

## Punctuating Musical Diacritics of Water in Cross-species Context

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### Abstract

There is an urgency for compelling new narratives of ecological survival that draw on Indigenous and ‘othered’ millennial intelligences and agencies. With a focus on the lifegivingness and sacredness of water, this paper is a call for collective inter-cultural cross-species oral-performative, recuperative conversations for re-learning to care for our damaged finite planet. Spirit-being is ever-present in the *St'at'imc* multiverse. Be humble, kind, respectful and at peace the elders tell us. Our original instructions teach us how to live together in harmony and compassion with the rest of creation.

In this narrative score, musical signs, symbols spaces and terminologies gesture toward lyrical, rhythmic, somatic, sensate, collaborative performance, including *pause-silence-beat*. At a bend of the river, with ancestors and those to come, ubiquitous Indigenous tricksters Coyote and Raven speak on the page as *dramatis personnae* to encourage metamorphosizing from normalizing Euro-diacritics that extinguish and essentialize Indigenous oral expression. Joining the conversation are Sam Jim, a *St'at'imc* elder born in 1866, and German astrophysicists Helga and Viktor who are researching water beyond our shared earthly home, Viktor having had *St'at'imc* research experience in British Columbia. The text is meant to be read aloud.

*Keywords:* indigeneity, narrativity, cross-species interdependency, sacredness of water



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*handdrums slow westcoast rhythm-sounds* timeline 1966 rainforest fog-shrouded creekside campsite near Fire Lake /~\ ^[' ucwalmicw high country southwestern British Columbia

*eagle whistle faint orchestral air for woodwinds strings wood on wood on rock on rock blazing crackling spitting campfire* perimetered by shale rocky outcrops oldgrowth giants *partially divert windwhipped drizzle* occasioning stirred sunny breaks *dancing flames silhouettes* Coyote Raven Sam Jim extended relations shadowed animations speak to their level of engagement in the moment the forest is celebrating Sam Jim's hundredth revolution around the solar eminence barely noticeable in a cedar's dendrochronology he having lately dug framed sided doored vented insulated a rootcellar to preserve and protect summer's harvest as winter's provisions

*forest music decrescendos* fifty-eight years into future-present *rain sounds staccato continuo soaring oboe air pierces other sounds adagio deep handdrum rattle tones fire sounds spzu7 dance steps percussive rhythms swish-beat volley tsexox sound of running water wind brush of cedar on cedar kalan7wi ucwalmicw aho faithkeepers Asayenes Asayenes Kwe*

slow cross-fade to *splash paddle paddle whoooosh lubb dubb* moored sternwheeler-concert hall with orchestra choir conductor *step by step descending melodic bassline hammond organ strings winds harmonics voiceovers announcements* pipe through lobby galley cabins green room orchestra light-sound room toilets mechanical-electrical-boiler-engine room bridge amplified-projected as trans-species supertitles sparks from broken fragments of heaven set alight what went before there was a before or a went *fade in zagharit*

*ff* ah water music says an authoritative *me voici voice affrettando* dihydrogen oxide universal solvent *hard audio pan to centre* only e-stem (economics-science-technology-engineering-mathematics) can provide rigorous foundation for assessing H<sub>2</sub>O and allied molecular structures

*conga groove snares wood block commentary* Coyote performs *sauts de latrans* as audience enters *arpeggi jingle slash chords on vibraphone* e-stem research and development extinguishes the natural world enhances lives of self-annointed elite species e-stem thinking designs empire's weaponry catalyzes state-military-industrial-education complex (Cole & O'Riley, 2017) *thunk thuk wood on wood gourd rattle chickadee trill frog chorus twigs snap*

Raven performs *demi-pointe à pointe* flexioning opening remarks at the rCOF (regional creatures-of-the-forest) AGM (annual generosity marathon) foregrounding bush-centric conversational *audio pitch* ranging 15 to 200,000 hertz depending on what species show up changing conversational modulation *fugual harmonies timbral cadence* this year's theme is *canticum in laudem aquae song in praise of water lamentosal bass soulful harmonic-melodic slides clarinet xylophone glockenspiel timpani bassoon strings harmonize melodically* no *ucwalmicw* would emcee a multispecies chorus universalizing two-legged protocols most tune their instruments to local trans-local regional *interactive terroirist harmonics wind-waves scat*

*extended anacrusis* says Coyote as co-unofficial moderator Raven thank you for the procedural updates which will not be in official minutes which are neither official nor etched as human-

(coyote- raven-) centred minutes on behalf of species communicating in thousands of mutually unintertranslatable languages across reductively determined-assigned taxonomic ranks with the only place agreement taking place being species abiding by their 'original instructions' which relate to the lifegivingness and sacredness of water spanning interspecies orchestral spiritways *ascending minor third* the challenge says Raven is to accommodate *communicatory vibration across sonic spectra* as the massed species do not accommodate to normalized *oboe concert pitch A above middle C* (middle of what) nor is there agreement within bird insect microbe fish plant reptile amphibian mammal taxonomized orchestral groups as to what constitutes commons standards fairness right-minded action quorum indigeneity validity as settler humans presume to translate-interpret performed-knowing across languages including those not using positivist representational codes across anthropogenic notions of species' worldviews which do not fit into rationalized conceptual-hypothetical-theoretical morphemized temporo-spatial(categor)izations

*breathy resonant high register hatched shadowed vowels* says Coyote given human inexpertise of nonhuman communication it is unlikely interspecies relationality and firstbeing-ship (cross-species indigeneity) will be agenda items due too to the complexity of onto-epistemological networks and AGM participants having differing morpho-sensate-existential-neuro-anatomical needs the best one can do is not privilege human settler idiolectal clichéification such as the trinitarium of reason-logic-causality and-as abstractional-essentialized-anthropo-neurotypicality across group dynamics that have historically led to panbiocide so in the spirit of compassionate conviviality unbottled water will be freely available in suitable physical states and quantities along with enforced safe mingling guidelines *hail on corrugated iron roof clunk thunka shhhh*

*prologue-chorus harmonizing breath tracks tremolo legato uptempo lyric entangled* inter-generationally across-species family bundles cast in a womb of stone-fire-water-air gazing across an eternity of escalating coloniality gesturing toward *esteem* as aqueous evidential (Cole & O'Riley, 2017) the elephant in the room is a colossus of searing breath that burns without burning caudal fin itude tugged at by successive omnidirectional gravitational fields collapsed wavefunctions abstracted calibrations of dynamic e-stem system imaginaries exhibiting nonperiodicities operating effectively within classical field parameters discussing variable constant-variable independent-variable relative-absolute assigned limits trajectories validities narrativities and resonant balances *in excelsius scientia yo and yo major third flattened seventh*

superscript e-banner of exoplanetary H<sub>2</sub>O motif *french horn accompaniment decelerando and a one and a* when the tool used to determine x is immutably part of its parametric co-extensive factorality this becomes redolent of other presumed self-sustaining cycles not as dis-attached stand-alone accusative sectioned for-instances or metadata of graphed databases but as insightsments to-of-respecting *in situ*-based connectivities in that *ucwalmicw* relationality is not post-itself *appoggiatura media coda harmonium timpani trumpets basso continuo sic itur ad astra* or remember to clean your spit valve rosin your strings pre-warmup *antler-branch rubbing*

*amituofu* voiceover horns woodwinds mixed percussion inter-iterate *fade in harp bisbigliando* in the late 1960s says Raven I recall Lee Jun-Fan speaking of becoming like water and 65 years ago the words of the *daodejing* resonated obliquely as to unutterability of-as consonantal xxx(x)-grammaton ineffability of form and-as formula e-stem is wont to essentialize water leading the conditioned human mind to need to make sense of osmote equivalency where/with/by the body

fashions chaos fractals solitons mingled with mathematized port-manteaux semi-continuously depending which set of functional boundedness and probability distributions one alludes to in the 1970s e-stem's epistemo-methodologies did not foresee-imagine this chaotic entanglement of layered phrasal disharmony *fadeout harmonics reverb echo backbeat crescendoing stridulating percussion fusion rumba clave stick on stick rimclick cymbal crash doo wop*

*ghost note glides double rolls oh mimes Coyote my* the divine name is not to be spoken aloud save consonantly just as divining processes of capitalism are disallowed as to soundedness

Raven *chortles clicks* when the vowelless conjuration of a meaning tract is oblique or abeyed and deflective rather than directed invocation there is space to move unrestricted by prescribed knowing such as *rote chord resolution* so Lee's reflection on water evokes *daodejing zhuangzi* filtering the millennia as sounds echoing from stone walls absorbing into rainforest as water *sings it is passively percussed* inhumed diffused osmotically by cnidarians and echinoderms whose original instructions include proactive poise harmonic cadence as-with songs of praise of all beings *freudenvollere* humans as instruments emit *vibrational frequencies* employing borrowed skins ligaments integuments sticks brushes clay seeds hollow dried vegetables berries strings of silk base and refined metal stones grains bone horn antler plucked struck bowed blown shaken tapped strummed embouchured pounded rubbed reeded scratched not in defence of territory nor to attract a mate but in praise of water *drip slither p lop bop fsss agogos*

Coyote builds up fire to ward off blustery cold sleety rain visions rise from the medicine-smoke of forest being *obertura con agua fresca y sal* deep longing soulfire *tsexox speaks across tongues reservoirs ucwalmicw-kichwa interlude rainforest soliloquy compressed percussive arpeggi ikaros plantsong glacial altiplano hoodoos malocclusive maxillary arcade panpipes ocarinas el pueblo unido la vida unida djembe* vines in thick coils of helical pedagogy

says Raven I saw on the news where water photonizing as a full circle rainbow was reported from instrumentation set at 42 degrees opposition to the ecliptic of the sun's seeming constellar path this speaks to internal reflection double refraction dispersion optics of high energy photons passing through water as dew mist rain spray ice steam but something so beautiful had to be an optical fractal transverse sensorial illusion it wasn't anywhere save a theoretical-hypothetical space where 'pure' *sama7* (settler) sciences are born and live their hypothetical li(v)es *fade out muted bugle call to the post iron gates clang riff vamp ostinato sputter cabasa clop clop*

excuse me says someone upwind from the orchestra why is there no punctuation in the program

starlight travelling megaparsecs in zero degrees Kelvin passes in nanoseconds through exoplanetary atmosphere condensing onto still-life exo-H<sub>2</sub>O *drip by geli d d rip flageolet solo* giving rise to augmented surfactant self-ionizing resilience radio-inactive-nucleonic *ice c rack ing four octaves above middle C* atmosphereless *tin kling glancingly melodic ornamentation sweep picking bel canto trills unsounding glacio-crystalline ice pellets corn snow exoplanetary impact debris overarching cornice shif ts andante con moto* moondance moonbow *cor lunae amat cor terrae* rocky outcrop shoreline high C tranquility resounds otherworldly *sans son*

*drum groove ||: crackling fire sounds Cagean silence (Cage, 1961) compounded unstaved octaveless noise bubbles orchestral hive percussively thrums with cricket cicada bee fly wasp cadences timbres mating calls whirlings tacet baroque strings percussion rising mist upbeat brass nasalized falsetto glottal slide avian communion duck loon owl swan departure güiro countdown do re mi liftoff flutter fade-bridge intermittent pipe ventilation sounds agua caliente roof-snow-ice dam melt shifting enter down left stellar jay redwing blackbird pine siskin dewy beaked basso-alto frog cricket toad trio bar-breasted piculet affettuoso cross species chorus glissando down-bow sound of rain drizzling single drop p p of rain re sounds Ds G mid bass single string strum double sharp pausa di breve between drops slurred bowing stroke j stroke paddlepaddle swoooooosh intermezzo aqua ch ch ch tone semitone tabla tenor-bass improv intermittent shekere flanged hi hat low volume chup choked off handclaps*

quick scene change allowing for *consumption of performative flatulofaciens lobby dos à dos fizzy water beans brussels sprouts asparagus dairy cauliflower more beans hot peppers broccoli moderatio* for use in variation of second theme with *violin solo giocoso con brio rain drum solo* moisture diffuses through roof layers *drip drip into tin kle buckets* unscored randomly dispersed ushers collect replace as required *tinkle blip plop unrehearsed drip ping ng ng flutter-tongue punctuation* press link for free download weather resilience app for pre-planning berry picking bushtea business c-squared *space-time liftoff musical scoring for percussion soprano saxophone pitched in b-flat strings in hoc nomine bear rooting sounds multiple paradiddling throat clearing exhalation leaves sussurate rustle crunch*

enter chorus *prolegomena* upstage right cross down centre *sesquitone tapshoe cleat slides as chef des affaires sfx* it is my duty to inform the reader-listener-ship that henceforth normalized time-space and social conventions relating to water will be gravitationally red shifted dopplerwise throughout this performance to accommodate audient receptors saltatorily reconfiguring inter-relationships across-among-through-with layers of acculturation *sans* benefit of foundational notation or common phrasing anything resembling diacritical punctuation is likely the composer's mistransliterated scribbling or emulation of traversal bush markings river rock indentations old growth stump projections wetland vegetation tracings fall leaves maple ash elm samara fry minnows tadpoles insect exoskeletons sweepers deadheads and given that volunteers collated folded trimmed stapled the concert programs in the galley-pantry during the midday chow-down tech-dress rehearsal any punctuation-resembling marks could be olive oil seasoned vinegar tamari sauce spiceflakes condiments sprinkles diverse diacritics *swirl whoosh p p p*

*late autumn post-covid techno-wissenschaft wizardry invades star-exoplanetary systems* establishing-shot -sound -scent(sation) infinitely slow jiggly crane swirls shifts to panorama concentric barrel-roll move to CU textured mortise jigsaw tenon composites with sky out-takes leaving earth and water espoused *oberbayern low register solo generic orchestral suite in D major for violin oboe trumpet harmonium* downslope from alpine meadow southwest of Munich Viktor in white lab coat oversized nametag 'Herr Professor Doktor Viktor Freiherren' broad-brimmed waxed Zorro-style rainhat midcalf-oiled raincoat open to elements peers intently through catadioptric telescope mounted on canopied 4x4 pickup truck while speaking on cellphone scattered high velocity clouds promise rain roulette he is overdressed for weathery drizzle *sicherlich Helga ja* I hear you *dein lieber* Viktor listens intently but the reception in the *mittelalpenwiese* is not so good in fact it is predictably intermittent yes I agree with whole heart

the James Webb telescope wasn't meant to be a trickster but it erases what for so long was solid quantum-astro-cosmo-logical science and we must keep upper-most in our minds the primacy of accurately annotated data-collecting and Jupiter's dear Europa appears increasingly to have vaunted water content in amazing configurations however remotely measured *AI-chatgpt*-interpreted data is potentially too deeply flawed to discuss on the phone without crypto-precautions and also body language and eye contact yes Helga *mein licht* I am certain *unser* Goethe (1919) was far *ur*-ahead of us in the complexity of his think-patterning and surely water is amazing on Saturn's and Jupiter's moons as no mere earthling has witnessed directly yes we will speak of exoplanets rockstars and quantum vacuum states *voiceover chorus scat ad libs with baroque toccata fugue in minor key* rain drizzle slows to a trickle clouds open reveal expansive dancing swirling planet-star-galaxy constellations

*science and the search for extraplanetary water homophony* tell me *kollegin* Helga why does everyone assume two parts atomic hydrogen joined with one part oxygen and who claimed the H-O-H angle to be forever-everywhere 104.5 degrees science has made of me a morosoph and respecting the *über* world of *scientia* if Newton overstated on scale and Einstein on rest versus kinetic versus total relativistic energy government media academia and wilfully gullible science popularizers err in proclaiming eternal anti-climate change science-based truth regimes I am drawn *sicherlich* to enlightenment german scholars who deconstructed the language they used to think in so *vielen dank* to the artists philosophers storytellers novelists comprehensivists who guided us to see other/wise and not live-die clichéd lives surely yes Helga exo-planetary hydrologists and quantum astro-physicists have some exact though perhaps highly inaccurate knowledges but at least they are expressed clearly and the mathematical calculations are hypothetically correct in their own mobius I say this as a caveat not an endorsement *bat chirps*

*brief orchestral interlude as ushers collect replace empty rain drip tinkle buckets semicoherent sprigs of conversation* from centre rows 4 and 5 aisle seats can be heard by lead trombonist and second oboeist about plumbers roofers and 'catching my death' and the expression 'dry cleaning bill' came up several times this is being recorded and will be used as future performance 'found data' while maintaining participant anonymity though free prior and informed consent seems to not be so much in evidence in preliminary draft discussion-enactments and-as forensic audits

*linguaging thinking knowing in confluence contrapuntal murmuring sounds* yes Helga I'm sure some famous german person said *wasser ist wasser ist wasser* though if it wasn't an academic e-stem person it would be ignored by the mainstream academic establishment science delights in essentializing all things so every major science discovery/morphemic invention leads to generational waves of spot-welded intellectual hubris and self-congratulatory stultification until the *oops we booboed again* how does every mainstream settler discipline end with clichéd thinking-as-knowing being rewarded for being essentializing and anticritical yes clichés have a special place in a cliché(d)riven society but what seems to be left out are myriad measurement procedures theories and hypotheses that shape and generate them because as one thinks about x water for instance one is continually going through settler colonial measurement regimes as if there were only one way of knowing and all one need do is amend typos and auto-correct AI blips rather than the thinking that reverential-izes closed-loop prescriptive models of knowing is it any wonder every new generation has a big flip in e-stem thinking a *eureka I've got it [wrong again]* moment in the bathtub science as *wissenschaft* or knowledgeship we german-speakers

have argued about nitpickingly for centuries misunderstood in german mistranslated into english even as cousin languages I slip into hopeful holistic thinking but here we are speaking in english and german thinking but yes water is life though e-stem calls it dead inorganic spiritless molecular water does not just support maintain and act foundationally with respect to life *it is life* yes Helga german puts too much into noun-form but changing thinking and changing a language at the same time is too much for most people everyone wants to take short-cuts which is why the world is so messed up contagious lassitude inveterate tangential sloppiness the hypotenuse as quantified mystical abstraction *ja* even atomic nuclear bonds are nominalized pico-ligaments and -tendons needing activation by other language bits verbs subjunctives imperatives numbers it is the bane of post-proto-paleo-indo-european thinking-knowing that slowly vets livingness into inert lifeless morphemes first sever language from its oral history and dynamic cultural context then put the language on life support then kill it by starving its spirit then resurrect it as a co-slave-AI-hybrid with an embryonic marsupialized number system and before you know it you have a dead petrified language-being used to discuss *living* things' artificialized intelligence produced by binary computer programming coding data-sets we need to shout sing whisper weep not converse with uninflected ratiomantic academic prose that kills the lifeblood of language by intellectualizing it de-notate de-story de-lude trans-form language *in toto* and as *holon* into a simulacrum of prestidigitated sleight--of-mind components what do you mean 'is that so bad' it is worse than bad it's the worst form of academic charlatan zealotry my *st'át'imc* elder friends would say *kalan7wi* they would say water is not just the words of it despite its symbolic capture as *sama7 cogito-speak* derivative

Sam Jim's voice is barely audible as *he sings* accompanied by *rain and fire sky-earth voices*

*ja Helga* I am understanding how you might think I say over and over the same thing like a skipping record or mismindful professor but what I see myself doing in our conversational collaborations sentence paragraph fragments parsed absences and adlibbed commentaries joined by-with-as invisible or nonexistent conjunctive analogies juxtaposed pretenses thread-bare intimations with deliberated stopped actions which only come together like trainer-wheeled holograms when the interlocutors are able to take the 'st' and key it with the remotely-located 'ir' to separate repetitions into a kind of paralinguistic adventitious cultivar that does not grow in straight lines of thought or topical organization but according to the dissemination of seed ideas idea seeds terroirist manifestos leading to companion-thinking commensal-knowings-with but the whisk that stirs the bowl of ingredients is not an isolated constative noun nor is the verb *stir* an agentializing manifestation of the resolution of aligned magic lantern glass plates of still lifes rather it happens as readers-thinkers-interlocutors 'click' together pressing the horologist's crown retroactively though sometimes it is prognosticated through remembering the future as a viscous fluid conscriptive pretense of what first appears to be individual un/dis/connected actions experienced as mutual confluences flowing outside of time-and-as-space *continual drip dripping*

*winter dance as points of articulation* suture blends to-as westcoast *chiaroscuro* interior plateau *indigenous singing slow measured deep steady tones deerskin hand drums eagle whistles rattles background chorus swish* of wet cedar shedding shining drops of liquid-life eighteen hundred microns in diameter raindrops running down cheeks temples noses lips of dancers drummers in ecstatic mo(ve)ment slow even-paced stepping whirling blending pivoting *water drips from silent swaying cedars* through the ineffectively re-architected missing parts of the roof

to the end of scale-like leaves in slow motion finding a gravitational home on heads bodies clothing regalia the assembled numberless *drip dripping drops* fall of a single moment every moment thereafter *cwis mitsaq lti zenka kalanmints tsina sqweqwel slow handdrumming serenade for chamber ensemble ja Helga liebeslicht* I see how abstractional *sama7-speak* (b)lends itself as (to) colonial *agent provocateur souriant* as presumptive genitive agent of *ucwalmicwts* (*ucwalmicw* language) nesting among *soft rounded liquidy sibilants semi-vowels glides glottal stops phalanges of laryngo-pharyngeal gatekept architectings faux laine faite articulations* on leave from *interdental fricatives front rounded closes umlauts lax vocalic schwas drip drip splot splash* rain is a blessing yet the *sama7* captures it in object form as *sama7 data* most wars are language wars ego wars eradication wars hate wars looting wars saving-imperial-face wars fascistic-surfactant-intent wars camouflaging genocidal-provenance by prejustifying-preemptive-extinguishment wars *military airs heavy on drums pipes brass winds remote colonial battlefield rousements crossfade to slow dance drip-trickle of melted glacier* yes Helga our ancient oral stories tell of the pre-Italianate and neolithic Celt camped in the *oberbayern* but not all of us hid in caves watching stalactites lengthen while the wild exogenic peripatetic tribes rioted without we drank purest of perfect mineralized water in hollow orifices of the earth while the combatants lost soul and sense in beer brewed with root rot canker mildew wilt and ergot no my wise one water is my truth and it is not molecular any more than a book is the words of it *discrete layered harmonized contrapuntal post-latent weather sounds*

*drip drip plunk ways of knowing and naming* Helga my bright star you must let me first do the doing and not name anything leave *wissenschaft* to retain and applaud its reductive tetrahedral triatomic dihydrogen oxide with its supercritical dipole electrostatic sigma bonded ionizing partialities foundational triple point and hagiomorphic noncrystalline (*hélas m stendhal*) vitreous exo-planeticity my mind hearkens back to stories told to me by *st'at'imc* elders purification ceremonies in riverine-glacial confluences spirit medicine collecting in bog brook bracken age-old rock paintings scrivenings re-embodied cultural stories in wordless performative thrall winter dance reviving body-spirit connection that the colonizer deemed inherently criminal along with five-year-old *ucwalmicw* children whom the state declares to be in dire need of prescriptive curricular civilizational remediation *dirge chords with upbeat ironic melody line pause cadenza* how I ask Helga can science even pretend it is composed of universalized truth regimes when two of its foundational concepts time and space *zeit und raum* change all the time (space) even relatively under changed/ing conditions in deep meditative and ritual states there is no space or time with or without the other in 1965 as I shapeshifted among *daodejing zhuangzi* and quantum physics I felt the absurdity of absolutely everything being deemed relative or of nothing being absolute physics can use neither word nor cipher nor design in a way that could approach the brilliance of conversation such as you hear from the old ones storying round a fire uphome in a bush camp fish camp berry camp or from young children at play *children singing*

*scat mezzo-basso aria fragments* a deep-spirited Sudanese poet of my ken says Raven claimed that time for nomadic bedouin is a way of explaining change but how can one speak of change if the word itself does not change isomorphically how can anything change if it becomes what it was not at what point does change take place when *it is not it but becoming it* how-when do stopped frames prefigure contiguity in movement contextualization teaches about layering I can only make or receive sense of water through storying drinking immersing myself in it for we too are water-beings we are water and do not need prepositions conjunctions declensions



conjugations interpretations tenses parsings to enjoin us using words and certainly the absurdity of *sama7* linguistics will forever deem 'smallest units' to be building blocks or critical masses and-as times rather than poems paragraphs or lived lives

before you hang up Helga tell me can we meet in the market by the old fountain we are talking all this time about water so it has to be there I remind you of Goethe's (1919) *sturm und drang* poem *Gesang der Geister über den Wassern (Spirit Song Over the Waters)* his song to the universe of the mystery and magic of water we are forever infixed into as its performativity *sforzando* hear me Helga I confide I need in my quantum astro-physical life to seek out water in every state and circumstance I am blessed as raindrops like musical percussion fall from a King Ludwig oak scion onto my unworthy insignificant head and uninvited presence on ancestral Indigenous land going back some half million years to *unser neanderthal* cousins 12 million years to *Danuvius guggenmosi* (Böhme et al, 2019) *für immer zusammen*

1966 (re)establishing-shots -sounds -smells -textures finding sensorial purchase as we bring our minds together says Coyote warming by the fire addressing the alpine rainforest nations nucleic acid and proteinacious nations plants six-leggeds winged ones amphibians reptilians stone people finned ones slitherers crawlers hoppers creepers human beings star-and-cloud-beings all and each to address the growing crisis of the water beings and spirits under threat by humans who understand progress only in terms of economic growth software upgrades consumerism come good neighbour plant nations epiphytes phorophytes bromeliads slime molds lichen fungi mosses each and all let us celebrate water not only as life-supporting and -enhancing but as life-giving the embodiment of spirit-being *ad lib crepitation femural fiddling harmonica fadeout*

*nocturne* Raven *chortle-thrups* slow fade to medium panorama stabilizer-mounted gimball showing how flush with life and vigour water-beings are in all environments thriving beyond and despite destructive anthropomanagement systems that the European enlightenment and revolting industrialization visited upon them for centuries our fellow creature-being Viktor madly tries to research us and not research us melding his mind with electromagnetic extenders transmitters capacitors coils meters oscillators codes in endless digital technological outreach to thrive (unsustainably) with good heart but *sans* responsible inreach *baroque strings concerto phrasing*

*thinking about how to think about water an interior orchestral air legato sounds of static buzzing clicks beepbeeps* I speak a lot sometimes Helga *ja* but it helps me to think because when I just look through the telescope it feels like there is no teleological improvisation beyond the clichés of mainstream science thinking all this rational thinking drives me mad *cello violin pizzicato oboe descending bass* but when I write think sing hum even in this rain and blowing I move with my body and mind in a different kind of thinking-knowing and when I speak with you I feel elated *ja* it is the phoneme-ology of german-speaking *the throaty salival sibilant and umlautlich precipitate sureness of our sounds* that move and inspire me especially the *conversational rhythm(ic)-sounds* they have the delicious *deep-in-the-throat sonority* of my *ucwalmicw* friends that have a lovely germanness about how they express themselves by which I in no way intimate our cultures and languages are alike historically politically or socio-economically *improvisational organ and strings harmonizing* I feel the verve of *ucwalmicwts* spoken utterances arising from overburdened data-mined geographies *ah so many water sounds in the throat* make for strong speech muscles clear sinuses and skin texture that glistens and

coronas when backlit backheard backthought in their unceded homeland *sound of breathing in and out of a tremolo harmonica blends into cymbal swish* when the elders speak I feel the spray and spume of the land rain waterfalls vibrant forest transpiration whitewater dew humidity snow sleet frost *ja Helga* my thoughts often turn toward mysticism the embodied-enspired manifestation of interspecies communication science sees 'body' as an unnecessary messy variable or interference to add to the extractional *immer überall* cauldron I repeat myself *ja* it is a choral form of reassurance as I speak haltingly in english and talking on the phone does not work for me I need to write formulas down make equations illustrations graphs doodles commentaries ramblings and tables to give sense to the numbers and make arrows use coloured fonts highlighting yes and have a beer as the evening wears on *lisch aus* this is how I think a pencil eraser paper crayons a superior pencil sharpener simple drafting instruments sometimes a calculator but most of all I need to just sit down to think and write and talk in a combination of english and *schwabinger* rhythms and channel life-energies in any case if my legs and back are tired I can't think if I am hungry or thirsty or tired or cold wet or stressed I can't think except in circles and great leaps that lead to double-down spirals to dungeonous *ängstlich* thinking yes Helga I know what happened last time but I have done my homework and my sources are up to date and yes I am keeping hydrated even as we speak [it's raining] so put on your thinking cap and a bright scarf no don't take the *strassenbahn* my nephew says the traffic is not bad now so you can drive your car besides you would need two extra tram seats for your equipment and writing materials your public transit carbon footprint might be smaller but think of your stress and safety levels that reminds me please bring your illustrations of the infrared spectrograph and multiband imaging photometer we need to cross reference their H<sub>2</sub>O data with our own bring too your last week's excellent notes on the Hubbel and James Webb telescopes and the particle accelerator cross references and don't forget your 2-litre waterflask yes as a chaser sometimes I feel water in its wondrous forms is a chorus that calls us not so much like the sirens that made Ulysses crash his ship but more gently and from within *hoffentlich* always the refrain

*rainforest orchestral suite* in the alpine rainforest interspecies gathering at Fire Lake and the deeply-collaborative meeting in the pub of spirit beings in *Marienplatz* near glacier-fed *Oberbayern* lakes there is a feeling of *zusammenkommen* a get-together using sound and rhythm to gesture toward what cannot be said except as words speaking about words self-echoing

in the shadows beneath old-growth giants Sam Jim is silhouetted by moonlight reflecting from *waves and ripples* where he stands in the stream the *drip of beads of luscious water* from cedar and fir leaves ferns and bushes are spiritual punctuation enjoining consensual realities *rustling swaying murmuring bobbing* fungi mosses molds and mildews jostling for positional advantage etiolating bristling furling embodying myriad tropisms you can sense water at a foundational level transpiring evaporating guttating dynamically balancing the plant between weather and the plant's inner life water exchange between *expelled breath* stomata atmosphere diffusing between roots scurrying down boughs and trunks air insinuating itself between water droplets *lento assai rana pipiens interlude soft bubble pops of rain and-as river en traîn de devenir*

during an *entr'acte* an 'eau de water' is performed jazz-blues improvisation on the theme of the gift of water but where are the forests the green valleys gone to hydrodams drowned every one *brief light bucolic melody evolving into jazz* how did the Brandenburg Concertos become infused with jazz traditions 150 years before anyone invented a saxophone looking at Handel

and Telemann's musical compositions related to water there is no coda just endless *passepieds minuets bourrées* to magnify country spirits which isn't untoward *suddenly an étude in strings and woodwinds les eaux de la terre et cieux* improvised Schaferesque *Lake Miniwanka* (Schafer, 2020) recitative for the cellist her instrument is spiritually undifferentiated from forest as a treeperson it teaches her to be thankful to share her breath to feel the humid earth in everything sense creation singing as the plant world diffuses into and out of water fire sky essence I see my mother tending with love volunteer flowers in her vegetable garden bachelor's button sweet william poppies allium snapdragons daisies delphinia irises foxgloves crocus shooting star woodlilies wild roses lupins lady's slipper Indian paintbrush forget me nots and sweet cosmos these too are her children her legacy of compassion humility and mutual nurturance

*scherzo affettuoso cedar branches whisper together* 1966 Sam Jim's fish camp *talk around the fire* was first about weather fishing whitewater and bears moved on to *sama7* disrespect for land water air fire transitioned to government claims of democracy when its provenance is 100% stolen land gained through genocide *sans cesse* systemic injustice Sam Jim doesn't get into wrangling listens quietly awhile nods walks to a secluded spot upstream removes his jacket and shirt rolls up his trouserlegs *steps barefoot into the water picks up a cedar wand performs age-old ceremony with water in motion* says Raven we were taught that ceremony helps to create positive cross-species pan creational community mindedness feelings of peaceful intention *plop*

*baroque strings suite in D major fade-in* soft-focused spot falls on Viktor surely Helga I am not forgetting the antics of water on Enceladus which our *Goethe freundlich* colleagues have been following since Mozart's time but I am not convinced by the spectroscopic analysis results too many unaccounted for variables *ja sicher* Helga I know of Saturn's e-ring and speculated subsurface saltwater ocean that might host hydrothermal vents (NASA, 2023) so popular with ocean bacteria here but we have to be careful how we claim to know and what we trust in with respect to remote sensing and remote measuring and technologically-enhanced evidentiality many cosmo quantum physicists believe water gushes out of its 'South Pole' into space at 400 metres per second *ja* that would be something to see but we have to be careful speculating what the liquid and ice water themselves host in terms of hydrocarbons and organic materials that the Cassini spacecraft measured in 2007 we don't want to let hubris and essentialism icloud our thinking and decision-making yes Helga that moon plume radically changes how we think about water even in a tiny moon like Enceladus *theremin bidirectional trills with handclaps*

*harmonics of relationality scale degree 5* we are together again my forest family says Coyote sharing lifegiving breath I salute you elder trees bush nations berry peoples herb beings fern essences mosses lichens fungi liverworts mushrooms grasses blossoms buds blooms saps excrescences leaves fronds peduncles needles calyxes symbiogens endosymbionts roots mitochondria chloroplasts rhizomes mycelia mycorrhizae igneous magma silicate feldspar glittery mica striated granite glistening oolichan skittering crabs wispy fog remnants living harmonics *kukwstum'c* we salute you *takem nsnekwnukw7a*

*harmonic minor ja* Helga it must be tonight for maximum elucidation of our recent astronomical observations and correspondence and it would give us a chance to discuss the Kepler 138 a-d exoplanets in the constellation Lyra which promise amazing water content (NASA, 2022) they

might be orbiting a red dwarf star then rain begins making further observation uncertain *musica sphaerarum* wild wind and sleet lash Starnberger See a brief downpour over swirled heartbeats then the weather takes a deep breath holds it exhales slowly close-up of water vapour trans-forming into liquid ice steam mobius are you still there Helga despite my aimless lalorrheal verbosity yes let us meet with laptops and fieldnotes but first I must update software and warm from my wet and frigid excursion yes *wasser ist wasser* but as an inconsistent invariable it refracts photons in unexpected patterns even accounting for temperature-pressure-gravitational gradients there are inconsistencies not included in remote calculations I am cautiously drawn to variations on chaos theory fractal geometry of physicality rather than conceptual worlds numbers water is seen in science as one of its invented molecules undergirded by invented atoms held together by over-zealous quarks and imagine-atoms we don't know what we don't know or even think we know despite or perhaps because of science's invented conventions standardizations universal constants science was not ready for the big flip in the mid 1970s with chaos theory not seeing its returning shadow yet it goes on thinking-knowing in the same narrow-gauged closed-looped way meanwhile e-stem continues to trigger feed accelerate climate change and the myriad injustices it creates and perpetuates

*espressivo bits of Vivaldi's Le Quattro Stagioni Handel's Water Music* says Coyote my family is obsessed looking into water *spontaneous scattered (including pre-recorded) murmuring* takes place in the fishcamp a middle-aged douglas fir aud/sent/ience member makes *sounds of needles swishing together* while moss and lichen family members inhabiting a nurse log lean toward the fire *at the wind's urging* saying that as beings of water they need to know how to prevail in storm and calm flood and drought *rain drizzles forest rustles confluences chatter cheerily*

*percussive syncopated harmonies* Helga says Viktor speaking into his *Geländewagen* screen you know the physics and chemistry of water do not for me jibe when looking at Jupiter's moons and even less with exoplanets hundreds of light-years distant so treating water as a constant with standard underlying conditions might be under threat in a context where phenomena are manifesting that terrestrial e-stem theories can't even guess at let alone experimentally mimeograph that is why we have to talk on paper and in person yes bring your calculator *bis bald Helga sound of engine turning over haltingly but not starting* that reminds me I must do more research on the prussian blue analog sodium ion battery *pitter patter of soft rain on rainforest understory*

*con brio* yes Helga while waiting for the tow truck I am thinking the current quantum dynasty doesn't see Einstein was only half serious speaking about *spukhafte Fernwirkung* the spooky action at a distance with Max Born in 1947 (Bernstein, 2005) you invent a number system a referential system and before you know it your concentric and looped circles of truth-claims spiral into the mathematical thinking that caused the problems no-one pays attention to the catastrophic implications of clichéd prescribed consensual knowledge systems I know having the sharpest pencil and crispest figures can lead to all wrong answers but I can go back and see where-how I went wrong your Viktor looks at re-quantification data set results for water on the Kepler exoplanet *sighing audibly* whatever happened to water just being something you need a drink of when you're thirsty why must it be essentialized with everything else in e-stem thinking it is alive it is spirit and shapeshifter molecular is only one of its forms

*intermission botanical-arboreal whispers soughs watercraft settling sounds swaying scraping squeaking lurching groaning orchestra members chat quietly and perform loving maintenance on their instruments* a few have n-95 masks at the ready but many can't wear them while playing some are separated by transparent hygienic screens *funneled winds whistle and whirl* the narrator-]conductor[ goes on *german scientists discovered stardust sprinkled with a radio-isotope of iron from a supernova whose ghostly interstellar cloud the Earth has been turned through for 40,000 years (Andrews, 2020)* *subito piano a sudden silence* saw everyone holding whiter clouds of collective breath and in the forest shade *the wind strums bare-of-leaf branches high in the canopy* says the pale grey squirrel in mid-leap I can't very well land on a metaphor or illusion unless I'm one as well to which *the cedar swishes nods scents assent*

strange says Coyote the *sama7* speak of water in terms of chemical molecular atomic and quark but as *ucwalmicw* we have learned that we ourselves are stories of water cycles waves ripples riparian and littoral topographies confluences eddies tides archipelagos reefs trenches ridges rises floes cornices mist and breath *tectonics of earthwaterairfire dancing*

*wraaak* Raven offers from his coniferous perch amongst hydrophilic bromeliads willows and cattails in the avian-insect-reptile-amphibian-microbe-mammal orchestra pit our knowings and stories of water are urgently needed our world is on fire our planet is at a climate change tipping point we need to take care of our water *the cross-species orchestra continues to tune their instruments in lifelong rehearsal-as-performance glissandi kukwstum'c ucwalmicw*

*Coyote pipes up* a radical paradigm shift is urgently needed to challenge the neoliberal progress narrative of modernity that permeates western(izing) education if there is any hope of addressing climate change and resulting global crises facing humanity and all life-being *myriad sounds key changes alternating basslines hybrid picking chord pro-inter-retro-gressions oral phrasings contrapuntal harmonics pace tone pitch timbre tempo texture variations ]si lences[*

*ad lib jazz tremolo phrasings* yes says Raven this would mean students learning to become with the world (UNESCO, 2020) (re)learning human non-human more-than-human interconnectednesses and-as interdependencies cornucopias of lifeways dismissed since the imperialist-scientific-industrial revolutions and concomitant growth of capitalist economies *shhhh*

says Coyote this would require widening the circle of knowledges and practices in education including millennia of Indigenous ecotechnological knowings-practices as equivalent to those of the settler mainstream holistic education connecting mind body heart spirit ritual with place generating more complex culturally-species-relevant ecologically just sustainable pedagogies

yes says Raven education must play a pivotal role but for this to happen teachers students administrators parents need to work collaboratively with local Indigenous and cross-species communities as equal partners to reimagine and co-create reciprocal mutually recuperative ecoliteracies eco-pedagogies and ecotechnologies for survival on this planet there is no time to lose

the current focus on e-stem education says Coyote needs to shift to land-based rhizomatic ecopedagogies mutual nurturance of human non-human and more-than-human entangled intelligences and agencies *songs of dancing waters and starlight red-winged blackbird sings*

*soft blues harmonica riff* says Raven taking a long slow drink from the clear glacial waters of the creek rich cross-cultural trans-species ecopedagogies offer not only written formats but conversations across oral-performative multi-sensorial genres *night wind and water sounds*

*syncopated oboe loon wolf drum chorus children handdrum voices of women sing water protection song* by Anishnaabe/Cree waterkeepers (Jerome, 2018) *harmonic meditation of river-spirit entanglements* in South America (Glass, 1999) *watery soundscape by choirs* around the world (Schafer, 2020) *musical dissonance* in response to flooding of NYC (Anderson, 2018) *st'at'imc women singing with Martina Pierre Women's Warrior Song* (personal communication, n.d.) act as intercultural trans-species spirit-bridges

Coyote *har-ra-roooooos* Raven *wraaaks chortles thrups* Sam Jim smiles forest water sky star beings *sing dance sway together whisper kalan7wi tsexox kukwstum'c niá:wen ucwalmicw*

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