



Invitation: Response to Plenary

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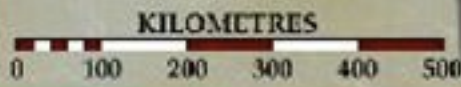
University of Alberta

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Maturana

- Everything that is said is said by an observer (1988, p. 27)

METIS NATION OF ALBERTA, 1994



Acknowledgements

- The land that we are standing on and I'd like to acknowledge the ancestors who've taken care of this land so that we can be here today together.
- Traditional territory of the Odawa and the Potawatomi Nations, all Anishinaabe peoples of the Algonquin language groups
- In a metaphorical sense I'd also like to acknowledge my ancestors - the 'ancestors' who've 'taken' care of me - the teachers who've touched my life and helped me to 'figure out who I'm meant to be.'

- Family ancestors: Great grandparents, grandparents & parents
- Sustained conversations I've had:
- Children, teachers, & teacher candidates I've worked alongside in mathematics education
- Drs Tom Kieren, Jean Clandinin, Grayson Wheatley & Margaret Haughey

Acknowledgements

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- Drs Vera Caine; Sandy Dawson; Dwayne Donald; Janice Huber; Lisa Lunney Borden; Joyce Mgombelo; M. Shaun Murphy; Elaine Simmt; Gladys Sterenberg; Angela Ward

Professor Gerdes tells the story

- Of the first mathematics teacher education program in Mozambique, just after independence
- When the government found 21 pupils to learn how to teach mathematics in 9 months; only 1 pupil 'kind of' liked mathematics (none wanted to be teachers)
- The pupils were asked the question: Why do you not like mathematics?

- 'Colonial,' Violent
- Useless
- Strange, alien, 'without roots in our African society'

Within Indigenous Communities

- 'Colonial,' Violent
- Useless
- Strange, alien, 'without roots in our Indigenous society'

Within Any Community?

- 'Colonial,' Violent
- Useless
- Strange, alien, 'without roots in our xxxx society'

Pauluus Gerdes' work

- ...acknowledged that the culture of people, of artists, of artisans constitutes an endless source for mathematical research and Mathematics Education. Mathematics professors of all levels can learn, from their students, what is characteristic of their cultures. The students can show the way to achieve a practice. The makings of artisans, fishermen, peasants, in short, of all the groups that master a practice, are based on knowledge that has been developed by arduous paths, over generations. I emphasize in a very special way the exemplary attention that Paulus dedicated to women in the evolution of African cultures...by Ubiratan D'Ambrosio, HPM Newsletter, December 2, 2014

- “As an academic, Paulus was responsible for numerous contributions to the theorization of craft and the formulation and solution of mathematical questions of the imaginary and folk craft. All his contributions have important implications for pedagogy with strong socio-cultural roots.”
- Ubiratan D’Ambrosio, HPM Newsletter, December 2, 2014

- Critical responses to enduring challenges in mathematics education

Enduring Questions of Prof Gerdes

- Who does mathematics?
- Who invents mathematics?
- What is 'mathematical thinking'?
- Who or which culture(s) define(s) it?

Culturally Relational Practices

- Enacting *miyo-wichitowin* through culturally relational research practices.
- (Donald, Glanfield, Sterenberg, 2013)

What is *miyo-wichitowin*?

- Cree concept
- a healing energy or medicine that is generated when we are actively together with the intention of honouring and respecting the relationships we are enmeshed within. This Cree core value emphasizes that the establishment and recursive renewal of good relations is necessary for people to work well together. The enactment of *miyo-wichitowin* helps expand the circle of good respectful relations, individually and collectively, and makes it possible for good thoughts, feelings, and visions to emerge and find expression. This enables us to live good lives.

3 dimensions of culturally relational research practices

- Co-researching with the community
- Acknowledging the community's history and contemporary practices
- Shifting our own identities as researchers
- Donald, Glanfield, & Sterenberg, 2013

As mathematics educators

- Critical responses to enduring challenges in mathematics education

Enduring questions.....

- How is it that we live our life's as researchers in a culturally relational way?
 - Co-researching with communities
 - Acknowledging community histories and contemporary practices
 - Acknowledging our identities as researchers
- Donald, Glanfield, & Sterenberg, 2013

Invitation

- To start inquiring into the stories you tell about communities, teaching and learning mathematics, and mathematics – its history and culture
- To start having conversations about those stories
- To start living and telling those stories in different ways
- To, come to know, understand, and honour philosophies that underlie the cultures of communities requires recursive ethical engagement with people in ways that enact *miyo-wichitowin*.

Maturana

- Everything that is said is said by an observer (1988, p. 27)

References

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Thank you!

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