

## Wading Into Murky Territory: Hunting for Storylines at an Academic Conference

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### Abstract

In this paper we share a process for identifying storylines from the Mathematics Education in Indigenous and Migrational contexts (MIM) conference in November 2022. Drawing from the scheduled presentations and the informal discussions that took place, we identified three connecting storylines: ‘We need more space’, ‘There will be tensions’ and ‘Perhaps it is okay to be uncomfortable’. By examining these three threads, we suggest there is an underlying storyline that connects them: ‘The need for change in the ways we approach teaching, learning, and researching school mathematics’. This process surfaced questions about the relationship between positionality, personal identity and the identification of storylines.

**Keywords:** Identifying Storylines, Dialogue, Bakhtin, Identity, Positionality

### Introduction

Is it possible to identify emerging storylines that develop over the course of a conference? We were challenged to explore this question during the Mathematics Education in Indigenous and Migrational contexts (MIM) conference in Alta, Norway, an international gathering that brought together diverse perspectives from mathematics education researchers around the world. Driven by curiosity and excitement, we accepted the invitation from the MIM project advisory board. In this paper we share our approach to -, and experiences with identifying storylines, how this process relates to personal identity, and the ways such scholarship contributes to furthering our understanding of communication acts.

After a brief introduction the evening before the opening keynote, we began orienting ourselves to the task. We met in person a total of three times: the morning the conference began to define our objective, at the end of the first day to calibrate our approaches, and after the closing symposium to finalize our “findings”. This article draws from our observations at

the conference, subsequent discussions via videoconference, and a discussion carried out over email.

We decided to share our interpretation of identifying storylines through a dialogue format. This approach allowed us to recontextualize our in-person conversations, email exchanges, and online discussions to communicate our findings in a way that approximated how we developed our ideas. Our focus during the conference was on the communication acts that took place, and our reflections throughout this process were driven by the dialogue between us. Moreover, since one of us is heavily inspired by Bakhtin's dialogism (e.g., Bakhtin, 1981; Holquist, 1990), it seemed fitting to explore the possibility of sharing our process using dialogue. To explore an unknown format became our response and answer to the explorative task we were given.

### **Beginnings**

This initial section describes how we became involved in this task. When registering for the conference, we envisioned being participants. Neither of us intended to partake in storyline identification or theory development; however, once the invitation was extended and accepted, both our experiences and perspectives of the conference shifted. Though we may have been asked to identify storylines because of our outsider status, we were attending the conference on the same terms as the other participants. We began to recognise our involvement in a complex process of dynamic positioning. Being provoked to notice storylines as participants of the conference, we never fully transitioned to the space of the insider; at the same time, we were not fully outsiders.

TRINE: How did you feel when you were invited to investigate potential surfacing storylines during the conference?

JULIANNE: When Dave Wagner first approached me to help out with this task, I was both excited and uncertain. Excited, because I enjoy getting involved with a variety of projects, especially those that involve deep thinking. I was also feeling a good deal of uncertainty, as I

wasn't entirely sure what the advisory board was looking for. Dave was vague with details, which is typical when we are working within the supervisor–doctoral student storyline. My uncertainty did not make me feel any less enthusiastic about the idea. I was intrigued by the invitation, in spite of the not-knowing. As a doctoral student you become accustomed to not-knowing.

TRINE: I feel that such uncertainty continues after the doctoral student period as well. Annica Andersson asked me to consider this task just before I headed to the airport to travel to the conference. The case was that I had just a poster presentation to do and registered for the conference at the last minute. I am a newcomer into the MIM-group, and for me the conference was important in learning to know people and becoming more involved with the ideas.

JULIANNE: This is an important point. You had a complex insider/outsider perspective that developed over the course of the conference. In addition to being both a conference participant and an observer, you were a newcomer to the core group of researchers involved in the MIM project. I still don't think of myself as an insider, but I suppose at a certain point I came a bit closer. How did you feel about the idea of doing this side project?

TRINE: Like you said, it was a vaguely defined task we were given, and it had been brought up in the advisory board meeting the day before the conference. That it had been created in the moment made it very tempting to try to do this. I would say that I felt mostly curious, but at the same time uncertainty was part of it. The uncertainty I felt was connected to two things: could I, as a newcomer having limited experiences working with storylines, identify storylines? I felt that I understood the concept and saw how it connected with my previous work, but I had never worked with it. Another reason why I felt uncertainty was that I wondered whether I could capture the storyline that the advisory board would accept. I also didn't know who I would be working with. But despite the uncertainty, the curiosity I felt about going more in depth and working on developing a better understanding of storylines superseded my fear.

JULIANNE: I think that this pre-conference provocation shaped the way that we experienced the conference as both observers and participants. You cannot be asked to notice things and maintain that outsider identity. Still, we both maintained a degree of uncertainty throughout the process. There wasn't a how-to guide explaining the mechanics of recognizing storylines as they emerge during a conference.

TRINE: In order to carry out our mission, we needed to create meaning of the happenings in the conference, the communication that took place within the context of the conference, between the individuals from several contexts. We had to consider several perspectives, alternating between a participant lens and an observer lens. It was useful that we took time to make a strategy, though I remember we found it difficult to tell where the different ideas first appeared.

JULIANNE: Yes, it seemed as though every presentation and ensuing discussion connected in such a way that it became difficult to identify when ideas or storylines emerged. It might be helpful if we elaborate how we defined storylines: how did we know when we identified one?

## Identifying storylines

As we transitioned from accepting the task to planning a course of action, we quickly realized that we were stepping into murky territory. Despite our previous experiences working with positioning theory and feeling confident about describing certain “known” storylines—for instance, the relationship between a doctor and a patient—we struggled to clearly articulate the characteristics that would make it possible to spot one in the wild. It is one thing to describe the function of storylines and the ways they influence our communication choices; it is quite another to confidently declare you have identified and accurately articulated one.

TRINE: I think it is fair to say that we found it difficult to be concrete about identifying a storyline. In one of our first conversations, we shared the same feeling, some degree of uncertainty about storylines. For me, storylines are connected to discourses and different norms/values about how to act/what to do/what to possess/what to say/etc. It resonates with my previous work drawing on Holland et al.’s (1998) theoretical framework of figured worlds. I would say that storylines are the underlying structure that people draw on in communication with the world and shapes their acts.

JULIANNE: Put differently, you might say that storylines are the shared stories that guide our communication choices.

TRINE: Drawing on the work of Beth Herbel-Eisenmann and colleagues we can say that storylines are broad, culturally shared common-sense narratives that function as frameworks for participants to make sense of any communication (Herbel-Eisenmann et al., 2016). Because we are hunting storylines, we need to be aware of where to look. Citing Wagner and Herbel-Eisenmann (2009) storylines are “contestable and contingent in the enactment of any particular conversation” (p. 2). We need to look at multiple spaces between and among participants in the conference, at the dialogues that occur before, during, and after scheduled presentations.

JULIANNE: Within a given context, like our conference, there may be conflicting storylines, dominant storylines, or more subtle storylines. As Wagner and Herbel-Eisenmann (2009) emphasize, storylines are both contestable and contingent. Contestable because different people may or may not act within the same storyline: it is possible to either accept or resist a storyline and enact within it or within a competing storyline. Storylines will also be contingent in the sense that when different people participate in a given interaction, they may not be working within the same storyline. In other words, our interpretation of storylines will be coloured by who we are.

TRINE: We might think of capturing a storyline and presenting it to an audience, which can be compared to freezing the picture in a movie at different crucial moments. When we think about the conference, the frozen picture would include you, me, other participants, and the relations between us.

It is like three threads coming together, and it is within these threads and in the spaces between, that we are trying to capture the surrounding narratives.

JULIANNE: Your description has me thinking about how we conceptualize storylines: do we view them as static, unchanging, and immutable, or do we view them as dynamic, ephemeral, and temporary? I think that our task forced us to navigate the static and the dynamic understandings of storylines (Davies, 2022). Static, in that we felt there was some *thing*, some narrative that could be parsed out from the discourses at the conference. But we also confronted a more dynamic understanding, particularly when we went to articulate the emerging storylines we felt were present. I like what you said about freezing the image of a movie.

TRINE: This is a moment when I feel that I cannot escape how I am affected by Bakhtin's theories. To Bakhtin (1986) being human means being condemned to the dialogic chain: we have no choice, but are instead forced to construct answers. This process of constructing meaning is endless. Meaning can never be finalized, as the dialogic chain will continue with multiple alternatives for how to construct meaning. So when we identify storylines, we are doing that as a response to the happenings in the conference. This is mediated by our personal histories and cannot be considered immutable. We are freezing a picture through our eyes, which is a simplification and represents one possibility.

JULIANNE: Thinking about storylines in this way also raises questions about how to change them, and whether it is possible to do so. I think this draws attention to the difference between an individual thought and a collective belief.

TRINE: Let's illustrate this with our first storyline.

### **Storyline: "We need more space"**

JULIANNE: The first storyline that we noticed was the need for *making* or *creating* space. The idea that we need to make/create space was an important thread that tied many of the conference ideas together. I think it was during the discussion following Kathleen Nolan's opening keynote that this idea first appeared, when she referred to the need for students to have enough space to be themselves and to use their own mathematics. This raises questions about the ways we think about mathematics. For one thing, there are many mathematics teachers who might resist the idea that student identity is related to the learning and doing of mathematics. Others may not even be aware of any relationship between identity and mathematics. But the moment we invite language into the conversation, we are inviting considerations of culture and identity.

TRINE: Yes, the importance of making space for students in mathematics was the first thing we discussed as a potential storyline. We had both made several notes during the presentations that paid attention to how to open up a space for students to be themselves as mathematics learners, even though we were sitting in different areas and were part of

different social circles. Maybe it would be good to try to be very clear about what we mean by the concepts of making or creating space?

JULIANNE: There is a difference between making space and creating space. Making space implies force. It makes me think of telling someone to squeeze over and make room for another person on a bench. And I think we encounter resistance to making space for new ideas because some of us simply don't have the capacity to squeeze. This is where many well-intentioned educators get stuck. The traditional mathematics classroom does not leave any space for individuality, and most educators first learned mathematics within these traditional spaces. This has me thinking about Pierre Bourdieu's (1990) concept of *habitus*, which he theorized as a "durably installed generative principle of regulated improvisations" (Bourdieu, 1977, p. 78) that provides structure to our beliefs, dispositions, and expressions of agency.

TRINE: Ah, interesting you mention Bourdieu. How do you connect the concept of habitus and the storyline about creating space?

JULIANNE: Unlike making space, creating space should be available to everyone. Anyone can be creative. Creating space requires a mindset that acknowledges and welcomes different ways of knowing mathematics. In an educational context, every student begins schooling with a distinct primary habitus that shapes their early experiences with institutionalized learning. Some students appear to be predisposed to experience success at school, while others do not. These "subjective expectations of objective probabilities" (Bourdieu, 1990b, p. 59) reflect a "system of dispositions—a past which survives in the present and tends to perpetuate itself into the future by making itself present in practices structured according to its principles" (Bourdieu, 1977, p. 82). The thing to note is the durability of the habitus. When we discuss the need for teachers to change the way they think about language and mathematics, or the need to adopt a different mindset when thinking about mathematics education more broadly, we are talking about changing the habitus. Whether we talk about teachers needing to make or to create space, we need to recognize that what sounds like a relatively simple concept might be more difficult to embrace for some.

TRINE: I think it makes sense to also add another concept from Bourdieu; *doxa*, which we could connect to the local field and its hidden belief system (Bourdieu, 1977). How students may be alienated from mathematics is something that might not be within the awareness, it is hidden and out of awareness.

JULIANNE: In one presentation there was a concrete example of how teachers might 'make space' in their mathematics classrooms by using "language zones," physical spaces in the classroom where students could speak the language of their choice to communicate about mathematics. The practice of using language zones is a tangible example of what a teacher could try in their classroom. However, it is not a practice that I have seen in most classrooms in my context.

TRINE: Me neither. I think that teachers are very important for changing practice, to create space for students to draw on their own experiences and connect with mathematics in schools. I think that my previous classroom teaching experience made me feel particularly touched by Beth's response to a question about the importance of involving teachers in the research process to achieve change. She said; "It is imperative!"

JULIANNE: The more we discussed the need for space, the more we noticed how our own identities as teachers and researchers were influencing our observations. As a former elementary mathematics teacher in a language immersion program, I remember feeling confined to curriculum objectives, dominant discourses concerning language use, and to the opinions of my colleagues. There was no space to consider other ways of experiencing language and mathematics. There was some curiosity about convincing teachers to “deviate” from the curriculum and explore controversial topics. Some presenters shared that there was room for including important social topics that extend beyond curricular objectives, and that community support was important. This was especially interesting to me, because I no longer feel as though there is insufficient time to include special topics in math class that are not explicitly described in the curriculum. Is this because I now identify more as a researcher than a teacher? This raises questions about how educational researchers can invite teachers to be a part of the process, so that those in the classrooms are empowered to make much-needed changes. This collaboration and shared goals are essential.

TRINE: I agree with you, and again this touches upon the dynamics of insider and outsider perspectives. As we looked for storylines, our positions shifted towards becoming insiders. It is a paradox that we might only be able to see something clearly as we distance ourselves from who we were and the initial experiences that shaped us. Let’s return to how to make change later on.

JULIANNE: For now, let’s move on to the second storyline we identified. Many presenters described encountering tensions when integrating language and mathematics.

### **Storyline: “There will be tensions”**

TRINE: Yes, that there will be tensions captures another storyline from the conference. These tensions seem to be a universal experience, whether we are thinking about changing classroom practices or conducting research. For instance, there was a presentation about the use of collaborative tests in mathematics that surfaced a classroom tension. The participating teacher experienced resistance from parents, colleagues, and administrators when she challenged traditional mathematics testing practices. I remember we talked about how even students may also resist new approaches to mathematics teaching. This raises questions about how to shift perspectives, when changes to previous practices are likely to surface tensions.

JULIANNE: Building from what you said about collaborative tests, a recurring problem to getting buy-in was garnering wider community support. At the micro level, this might be gaining the support of students and colleagues. Community also extends outside school walls and includes parents, community members, and the wider public. So how do you gain community support? The process seems to be culturally embedded, which means that different contexts might require different approaches.

TRINE: Regardless of whether we look at micro- or macro levels, in our dialogues we shared reflections based on the fact that both of us had noticed how there were several tensions emerging in the presentations and discussions. Again, Bakhtin’s theories could be helpful. Bakhtin (1986) sees the world as a site of struggle captured by centripetal and centrifugal forces. The centripetal forces try to unify and promote one way of conceiving of a given

situation. The centrifugal forces enable several possible meanings and truths, which make diversity attainable.

JULIANNE: When working within a minoritized context, there are complex power relations that might not be easily revealed or understood. For instance, one presenter described soliciting the assistance of a well-respected community member to assist with finding participants for their study, which resulted in a miscommunication between the research team and the potential participants. How should researchers navigate these miscommunications, and how do we report them to our colleagues? Questions were raised about naming cultural groups and how to distinguish between “good” and “bad” research. Several presenters described the challenges of conducting research during an evolving pandemic, saying the process was anything but beautiful and might better be understood as exploratory. This struck me. What separates beautiful research from the messy?

TRINE: It was said that there is a need for changing from individual to collective perspectives when we are thinking about doing research related to teaching and learning mathematics. Again, how do we achieve this shift? And is it possible to single out individual perspectives, from the collective? I think Bakhtin would have said no.

JULIANNE: There are tensions when thinking about integrating language, culture, and mathematics. Whether we are thinking of ways to decolonize curriculum, to connect research and practice, or to encourage colleagues to adopt new ways of thinking about mathematics education, there are no straight paths.

TRINE: We talked about these different perspectives and started to wonder whether this could be another storyline of the conference; that there are tensions at different levels when we are looking at the issues of the MIM-conference.

JULIANNE: There is a pervasive and binary, all-or-nothing mentality in mathematics education. We see it when students ask whether they found the “right” answer, when we describe ourselves as being “good” or “bad” at math, or even when we question whether we are teaching things “the right way”. We also found ourselves slipping into a dichotomous way of thinking. While conference goers could be described as being like-minded when it comes to thinking about the sociocultural nature of mathematics, there was a sense of “us” and “them” when thinking about colleagues who existed outside of the boundaries of the conference.

TRINE: Yes, when you say this, I think we can add another layer of tension to those we already have discussed. Even among like-minded participants, there were uncomfortable dissenting opinions. This leads us to the third storyline.

### **Storyline: “Perhaps it is okay to be uncomfortable”**

JULIANNE: There was a particular moment of tension during one presentation that seemed to cause momentary but general discomfort among conference-participants. The audience was asked to consider the appropriateness of incorporating student questions when these questions were founded on racist assumptions. The ensuing discussion seemed to change the tenor of the conference and resulted in the third storyline that we identified: *perhaps it is okay to be uncomfortable*.

TRINE: I remember feeling uneasy with the shifting atmosphere. An audience member strongly expressed how they would never permit students to explore racist-informed questions, that they would “shut it down”. From my memory, you had the same reaction to it. The dialogue between the two continued, with one side arguing that these questions cannot be buried and the other arguing that they must be forbidden, and it was a relief when someone suggested; *perhaps it is okay to be uncomfortable*.

JULIANNE: This simple statement acknowledged the conflicting perspectives and gave us permission to breathe. I wonder now whether this is a concrete example of how to create more space.

TRINE: We both had written down this expression, and we started to recognise how this phrase was becoming a part of the conference. It was used in different settings, by different participants. We wondered whether this could be a storyline about our desire for change. In a way, this relates to the negotiability of storylines and positionings. I think the participants in the MIM-conference do share some common concerns. We are all wondering how to deal with tensions from different points of view in order to create space for change.

JULIANNE: This storyline is about acceptance. We know that integrating language and culture into how we conceptualize mathematics education can be uncomfortable, but it is a difficult reality to accept when you so desperately want to make improvements. This storyline became a rallying call of the conference. I heard it in the washroom at the university, over drinks at the hotel, even during the conference dinner during social conversation. Rather than staying within the confines of conference presentation and discussion, this idea followed us wherever we went while in Alta. And it is an idea that has followed me back home to Canada.

TRINE: I agree! This storyline gives us a way to navigate within the tensions of a contested space in our local contexts outside of the conference.

### **Final Thoughts**

After engaging in a concentrated effort to identify emerging storylines, we became entangled in critical questions that require further study. We need to ask questions about who can and who does identify storylines, and how identity in the past, present and even anticipated future impacts the words we choose to describe them. Scholars interested in storylines would benefit from questioning their assumptions about where and when storylines emerge, how we choose to articulate them, and what this means for future work in the field.

JULIANNE: Before we conclude, it bears mentioning that there was a flow to the storylines we identified. The first storyline seemed to lead us to the second, and the second storyline led us to the third.

TRINE: This connection made us reflect upon whether there could be an overarching storyline that all three are derived from. They all arise from a shared belief in the need for change in the way school mathematics is enacted across the different contexts presented in the conference. Once we become aware of the need for change, it is impossible to ignore it. More importantly, it becomes an ethical responsibility to include educational stakeholders in the discussions. As researchers we have the opportunity to invite others into what we do, to blur the lines between insider and outsider. We can connect stakeholders from different layers who are involved in the field of mathematics education.

JULIANNE: Moreover, our discussion has stirred up questions about when and how a storyline emerges: what are the necessary preconditions?

TRINE: Taking a step back and thinking about how we identified the three storylines of the conference, I find it really interesting how they developed in different ways. The first storyline emerged from similar notes from the presentations. The articulation of it made us think about the difference between making space and creating space. The second storyline appeared in our conversations, when we shared reflections of our experiences about the different layers of tensions that emerged in the presentations and subsequent discussions. The third storyline was different. It emerged during a moment of resistance within the conference, and we felt it like the rupture of a flow. It was like the two first storylines slowly developed, while the third storyline hit us. It stood out more, both in the moment of time but also in the way the words spread, and we felt the power of saying “*perhaps it is okay to be uncomfortable*” ripple throughout the rest of the conference.

JULIANNE: There is power in words. When we started naming storylines, we tried to preserve the meaning of each storyline. This raised questions about which words to use and how to convey the sentiment of something that was embedded within a very specific context. Searching for storylines is one thing, but there is a process of recontextualization that occurs between an informal discussion and a formal written composition. As we moved from our initial discussions towards composing this paper, we discussed whether we should be consistent with maintaining the same voice in each storyline. Specifically, we wondered whether the first storyline should be phrased “*there needs to be more space*”. We decided to keep the word *we*, because it centers the people involved and best captures what we observed. But should this be the priority when naming storylines? We still do not know.

TRINE: Were these storylines inevitable, or did we notice them because of previous storylines that influenced our thinking? Would others choose the same words, or would they articulate the storylines differently? These are not simple questions to answer.

JULIANNE: Even as we share our “findings” in dialogue format, we need to caution against assumptions that extend beyond the boundaries of the conference. The storylines that we identified may not be the same storylines that others would have noticed; moreover, had we identified a different storyline as the initial thread, it may have changed what we subsequently identified as the other threads.

TRINE: The implication for this, within the spirit of Bakhtin, is accepting that there is no single truth. Dialogism implies awareness on different levels, being aware of how we are all captured in centripetal and centrifugal forces. The iterative process makes it possible to reflect and re-reflect on what is happening within the relational interplay. In identifying these

three storylines, we have made choices, orchestrated different voices and written through our personal histories. We do not pretend to report a single truth; instead, we hope that our dialogue brings readers to the conference through our eyes. Moreover, our exploration of the emerging storylines of the MIM-conference is not finalized; rather, it goes beyond looking back at the conference and extends into future dialogues about mathematics education in Indigenous and migrational contexts.

This dialogue is our response to the explorative task we were given. By sharing how we negotiated meaning throughout the process of our “hunt,” we pushed the boundaries of how storylines are identified and understood. We urge readers to continue the dialogue by asking questions about the relationship between positionality, personal identity, and the identification of storylines.

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