



positions on mythopoietics

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What is mythopoiesis?

A tension has always existed between the two ancient Greek concepts of *mythos* and *logos*. Mythos is concerned with the cultural, imaginal, and emotional; logos is related to the rational, pragmatic, and scientific –with what are often called *facts*. One could argue that our current frame of education is overly concerned with the logos, with its focus on standardization and corporate metaphors. *Mythopoesis* is a form derived from the Greek word for *myth-making*. It is the process whereby “the reflective imagination is actively evoked and personal and social myths brought forth” (Wright, 2008 p. 95) “in order to generate forms of transformation” (Healy, 2008 p. 177). This imaginal state opens a space where old stories may be transformed in order to open new understanding.

Thoughts from the Field of Educational Research

Mythopoesis has relevance for education because education as a process is a powerful contributor to cultural myth-making (Aadlandsvik, 2009). We live in stories that make up our lives and provide different ways of knowing.

For Macdonald (1995) the mytho-poetic is a type of imaginative, perhaps Romantic, thinking, identified and associated with the work of humanistic and holistic educators, who rely upon “insight, visualization, and imagination”.

In complexity thinking for example there exists a mytho-poetic attitude and ethos at work in challenging linear, reductionist, hierarchical, determinist narratives and in offering different geometrical conceptual metaphors for image-thinking (Khan, 2013).

In Haggerson’s view (2000), “the mytho-poet is one who studies, interprets, and reinterprets myths about education, schools, learners, teachers, curriculum – and then represents these interpretations in poetic forms”. She establishes mytho-poetic work as being committed to transforming and emerging from creative engagements with and across the (inter/intra) personal, socio-cultural, ecological, and spiritual life- worlds.

To comprehend human understanding (a realm of great concern for education) we need contributions both from the sciences and from art, the objective and the subjective. Otherwise “we are left with a monocular vision; both are necessary to have depth perception” (Eisner, 1979, p. 198).

The Question

In what ways, if any, might concept study (or other domain of inquiry in mathematics education) be participating in mythopoiesis in mathematics education? What, if any, is the potential value in this framing?

The Trickster and the Slow Dell

Craig Dwyer

I am reminded of the work of Garrison and his look at the trickster archetype (Garrison, 2009). Teachers find themselves stuck in a hyper-bureaucratic structure on a day to day basis. Just yesterday, I spend a good four hours writing and editing report cards. Next week, I will receive notes from another member of "administration" and go through all of them again. I do this on a slow old Dell desktop computer, because the final report must be formatted in an older version of Excel that is not compatible with my laptop or iPad. Everytime I click on a cell to edit the comment, I have to wait for about 15 seconds for the cell to load the comment. Multiply this by 13 students and about 10 cells per student, and you have a great chunk of time spent waiting.

Now, I am not against the process of report writing. However, I have a very open dialogue with each and every parent in my class, and they know exactly what I am going to say. As do my students. So, for whom am I writing these reports? I meditated on that question as I was waiting for the cells to load, and the obvious answer is for the bureaucracy. To check a box and say it was done, and it is filed in the cabinet, or on the server.

My reflective imagination while writing reports (which are well intended artifacts to evoke reflection in the learner, and hence growth) is brought to a place where the prevalent *mythos* surrounds such didactic objects such as data administration, routine tasks, pointless acronyms, professional jargon, etc. I feel like I am stuck in George Orwell's *1984*, or Terry Gilliam's *Brazil*, or even worse, *Office Space*.

So what does this have to do with concept study? Truthfully, I don't know. Stories are a part of everything, and if mythopoetics is a way to view and open spaces around those stories, then perhaps it may allow us a slightly different lens to see how our cultural myths impact our understanding of mathematical concepts. Or maybe, if we view Concept Study as more than teachers deconstructing mathematical knowledge, and instead view it as a form of learning, we may arrive in a space that has some interesting paths. Instead, we may see Concept study as a way of being, not with mathematical concepts, but with collectives of people who are intent on learning. When you have collectives of people together, with the goal of learning; stories, myths, and poetry become a shared phenomenon and a way to re-imagine our learning as so much more than just the *logos* of our bureaucracy, but rather the *mythos* of our soul. This *mythos* would be a different way to represent the learning, not through stock comments, jargon and acronyms, but rather through re-imagined spaces and the poetry of the moment. It is less scientific and based on "*best practices*", and more insightful, based on the imaginative realm.

Those are reports I would love to write.

Amy

Like Craig I am in the middle of writing report cards as well and my mind boggles at how a number on a select part of the work my students do (because not everything is done for marks) can truly reflect what my students have really integrated into their long term memory. I have some students who get high marks but I am really uncertain if they have learned anything this year because they never challenge themselves past what learning they started the school year with, and others that I know have learned a lot but submit no work so therefore have lower marks due to the spreadsheet format our report cards use to calculate marks. As well, I struggle with the difference between an eighty and an eighty-one.... while they appear different I wonder if that difference is a true difference or just a difference created by our school system's over-reliance on logos.

I wonder if a concept-study could be a better way to measure growth. Looking at the number of connections that a student makes over a period of time. Those students who are adept learners will make many on their own but will need support to make some; those learners who struggle with learning due to language barriers, learning challenges, gaps in their previous education, or are missing prerequisite skills may make few connections on their own and need support to make more; and there are students that will fall anywhere in between on a fluid continuum that changes based on the situation at hand. So then the question is do we "assess" for number of total connections, number of new connections, or ability to use those connections in a variety of situations?

When I think of it closely, I guess my dream to create a Math video game is my attempt to move how students learn mathematics out of the logos and into the mythos. To create a story, to spark their imagination, to have them, and I speak metaphorically here, dream mathematically. Research has shown that people remember more when what they are learning a connection to prior knowledge or from emotional connections (Sprenger, 2010), therefore mythos and not logos should be our guiding force if we wish to create a future generation who is mathematically literate in more than just a textbook problem kind of way.

Mythopoesis: A Montessorian Perspective

Jen

Looking at mythopoesis, I was surprised (saddened, really) to be reading about this perspective so late in the program. Mythopoesis, or myth creation, is an essential means of introducing/creating humanistic experiences for students to engage/connect with concepts and ideas through story. This practice opens and invites dialogue and discourse. Specifically, Khan (2011) concludes that mathematics education should both seek to “demythologize” and “remythologize” mathematics. Along this vein, students should be encouraged to question beliefs, theories and ideas; this discourse may expose misconceptions, partial understandings and conviction to beliefs. The idea of co-creating or co-constructing shared mathematics stories is appealing, considering the benefits explored through complexity science’s *collectivity*: the richness in discussion reflects the group’s internal diversity and redundancy (Davis, Sumara & Luce-Kapler, 2008).

Unfortunately/fortunately, I am biased in my experience and opinion of the value of mythopoesis as an avenue for engaging in (mathematics) inquiry in education. For nearly ten years, I have considered myself a Montessorian. It is an educational philosophy that I feel strongly aligned with in beliefs and practices. The Five Great Lessons are part of the Montessori curriculum and are fundamental to the pedagogical practices in the classroom.

Many Montessori educators, sadly not all, teach-from/connect-to the big ideas introduced through the Great Lessons. In my Montessori training, I learned that Maria (Montessori) saw great value in offering the students impressionistic, overarching stories about the creation of the universe, life on earth, humans, language and numbers. Montessori was a scientist and pedagogue in her own right. If you are looking for an intriguing, controversial story to spur discussion in a classroom, what better question is there than how it all began? It is not surprising that Leonard (2008) references Montessori’s approach to teaching mathematics, science and history (*cosmic curriculum*) as an example of imagination and mythopoesis at play.

In considering the big question: *what do you hope to achieve as a teacher*, might mythopoesis be a means of co-creating memorable and meaningful experiences that will resonate with students long after they have left your classroom?

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