



The Ancestral Science Podcast explores scientific topics through conversations between Knowledge Keepers and Scientists, while *experiencing* the origins and depth of science on and with “the Land”. Join us as science COMES ALIVE when knowledges are shared alongside ancestor plants, rocks, animals, and rivers, creating connections between personal, Indigenous, and global science.

The Ancestral Science podcast is a place for *everyone* to see themselves in science, to be inspired by the SCIENCE that is all around them and expand the definitions of both *ancestor* and *science*.

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### SEASON 3: Episode 13 (re-launch) with **Dr. Michael Yellow Bird**

“Healing Frequencies of jokes, scents, movement, and a crackling fire”

It’s been a cortisol-inducing year, and with the holidays approaching, we thought re-launching a mindfulness episode we recorded in December 2024.

We were grateful to speak with Dr. [Michael Yellow Bird](#), citizen of the Three Affiliated Tribes, the Mandan, Hidatsa, and Arikara Nations and grew up on the Fort Berthold reservation in White Shield, North Dakota.

We began with a guided meditation to ground ourselves and focus on the present, then we explored a mathematical equation for decolonization, how Auntie jokes can protect the brain, the effects of colonization on our bodies and brains, the smell of bacon and well-being, mindfulness and systemic racism, and ancestral eating.

Remember, you can support the pod and rock some unique Indigenous Science merch at [www.relativesciencecircle.com/shop](http://www.relativesciencecircle.com/shop), all proceeds go towards Knowledge Keeper honoraria, following protocols, and keeping the pod going.

Please like, share, follow, and rate the pod, it goes a long way to share this knowledge.

#### **SHOWNOTES:**

##### **-What is science to you?**

- Humans have always done science and used scientific methods
  - looking at a problem from different angles
  - “literature review” by talking to different people and communities about different problems and potential solutions.

##### **-importance of REST**

- resting your mind moves blood from left to right brain
- this is when aha moments happen

### **-Equation for Decolonization** (Michael is working on this...stay tuned...)

- what is the measurement for when this happens?
  - eg. when land, language, and culture is returned to Indigenous peoples
- a healthy community begins with respect and reciprocity
- there is never 100% decolonization
- knowledge is always borrowed from...
  - the forests, the rivers
  - other peoples and cultures
  - this is about mimicking and learning from the Land and others
    - like the snake or grass dance

### **-Neurodecolonization**

- the brain has been colonized through fear of others (in order to survive)
  - based on threats to culture, language, family, well-being
  - it is natural to distrust the 'unknown'
  - Indigenous people have continued to fear and continued to be oppressed while being treated in stereotypical ways.
  - those with power control the narrative
- how can the brain be decolonized?
  - by paying attention to the moments of fear and these feelings

### **-The Body and Colonization**

- colonization damages DNA and the brain which relates to poor health outcomes
- colonization has removed traditional practices in relation to the land, movement of the body, migration patterns, being outside/on the land...
- this leads to obesity, increased glucose, high blood pressure, increased dementia through lack of proteins releases during motion and exercise.

### **-Laughter and Healing**

- when you laugh you release a higher frequency that is connected to a release of serotonin neurotransmitters. This of course makes you happy but also releases a protein that protects your brain from pain.
- This is why Native Jokes are so amazing! So remember to embrace laughter, all those Auntie jokes and unique Indigenous cultural teasing, and learn about the sacred clowns from your area!
- humour has been colonized.

### **-Frequencies & Memory**

- fragrance frequencies and memory
  - smells increase memory by up to 200%
  - think of the smells that evoke positive memories, embrace those to evoke well-being
  - connect with smells of your past, childhood, or even that connect with your Ancestral Lands.
- dancing and singing frequencies also are healing

- fire as firewall
  - smells, sounds, feeling of a fire evokes feelings of protection
  - fire kept predators away

### **-Mindfulness & Systemic Racism**

- everyone can be mindful
- “[The Relaxation Response](#)” by [Dr. Herbert Benson](#)
  - “I am beauty”
  - these positive statements express genes that improve health and lower stress genes
  - create mindfulness changes
- “[Defunding Mindfulness: While we sit in our cushions, Systemic Racism runs Rampant](#)” by Michael Yellow Bird, University of Manitoba; Maria Gehl, ZERO TO THREE, Washington, DC; Holly Hatton-Bowers, University of Nebraska-Lincoln; Laurel M. Hicks, University of Colorado-Boulder; and Debbie Reno-Smith, Victor, Inc., Riverside County, California
- Mindfulness** changes the [temporal-parietal junction](#) in the brain, this leads to...
  - increased understanding of others
  - increased emotional intelligence
    - notice more when people are in distress
  - this mitigates negative feelings
  - increases compassion
  - activates the insula cortex which allows you to :
    - better deal with conflict
    - open you up more
    - increases social and emotional learning
- when there was NO written culture and stories/knowledges passed on through oral communication...
  - there was no systemic racism
  - people could be more reflective (instead of reactive)
  - more meditation practices to regulate emotions, hormones, empathy, and compassion.
- When there is mindfulness, the self-identity part of the brain shrinks!
  - focus shifts from ME to US
  - Us is then about community, rocks, land, animals, cosmos
  - [Dr. Andrew Newberg](#) speaks about transcendent experiences
  - “[Neuroscience, near death experiences, and how god changes the brain](#)” by Dr. Andrew Newberg (Youtube)
  - this is how we can better connect with the Circle of Life
  - like how Indigenous people had ceremonies for hours or days at a time, and had transcendent experiences, almost like psychedelics.

### **-Mindfulness & A.I**

- humans and machines coming together is A.I
- A.I can make us 1000x smarter if we facilitate with compassion
- Ray Kurzweil “[The last 6 decades of AI](#)”

-this is an existential opportunity, but like all “new technologies” we need to recognize both the good and the bad. Fire is both harmful and helpful.

### [Indigenous AI](#)

#### **-Ancestral Eating**

-before agriculture, humans migrated to eat. They followed animals and cycles and season, relying on running, movement, and calories to be successful.

-humans had to be diverse in their eating, and this was mostly plants and less animals

-humans developed a gene that allows for weight to be put on quickly because of the importance of calories and sometimes limited access. This has led to the evolution of obesity.

-this is also why humans love nutrient dense food like animal fats, we want and crave salt, sugar, and fat.

-humans had to take advantage of these for survival!

-“[Decolonizing Fasting to Improve Indigenous Health](#)” Dr. Michael Yellow Bird

-“[Not for Ceremony: Decolonize your Feeding by Fasting](#)” Interview by Dr. Michael Yellow Bird

#### **-Additional resources** from/by Dr. Michael Yellow Bird:

-“[Decolonising Social Work Education: Memory, Haunting and Critical Hope in the Nordics](#)” UPCOMING NEW BOOK by Kris Clarke, Michael Wallengren-Lynch and Michael Yellow Bird.

-[overview](#)

-“[Defunding Mindfulness: While we sit in our cushions, Systemic Racism runs Rampant](#)” (2020) by Michael Yellow Bird, University of Manitoba; Maria Gehl, ZERO TO THREE, Washington, DC; Holly Hatton-Bowers, University of Nebraska–Lincoln; Laurel M. Hicks, University of Colorado–Boulder; and Debbie Reno-Smith, Victor, Inc., Riverside County, California

-“[All our Relations: Four Indigenous Lessons on Mindfulness,](#)” (2021) There’s healing in acknowledging our interconnectedness. Four Indigenous wisdom keepers share how their practice helps them remember.

-“[Lecture by Michael Yellow Bird](#)” (2023) Brown University (youtube)

-“[Neurodecolonization and Mindfulness with Dr. Michael Yellow Bird](#)” Prison Yoga Project (2023) (youtube)

-“[Meaningful mindfulness: Social work dean promotes technique for positive impact, both individually and collectively](#)” (2022) by Sabrina Carnevale

-“[Healing through Ceremony](#),” Michael Yellow Bird and Dr. Anita Sanchez

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Want more Indigenous Science Resources? Check out [Relational Science Circle](#).

Want to learn more about Indigenous Science, Indigenous Science/Mathematics Teacher PD sessions, or have an idea for a guest or topic for the Ancestral Science Podcast, email [relational.science@gmail.com](mailto:relational.science@gmail.com)

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