DECOLONIZING THE MIND: HEALING CREATING WELLNESS THOUGH MINDFULNESS NEURODECOLONIZATION

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As you will see in this presentation colonization has caused a lot of trauma among Indigenous Peoples.

Mindfulness and neurodecolonization can heal the traumas caused by colonization
DECOLONIZING THE MIND: WHAT DOES IT MEAN?

- A colonized mind is one that has been oppressed and been taken captive by disturbing, intrusive and false thoughts and beliefs. A colonized mind creates greater confusion, fear, low self-esteem, and destructive behaviors.

- Decolonizing the mind refers to the use of approaches that restore balance, harmony, and resilience to one's mind, leading to healthy outcomes.
One of the most important event and processes that have changed Indigenous well-being is Colonization

Colonization 101
Contamination is the initial exposure to something that is foreign to an organism.

An infection means that germs are in or on the body and make you sick, which results in signs and symptoms such as fever, pus from a wound, a high white blood cell count, or pneumonia.

Germs can also be in or on the body, but not make you sick. This is called colonization. People who are colonized will have no signs or symptoms. They feel fine. MRSA can cause infection or colonization.

Exposure to ideas, beliefs, practices that are harmful and foreign to a culture.

Ex: Mainstream education is superior to Traditional education

After a while you adapt to the belief that mainstream education is superior and you send your kids to Harvard. You have become colonized.

The harmful or mismatched ideas, beliefs, and values are forced upon you with bad results.
Colonization: Human to Human

It is a traumatic experience. It involves invasion, slavery, murder, kidnapping, sex trafficking, removal, genocide, loss of territory, displacement, and loss of human and cultural rights…
EARLY COLONIZATION: GENOCIDE IN HISPANIOLA, CHALLENGING THE MINDSET AND HISTORY

HUMAN v. HUMAN COLONIZATION:

• The invasion and subjugation of one group by another.

• The action or process of settling among and establishing control over the Indigenous people of an area.

• The action of appropriating a place, or domain for one's own use.

• Control and manipulation of one’s beliefs, values, ethics, ways of being
SUBJUGATION OF INDIGENOUS PEOPLES STARTED LONG, LONG AGO: DOCTRINE OF DISCOVERY, 1493

Papal bull: (May 4, 1493) Inter Caetera

- 6 months after Columbus’ ‘Discovery’
- Pope Alexander VI calls for “barbarous nations” to be “subjugated” and brought to the Catholic faith and Christian religion “for the propagation of the Christian empire” (“imperii christiani”).
- If a Christian enters the lands of non-Christians their lands become the possession of the ‘discoverers.’
19TH CENTURY COLONIALISM: MANIFEST DESTINY, COLUMBIA, AND “AMERICAN PROGRESS” (JOHN GAST, 1872)
In 1882 U.S. Interior Secretary Henry M. Teller, ordered an end to all “heathenish dances and ceremonies” on reservations due to their “great hindrance to civilization.”
"...there is no good reason why an Indian should be permitted to indulge in practices which are alike repugnant to common decency and morality; and the preservation of good order on the reservations demands that some active measures should be taken to discourage and, if possible, put a stop to the demoralizing influence of heathenish rites"

---Hiram Price, Commissioner of Indian Affairs, 1883
In 1892, Commissioner of Indian Affairs Thomas J. Morgan sought to further suppress Native religions by ordering penalties of up to six months in prison for those who repeatedly participated in religious dances or acted as medicine men.
19TH CENTURY COLONIALISM: THE INDIAN “PROBLEM” - ABDUCTING NATIVE AMERICAN CHILDREN
To aid in their assimilation to U.S. Anglo culture, boarding school administrations “forbade, whether in school or on reservation, tribal singing and dancing, along with the wearing of ceremonial and ‘savage’ clothes, the practice of native religions, the speaking of tribal languages, the acting out of traditional gender roles” (Hultgren, 1989)
19th Century to Present-Day Colonialism: Taking of Indigenous Peoples Lands
CHANGING THE GENETIC EXPRESSION OF INDIGENOUS PEOPLES: HUNGRY CANADIAN ABORIGINAL CHILDREN WERE USED IN GOVERNMENT EXPERIMENTS DURING 1940S

- https://www.thestar.com/news/canada/2013/07/16/hungry_aboriginal_kids_used_unwittingly_in_nutrition_experiments_researcher_says.html
HOLOCAUST SURVIVORS PASS THE GENETIC DAMAGE OF THEIR TRAUMA ONTO THEIR CHILDREN

Phips Proclamation (1755)

- “For every Male Penobscot Indian above the Age of twelve years that shall be taken within the Time aforesaid and brought to Boston Fifty Pounds.
- “For every Female Penobscot Indian taken and brought in as aforesaid and for Every Male Indian Prisoner under the age of twelve Years taken and brought in as aforesaid Twenty five Pounds.
- “For every Scalp of such Female Indian or Male Indian under the Age of twelve years that Shall be killed and brought in as Evidence of their being killed as aforesaid, Twenty pounds.”

Source: Phips, "A Proclamation"
When a dam changes the ecology of the river it changes the river which changes the ecology of the people. It disrupts ceremony, food and water sources, and maybe most importantly, it changes the human microbiome which is critical to health.
What drives these children to their own death?

“I think that the number one reason is the extreme poverty and culture of violence that the federal government instituted here, through all the years of oppression and forced assimilation into non-Native culture. Basically just putting us into reservations which make us invisible” (Inila Wakan Janis, 2015)
21ST CENTURY COLONIALISM: RESISTANCE TO THE DAKOTA ACCESS PIPELINE (DAPL), STANDING ROCK, NORTH DAKOTA
Deep Colonization: Intergenerational Trauma

Colonization, depending on its features, can drastically change our brain, genetic expressions, telomeres length, microbiome, and deep cellular, enzymatic, and molecular structures and processes.

The disturbances change the deep identities of the colonized and can be passed onto future generations.
There is evidence that chronic stress chemicals floods the brain with an enzyme (protein kinase C) that breaks down delicate the dendritic spines of the neurons in the prefrontal cortex. Dendritic spines are associated with memory and learning. (Chena, Hentera, and Manjib, 2009).

They can Repair when stress is Eliminated
A telomere is a region of repetitive nucleotide sequences at each end of a chromosome, which protects the end of the chromosome from deterioration or from fusion with neighboring chromosomes.

Telomeres protect our genetic data, make it possible for cells to divide, and hold some secrets to how we age and get cancer.

Each time a cell divides, the telomeres get shorter. When they get too short, the cell can no longer divide; it becomes inactive or "senescent" or it dies. This shortening process is associated with aging, cancer, and a higher risk of death. So telomeres also have been compared with a bomb fuse.
In one study, “Middle-aged people who were physically active not only had higher aerobic capacities, but also longer telomeres than those who were sedentary. They had telomere lengths that were similar to people much younger than they were.”

In another study, “Telomere lengths were shortest for both depressed and healthy participants who were showing chronic stress. Many of the depressed participants exhibited disturbed cortisol regulation, which may explain why they had a higher overall probability of having shorter telomere lengths.” (Norrback, et al., 2015).
“Telomere length in children is associated with a stressful home environment, and genes that encode certain neurotransmitters may heighten the effect of that stress.”

In a study of family stability, “Children living in the most stressful environments had telomeres that were on average 40 percent shorter than those of the children studied who were living in the most nurturing settings.”

Daniel Notterman, Penn State, 2007).
BDNF is part of a cascade of proteins, produced in the brain that promotes neuron growth and stops neurons from dying.
Bigger, aggressive white mice bullied smaller brown mice created social stress for smaller brown mice. The prolonged stress of being bullied created an increase of BDNF in the brain. This activated genes in the front part of the brain which produced high levels of social anxiety, withdrawal, depression. (University of Texas, Southwestern Medical Center, 2006)

“Studies suggest the possibility that BDNF and its mediated signaling may participate in the pathophysiology of depression and suicidal behavior” (Yogesh Dwivedi, 2009).
Chronic stress distorts key brain chemicals: serotonin (sleep), dopamine (pleasure), and noradrenaline (energy levels).
Theory and Practice of Decolonization
Decolonization theory: Colonization is traumatic, invasive, generational, and affects Indigenous Peoples at an historical, social, and molecular levels. Understanding and eradicating colonization creates greater well being among Indigenous Peoples.

Decolonization Practice: includes privileging and engaging in Indigenous philosophies, beliefs, practices, and values that counter colonialism and restore well being.
DECOLONIZATION PROCESSES

- Stripping away the harmful, invasive thoughts, practices, beliefs, and values that have been imposed by colonizing structures, processes, and evolutionary mismatches*

- “…the restoration of cultural practices, thinking, beliefs, and values that were taken away or abandoned (during colonization) but are relevant and necessary for survival and well being.

- It is the birth and use of new ideas, thinking, technologies and lifestyles that contribute to the advancement and empowerment of Indigenous Peoples.”

* a concept in evolutionary biology that refers to evolved traits that were once advantageous but became maladaptive due to changes in the environment

Neurodecolonization involves using mindfulness approaches with traditional and contemporary contemplative practices to change the function and structure of key regions the brain (neuroplasticity), as well as neurochemistry (neurotransmitters and neuromodulators; epigenetic expression; and molecular, cellular, enzymatic repair, in positive, empowering ways.

The goal is to replace or prune neural networks and pathways of negative patterns of thought, emotion and behavior and replace with healthy, productive structures.

Decolonization refers to activities (culturally empowering mindfulness practices) that weaken the effects of colonialism, facilitate resistance, and create opportunities to promote traditional practices in present-day settings.
Mindful Decolonization: Healing the Effects of Chronic Stress and Trauma
Arikara brain on happiness, joy, optimism, feelings of well being

His belief in these sacred objects also enable him to grow neurons of resilience. If in his mind he can call upon these objects when times are difficult he will revisit optimism, joy, and well being.
“The more man meditates upon good thoughts, the better will be his world and the world at large” — Confucius  (September 28, 551 BC – 479 BC; Evidence-base of neuroplasticity: 2,500 years ago)
Definition of MINDFULNESS

1: the quality or state of being mindful

2: the practice of maintaining a nonjudgmental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis; also: such a state of awareness

Definition of Meditation (using certain practices – Metta – Loving Kindness practice)

Meditation is a practice of concentrated focus upon a sound, phrase /word, object, visualization, the breath, movement, or attention itself in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth.
• **Toxic stress response** can occur when a child experiences strong, frequent, and/or prolonged adversity—such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence, and/or the accumulated burdens of family economic hardship—without adequate adult support.

• This kind of prolonged activation of the stress response systems can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years.
Mindfulness

Non judgement

Non attachment

Present moment awareness

acceptance

Paying attention

A lot of the pain that we are dealing with are really only THOUGHTS.

STARVE YOUR DISTRACTIONS FEED YOUR FOCUS
MINDFULNESS APPROACHES

• Sitting Meditation
• Mindful Walking
• Mindful Eating
• Mindful Listening
• Open Monitoring
• Diaphragmatic breathing, or deep breathing breathing
• Practices: Loving-Kindness; Body Scan; visualization; breath awareness
• Mindful resilience training: visiting the charnel grounds of trauma (advanced)
RESEARCH ON MINDFULNESS RELEVANT TO EDUCATORS
(MINDFUL SCHOOLS, 2017)

• **Attention**
  - Numerous studies show improved attention\(^1\), including better performance on objective tasks that measure attention.\(^2\)

• **Compassion**
  - People randomly assigned to mindfulness training are more likely to help someone in need\(^6\) and have greater self-compassion.\(^7\)

• **Emotion Regulation**
  - Mindfulness is associated with emotion regulation across a number of studies\(^3\). Mindfulness creates changes in the brain that correspond to less reactivity\(^4\), and better ability to engage in tasks even when emotions are activated.\(^5\)

• **Calming**
  - Studies find that mindfulness reduces feelings of stress\(^8\) and improves anxiety and distress when placed in a stressful social situation.\(^9\)
MORE BENEFITS OF MINDFULNESS MEDITATION
HTTP://WWW.FORBES.COM/SITES/ALICEGWALTON/2015/02/09/7-WAYS-MEDITATION-CAN-ACTUALLY-CHANGE-THE-BRAIN/#2C74FA5A1465

- Meditation Helps Preserve the Aging Brain (Luders, Cherbuin, and Kurth, 2015)
- Meditation Reduces Activity in the Brain’s “Me Center” (Default Mode Network: wandering Mind; Brewer et al., 2011)
- Its Effects Rival Antidepressants for Depression, Anxiety (Goyal, Singh, & Sibinga, 2013)
- Meditation May Lead to Volume Changes in Key Areas of the Brain (Lazar, 2011)
- Just a Few Days of Training Improves Concentration and Attention (Mrazek, M., et al, 2013)
- Meditation Reduces Anxiety — and Social Anxiety (Fadel, Z., et al, 2013)
EXERCISE III. LOVING-KINDNESS, GOOD WILL EXERCISE

- “May I be well and happy”
- “May I be at peace”
- “May the world be free from confusion”
- “May all rez dogs be loved.”
The neuroscience investigation of mindfulness focuses on the neural systems that are utilized to achieve meditative states and to determine the effects that regular practice of mindfulness has on brain structure.
NEUROPLASTIC CHANGES HAPPEN FAST: 11 HOURS OF MINDFULNESS TRAINING (EVIDENCE-BASE OF CHANGE)

After only 11 hours of practice (30 minute sessions) positive structural changes took place in the white matter of the brain, which boosted brain connectivity (Posner, et al, 2010)
45 minutes of practice per day for 8 weeks changes brain structures associated with memory, sense of self, empathy, and stress (Sarah Lazar, et al, 2011)

Reduction in Stress – decreased gray matter in amygdala
MINDFULNESS MEDIATES AND DECOLONIZES CONFLICT

**Conflict-related Insula:**

Mindfulness meditation activates the “insula, which is associated with interoception, the sum of visceral and “gut” feelings that we experience at any given moment (internal body sensations).

It is key region involved in scanning the physiological state of the entire body and then generates subjective feelings.

- It controls mental emotions and regulation of body’s homeostasis.
- It increases gray matter which enables one to control negative emotions.

(Hölzel et al., 2011)
Temporal parietal junction

Becomes activated during meditation.

This area is associated with the ability to perceive the emotional and mental state of others.

This brain area is more active in meditators than non-meditators, even when they are not meditating.

- the RIFG is recruited when important cues are detected, regardless of whether that detection is followed by the inhibition of a motor response, the generation of a motor response, or no external response at all (Hampshire et al., 2010, NeuroImage).
MINDFULNESS MEDITATION PRACTICE MODULATES BRAIN WAVES

Brain Waves Graph

Gamma Waves
31-120 cps
Hyper brain activity, which is great for learning.

Beta Waves
13-30 cps
Here we are busily engaged in activities and conversation.

Alpha Waves
8-12 cps
Very relaxed. Deepening into meditation.

Theta Waves
4-7 cps
Drowsy and drifting down into sleep and dreams.

Delta Waves
0.5-3 cps
Deeply asleep and not dreaming.
MINDFULNESS DECOLONIZES HEALTHY BRAIN CHEMISTRY

- Serotonin: the self-esteem & sleep chemical
- Acetylcholine: the alertness chemical
- Oxytocin: the trust chemical
- Endorphins: the pain killer chemical
- Melatonin: the R&R chemical
- Dopamine: the reward chemical
- Norepinephrine: the excitement chemical
- Phenylethylamine: the bliss & infatuation chemical

HAPPINESS
Neurodecolonization and Contemplative Practices
MINDFULNESS TRAINING IN MSW PROGRAM
HUMBOLDT STATE UNIVERSITY, 2010-2011
MINDFULNESS AT NORTH DAKOTA STATE UNIVERSITY, FARGO, ND, APRIL 2016
ARUNDHATI YELLOW BIRD PRACTICING MINDFULNESS MEDITATION, FARGO, ND, SUMMER 2015
YELLOW BIRD GIRLS MEDITATING
TRADITIONAL INDIGENOUS CONTEMPLATIVE/MINDFULNESS PRACTICES CAN HEAL

Arikara Engaged in Ceremonial Mindfulness in Traditional Earth lodge
Arikara brain on happiness, joy, optimism, feelings of well being
Singing to the Cedar Tree
PUTTING IT ALL TOGETHER – ARIKARA
BLESSING OF THE CHILDREN
INDIGENOUS POWER POSES: ARIKARA BEAR CEREMONY, 1903
• National Association of Indigenous Peoples Mindfulness and Neurodecolonization

• Using decolonized mindfulness approaches

• National certification of Indigenous mindfulness teachers

• Standards based upon competencies in: trauma, relevant neurobiology, neuroscience, and genetic sciences; evolutionary biology; microbiome science; Colonization and Decolonization; Development of Tribal Brain Policies

• Encouraging the return to traditional foods, behaviors (laughter, happiness), ceremonies, and healing