of poetic structures in the analysis of narrative data is not new to educational research (see the summary in Ohito & Nyachae, 2019) and has been offered as a powerful analytical tool that pays attention to the poetry of a narrative, thereby enabling one to enter imaginatively into the thought processes of the speaker (Staats, 2008; 2017). In her study of mathematical discourse in the classroom, Staats discusses the form of statements that were used by students when reasoning mathematically in order to reflect on the hitherto unnoticed processes of meaning construction. The poetic functions that she observed included examples of grammatical parallelism based on repetition of verb phrases, both in monologues and re-voicing in dialogues, as well as shifts from one verb phrase to another. By considering the poetic structure of students' discourse, Staats (2008) argues that she is able to trace the attempts to construct a mathematical argument as students share and transform mathematical ideas. In later discussions, Staats (2017) goes on to illustrate how the analysis of poetic structures can contribute to emerging perspectives of argumentation in mathematical discourse, stating that this form of analysis "amplifies, qualifies, and advances the word-level message" (p. 291).

However, the use of poetic structures in mathematics education research is not only found in repeated grammatical devices. Hall, Towers & Martin (2018) use the poetic structures within the Listening Guide method of analysis to illuminate the complexity of a student's presented mathematical identities. The process focuses on first-person voice, through the creation of an *I* poem, that considers how speakers talk about themselves, with the stanzas being formed by identifying changes in tone of voice. Importantly, each verse is not necessarily seen as a separate voice as the narrative may return to the same tone of voice in a later stanza and in this sense, an *I* poem draws attention to the intertwining of coexisting voices. However, in contrast to the poetics of Staats (2008), within the Listening Guide process, the formation of an *I* poem is not the end goal but one of four stages of listening that directs the attention of the researcher onto the voice(s) of the participant. By analysing the narrative of one participant from a larger project, Hall, Towers & Martin (2018) illuminate the internal dilemmas and somewhat contradictory nature of the student's identity positioning narrative. The two contrapuntal voices that are revealed seem to be in opposition and the authors go on to discuss whether one of the voices could be considered the most authentic [2]. Hall, Towers & Martin argue that the Listening Guide analysis process aligns with the dynamic, fluid nature of identity work, and highlights the difficulties that arise when attempting to listen for, and respond authentically to, students' identity narratives.

As can be seen in the examples above, a poetic structure is formed through the relationship, of some sort, found in the speaker's (somewhat unconscious) selection of words, phrases, and tone of voice that have similar, or in some cases, contrasting sounds, rhythms, and meaning. The repetition found in the narrative is more complex than the sameness of words and phrases, but focuses on rhythmic properties that, although not typically viewed as poetry, work together to highlight the construction of meaning. Staats (2017) and Gilligan *et al.* (2006) explicitly frame the formation of a poetic structure as a subjective process, as due to the researcher listener who in analysis forms the poem, and what is described by Bahktin (in Wortham, 2001) as the unfinished nature of any utterance, the meaning that is constructed is in the moment and contextual. Hence, the form of a poetic structure, and the subsequent interpretation, should be seen as personal for both speaker and listener. However, in these examples, there is not a structure that serves to illuminate the influence of contextual voices, and therefore for the researcher any discussion around authenticity is highly subjective. In line with the polyvocal work of Ohito & Nyachae (2019), I contend that a poetic structure which focuses on how another discusses the student, can be used as a foil to recreate the meaning given to the student's identity work.

## Listening to coexisting voices though the use of poems

In the example that follows, I illustrate the stages of the Listening Guide method and the impact of poems in illuminating the coexisting voices in the narrative. I introduce the use of the novel structure of a *they* poem into the process as a contextual foil in the analysis of the voice of the student to reveal the potential for re-voicing.

### Listening to Darren

Darren was in his third year at a post-16 college and attended a mathematics GCSE resit [3] class as he did not gain a grade 4 pass at the age of 16. He had reattempted this exam several times at college but had not been able to improve his grade. Following my interview with Darren, I applied the Listening Guide process of analysis to the recorded narrative to attempt to expose a hitherto hidden counter-narrative.

Through my immersive listening from the first stage in the process, I noted that the overall plot of Darren's identity work was developed within the context of both his past and present learning. He discussed being responsible for his past under-performances, as well as the realisation that he should be the instigator of change in the present and in the future. Although there was some reference to other actors in his educational experiences, for example, his teacher or other students at school, Darren's narrative focused on himself as an individual. He consistently used the pronoun 'I' and discussed the impact of his own actions on his past and future outcomes. Interweaved with this plot, Darren told a story of frustration, describing seemingly insurmountable challenges.

### Creating Darren's *I* poem

In the second listening I used Darren's narrative data to create his *I* poem which was formed by extracting the pronoun 'I' as well as the verb and additional words if relevant to the

meaning. The following extract is an example of this process:

> Yeah *I don't know I prefer* sheet work it is just easier like *I can just see* the question and write the answer *[pause]* the question is just there and *I can just do* the working out on the sheet because *I can see* the question otherwise *I have to write it all down* and *I get confused*

The phrases are arranged as they occur in the narrative, placing one phrase per line and accordingly the *I* poem is formed:

> I don't know I prefer
> I can just see
> I can just do it
> I can see
> I have to write it down
> I get confused

At this stage, I entered the subjective process of dividing the complete poem into stanzas. In Darren's *I* poem, there seemed to be an intertwining of two different stories, namely the repetition of enactments that have and /or should take place *(action I)*, and the repetition of a personal dilemma and dialogue *(struggle I)*.

Within Stanzas 1, 2, 4, 5 and 7 of Darren's *I* poem, the focus on his actions, both past and future, created Darren's *action I* voice. The repeated use of phrases such as 'I wasn't' and 'I didn't' reflect on past actions and similarly 'I need to' and 'I have got to' reference future actions. However, it was interesting to note that Darren does not make reference to present actions; that is, there is no 'I am doing' evident in the *I* poem. It seemed that Darren was able to reflect on what he had done in the past and to consider what he should be doing in the future, but this did not translate into current actions. Furthermore, in Stanza 2 Darren not only describes past actions but is reflective, suggesting that Darren's identity work was being constructed within the interview process itself.

However, a poignant second story seemed to arise from Stanza 3, which was by far the longest verse. In it the focus is on an internal dilemma and a dialogue around the issues of having to show workings, which created Darren's *struggle I* voice. The repetition is found in the tone of 'I know how' and 'I can just see' but a struggle occurs 'if I have to explain/write it down'. Furthermore, this voice reappears later in the *I* poem in Stanza 6, in which the repetition found within the struggle *I* voice and the action *I* voice seem to combine. It seemed that the frustration of the struggle and the solution of action are intertwining, however, Darren does not talk about what he is doing (present), rather about what he needs to do (future), and hence the struggle is not resolved. It seems evident that there may be barriers to Darren's implementation of his solution of action.

### Introducing the teacher's *they* poem

As part of the data collection process, I interviewed the classroom teacher in order to listen for the teacher's interpretation of Darren's identity work and the impact this may have on teaching and learning in the classroom. The teacher was new to college and had been teaching Darren's class for two months. Similarly to the *I* poem, I created the novel *they*

poem by reflecting on how the *other*, in this case the teacher, talked about Darren. This involved extracting the pronoun and name statements, for example, 'He likes' or 'Darren had to' and arranging them in the order that they appear in the narrative data. All references to his name being replaced by the pronoun. Through my process of re-listening, there seemed to be two intertwining, coexisting positioning stories, namely the describing of the learner themselves *(about they),* and that of a more personal sense of the teacher-learner relationship *(with they).*

Within Stanzas 1 and 4 of the *they* poem, the *about they* positioning voice focused on the present behaviours of Darren and described his enactments as an individual. Darren was presented by repetitive use of the phrase 'He is' to describe how he was seen, what he said, and how he acted in relation to learning, with Stanza 6 describing activities outside of classroom-based learning. However, this voice was also concerned with changes in attitude and thinking, as well as with reinvention, suggested by repetition of the phrases 'He has' and 'He had'. The teacher seemed to be combining inferences about Darren's maturing thought processes with his observable changes in behaviour. Interestingly, there was evidence of a sub-poem found in the narrative about Darren. This narrative uses the pronouns *some* and *they* to refer to college learners in general *(about some),* and there is a sense of repetition around barriers to learning as well as subsequent changes in learning behaviour. The *about some* sub-poem describes changes in thinking and behaviour (both positive and negative) of the generalised learner, with some learners being able to overcome their previous barriers when entering college and some unable to do so. This sub-poem was embedded in Stanza 3 in a way that could suggest that the narrator aligned Darren in some way with the generalised position, that is, they believed that Darren was a member of the group who took the opportunity to reinvent themselves in the college environment.

As a contrast, the *with they* positioning voice seemed more personal and, as can be seen in Stanzas 2, 5 and 7, focused on moments in the relationship between Darren and the teacher. There is repetition in the way that the teacher describes the conversations, interactions, influences, and sentiments that were emerging as they worked together. This suggests that the teacher saw an element of mutuality in this relationship, an openness to what could be learnt as well as what should be taught. Within Stanza 5, the poem focuses on reporting only the words of Darren, which could suggest that the *with they* voice was not present; however, I argue that the relationship was still evident with the teacher as a (silent) listener.

### Re-listening after the poems

After the analysis of the poems, I returned to the full narrative for the third stage and fourth stages of the Listening Guide process. These stages focus on the contrapuntal voices that have been exposed though the use of poetic structures and they compose a final analysis using the findings from all the previous listenings. Through multiple re-listenings, I took account of each voice, identifying both how they were individually developed within the narrative,

as well as how they may intertwine like melodies in music. In this way the poetic structures that are created act to expose the various voices, rather than providing final evidence of the voices themselves. However, as previously stated, the positioning narrative of the teacher was introduced as a contextual foil to identify sameness and difference, thereby adding texture to the findings.

Darren presented two coexisting voices, namely the bravado of the *action I* voice and the poignancy of the *struggle I* voice, however, these coexisting voices seemed to be in juxtaposition. Darren's narrative suggested that a deliberate decision to start acting in a different manner will lead to the directed result (in this case, being able to show workings out and therefore pass the exam), with the only barrier being inaction. However, the voice of struggle presented an alternative mathematical story regarding past, present and future outcomes. In the interview with Darren, these coexisting narrative voices described internal discourses around lack of control, *e.g.,* "all my knowledge goes out the window," and low confidence, *e.g.*, "I start questioning [the answer] if it is right." It seemed that, although Darren recognised the struggle, he thought he could overcome this through actions, with the two voices intertwining in the narrative.

However, using the voices exposed in the teacher's *they* poem as a foil, there seemed to be some alignment in Darren's narrative with the teacher's influencing interaction, as can be seen in these examples from the interviews:

> D: I think I need to start doing [workings] in exams but if I get into the habit of doing it in class, I will do it in the exams.

> T: [I said to him] If you get in the habit of showing your workings out in the stuff we do in class, it becomes normal and then when you are doing it in the exam it is normal to show your working out.

Both Darren's *action I* voice and the teacher's *about they* voice described in the same manner the necessary changes in learning behaviour as well as the impact on future exam performance. Darren seems to have had internalised the voice of the teacher, re-voicing that ability to show workings consistently would result from individual effort.

There was further evidence of alignment in the notion of reinvention, with both Darren and his teacher discussing change in relation to learning mathematics:

> D: [regarding his previous educational experience] because I knew like everyone in the class so like just joke about in his lessons and now I feel it is better now. I don't know I matured more, and it just got better.

> T: He now understands that maths wasn't something he has to do because that's what the rules were, maths is something he has to do because it will benefit him later.

Both actors highlighted past behaviours, and attitudes that they suggested were no longer evident in Darren's present: 'this is how I (he) used to be', but 'this is how I am (he is) now'. The voice of the teacher seemed to align observable actions as evidence of a reinvention within internal thought processes. However, compared to the specificity of the teacher narrative, Darren generally reflects on maturation as the source of reinvention, suggesting that change happened to him rather than he made change happen.

In contrast to the similarities discussed above, there were differences brought into relief between the *action I* voice and the *struggle I* voice. Although there was evidence of re-voicing in the solution to the issue of not showing workings, there was none regarding the *struggle I* voice. That he described the performance of explaining as the difficult factor, rather than the skill of recording, suggested that Darren would not be able to overcome this frustration independently, by behaving differently. Although the most prominent voice for the teacher was the *with they* voice, which described the developing teacher-student relationship, it seemed that there had not been an instant in which Darren had shared his *struggle I* voice. For this student, it seemed that learning was individual, with both the actions required and the dilemma of the struggle being personal and therefore confronted as such. However, the solution proposed by the teacher, and re-voiced by Darren, was not able to align with the challenge of "it is difficult to explain," as privately expressed. This misalignment could explain the disparity between the bravado of the *action I* voice and the poignancy of the *struggle I* voice; the solution of 'doing' is not able to solve the dilemma because it is not resolving the correct issue. It seems the issue of showing work was not due to inaction (solving by doing), but a result of the struggle of not knowing how to explain the thought process that produced the correct answer. The misconception of the teacher around Darren's identity work had influenced both the voice of the student, the teaching and learning experiences, and hence overshadowed the authentic voice of this student.

## Concluding remarks
The purpose of this article is to reflect on the use of poetic structures to listen for a counter-narrative regarding the identity work of a student who was labelled as low attaining, in order to inform the teaching and learning experience. In mathematics research, the interpretation of the identity work of low attaining students is often done through the lens of others (Darragh, 2016). The process described in this article provides the opportunity to foreground the voice of the student. I have presented the impact of introducing a *they* poem into the Listening Guide analysis process, which can be used alongside the creation of the *I* poem in order to illuminate and foreground the voice(s) of a student. Through using the two poetic structures as voices in dialogue (Ohito & Nyachae, 2019), the expanded methodology has enabled me to reveal re-voicing by the student in a way that may have not been available if the narrative of the student had been analysed in isolation. By viewing the voices of Darren alongside other contextual narratives, the opportunity was afforded to consider struggle as a counter-narrative to inaction, thereby challenging the dominant discourses around this particular low attaining student. I suggest that the voice of *struggle I* could be viewed as the authentic unheard voice in interpreting the identity work of this student.

The use of a *they* poem is a novel structure in the Listening Guide process. Going forward, I intend to apply this methodology to the next stage of my research into the

experiences of those students who are labelled as low attaining in mathematics. By applying the analysis process during the fieldwork, rather than retrospectively, I hope to afford the teacher the opportunity to listen in new ways to what is currently unheard in the classroom, and for the student to be heard in the fullest sense of the word. I argue that listening to a hitherto silent voice necessitates a response, or else the marginalised voice is still unheard, and therefore, providing the opportunity for all actors to respond in terms of teaching and learning is important. However, I am aware that a particular challenge will be to mitigate the potential for dominance of the *they* poem structure in the analysis process, that is, foregrounding the voice of the other over the voice of the student. I argue that a *they* poem, as a poetic structure, can and should be used as a foil to the *I* poem, and as an aid to recognise re-voicing as an echo of other contextual voices. Hall, Towers & Martin (2018) conclude that identity work is fluid and dynamic and therefore any process of analysis should allow for this complexity. I believe that extending the Listening Guide process, through the use of contextualising *they* poems, offers a useful approach for engaging with the marginalised voice of students in the interpretation of their own mathematical identity work.
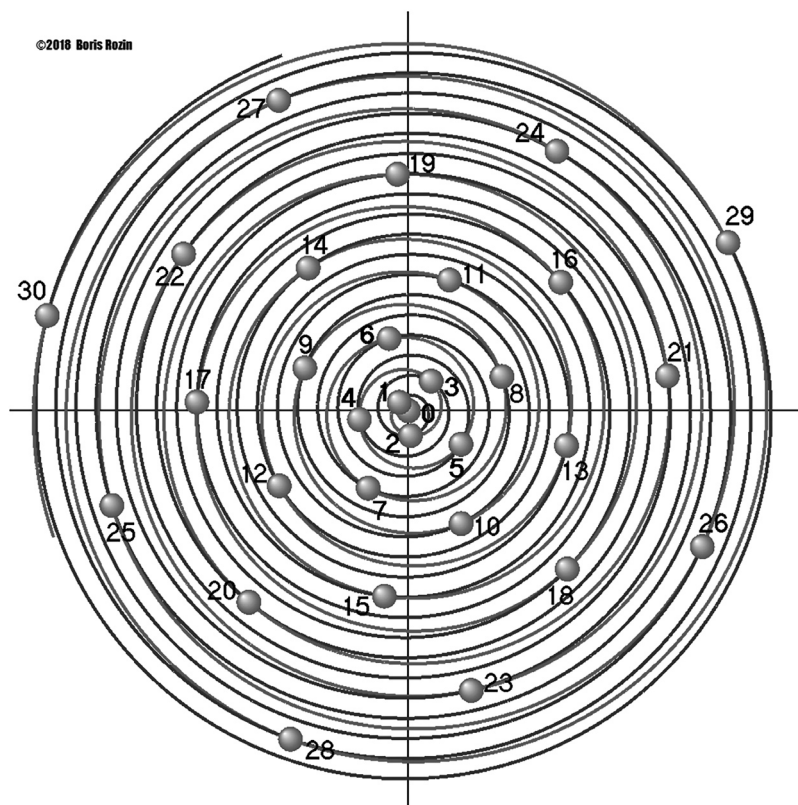
## Notes

[1] In England, most students are tested formally at the ages of 7, 11, and 16 years . The language around the scores that students achieve on these tests imply that some students are considered to 'meet expected standards', some are 'above expected standards', and some are 'below expected standards'. At 16 years old, students who achieve a grade of 1, 2 or 3 in their GCSE [3] exams are considered by the Department of Education to be 'low attaining'.
[2] The term 'authentic' is potentially problematic as both the act of presenting voice and the act of listening to voice could be seen as performative. The term is used here to give a sense of the students' own personal thoughts in contrast to a re-voicing of others in the teaching and learning context.
[3] The General Certificate of Secondary Education, GCSE, is an academic qualification taken by students at age 16 at the end of their secondary education. Students who do not achieve a pass, that is, a grade 4 or above, must retake the qualification in college.

## References

Bishop, J.P. (2012) "She's always been the smart one. I've always been the dumb one": identities in the mathematics classroom. *Journal for Research in Mathematics Education* **43**(1), 34–74.

Darragh, L. (2016) Identity research in mathematics education. *Educational Studies in Mathematics* **93**(19), 19–33.

Gilligan, C., Spencer, R., Weinberg, M.K. & Bertsch, T. (2006) On the listening guide: a voice-centered relational method. In Hesse-Biber, S.N. & Leavy, P. (Eds.) *Emergent Methods in Social Research,* pp. 253–271. Thousand Oaks, CA: SAGE Publications.

Hall, J., Towers, J. & Martin, L.C. (2018) Using I poems to illuminate the complexity of students' mathematical identities. *Educational Studies in Mathematics* **99**(2), 181–196.

Helme, R. (2019) What are the implications for identity positioning of foregrounding the low prior attaining students' own narrative data? *Proceedings of the British Society for Research into Learning Mathematics (BSRLM)* **39**(3). https://bsrlm.org.uk/wp-content/uploads/2020/01/BSRLM-CP-39-3-02.pdf

Ohito, E.O. & Nyachae, T.M. (2018) Poetically poking at language and power: using black feminist poetry to conduct rigorous feminist critical discourse analysis. *Qualitative Inquiry* **25**(9–10), 839–850.

Staats, S. (2008) Poetic lines in mathematics discourse: a method from linguistic anthropology. *For the Learning of Mathematics* **28**(2), 26–32.

Staats, S. (2017) The poetics of argumentation: the relevance of conversational repetition for two theories of emergent mathematical reasoning. *Research in Mathematics Education* **19**(3), 276–292.

Wortham, S. (2001) *Narratives in Action: A Strategy for Research and Analysis.* New York: Teachers College Press.

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