

Response to Nielsen et al.

Coyote & Raven Discuss Mathematics, Complexity Theory and Aboriginality

PETER COLE & PAT O'RILEY [AKA COYOTE & RAVEN]

Stl'atl'imx Ultraversity

the contra-papyrogenic rubric of exoposited adipose ATPase precursor, a presumed dietary quotidian of ur-paleo-preindian postgenitors, unfolds uniquely within a micro-crystalline saturated ring structure of covalently linked c-14 nucleotides to reveal an 8-stranded multipolar Autochthonal Deliquescent Haplotypic Dyspraxia (ADHD)co-derivative, whereby negative logarithmic transpranial precognates reveal that canadian schools are failing aboriginal students and that chronic iatrogenic acephalic altschule professorii reveals a sub-libidinal post-contact retro-frieze holotype whose function is currently unknown

coyote did you know that after pouring undisclosed sums of federal monies into 600 odd (or at least uneven and sometimes imaginary or at least forgotten) aboriginal communities as well as numerous organizations and centres over decades elected members bureaucrats and educators have deemed it a universal truth that aboriginal people in possession of government fiduciation are in need of enlightenment because they don't know diddly squat about numbers or educating their youth except what they learned in the bush in the alley on the street in the dumpsters

[music from *In the Ghetto* by Elvis Presley – lyrics by Scott Davis]

*As the snow flies
On a cold and gray chicago morn
A poor little baby child is born
In the ghetto*

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*And his mama cries
cause if there's one thing that she don't need
Its another hungry mouth to feed
In the ghetto*

*People, don't you understand
The child needs a helping hand
Or he'll grow to be an angry young man some day
Take a look at you and me,
Are we too blind to see,
Do we simply turn our heads
And look the other way*

*Well the world turns
And a hungry little boy with a runny nose
Plays in the street as the cold wind blows
In the ghetto
And his hunger burns
So he starts to roam the streets at night
And he learns how to steal
And he learns how to fight
In the ghetto*

*Then one night in desperation
The young man breaks away
He buys a gun, steals a car,
Tries to run, but he don't get far
And his mama cries*

*As a crowd gathers round an angry young man
Face down on the street with a gun in his hand
In the ghetto
And As her young man dies,
On a cold and gray chicago morn,
Another little baby child is born
In the ghetto
And his mama cries*

shhhh raven I'm trying to listen to a song but these noisy indians make it hard to hear

*give me 46 649 quickpicks 35 Lotto BC superpicks 42 Lotto7 sportpicks 135 tele-bingo cards 200
nevadas a pack of smokes some white bread peanut butter chips 3 hot dogs and a large diet coke I
should be getting \$6.32 change thank you very much! ah capitalism! I love being proletariat*

*fifteen two fifteen four fifteen 6 and a pair is eight and nibs make nine drawing to an inside straight
I'll raise you 6 and call hey you're card counting! not me I'm an arithmofugic Indian ah! my kitty
again \$378 I just loooove numbers*

*yes sir these are all my buggies! I have 58 24-packs of aluminum beer can empties 786 2-litre pop
empties 63 dozen beer empties 630 1-litre plastics for \$238.84 ah the joys of entrepreneurialism*

*okay mr hbc sir! I have 3 martin skins 12 beaver 5 silver fox 3 wolf 1 wolverine and 43 gophers
that should come to \$975 thank you round it off to a thousand ah I love arithmicktick*

*sorry I can't spare any change just now! I need all my money for groceries for my kids I only have
\$40 for 3 weeks of groceries and I don't even smoke or drink or do any of that other stuff and I'm
behind in the rent again the numbers aren't working for me right now*

*mr alexis I hearby sentence you to 3 years for assaulting a police officer [it was self-defence] 60 days
for mischief [it wasn't me I was passed out] 90 days for b&e [it was my place I just lost my key]...*

*mr judge sir you better get out your imprisonment calculator because I'm just taking the rap for a
friend who has a bigger family to support so add a few more years for lying under oath and don't
forget I breached the court order to stop blocking the uranium mine on my doorstep on the ottawa
valley aquifer add another 6 months and \$2,000 a day fine for standing up for my constitutional
rights as affirmed by the supreme court for protecting my traditional homeland ah! so I get to do my
time in supermaximum security with the badboys well I guess we're all indians in there anyway i'nit
just like downtown vancouver regina winnipeg edmonton ama7 sqit my friend may the armed forces
be with you!*

hey coyote how does this sound for a press release: \$11 million federal government project
to alleviate unemployment and improve educational prospects for Aboriginal People a bit of
math upgrade thrown in some apprenticeship training hm I wonder what the success
rate is for these token training programs for white people let alone for aboriginal people?
5 per cent tops!

it's called a 'future employment opportunity!' but hey who's going to hire an indian even
with a journey person ticket? skilled trades! let's talk first about the underlying post-
traumatic stress that virtually eliminates the possibility of a normal life including school
social or working life for aboriginal people! and where is the post- we all know where
the traumatic is

hmm new stats a dropout rate of 92% from the apprenticeship program – well let's hear
the federal government blame the indians for their own failure again for their own
genocide have they mentioned the welfare programs that are producing lifelong
dependents generation after generation! there's a wa meeting tonight welfare
anonymous sorry can't come tonight it's bingo night! too bad

I just love those stories! they remind me of back home!

on the reserve you mean?

no I'm a 68th generation torontonian baby point bloor west humber river high park

raven the project manager is telling us that aboriginal people have the worst experience in education and training of all statistical groups how can we alleviate that?

before the euros came with their invasions of discovery and conqerage we had lifelong education it was called *living in the village* like all of our indigenous brothers and sisters around the world we had sophisticated knowledges and practices of survival and sustainment the conventional settler schooling is actually unconventional for aboriginal students

we didn't have the european ideas of mathematics and science granted

but we did understand astronomy the growing seasons how to earth-quake proof our homes the importance of building with local materials how many fish to take and how many to leave how to share what we had we could read the weather the land the animals the insects the birds the rivers lakes and ocean the tides and winds we could read the past the present and the future now we're mostly illiterate

the interesting thing about most statistics offered by the mainstream is that aboriginal people do not freely participate in statistical questionnaires and when they do they do not always put forward veridical responses to the pollsters/researchers/voyeurs/busybodys never trust a whiteperson with a notepad and a pen!

the first thing to do is throw away all of the answers that come from question-and-answer research with indians the second thing is remove aboriginal people from statistical locations we do not like to be in the same group with respect to the answering of questions because we know what the authorities do to indians in groups especially if we're unarmed and there are no witnesses to the whitenesses all x's look alike

aboriginal people are large-and-by simplistic anti-complexivists raven whose transcalative culturally dismissive ideas about numbers need to be deoperationalized offloaded exfaceted and brought into the 21st century

what was wrong with our 15th century ideas 16th 17th 18th 19th!! we were doing okay! now capitalism is the only game in town the state doesn't want you to think it gets in the way of the exploitation of the working person and propping up the owners of the means of production

to succeed in society within the canadian context we must memorize what western trained academics deem to be important for us to know pedagogy rules!

but raven pedagogy at least in an etymologically protracted and ensconced sense relates to the teaching of children while andragogy [if I remember my greek] relates to the teaching of peers or adults so why has pedagogy been the only choice when the settlers have tried to re-educate aboriginal people — the big clean white jug (filled with eurocentric impurities and power relations) fills the little dirty indian jugs with ideological propaganda disguised as freedom economic growth and (cough cough) democratic principles now we are abused by the term 'ethno' ethno-mathematics ethno-botany! ethno-science! is anything white ever delegated as ethno- guess who gets stuck with the racialized attitudinalized diminutive drawkcab prefixes?

but cultural production is a way of

pleaaaaase!! coyote I can't take it anymore the avalanche of crapola words

friere has an answer

please please not the 'f' word don't liberate me I don't have the requisite pre-emptive strike preparedness equipment to survive in a eurocentric euroconstructed liberatory framework! please no dead white guy lifelines I'd rather drown in my own self-pity or presumed ignorance

how about 'culturally responsive' categories as a hedge against hegemonic discourse

iee! this is worse than smallpox middlepox language viruses infecting us with euro *cogito ergo soys y estoys sono et je pense ainsi* no more! I'll sign anything you can have my language my culture the bones of my ancestors my firstborn

the newcomers are being inclusive coyote

inclusive no! not the 'i' word please exclude us from your alphabetic initialization messianism we don't want your mathematics your numbers your graphs your equations your economic understandings we know all about how equal signs don't work they only work on paper! in white theoretical spaces *in vitro ex viva* they don't even work in the federal contractor's program in employment equity

the newcomers only want to decolonize mathematics for us!

that's like decolonizing imperialism! first they interpret us into symptoms tell us something is wrong with us then they do a [cristobal] colonoscopy and try to sell us our own traditional medicines that other settler researchers stole from us and patented and

gave their own names to no aboriginal person really believes that decolonization is anything but a western conceptual framework decolonizing education for instance first they colonize us then they decolonize us but *they're* still here! how does that work? first they present themselves as prestidigitators turning our land into their money and now they're mages sages and even indian shamans or some indian tribe has adopted them or given them an indian name all hail! o ye heavens!

you know raven these bridges that they're talking about building are western bridges I wish they would just let us walk across the water on the rocks and through the shallows bridges aren't really indian friendly or environmentally friendly they're just a way of moving products to consumer markets and field artillery to where the indians are raising a ruckus

coyote how can you ever reclaim your aboriginality if you don't cross the bridges the colonizers are building you'll be stuck in a primitive paleoindian state

how can we re-claim if we never claimed anything in the first place except our relationship with land and with all our relations please! I just want to live my life and not have to claim anything or better myself or raise myself in anyone's eyes or estimation or balance sheet or bell curve

but coyote how do you know who you are if you don't make any claims

aboriginal people never claimed anything at least my relatives didn't now we are supposed to use european ideas to claim what doesn't make sense in any of our languages

but you have to use western knowledges to overcome western-produced inequalities we need to transform in order to move forward

raven the transformation process itself is part of eurocentric dysfunctionalism there is no transformational gifts from the visitors they can only give us layerings of colonization trapping us inside eurocentric assimilationist theories statistics and research data are all coloured by the larger society in hues and gradations of that society we become integers in their histories at the same time they copyright our oral stories and statistically fix us in their lepidopteral display cases

elders can help to make our form educational experience authentic meaningful and relevant

tell it to my father! who never set foot in my school he was never welcome there at the school where my mother taught and we only lived 4 blocks away elders are mostly treated like tokenized anachronisms what about the many elders who do not know

their traditions but pretend to and cause more damage than if they had just stayed away? the term elder is not without controversy especially self-declaring elders who often go along with the white bureaucracy and administrations

but he would be welcome now your father

ha!! even my white relatives had no use for him how could my father a stl'atl'imx man possibly be welcomed anywhere in canada by people who are not indigenous to the land only aboriginal people can do the welcoming how can a colonizer welcome us to our own home?

you don't think they have been here long enough to welcome anybody?

until we have had the conversation at a national level about the real history of this land the systemic abuses by colonial federal provincial municipal and military governments the killings the genocides the rest of the conversations are meaningless! grand larceny on a continental scale is the basis of the economic reality and ethics of the americas math is not even in this universe western science and mathematics would turn to circular lasers and framedragging temporospatial mathematical hypotheses when the real time machine is our memories our oral stories about how our land became their land about the enslavement and alienation of aboriginal people under the euphemism of fiduciary responsibility

they only want aboriginal students to do well in math we don't need a history of colonization to do that!

whose math raven? for whose development? for whose definition of development? math

for what end? so aboriginal students can make a statistical crawl toward mainstream occidentality without context and foundation education is a meaningless journey into a unknown where only we are absent where only we are silent and silenced

we need complexity thinking to get us out of our hole we need to be nested in relationalities

you are thinking maybe that more eurowords will save us or cute metaphors from elsewhere

so much good work has been done in the area of nesting metaphors including the regenerated ideas in *aotearoa* for *kohanga reo te aho matua* and *kura kaupapa maori* for the *mokopuna* and *tamariki*

yes coming straight out of a french immersion school in vancouver we don't need to look to exotic locales for meaningful educational solutions for aboriginal people using nesting metaphors might sound nice in translation and cute and cuddly but we need to follow our own ways we need to create and enact our own metaphors interestingly for the *aotearoa* experience nesting on the ground for flightless birds did not bode well for their continued survival when four legged predators were introduced by immigrants

complexity thinking can help us

whose complexity thinking? euroknowledge as rote memorized or swallowed whole or quaffed like jesus wafers and communion wine? by the grace of god may it not touch my epiglottis

systems are the new way of coping

so now western systems theory is the new saviour! are we supposed to buy it or lease it or maybe trade it for some more land? where do you think they got this complexity idea from? invented it? I don't think so discovered it? ha stole it? yes

systems is a new way of looking at relationship

raven I already have relationality many of my relations are living in my house some in the garage a few in the gazebo three in the bathtub two in the coal shed whiteness in a new container will not save me we are the unbleachables systems are not white containers of indian salvation we HAD systems we called them 'all my relations'

remember their inspiring talk about transphenomenal and transdisciplinary ideas how are we going to get anywhere without sophisticated help from the outside

and where has 'help' gotten us so far? they have all the land we have the bibles! and where are the settlers today – who will help them in their economic spiritual social ethical mess!?

if we don't get up to speed

speed? whose speed raven? whose direction what direction? what kind of life are we talking about and for whose benefit? not ours

the settlers want to help us with our numeracy our mathematical literacy!

it's all part of a larger 'help'ing strategy that even the 'helpers' have no idea about where do racism and legitimacy and validity fit into this helping equation? where do multiple levels of substance abuse fit in including those nested within the fetal alcohol spectrum disorder?

we need to follow their lead on this

raven who is at the blackboard whiteboard flipboard projectionboard pro-claiming and leading the conversation and who is taking notes? who is being taught their own knowledge by the colonizers? who is paying whom for whose knowledge? whose knowledge is being researched and copyrighted by whom? what about the unlevelness of the playing field? what about the organic interconnected world the dialectical materialistic world outside of mathematics and science and educational engineering? thousands of years before the word 'system' ever existed before there even was an english language we had our ways and they worked well for millenia and like all knowledge systems they changed continually

coyote mathematics can be of great benefit to aboriginal people

right! we can add up the dead and dying to the nearest decimal point we can determine risk the retro risk of going to residential school of catching tb or smallpox of standing up against the canadian state we can use statistics to turn our grandmothers into numbers and percentages and graphs and equations then we can move right along to see where we fit on their economic graphs tables illustrations theories outcomes

we need to use numbers to tell our stories

on what is this 'need' based and who has determined that it is a need? who will provide the solution the universal solvent seems to be eurocentric knowledge capitalism by any other name

we need to investigate cultural-responsiveness!

oh! like the non-aboriginal response to 500 missing aboriginal women 50,000 children dead in residential schools the incarceration rate of aboriginal people and aboriginal deaths in custody or perhaps the 95% of all first nations populations who died from militarism introduced diseases and enforced starvation? I'm sure that if we put those on posters all around the reserve the classroom the downtown east side it will be of immense help on a day to day basis maybe we could indicate how much money we receive from welfare payments and what welfare does to our communities or how much money comes to us in useless government make-work projects! will mathematics bring back the 100 million buffalo or the billions of passenger pigeons the untold

numbers of fish and other victims of settler largesse and entitlement? what about the 120 million aboriginal people who died at the hands of european largesse between 1492 and 1550 the first wave of 'help' from the outside

coyote you can't deny that science and mathematics are important today

before we even get to mathematics or education we have to determine what is left out of the conversation! the context of the whole colonization process is not even addressed or stamped return to sender math has to get to back of the line wait its turn with religion and ethics

you can't deny the efficacy of 'structural coupling' as a facilitative integer

how hybridization can help us huh!

without a bounded system coyote there is no cultural meaning

fences and bridges are control and containment measures! thank heaven for sensitive colonizers cutting us off at the top of the pass requiring that we climb higher walk the ridge to avoid being helped climbing sheer rock faces to escape lifesavers soulsavers facilitators fiduciators

without generative forces it is not possible to

generative? what about *re-generative* sustainability you know giving back more than you take no I didn't think it would sound familiar sustainability and economic growth are not co-extensive

I am alluding to relationality emergent coupling dynamic interactions

what century are we in? what level of psychological drivel are you now quagmired in? talkatalk

in order to move forward in a good way redundancy needs to be engaged with and flexibility

so that when we're put on the rack we last longer when we're made redundant I thought we always were pretty flexible how do account for the fact that we still exist despite deliberate attempts at genocide and assimilation despite *tkodwm* no it's not welsh it stands for *the knowledge of dead white men* ever present all infective and handily crafted into western societal relations *normalising* abnormality not seeing the clearcut for the paper

what about the positive effects of colonization? we are seeing great progress

we see what we are culturally conditioned to see and understand how can aboriginal people make aboriginal sense of western academia? if we are just using euroideas eurowords eurohistories eurovalidities and euroassumptions to determine what counts as relevant research and knowledge

science is only there to help us

aboriginal intellectual property as recycled through materialist complexity theory

situational relationality

context context context the rest is silence

collaboration is encouraged between science and aboriginal knowings

ha! look at bob lovelace in a supermaximum facility for 6 months for opposing a uranium mine on algonquin territory the white judge said 'there is only one law in this land' where does that fit in to complexity theory tell it to the KI-6 imprisoned for protecting their land against mining speculators! science knows the dangers of mining to human health yet capitalism ignores this

complexity theory may lead us back to our own ways

you don't seriously expect any court or legislature or military or paramilitary to take any academic or aboriginal theories or practices seriously if they undermine mine under their sovereigntist claims to our traditional territories their right to extract wealth

but it works at a number of levels of analysis

please! how can you have analysis and flexibility in the same jamjar analysis will catabolize everything oxidize everything exploit everything it would probably eat the lid before the cavalry arrived leaving flexibility unprotected and vulnerable 911 hello the indians are on warpath again! send in the army! with air support! national security national security!

sharing cultural knowledge is encouraged

of course it is encouraged so that western science can continue to steal our knowledge and claim it we need a safe place to do the cultural sharing *with our own people* and an assurance that what we say will not continue to be copyrighted or patented or otherwise exploited and stolen by the settlers or assigned to the white&multicultural public realm

assymetries drive the system

whose conception of assymetry certainly not aboriginally derived knowledges unless they go through a western assimilation process

today classrooms are self-organizing systems in which aboriginal people can grow

is that what they say? then how come it's always the indians who are in detention or absent or who fail? what is the system behind the system behind the system is it whiteness at all levels or liberal multiculturalism across the board how did the term 'system' come to eclipse or erasure 'all my relations'?

the educators say that complex systems are perpetually novel

but the underlying message is indians need to be fiduciated by everybody else we are inept!

it is important to invite aboriginal stakeholders

that's just it we don't want to be invited we want to do the inviting if and when we feel we need or want to that is what self-empowerment is all about

raven we need to train skilled tradespeople

we have skilled people we are just skilled in different ways than those who would have us be measured or evaluated or validated or trained or educated by them I wonder what an indian house would look like if it were designed and built by indians for indians even with miscuttings mismeasurings it might turn out okay at least the self-empowerment of self-supervision would be a positive step forward a conversation will not develop if one racial group is always in charge is always seen as being right and the other is seen as lacking

de saussure would approve

was he a carpenter?

he was a swiss theorist in the area of language and thought

if he dealt only in abstractions he might be good at developing an abstract dwelling for abstract people using abstract constructs and concepts abstract nails abstract plans

he was an expert in the area of language theory and language drives knowledge

then he could build a dwelling made of words but what would live in it syllables phonemes conjunctions he certainly can't be involved in anything structural or load bearing

raven the gist is aboriginal students need to have a deep understanding of mathematics

whose mathematics and for what purpose for whose benefit? we never had all those numbers we didn't even have to worry about pi or the volume of a cone because the tipi's diameter and the buffalo hide's weight would make sure it went all the way around at the bottom and the walls went as high as they needed to our ishkins were trial and error learning from experience and from dreams and visions

the teacher in this system becomes rather than a knowledge dispenser a facilitator a coach

then I don't see how it's pedagogy at all

now with the importance of mental fitness being open to new ideas everything is seen all intertwined into a great knowing a totalizing discourse

not another totalizing discourse! the last one we threw on the compost hasn't even started to decompose yet it's probably not biodegradable

math and physics are high status subjects that will help our students go far

just as aboriginal studies is a no status subject which will keep students close by

cultural readiness and cultural relationality are now seen as starting points for math learning a complexivist lens makes everything so much more meaningful

who grinds and polishes and sets the focal length of this lens not aboriginal people does it have an antireflective scratch resistant coating with uva uvb protection

it's a metaphorical lens

we never needed that kind of lens we've always seen through our own cultural knowings not through an abstract instrument of cultural hegemony we have numbers enough in my culture *one two three and enough* when we have enough food we share and when we don't we share anyway

western academia wants to see aboriginal knowledge and practice as the starting point of learning math for aboriginal students

it has to be if the student is aboriginal where else could they start by deaboriginalizing the student and then dealing with a generic locationless unsituated subject?

there is a great desire for advocacy for the opening up of an intercultural dialogue

learn something from john mighton jump out of the way and let the interacting begin with the people of the land let them do the inviting when and if they choose to

About the Authors

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