

ANCESTRAL SCIENCE PODCAST

SEASON 2: Episode 3 (audio/video)

with **Dr. GREGORY CAJETE**

“OG Science of corn calendars, seed ceremonies, & sun daggers”

It was a warm late spring morning, just before solstice, filming on Treaty 4 Lands within the beautiful Fort Qu'Appelle Valley.

We were grateful to speak with Dr. Gregory Cajete, Tewa from Santa Clara Pueblo, New Mexico about how Indigenous Science is truly the OG (original) science and his life work of weaving together Indigenous and Western science. We spoke about the connections between corn, seeds, and the cosmos, biophilia versus biophobia, creation stories and science, being in relationship with plants and animals, sun daggers and the Solstice Project, and quantum thought.

Remember, you can support the pod and rock some unique Indigenous Science merch at www.relationshipsciencecircle.com/shop, all proceeds go towards Knowledge Keeper honoraria, following protocols, and keeping the pod going.

SHOWNOTES:

PUEBLO REVOLT of 1680

- gained sovereignty over homeland to retain culture, ceremonies, and languages
- they were less impacted by colonization

<https://indianpueblo.org/a-brief-history-of-the-pueblo-revolt/>

<https://www.history.com/news/pueblo-revolt-1680-popay>

GROWING UP ON THE LAND

- learning about plants and medicines from grandmother, on the land
 - "I was always outside"
 - connecting with the natural agricultural cycle
 - dances, ceremonies that represent different cycles of the corn- the corn calendar
- <https://www.cloudchiefcompany.com/kachina-and-calendar-of-hopi-ceremonies>
- being in connection with the natural world is foundational knowledge, an internalization of a passion to learn from and with the Land

BIOPHILIA

-the innate human tendency to be drawn to and connect with nature and the Land. It is the LOVE of Nature.

-"Biophilia" (book) by E. O. Wilson

-"Biophilia: E.O Wilson's Revelation on our Deep Rooted Connection to Nature" (article)

<https://lifeafter.life/article/biophilia>

-Wilson's deep connection with ants (which got Cajete interested in his research because of his cultural connection with ants) began with his fascination with ant communication through chemicals and insect parent care

"Revealing its Natural Readiness to Indigenize," (article) by G. Cajete

<https://cjee.lakeheadu.ca/article/view/1071/664>

"Cultivating Biophilia" (article) http://www.susted.com/wordpress/content/cultivating-biophilia-utilizing-direct-experience-to-promote-environmental-sustainability_2015_03/

BIOPHOBIA

-the fear of nature

-Western/global science often requires a disconnect between the reality of the Land and the sanitary lab, evoking a type of fear of nature while also creating a hierarchy of humans being better than nature. Doing science in a lab disconnected from relationality, the land, and the web of life. Indigenous science is being within these relationships, within the web, on the land, with the insect and animal ancestors.

ART and SCIENCE

-Pueblo Pottery <https://www.indianpueblostore.com/blogs/native-art-artists/pottery-techniques-styles-from-across-the-pueblos>

-Pueblo Clay: America's First Pottery <https://www.amoca.org/past-exhibitions/pueblo-clay-americas-first-pottery/>

-deep connection between clay, the land, stories, and art

-the "instinct of creativity"

-there isn't that big of a division between art and science

PLANTS have a SPIRIT

-they have a spirit, they give humans life, we have a responsibility to the plants. This is part of the human contract!

-Pueblo irrigation systems <https://www.kunr.org/energy-and-environment/2023-05-11/new-mexico-pueblos-centuries-old-irrigation-system-tested-drought-wildfires>

-"Ancestral Pueblo Agriculture" <https://www.nps.gov/azru/learn/historyculture/heritage-garden.htm>

NATURAL CYCLES

-seed, plant, hunting/animal migration cycles

LOOK TO THE MOUNTAIN (book) by G. Cajete

-science in school didn't include science of the Land

-using plants for food and medicine for survival- connecting biology with Indigenous knowledge

-science is relational, it is about relationships to animals and plants and beyond

BUREAU of AMERICAN ETHNOLOGY (1895)

-at this time, situated at the Smithsonian, and sent out anthropologists, astronomers, biologists, archaeologists, botanists, ethnologists to Indian Country to "collect knowledge," under the assumption that Indigenous people would disappear within the next generation

-it is a collection of very comprehensive knowledge

-they reported back all the knowledge they "found" and documented it

The SEVEN ORIENTATIONS/DIRECTIONS ([PDF](#))

-seven orientations of scientific knowledge (by G. Cajete). in "Look to the Mountain," pg 193-203

-Seven Directions: Centre (heart), East, West, South, North, Below, Above

SUN DAGGERS

<https://www.ancient-origins.net/history-ancient-traditions/sun-dagger-0016806>

<https://earthstonestation.wordpress.com/2014/09/25/chacoan-culture-archeoastronomy/>

-The Solstice Project- <https://solsticeproject.org>

-"Picture Rocks Sun Dagger" (article) B E. Schaefer, James Stamm

https://apod.nasa.gov/apod/image/2008/PictureRocks_Sundagger_JAHH.pdf

LUNAR CYCLE

-the sun daggers also show the 18.6 year lunar cycle

https://www.researchgate.net/figure/The-186-yr-lunar-nodal-cycle-and-study-locations-The-Earth-spins-about-axis-A-and_fig1_316219532

[The-Earth-spins-about-axis-A-and_fig1_316219532](https://www.researchgate.net/figure/The-186-yr-lunar-nodal-cycle-and-study-locations-The-Earth-spins-about-axis-A-and_fig1_316219532)

-instead of a "dagger of sunlight" here it is a "dagger of moonlight" during a full moon!

SPIRIT and SCIENCE

-spirit is energy. everything manifests energy, where everything is in the process of formation of energy

-living energy as "light"- as this light turns into matter, this is quantum

-light is also "thought" which has energy within itself too. Life is its purest within this light

-everything begins with a thought

LEROY LITTLE BEAR

-Blackfoot Physics https://www.youtube.com/watch?v=o_txPA8CiA4

<https://www.youtube.com/watch?v=Xz2QxvWcnXI>

INDIGENOUS SCIENCE is for EVERYONE

-"Science is the study of life, that life principle, that life that animates everything"

-people are changing their "thoughts" about Indigenous/Native Science, of which can change reality, which is a good thing!

-education of science should include CREATIVITY in thinking and problem solving, which is Indigenous Science

Dr. Gregory Cajete's Books and Publications:

"Native Science: Natural Laws of Interdependence" (book)

"Look to the Mountain: An Ecology of Indigenous Education" (book)

"Indigenous Community: Rekindling the Teachings of the Seventh Fire" (book)

"Diné Perspectives: Revitalizing the Reclaiming Navajo Thought" (book)

"Spirit of the Game: An Indigenous Wellspring" (book)

"Critical Neurophilosophy and Indigenous Wisdom" (book)

"Igniting the Sparkle: An Indigenous Science Education Model" (book)

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