

# DRAFT

## Climate: A New Story study notes

### Climate: A Series correlated video questions

Prologue: **Lost in a Maze**

Ch. 1 - A Crisis of Being

- **What made you an environmentalist?**
  - Emotionally confronting extinction due to human violence.
- **What drives the underlying addictions perpetuating environmental damage? What is the unmet need behind the addiction to fossil fuels? How can we meet that need?**
  - We seek through growth to meet fundamental needs. Needs that are qualitative. Connection, community, beauty, sacredness, intimacy.
  - Temporarily numb but ultimately heighten the longing
  - Must reorient toward qualitative development instead of quantitative development
  - For this, we need a new story of the world. A new and ancient story. Interbeing. A way of seeing, being, and feeling. Not just a concept or philosophy.
  - We must first restore our inner ecosystem of love and empathy, if we're going to have a chance at restoring our outer ecosystem. We must regain our listening capacity.
- **Why aren't appeals to rational reasons enough to convince us to change our behavior and heal the planet?**
  - "Trust us, bad things will happen to us if we don't change our ways. It's almost too late."
  - Rational arguments appeal to self interest. But it's not enough. We need a revolution of love. In the world of separation, love is irrational and the mind is in perpetual conflict with the heart.
  - Instead, we can ask "What is it like to be you?" We can understand the other.
  - Are you ready to give up being on team good and being right? Are you ready to give up your addiction to fighting?
  - Fighting the enemy is futile, when you inhabit a system that has the endless generation of enemies built into it. That is a recipe for endless war.
  - What about appeals to love? Is life on earth valuable and sacred in itself, or only in its utility to ourselves?
- **Is "the war on \_\_\_\_" working? Are we experiencing war burnout?**
  - This can be a necessary initiation
  - "When we exhaust what we know, then what we don't know becomes possible."
  - War is usually a reductionist, fundamentalist viewpoint

- What deeper shift do you think climate change is calling us into?
  - Climate change calls us into a new mythology of self and other.
  - Respect for nature is respect for all beings, including plants. Part of this is believing only humans have full beingness.
  - What we do to the other, we do to ourselves.
  - Lesson 1 was the bomb, lesson 2 is climate change.

## Ch. 2 - Beyond Climate Fundamentalism

- What is the problem with climate fundamentalism?
  - Mirrors money and war
  - Reduces the complex to the simple, and demands sacrificing everything else to 1 goal
  - It requires that we harden our hearts to the needs in front of our faces
  - This causes hostility toward environmentalists from people who are immediately suffering, such as impoverished minority communities
  - "We know better than you do what you should care about"
  - All suffering is part of the same fabric. Healing on any level contributes to healing on all levels.
- What induces a shift to the consciousness of interbeing?
  - An initiatory experience
  - Through a confrontation with beauty, suffering, and mortality. Through a connection to what is real.
- What is the problem with carbon reductionism?
  - It reduces "everything matters" to "one thing matters"
  - Sits within a scientific reductionism. The reduction of the whole into its parts, and the world into measurements. The reduction of the qualitative to the quantitative. Reduction of the infinite to the finite.
  - It depends on what we include in our measurements. And something always escapes the model.
  - Often, what is left out is our shadow. And the thing we ignore or repress often festers and roars back.
  - Why do you think the policy conversation is so focused on carbon emissions?
- Can you give an example of a carbon reductionism initiative backfiring?
  - Where the unmeasured suffered? Where externalities were discovered to be just as damaging, like rare metals mining or stealing the wind?
- Will our measurements ever be complete? What is left out?
  - What we don't value
  - What isn't part of our agenda
- What is the opposite of fundamentalism?
  - The opposite of fundamentalism is looking at **everything**.
- What is the real reason you want to stop the clear cutting of your local woods?
  - Love.
- What is the biggest threat to life on earth?

- The biggest threat to life on earth is ecosystem breakdown. Life maintains life. When these things break down, the results are unpredictable.
- Are social issues secondary to saving the planet? Do we need to harden our hearts? Do the marginalized groups need to wait?
  - Social issues are not secondary to the grand goal of saving the planet. Social healing is indispensable in ecological healing. Neither can succeed without the other, neither is more important than the other.
  - After all, most human suffering comes from human beings themselves, much more often than grand external tragedies. A hurting person spreads hurt everywhere, including on to the planet.
  - But social justice isn't enough. Social healing involves likely the total reformation of every system we have.
- Why should we be wary of rushing to a cause?
  - Let's not jump to "the cause", even though the simplicity is actionable and the certainty is comforting. If the solution was one thing, that'd be so much easier. But what is easy is not always what is true. The ready solution can be like a narcotic, numbing the pain without healing the wound. It feels good to be able to say "Let's do something about it!".
  - Can you give some examples of reductionistic problem-solution thinking not working for us?
    - The story of the eels disappearing.
    - Is gun control the right approach to mass shootings?
    - What is the real cause of lyme?
  - Take action on the cause if the problem is truly simple. But what if the problem is everything?
    - If your foot hurts because you're walking on a splinter, remove the splinter.
    - Most things are not this simple.
    - In ecology, every cause is also a symptom.
    - Our programming: identify the problem (intellectual), measure it (scientific), attack it (political).
    - If all you have is a hammer, everything looks like a nail.
    - We are clinging to a problem that our available solutions can handle, so we may hold on to the totality of our worldview.
  - Where do the real solutions lie?
    - The real solutions lie in the local. Protecting and regenerating the local places, while respecting the local places of others.
    - Feeling love for the earth, holding ourselves in the rawness of loss, and not jumping to the simplest available problem-solution.

### Ch. 3 - The Climate Spectrum and Beyond

- Which side are you on? Are you a climate change alarmist or a climate change denier?
  - This is the wrong question.
  - I am skeptical and alarmist.

- What are the deeper dynamics of polarization?

- The dynamics of polarization obscure something more important than “what side is right?”
- As with many polarizing issues, it is the hidden assumptions/agreements of both sides that are most important. Assumptions about what is important, and what not to talk about. Draws attention away from the underlying causes to the more superficial symptoms. Therefore, it perpetuates the status quo.

- (What is the conventional spectrum of opinion on climate change?)

- #1 climate change skepticism. Not happening or not attributed to human activity. “Denialism”.
- #2 techno-optimism. Another challenge we will overcome through progress. There is no problem we can’t solve.
- #3 climate orthodoxy. Carbon emissions focus. There is no time to waste.
- #4 climate justice and systems change. Climate change is inextricably linked to our economic and social oppression systems.
- #5 climate catastrophism. It is already too late, except with an inconceivably fast and dramatic response. (Guy McPhearson)

- (What hidden agreements unite these conventional opinions?)

- Focus on greenhouse gases and global temperatures. (Aren’t a problem vs the end of humanity)
- Throw out care of nature with standard AGW narrative
- Demote other social issues to secondary importance, including those of ecological healing.
- Carbon reductionism that implicitly permits other ecological destruction that doesn’t emit CO<sub>2</sub>.
- Nature as a “separate” environment.
- The assumption that climate is governed by global geomechanical processes, and not by life processes.
- A mechanistic view of nature as an incredibly complex machine.
- Quantitative approach to knowledge
- Utilitarianism
- The belief that humans are the only fully conscious beings on this planet

- What is the role of mythology in earth healing?

- The deeper current of our civilization moves with mythology. A story of the world. The solution will come from outside the story of separation.

- (What perspective does the evidence support? Is there some sanity and validity to each perspective? Can you make your belief based on quantitative evidence alone?)

- The “us” vs “them” drama.
  - Identify & dehumanize the enemy.
  - Both sides think they’re sane, right, human, smart, discerning.
  - It’s an act of betrayal not to take sides, or to sympathize with the enemy. Pacifists draw more hostility and contempt because they question the validity of the story. They pose an existential threat to identity.

- In preparing for this book, Charles read the best examples of each opinion he could find.
- Mostly a question of **who you trust**.
  - Most people think science is the only thing worth trusting.
- Might conflict with other **deeply held beliefs**.
  - Most climate deniers are in the religious right, question other mainstream positions presented by science like the earth being a sphere, are concerned about increased government regulation of business, usually believe humans can solve anything, usually concerned about distractions from the war on terror.
- Everyone would benefit from a **less dogmatic** approach
- Everyone would benefit from less ego attachment (self-righteousness, smugness, contempt for those who disagree)
- Everyone should be wary of their own **confirmation bias**, even if they think they're unbiased. Even just bringing more scrutiny or attention to certain sides.
- A society of increasingly non-communicating reality bubbles, warring with each other, even as their hidden agreements go unexamined and their shared interests neglected.
- Spend some time in each reality bubble
- **What truth does climate catastrophism hold?**
  - #1 a great dying is on its way, and humans are to blame
  - #2 we are facing a major metamorphosis into a new kind of civilization
  - #3 conventional means, systems, mindset are not enough. The conventional solutions will fail and cause us to stop... and look for new solutions. That solution may be "oh well, let's just focus on love, beauty and life. YES. That's the first step.
- **What are your thoughts on the mainstream climate narrative?**
  - Same reality tunnel affliction exists here
  - "Science is broken". Fraud (deliberate, but mostly unconscious and systemic), irreproducibility of results and no incentive to prove reproducibility, misuse of statistics (p hacking), flawed system of peer review that enforces "paradigm protection", lack of funding for unorthodox hypotheses, publication bias favoring positive results over negative results, endless elaboration of existing consensus theories, losing funding/positions over controversial theories, political pressure to not publish data challenging mainstream narrative so they don't get labeled a "climate denier".
  - Basically, confirmation bias is built into the scientific institution. "Paradigm protection". "Groupthink" through in-group out-group dynamics.
  - Science need not be the master
- **What is anthropogenic global warming (AGW)?**
  - Climate change as part of a broader ecological degeneration
  - Anthropogenic = originating from human activity
- **So what is your position?**
  - We are facing a climate crisis

- It's not so much about global warming, and more about "climate derangement"
- The priority is to restore soil, water and ecosystems worldwide
- The flesh eating virus underneath this all is the global financial system and the story of separation. Development and extraction are devouring the world.
- Wants people to open their eyes and feel the dying of life on this planet.
  - (Population decreases, extinction crisis, poisoned ecosystems, spreading deserts)
- The living planet view
- Invites us to serve life
- The crisis will intensify until the medicine has been fully received

#### Ch. 4 - The Water Paradigm - A Different Lens

- What is "the water paradigm", and why do you suggest a shift to it?
  - Draughts and floods ARE climate change. This is the climatic factor that affects life most.
  - Water and carbon cycle are closely entwined. Focusing on water will address both.
  - Water vapor is 80% of greenhouse effect. But it's hard to model for many reasons.
  - Water is life. What we do to water, we do to life.
- What is the "Gaia theory"?
  - that life creates the conditions for life
  - Geomechanical to living systems view
  - Climate health depends on the health of local ecosystems everywhere. Depends on water cycle. Depends on forests and trees.
  - Alive planet is resilient to major challenges
  - Illustrated by forests' interaction with water. "Forests bring the rain". We must protect and restore our forests, like our life depends on it.
- What are the organs of Gaia?
  - What are the most important organs of Gaia?
    - The most important organs are the ones that host the most life
    - Forests, wetlands, estuaries, coral reefs, rich grasslands
    - Agriculture and urban
      - Lands heavily influenced by humans are dying lands
      - We must learn to live in relationship with nature, not against it
  - Mass deforestation started at least 2000 years ago, and the effects of this is double the effects of the industrial era, which has just continued the trend. Earth has ½ the trees as it did at the dawn of civilization.

#### Ch. 5 Carbon - The Ecosystems View - Carbon, Soil, and Life

- Can you speak to the importance of wetland, grassland, and forest ecosystems?
- Wetlands
  - Deposit more carbon in soil than any other ecosystem
  - Wetlands, mangroves and salt marshes = ½ of biological carbon capture globally
- Grasslands

- With herds of large herbivores, have huge sequestration (estimates vary by several orders of magnitude)
- 97% loss of north american high grass prairie
- Forests
  - Right now absorb 40% of global anthropogenic emissions (the more CO<sub>2</sub> in the air, the more they absorb, up to a limit) (and emit 1/3 due to deforestation)
  - 1/2 the trees since beginning of civilization
  - Deforestation is a widely accepted problem
  - Forest degradation as a result of logging, forest fires, and insect damage
    - Logging makes forests more susceptible to fires by decreasing evapotranspiration and disrupting ecological balance keeping insects in check. Homogenizes the forest. Heavy machinery > soil compaction.
    - Mycelial networks tie together all the forest plants. Create a communication network to share info, send alerts, share resources. Roads chop up this living web into smaller, disconnected pieces
    - Keep trees from getting elderly. What if these elders contain wisdom?
    - Keep trees from falling and degrading over decades. What if these host slowly developing fungi?
    - See “The Hidden Life of Trees” by Peter Wallaben. Healthy trees feed sick trees, parent trees feed their offspring, community keeps stumps of felled trees alive for centuries, communicate through airborne chemicals and mycelial networks. Learn collectively and form friendships, cooperating instead of competing for sunlight. Natural forests are kept 3 degrees cooler than manmade forests.
  - Forests include ALL the living beings that live there. Including apex predators like wolves. How do you quantify this? Their effect is indirect, systemic, and diffuse. (E.g. kill wolves, too many deer, eat too much vegetation, expose bare earth, runoff, desertification, etc.)
- The emissions obsession
  - Where did the biosphere’s historical resilience come from?
    - From healthy ecosystems. Because life creates life.
  - Why do you think the policy conversation is so focused on emissions?
    - With our existing tools, it is easier to measure fossil fuel emissions than the effects of land use changes. Very difficult to understand and model the complex processes of ecosystem life.
    - Rests comfortably in our geomechanical perspective of earth as a complicated machine. Complicated = many independent variables. This is how science is set up. Complex = variables are dependent, causal relationships are non-linear, no part can be understood in isolation, the whole is greater than the sum of its parts, altering 1 variable can have huge and unpredictable effects.
  - What should we be focusing on instead of carbon emissions?
    - We need to focus on: ecosystems, soil, and biodiversity

- We must recognize the aliveness of earth and all its beings
  - Come on. Do we really need these numbers to know that we must preserve and restore our forests? Even if you could live on a barren planet, would you want to? If we don't already know the sacredness of forests, more numbers are not going to help.
- What do you think about geoengineering solutions?
  - Geoengineering - the artificial altering of earth's atmosphere composition and surface reflectivity of the planet in order to reduce global temperatures.
  - Who knows the consequences of crazy things like spraying the skies and installing giant carbon sucking machines
  - Even more sane solutions like massive tree planting has backfired (China example)
  - These solutions attempt to avoid the call to a new story, to extend our culture of overconsumption a few years longer, to continue the domination of nature
  - What is the deepest problem with this kind of short term thinking?
    - The long term is sacrificed for the short term
    - The status quo is perpetuated
    - We further empower those already in power, because they can take quick and global action
    - Because the crisis is never ending and the solutions superficial, **the long term never comes.**
    - We continue giving power to the political system that is perpetuating ecocide in the first place
- The cult of quantity
  - Is there a "rational" reason we should care about saving the whales?
  - We have to remember the limits of our knowledge. Our models will leave things out. What else have we left out that I haven't even mentioned?

#### Ch. 6 - A bargain with the devil - hazards of the global warming narrative

- Have environmentalists made a bargain with the devil by jumping on the global warming narrative?
  - We moved from making decisions from the heart to the mind
  - Traded local for global approach
  - Joined the camp of self-interest and fear
  - They've agreed to mask the real reasons they care, which aren't just about climate change
- (Have environmentalists lost their biggest potential ally, the general public, by joining the mainstream global warming narrative?)
  - People de-prioritize global warming for more immediate issues
  - Even if they believe in it intellectually, it doesn't feel that real
  - Fear-based articles don't work
    - Make people feel powerless
    - Guilty
    - Leads to psychological denial



- The mainstream narrative has kept people removed from their direct experience of ecosystem destruction. Especially because normal routines continue. People don't usually change until something affects them on a physical/emotional level
- **Where does real environmentalism come from?**
  - Real environmentalism comes from beauty, love, loss and grief.
  - We need the kind of passion we saw at standing rock.
  - The heart. The immediate. The local.
  - We need a revolution of love.
  - You are a nature lover. You are a treehugger. You are a whale lover. A butterfly gazer. A turtle caresser.
- **Why should I care for Gaia? // Why should I care for my son?**
  - To give a utilitarian answer is insulting to the person's character. It says "I know you, you just care about your rational self-interest."
  - All beings yearn toward the exuberant expression of their life force. Even you yearn to express your gifts more beautifully than you need to. "I know you. Given half a chance, you will care for the Earth."
- **What is nature trafficking? Should we make decisions about nature on the basis of utility?**
  - All mindsets of exploitations must end
  - You probably don't like being exploited as a consumer or employee, valued only to the extent that you're useful to someone else
  - Economic/political logic : human population // carbon counting : valuing parts of nature more than others
  - Quantification <-> monetization
  - Can the value of whales be measured in dollars?
- **Does nature have rights?**
  - We must see it as a being and hold it sacred
  - Can we ever reason our way to love?
  - We must feel more, care more, and do more

## Ch. 7 - The Revolution is Love

- **Why do you say the revolution is love?**
  - We form emotional callouses just in order to function. And then, something pierces those callouses. And when we grieve one of life's sorrows, we grieve them all.
  - Love violates the story of separation. Love is the expansion of self to include another, whose well-being becomes part of one's own.
  - What is it like to be a rhino, a river, a police officer...?
  - Because each contains all, we can be peaceful in our fervor and patient in our urgency.
- **What if the concrete world is possible to survive through technology?**
  - It's a nightmare machine world, where human life is entirely dependent on technology
  - So far, people have chosen this step by step
  - What kind of world do you want to live in?

- What do you want to sustain?
- If ecological degradation had the power to make us choose a healing path, it would have happened already. When do we say “enough”?
- We are called to make a conscious choice. It’s up to us to answer this invitation.
- Why do we settle for a world that becomes uglier and more degraded every year?
- **How does love for planet earth awaken?**
  - Through loss, grief, and the realization of death
  - Through beauty
  - For example
    - “Paradise Found” gives us a glimpse of the beauty of pre-colonized north america
    - “Change blindness” in psychology makes this almost unbelievable. People are bad at tracking subtle changes over time.
    - I think we feel what we’re missing, but we don’t know what we’re missing. It’s a poverty, a void, a hunger for something unidentifiable. Maybe this gets transferred to addictions.
    - Despite all that has been lost, the earth is still alive, and much beauty remains.
    - Now is the time to choose life.
  - To recover our ability to feel, it’s going to hurt. There is a tremendous amount of trauma that has been locked away as we all try to survive in a world of artificial scarcity.
- Our ideological transition zone
  - Linear control-oriented thinking -> nonlinear systems theoretic thinking
  - Ecosystems are the most potent teachers of this

## Ch. 8 - Regeneration - healing the soil

- **What is “regenerative” agriculture? And what is one example of it working wonders?**
  - Quickly sequesters large amounts of carbon. In this case, because of the rebuilding of topsoil.
  - MIRG - management intensive rotational grazing or “holistic grazing”.
    - Makes land rich and spongy and wet. The land comes back to life. Springs return, greens grow again, animals return, creeks flow. Semi controversial in the mainstream because it’s hard to measure (Alan Savory)
  - Regenerative analog forestry or syntropic agriculture (Ernst Gotsch)
    - Brought dead land in Brazil back to life
- **Why is regenerative agriculture marginal?**
  - Incompatible with existing institutions. Cannot apply standard processes, hard to measure results, GMO/pesticide/herbicide companies have no incentive to fund studies on this. Hard to translate into data-based policies. Require intimate knowledge of local places over long time spans. There is no formula.
  - Represents a paradigm shift. Participate in nature instead of dominating it.

- For a long time, more and more people have moved away from farming and the land
- **Can we actually feed the world regeneratively?**
  - Small, ecological farms often outperform large farms
  - What if lawns grew food instead?
  - Does require more time per capita on food and earth healing. Change in zoning codes for homes and land. More people involved in growing food. We could reallocate all the farm subsidy money to incentivize 3-year transition to regenerative farming.
  - What if we encouraged at risk young people to regenerative farming instead of the military?
- **Can healing the soil heal the water?**
  - Can help reverse desertification
  - “The water man of India”. Water retention structures. Water retention landscape. Tamera ecovillage.
  - Can you talk me through the full water cycle? Viktor Schauberger. “The full water cycle”.
    - Half water cycle: ocean>cloud>rain>runoff>flow into streams>ocean
    - Full water cycle: ocean>cloud>rain>soak into earth(stay for weeks-decades)>emerge from springs>flow into streams>ocean
- **Were indigenous people just lucky to have wild, pristine land and low population density?**
  - Instead of zero impact, positive impact. Instead of “leave no trace”, leave a beautiful trace
  - How should we participate? Watch and listen and enter an intimate relationship

Ch. 9 - energy, population, and development - the paradigm of force.

- **Is it possible to transition to sustainable energy or not?**
  - The more he researched, the more unclear it became.
- **What does the push for sustainable energy take for granted?**
  - It's best for humanity to continue using a lot of energy if it can do it sustainably
  - Conventional models of development
  - “Progress” and increased energy use means increased well-being
  - Takes for granted current systems of medicine and agriculture
- **Why are we so obsessed with energy?**
  - Harnessing non-food energy sources to perform work is unique to humans
    - 500,000 years - fire
    - 5,000 years - animals to plow fields and carry loads
    - 100s years - burned oil, coal, gas
  - Energy consumption per capita in america peaked in 1970s
  - Maybe we will not ever ascend toward techno-paradise
  - A force-based system requires a lot of energy
- **Are we going to have to make due with less? What about a more abundant life that requires less energy? Is that possible? What might it look like?**

- Holistic medicine, regenerative agriculture, and close-knit communities require LESS energy with better health, abundant food, and more happiness.
  - Many people walk out of “developed life”, and not because of climate change
    - Severe depression, addiction
    - Seek to live in a different way: soil, community, unplug, downsize houses and income, seek to learn from other cultures.
  - **What if we won't be forced into a change, but what if we have to choose it instead. Many already are, as best they can, within a social-economic matrix that is hostile to it. A personal crisis can open the possibility of choosing a beautiful life over a secure life.**
  - In doing so, we've started to turn instinctively toward the marginalized indigenous who hold knowledge we can't even conceive of.
  - How do **you** want to develop?
    - Giant flat screen tv with robot house cleaner and 5000 sq ft and 3 car garage that you get to by your helicopter.
    - Small house of natural materials, made in sacred geometric proportions, ringed by gardens bursting with life, linked to other dwellings by footpaths, with people you care about deeply in community. Developing consciousness, sensitivity to subtle energy, relationship with the land, emotional intelligence, and authenticity of relationships.
- **If forced to choose, what sustainable energy would you bet on?**
  - Photovoltaics seem most promising. And indeed, human creativity is rather unlimited when united toward a vision.
  - But this transition may only go so far. We don't want to sustain more misery. And “green energy” can even be devastating.
  - For example, free energy devices. Are they going to save us?
  - Abundance is a state of mind and a product of relationships. Technology is but a tool. We could have this abundance now if we transitioned to new systems socially and economically.
  - Distribution is a bigger issue for us right now. E.g. half of food goes to waste. Distributed energy is more promising than centralized.
- **Do we need to decrease the population to save the planet?**
  - Live like an American = 1.5 billion sustainably
  - Live like Guatemalan = 7.5 billion sustainably
  - Live like indigenous = 15+ billion sustainably
  - Eugenics and then population control and sterilization. This burden often targets the undeveloped countries and marginalized communities, because developed countries already have negative population growth
  - Techno utopian. Not a problem, because we will solve the problem
  - Women's empowerment rationale assumes that women are better off dependent on employers than men or community

- Access to contraceptives has little influence on birth rate. Biggest influence on birth rate: education (affluence, social stability, transition out of patriarchy), mortality rates (children not making it to adulthood)

## Ch 10 - money and debt - a game of musical chairs

- **A game of musical chairs = current economic system**
  - Money is lent into existence, and those loans carry interest. So there is always more debt than there is money. Therefore everyone is set into competition for never enough money. The strong, quick, and lucky get a chair. It must impoverish someone, so different factions seek to engineer the circle to give themselves a better chance at a chair. Everyone is so desperate to survive, they don't question the rules of the game.
  - But what if there were as many chairs as people?
  - This false scarcity encourages heartlessness. If you care too much, often you'll go out of business. No chair for you.
  - **The prophecy: the doctrine of rational self-interest.** Which has never been true and never will be true of humans. But corporations are like the culminating expression of this ideology. Corporation is a more ruthless player of musical chairs than most actual humans can be, so they excel at the game. But individuals exhibit the same kind of ruthlessness, albeit milder, when we seek the best deal.
  - **What about conscious capitalism?**
    - Applied sincerely, mindfulness and spiritual practices in corporations make "business as usual" harder for people to participate in. They precipitate a crisis for the organization and the people in it. And that is good.
- **What's the key difference between our economy and musical chairs? The growth imperative.**
  - The bank lends \$1,000 to a bunch of people and requires them to pay \$2,000 back in 10 years. It is mathematically impossible for more than ½ of them to do it.
  - But nearly everyone can pay them back, because the bank has lent out more money, with interest, to those it thinks can pay it back.
  - When lending slows down, bankruptcy is certain. It's called a depression.
  - To forestall depression, economic growth must never end.
  - So, assuming the system can't change, all politicians champion economic growth. In this system, they're right to do it.
  - This leads to relentless pressure for growth, like our lives depend on it. Which has us resorting to imperialism, colonialism, exploitation of natural resources, etc.
  - Economic growth means the exchange of good/services for money. Therefore, undeveloped areas offer a huge opportunity for growth, because they don't use money. "What a tremendous market opportunity!" But how are they going to start engaging in the economy without any money? Easy, selling their natural resources and enlisting them in modern jobs. This is what development loans have funded for over 500 years. It assumes that money = well-being, and development is good or inevitable. That our life is better than theirs.

- But suffering hides behind the numbers.
- We should direct our activism toward changing the system of scarcity, not blaming the participants (monsanto) or the symptoms (greed).
- What would a new kind of progress in a de-growth economy look like?
  - Rebuild connection to community and land
  - In truly advanced society, everyone would live in a building that beautiful.
    - Ex: retreat center in Brazil built by indigenous
      - In 3 weeks, without measuring tools or metal fasteners, and with only equipment they got from the land, they built a 40-person accomodation. Smoke from the fire pit rises quickly, proofing against insects but still waterproof. Temperature regulated passively. Built in precise golden mean ratios. Makes architects weep in humiliation when they visit.
  - Maybe a quantitative regression, but not a quality of life regression
    - Less money, floor space, cars, energy consumption per capita
    - More herbal medicine, less conventional medicine
    - More bodywork, fewer high tech procedures
    - More beautiful buildings, but fewer big ones
    - More singing, less music purchases
    - More time outdoors, and less in gyms
    - More free time for children, less time in organized activity
- How have we managed to maintain this system of endless growth?
  - Almost everything in our lives has become a product or service
  - We reach to undeveloped parts of the world to get more economy participants. We extract their natural resources and labor. Their debts are at even higher interest rates, and they become indentured servants to continued development. Growth is imported to the developed countries from the less developed countries.
- What are the key elements of an ecological economy (based on steady state or degrowth)?
  - Debt cancellation
    - Debt is a social construct that can be changed
    - Central banks could null all debts, partially cancel, or reduce the interest rate to 0%
    - A debt resistance movement, debt strike would quickly bring system to its knees because the banks are already so highly leveraged
  - Negative interest money creation
    - Liquidity fee on bank reserves (maybe 5% a year), so banks have incentive to lend money at 0%
    - Reverses concentration of wealth, encourages money flow, shifts taxation, etc...
  - Internalization of ecological costs
    - But very difficult to measure. But we could develop better ways than carbon credits.

- Though of course, we must remember we cannot truly represent nature in terms of dollars.
- Universal basic income
  - Unleashed from survival mentality, people are free to express their gifts and contribute meaningfully. Lots of evidence that people don't just become lazy entitled slobs.
  - Businesses would have strong incentive to create fulfilling jobs
  - "Social dividend" for each person.
  - Could be funded by levies on accumulated wealth, which negates the profit from mere ownership of resources
- Economic relocalization
- Recovery of the spirit of the gift

#### Ch. 11 - An Affair of the Heart - In Science We Trust

- Science is our main map of reality. Seen as rational, truth. But it is really our religion.
- Is science actually more like a religion, rather than the one and only rational path to truth?
  - Based on *a priori* metaphysical "givens" that we must take on faith
    - Objectivity - assumes formulation and testing of hypotheses don't affect the experiment.
    - Anything real can be measured and quantified.
    - Anything that happens is because of aristotelian efficient cause.
    - Basic building blocks of matter are generic. E.g. all electrons are identical.
    - Nature can be described by invariant mathematical laws.
  - These "givens" are crumbling under quantum mechanics and complexity theory.
  - Other religion parallels
    - A procedure for attaining truth (scientific method)
    - Elaborate divinity rituals to gain knowledge (experiments)
    - Further rituals to manipulate reality (technology)
    - Invisible universal spirits (energy, forces, etc)
    - Esoteric language
    - Teachings on human nature
    - A creation story (the big bang and darwinian evolution)
    - Invisible entities (electrons, mitochondria, etc)
    - Special rituals for healing (medicine)
    - A priesthood
    - A training/initiation for priesthood (graduate school)
    - Orders and associations for priests
    - Preachers (science writers, etc)
    - Legendary saints and heroes (Darwin, Newton, Einstein, Maxwell, Bohr)
    - Martyrs for the cause (Galileo, Bruno)
    - Mainstream sects and wacky cults
    - Extremists, fundamentalists, and tolerant moderates
    - Doctrinal schisms, heretics and apostates

- Excommunication of heretics (funding cutoff, blacklisting from journals)
  - A system of ethics and morals (rational choices, scientific policies)
  - A system for the indoctrination of youth
- If science is just another religion, should we dismiss it?
  - The point isn't to dismiss science for being a religion. It's not to disparage it, but to open up new questions.
    - What are the limitations of technologies available in this worldview?
    - What other religions, systems of metaphysics, perception and technology might be borne of the current crisis and needed to address it?
    - What might science become if we abandon some of the metaphysical assumptions?
    - What does it become when we recognize that observer and observed are inextricably entwined? When we recognize the consciousness and agency of all matter? When we cease privileging quantitative over qualitative reasoning?
- Despite dogma and institutional issues, which it shares with other religions, does science offer a core spiritual truth?
  - "I do not know, so I shall ask"
  - When science is healthy, this takes the form of: critical thinking, hypothesis testing, patient empirical observation, communities of knowledge seekers that criticize, refine and build upon each other's work
  - The true scientist is always open to being wrong. Even at the cost of prestige, funding, and self image.
- Let's expand science to include what it has ignored. Let's question authority and heal our self-righteousness. Let's welcome the miracles of our direct experiences as real, and expand what we believe is possible. There is a division between spirituality and politics, so spirituality and the "unscientific" is relegated to our personal lives.
- Do we understand the nature of reality better than the indigenous? What do they have to say about earth healing?
  - From the Heart of the World. ALUNA. (Kogi requested this film to be made)
  - The well-being of all depends on the well-being of each.
  - "If you knew she could feel, you would stop."
- If nature has power, why hasn't it stopped the destruction?
  - Maybe it doesn't fight force with force. But we might be able to align with nature.
  - E.g. activism example that uses sacred art and ceremony, instead of fight. Quiet peaceful knitting ladies.
  - To enter the realm of synchronicity, we must sacrifice. Maybe time, money, certainty, known, safety, public image. To undergo a transformation to align with a future that calls to me. You must send a clear message "I am serious about this", and you may be questioned with challenges or setbacks. When we put everything we've got into the service of a vision, the world takes notice and reality shifts. Our failures are our prayers. It means doing the best we can with sincere commitment. Our prayers are at least heard. The something that is listening... might be everything.



- Reanimating reality
  - For generations, our entire cultural conditioning pushes us away from this
  - Usually, people need help inhabiting the story of interbeing. Usually, this comes in the form of direct experience.
    - His synchronicity story in Taiwan of the grandfather trees
  - Often, we have to choose belief before proof. What story do you choose to live in?

## Ch. 12 - Bridge to a Living World

- Occidental arts & ecology center by Brock Dolman
  - He knew his heart's longing for a more beautiful world coincides with an actionable reality
- Present this list of "direct changes needed" because
  - 1. Collective mind is ready for these ideas to move from super fringe to fringe
  - 2. Many of them don't require consensus or approval to practice on a small scale
  - 3. Nothing less than these will suffice
- \*\*What are some of the direct actions you'd suggest for earth healing?\*\*
  - Promote land regeneration as major new category of philanthropy. Fund demonstration projects, connect young farmers to land, help farmers transition. Shift agricultural subsidies away from conventional crops.
  - Global moratorium on logging, mining, drilling, and development of any remaining primary forest, wetlands, and other ecosystems.
  - Expand the land protected by wildlife refuges and other reserves. When possible, enlist local and indigenous people to align livelihood with ecological health.
  - Establish new ocean marine reserves and expand existing ones. Goal of 1/3-1/2 of ocean, estuary and coastline into no take, no drill, no develop sanctuaries.
  - In rest of oceans, ban drift nets and bottom trawling.
  - Ban disposable plastic bags for retail. Phase out plastic beverage containers in favor of a refillable bottle infrastructure.
  - Reconstitute world bank to serve ecological healing rather than development. Start by declaring amazon and congo global treasures, purchasing the external debt of countries with rainforests and cancelling the debt at a rate equivalent to potential income of now-banned mining/drilling/etc in those areas.
  - Promote afforestation and reforestation globally, with an emphasis on ecologically appropriate native species.
  - Establish eco-core to address youth unemployment.
  - Change building codes, sanitation codes, and zoning regulations to allow higher density development, tiny homes, composting toilets, aquaculture wastewater treatment, etc. Nullify all land use covenants that prohibit vegetable gardens.
  - Reintroduce and protect keystone species (e.g. beavers, wolves, cougars)
  - Carry out water restoration projects worldwide. Water retention landscapes, regenerative grazing, horticulture, strategic removal of dams/canals/levies.
  - Relocalize food system and promote economic localization generally. Nullify "free trade" and replace with "fair trade" that promote economic sovereignty.

- Negative interest financial system that imposes liquidity fees on bank reserves, along with anti-speculative taxes
  - Apply pollution taxes to make companies internalize social and ecological cost of toxic waste, radioactive waste, air pollution, water pollution.
  - Impose deposit system for most manufactured goods, to incentivize durable, repairable products with easily recoverable materials.
  - Turn away from pesticides. Start by banning pesticides for non-agricultural use (lawn, garden, parks, etc). Ongoing insect holocaust is serious and likely due to these pesticides. They are part of countless symbiotic relationships and food chains. This requires the de-industrialization of agriculture and the end of monocropping. This may be the most urgent environmental issue we face.
  - Demilitarize society. “You cannot serve 2 masters.” Eventually the contradiction rises to the surface in the form of a choice point, a crossroads, or a clarifying test. What overarching aim does the military serve? Domination through force. Sucks up energy, materials, money, and human talent. Tens of thousands dedicate life to developing weaponry. The money spent on weapons could probably fund all the other proposals in this book. This would send a message: “everything is different now.” We face a crossroads: war or peace, love or fear, domination or service.
  - \*Did not include carbon tax.\* Large reduction in fossil fuels will necessarily result from other proposals. Regenerative agriculture and reforestation will sequester large amounts of carbon. Don’t want to incentivize ecosystem-destroying carbon-sucking machines.
- These will only happen from a new story. A story of interbeing and a living planet view. We need urgency with patience. We need to do some things that will bring quick results (see above) and some things that will bring slow results. Which are yours to do?
  - It is possible. We must dedicate ourselves unreasonably, and with no guarantees of success, to our unique form of service. With the knowing that a healed world, a more beautiful world, is truly possible.