



Birthing a Post Pandemic VEGAN World

A Climate Healers White Paper



CLIMATE HEALERS

healing earth from the inside out

"Nothing is as powerful as an idea whose time has come" – Victor Hugo.

Abstract

Unlike past inflection points in human history, this one caused by the COVID-19 pandemic calls for a fundamental rethinking of our relationship with animals and Nature. In this white paper, we define "VEGAN" as "Vitality Engaged Guardians of Animals and Nature" and show that an exponential transformation to a VEGAN world is already underway and that mainstream attempts to denigrate the "V" word are like "social distancing" to impede this transformation. We propose a mathematical model for the growth of the VEGAN movement, along with two concrete interventions to maximize its growth rate and minimize the asymptotic residual [Carnism](#) in a post pandemic VEGAN world. We propose a new story for humanity along with a new "Aquarius" game that we can play in lieu of the money game we play today, in order to coordinate our actions in a VEGAN world. Finally, we examine the 7 core shifts along with the institutions and infrastructure that we have to nurture in order to transition from our crumbling, unsustainable global industrial society to a robust, thriving, post pandemic VEGAN world.

1. Introduction

[Climate change](#), [biodiversity loss](#) and [ecosystems collapse](#), the three main environmental problems identified by the UN at the Rio Summit in 1992, couldn't do it. [Hurricane Katrina](#) couldn't do it. The [Amazon fires](#) couldn't do it.

[SARS-CoV 2](#), a microscopic virus, did it. The infection that it spawned, COVID-19, has brought our global industrial society to a pause unlike anything that we have ever seen in our lifetimes. At this inflection point in human history, it is time to look beyond the single minded pursuit of yet another vaccine-based, technological fix to "[conquer and subdue](#)" Nature^[1]. It is time to consider a fundamental rethinking of our relationship with animals and Nature in a post pandemic world, while simultaneously addressing our environmental problems holistically. This white paper explores how this can be accomplished.

We define VEGAN as "Vitality Engaged Guardians of Animals and Nature" and VEGANism as a way of living in which we seek to never intentionally hurt animals but care for them and Nature instead. By that definition, most of us are already VEGAN in our hearts. However, we live in a society where what we say and what we do are not always in alignment, because we have been systematically lying to ourselves regarding the necessity of consuming animal foods, among other things. This is why [Carnism](#), the opposite belief system to VEGANism, which conditions us to abuse animals, is so prevalent in the world today. As a result, the birthing of a post pandemic

VEGAN world will likely be viewed as the “greatest transformation in human history,” even though it is just a return home to who we really are.

Humans are one of the most adaptive species on the planet. At many times in the past, we have transformed our culture and civilization rapidly as environmental circumstances changed around us. In the [Great Migration](#) some 60,000 years ago, during the previous ice age, we journeyed out of Africa and spread throughout the Earth. This required transforming our diets and lifestyles as we settled in different climatic conditions. When the Earth emerged out of the ice age into the Holocene interglacial era some 12,000 years ago, we began the [Agricultural Revolution](#) simultaneously almost everywhere, which once again transformed our diets and lifestyles tremendously. Now we are in a planetary emergency, not just due to the [COVID-19 pandemic](#), but also due to [climate change](#), [ecosystems collapse](#), [chemical pollution](#), [mass extinction](#), and other environmental catastrophes. This calls for yet another massive transformation of our culture and civilization.

Culture is the set of values that dictate human behavior within a society while civilization is the physical, engineering implementation of these values. Every culture has its origin story, a set of rules prescribing how people are supposed to behave and guarantees immortality for its people, either literally or symbolically. To birth a VEGAN world, we need a transformation in our origin story and a transformation in the set of rules prescribing how we behave towards each other and towards Nature, while postulating a different kind of immortality for our species.

A microcosm of any culture is embedded in its food system. What does that say about our global industrial society with its factory farms and slaughterhouses located in marginalized communities with a virtually enslaved workforce drawn from those communities? Is that not a microcosmic encoding of the speciesism, colonialism, racism and patriarchy that pervades this society? And how can we justify that these slaughterhouses are considered “critical infrastructure” in this society, subject to a [Presidential executive order](#)^[2] decreeing that they remain open, despite the health risks they pose to the workers who are mainly People Of Color (POC)? And what happens when this society spawns dissidents - VEGANs -who repudiate this violent culture and seek an alternate way of life?

This is a unique moment in human history. The Berlin wall of the animal exploitation industry is weak and it is crumbling. And just as happened in the Berlin wall of 1989, the old guards who used to protect the wall are laying down their arms, shuttering their factory farms and slaughterhouses and walking away. What remains to be done is to safely and systematically dissolve these animal exploiting enterprises and build instead, a new system founded on caring for each other, including a food system promoting healthy, immune boosting, plant-based meals and usher in a post pandemic VEGAN world. We either make this global transformation

to a VEGAN world inexorable and exponential or we will likely descend into a Mad Max world of chaos and violence as the Earth's climate goes haywire and we go extinct.

The noted author and lifestyle coach, [Tracey L. Martin](#) wrote^[3],

"Change is inevitable, but transformation is intentional."

Change is the only constant in the universe. Change happens naturally, while a transformation is something that we choose to do intentionally. In this white paper, we present factual evidence that an exponential transformation into a VEGAN world is already underway, but it may be hard to discern as [Prof. Albert Bartlett](#) famously observed,

"The greatest failing of the human race is our inability to understand the exponential function."

Human history is literally a chronicle of exponential transformations, but at any given point in time, we assume that whatever has been happening to us will continue to happen forever linearly. However, in a self-fulfilling virtuous cycle, those of us who become conscious of an ongoing exponential transformation then accelerate it and bring it to fruition.

This white paper is organized as follows.

In Section 2, we will examine a confluence of factors, ranging from health to environmental to animal rights to spiritual, that are contributing to the growth of the VEGAN movement. We will show how all these factors are being further accelerated by our need to respond accurately to the COVID-19 pandemic.

In Section 3, we will examine numerous exponential transformations that have occurred just within the past 100 years and show how these closely parallel the growth of the VEGAN movement within the past few years. We will then formulate a mathematical, [SISa social contagion model](#)^[4] for the growth of the VEGAN movement and examine the factors influencing its closed form asymptotic solution. We will then propose two interventions to maximize the uptake of the VEGAN movement and minimize the asymptotic residual [Carnism](#) in a VEGAN world: the "[21 Days to HEAL](#)" program and the [K-Mama](#) app.

In Section 4, we will advance a new story for humanity within the context of a larger story of the Earth, which places the VEGAN movement as an inevitable progression of evolutionary complexity and order for both humanity and the Earth. This story hypothesizes an ecosystems role for humanity as the climate-regulator species and our present seeming folly as our "caterpillar" phase in which we were implementing homeostasis for Gaia on planet Earth. This imbues our past and future activities with meaning, a [perennial quest](#)^[5] for humanity, and therefore a vital place for us in Nature.

In Section 5, we will describe a new global game called [Aquarius](#) to usher in a [Kate Raworth](#)^[10] style doughnut economy for humanity as we consciously embrace our ecosystems role as the thermostat or caretaker species of the planet.

In Section 6, we will examine the [7 Core Shifts](#) in the transformation of our story and global game. These shifts entrust this generation of humans with the responsibility to either get it right and cause what will likely be characterized as “the greatest transformation in human history” by future historians or get it wrong and go down in infamy as our species descends into oblivion with much of the rest of life. This choice is entirely ours to make.

Finally, in Section 7, we will examine the institutions and infrastructure that we must nurture to usher in a robust, post pandemic VEGAN world.

2. Background and Context

In 1914, when Mohandas Gandhi landed in India from South Africa, he was wearing a suit and tie, a lawyer’s outfit. He spent the next few years traveling the villages and cities of India to work out a strategy for accelerating the Indian Independence movement. Then in 1919, he started the Khadi movement wherein he asked the people of India to change their clothes from British clothes to “Khadi” clothes made by Indians in India. At first, many Indian intellectuals of that era scoffed at him wondering how Indians could possibly take on the mightiest empire the world had ever seen by simply changing their clothes. Nevertheless, Gandhi persisted and by 1930, the Khadi movement had managed to bankrupt the textile mills in Manchester and the British government was on its knees begging to negotiate with Gandhi.

The lessons drawn from the success of the Khadi movement rest on three simple Gandhian principles for effective nonviolent direct action:

1. Align with the truth,
2. Concerted personal transformation leads to social change, and
3. Establishing the personal transformation as a moral baseline makes it sticky.

Gandhi viewed the Khadi movement as part of his larger “Satyagraha” or “Truth force” campaign, in which he placed alignment with the truth above all else.

Next, his oft-quoted aphorism,

“Be the change you want to see in the world,”

shows that Gandhi understood that social change is possible only when millions of people undergo the same personal transformation in concert. He counseled Indians that if they wanted to be free of British rule, they must first become worthy of that independence. He wrote,

“If we have the Khadi spirit in us, we will surround ourselves with simplicity in every walk of life. The Khadi spirit means infinite patience. For those who know anything about the production of Khadi know how patiently the spinners and weavers must toil at their trade, and even so must we have patience while we are spinning the thread of freedom.”

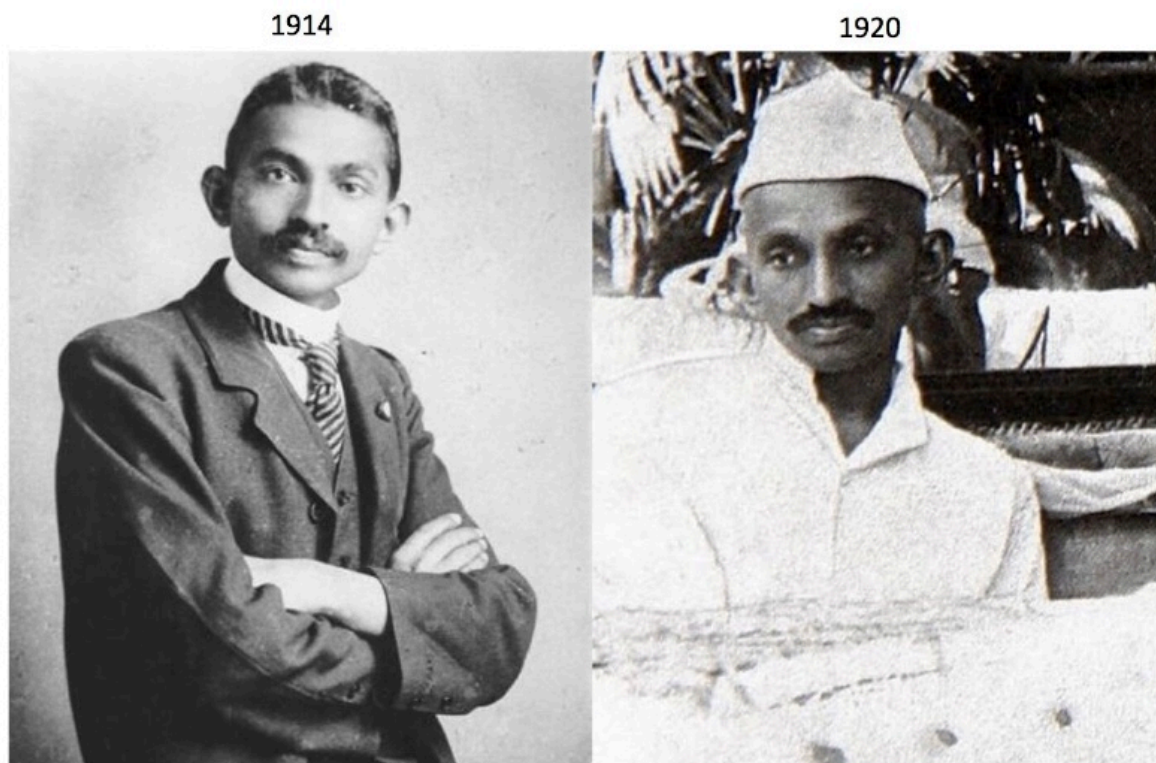


Fig 2.1: Gandhi's transformation at the initiation of the Khadi movement

Finally, Gandhi framed wearing Khadi clothes as the least that any Indian can do to free India from British colonial rule. He wrote in the [Navjivan magazine](#) in 1926,

“I consider it my duty to induce people, by every honest means, to wear Khadi.”

This framing accelerated the Khadi movement as Indians felt morally compelled to change their clothes, which then accomplished Gandhi's objective of bringing the British rulers to the negotiating table.

The VEGAN movement in the 21st century closely parallels the Khadi movement of the 20th century. It is well established that going VEGAN has a beneficial impact on our health, the environment and the animals. When we encourage people to go VEGAN, we are encouraging them to align with the compassion that is already in their hearts. Besides, going VEGAN is a personal transformation that when done by millions of people in concert, has the potential to bring the global corporate empire of the 21st century to its knees, returning power back to the people. Finally, to illustrate that going VEGAN is indeed the least we can do in the present circumstances, consider the following scenario:

Imagine that our house is on fire. In response to that fire, wouldn't we agree that the least we can do is to stop throwing fuel on the fire?

That is VEGANism.

Next, wouldn't we persuade our family members to stop throwing fuel on the fire?

That is VEGAN advocacy.

Therefore, going VEGAN is not some huge personal sacrifice that we are making, but the least we can do considering that animal agriculture is the leading cause of [climate change](#), [biodiversity loss](#), [ecosystems collapse](#), not to mention [emerging infectious diseases](#) like the COVID-19 pandemic. As Isaac Bailey wrote in an [opinion piece](#) in response to the recent [Presidential executive order](#)^[2] decreeing slaughterhouses to be "critical infrastructure,"

"Few of us protested or got the absurdity, the immorality, of telling fellow human beings to risk sacrificing themselves so the rest of us can keep eating burgers."

When eating plant-based foods, the minimal first step when going VEGAN, is being framed as a moral issue by someone who otherwise enjoys eating meat, it has surely become the moral baseline for our era. Matthew Scully, the former speechwriter to President George W. Bush, reinforced this perspective in the [National Review](#),

"(Animal Agriculture is) a business whose ruthlessness to animals, utter indifference to workers, destructiveness to the environment, and manifold harm to human health combine to qualify it as perhaps the least essential industry in America, and among the most amoral."

The contrast between Matthew Scully's characterization of this industry as "least essential" and the Trump administration's characterization as "critical infrastructure" couldn't be starker. The former is the perspective of a courageous writer who's aiming to tell the truth about the industry, while the latter is the marketing perspective of the Executive Branch of the United

States Government, perpetrating systemic injustice as it sacrifices workers, especially POC, on the altar of economic growth and corporate profits.

It is such marketing and lies that create a gulf between our culture and our civilization. Our culture is based on “all men (beings) are created equal”, while our civilization has resulted in one of the most unequal societies in human history.

Our culture proposes that our Creator has endowed every human being with an “inalienable right to life,” while our civilization has implemented the greatest “killing machine” in human history.

Our culture’s “inalienable right to liberty” has resulted in one of the most incarcerated population in human history, while the “pursuit of happiness” has resulted in one of the most medicated populations in human history with almost [half of adult Americans](#) ingesting anti-anxiety medications or anti-depressants or mood altering illegal drugs on a regular basis.

From an engineering perspective, whenever there is such a vast gap between a specification (culture) and its implementation (civilization), the root cause is invariably an underlying dissociation with reality. Engineering is a profession where its practitioners cannot pretend something is true when it isn’t or something isn’t true when it is. If they do, then what they build would not work, for Nature is unforgiving about such pretensions. During his investigation of the space shuttle Challenger disaster, [Dr. Richard Feynman wrote](#),

“For a successful technology, reality must take precedence over public relations, for Nature cannot be fooled.”

Prior to the Challenger disaster, the engineering team at NASA had warned that the O-rings on the space shuttle couldn’t withstand the low launch temperatures, but NASA administration officials overrode the engineers and insisted on the launch proceeding as scheduled due to publicity considerations. The shuttle then blew up shortly after launch in 1986, horrifying the world.

A civilization based on marketing and lies is not sustainable and the COVID-19 pandemic is now forcing us to come to grips with this simple fact. We can never address any of our public health issues successfully, whether it is the COVID-19 pandemic or climate change or biodiversity loss or ecosystems collapse, while building our responses on a tissue of lies. When our medical establishment is continuing to play along with the fiction that animal foods are the only source of protein in our diet and therefore, slaughterhouses are “critical infrastructure,” they are playing the part of the NASA administrators who let the Challenger disaster happen knowing that the O-rings would likely fail. However, this time, the consequences are infinitely direr as our entire planet is at stake.

From a spiritual perspective, when what we say and what we do are not in alignment, we suffer tremendously. This suffering would be worth it only if it educates us and leads us towards the necessary exponential transformation to a post pandemic VEGAN world.

3. Exponential Transformations and the SISa Model for VEGANism

History is a chronicle of exponential transformations though at any given point in time, most people remain unaware when they are immersed in one.

The exponential growth of the Khadi movement of the early 20th century caught the British rulers by surprise and they responded with the Salt Tax, a futile attempt to extract tax revenues from their Indian subjects, in 1930. Mahatma Gandhi then led the Salt Satyagraha and the rest is history.

In 1962, when President John F. Kennedy made his speech at Rice University in Houston, Texas, calling on Americans to land a man on the moon by the end of the decade, scientists did not know if it was feasible and engineers did not know how it could be accomplished. But then, the moon-landing objective inspired them and they broke down the mission into its constituent problems, painstakingly solved each one and achieved that “*giant leap for mankind*” in 1969, ahead of schedule. This was an exponential transformation in technology which could not have been possible without President Kennedy’s goal setting, along with good science and engineering.

In 1995, the scientist Clifford Stoll wrote his now-infamous [article](#) in Newsweek entitled, “*The Internet -Bah!*” which dismissed as baloney, telecommuting, online shopping and digital media, among other things. At that time, he was right to point out that the internet was slow and clunky as he was periodically interrupted with the message, “Too many connections, try again later.” But in the background, a lot of us engineers were working on making the internet infrastructure more robust with digital connections that ran 10 times faster than the analog ones prevalent at that time. By 2003, tens of millions of these digital connections were deployed in the internet backbone as Google was born and the rest is history. It took just 8 years to undergo this exponential transformation from “who needs the internet?” to “I can’t live without the internet”.

In September 2005, Gov. Arnold Schwarzenegger of California [vetoed](#) the Gay Marriage bill. At that time, marriage equality was but a gleam in the eyes of LGBTQ activists and it seemed distant. The prevalent view at that time was that marriage equality would not happen in our lifetime as even the most liberal state in the US, California, would not allow it. Nevertheless, the activists persisted and by 2015, after [Obergefell v. Hodges](#) was settled in the United States

Supreme Court, marriage equality became the law of the land. This was the result of an exponential transformation in social attitudes over the course of a mere decade.

In December 2015, we presented the “[Lifestyle Carbon Dividend](#)”^[11] paper at the American Geophysical Union (AGU) Fall Meeting in San Francisco. In the paper, we showed that if the world were to go VEGAN and the grazing lands used for animal husbandry were to be returned to the original forests that existed on those grazing lands in 1800, that alone would sequester more carbon on just 41% of grazing lands than all the carbon added to the atmosphere between 1750 and 2015. This was a simple calculation made by just grid substitutions in a well known IPCC land carbon model, the [Integrated Science Assessment Model](#) (ISAM), and then adding up the numbers. Over 100 climate scientists came to speak to us during the session and every one of them agreed that the calculations made sense, but said,

“It will never happen. The world will never go VEGAN.”

Modeling the Growth of the VEGAN Movement

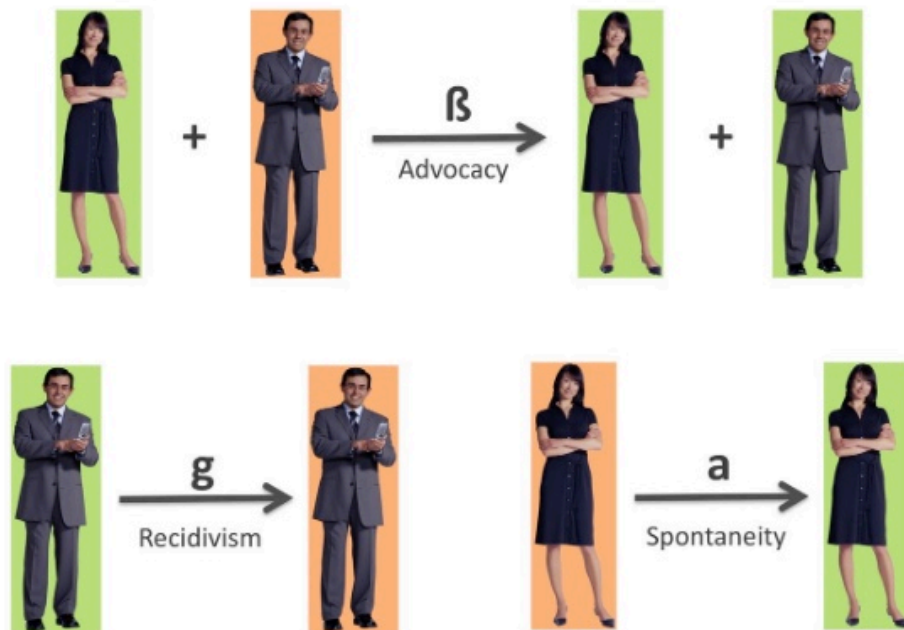


Fig 3.1: The three modes of transformation impacting the growth of the VEGAN movement. Green background indicates VEGAN and brown background is Non VEGAN.

But the exponential transformation to a VEGAN world was already underway in 2015. By 2016, the search for the term “VEGAN” had exceeded the search for the term “Coca Cola” on Google, with the vast majority of the searches occurring in the United States, Canada, Australia, New Zealand, Germany, Austria and the United Kingdom. In 2018, Forbes [reported](#) on a Global Data survey which found that 70% of the world population was actively reducing or eliminating meat consumption and that between 2014 and 2017, in just 3 years, the number of adults self-identifying as VEGANs in the US had increased by a factor of 7.

The Contagion Model For VEGANism

Let $V(t)$ = # practicing VEGANs at time t

$N(t)$ = # practicing Non-VEGANs at time t

$N(t) + V(t) = P$, the human Population

$$\frac{dV(t)}{dt} = \beta NV - gV + aN$$

$$V^* = \frac{P}{2} (1 - s_0 - r_0 + \sqrt{(1 + s_0 + r_0)^2 - 4r_0})$$

$$s_0 = \frac{a}{\beta P}, \text{ the Basic Spontaneity Ratio}$$

$$r_0 = \frac{g}{\beta P}, \text{ the Basic Recidivism Ratio}$$

Fig 3.2: The Contagion model for VEGANism and the closed form solution to the asymptotic #VEGANs in the population.

If that rate of growth were to be maintained, then the number of VEGANs would increase by another factor of 7 by 2020, a factor of 49 by 2023 and a factor of 343 by 2026. This means that if even 1/3 of 1% of the US population were VEGAN in 2017, 100% of them will be VEGAN by 2026. Such is the power of exponential transformations.

However, in reality, exponential processes plateau as more of the population comes on board. [Hill et. al.](#)^[4] analyzed the growth of social movements using a modified version of the

standard Susceptible-Infected-Susceptible (SIS) model that is used for analyzing communicable diseases. They called their social contagion model SISa, since it included an “automatic” term to account for those who transform spontaneously.

In this model, the number of VEGANs in the population is increased with VEGAN advocacy (βNV) as well as spontaneous transformation (aN), while it is decreased by recidivism (gV) among the VEGAN community. This shows that ineffective advocacy (small β) and excessive recidivism (large g) can be detrimental to the growth of the VEGAN movement. In addition, mainstream cautions about using the “V” word amount to a form of “social distancing” to minimize the infectiousness of the VEGAN movement.

Residual Carnism In Population

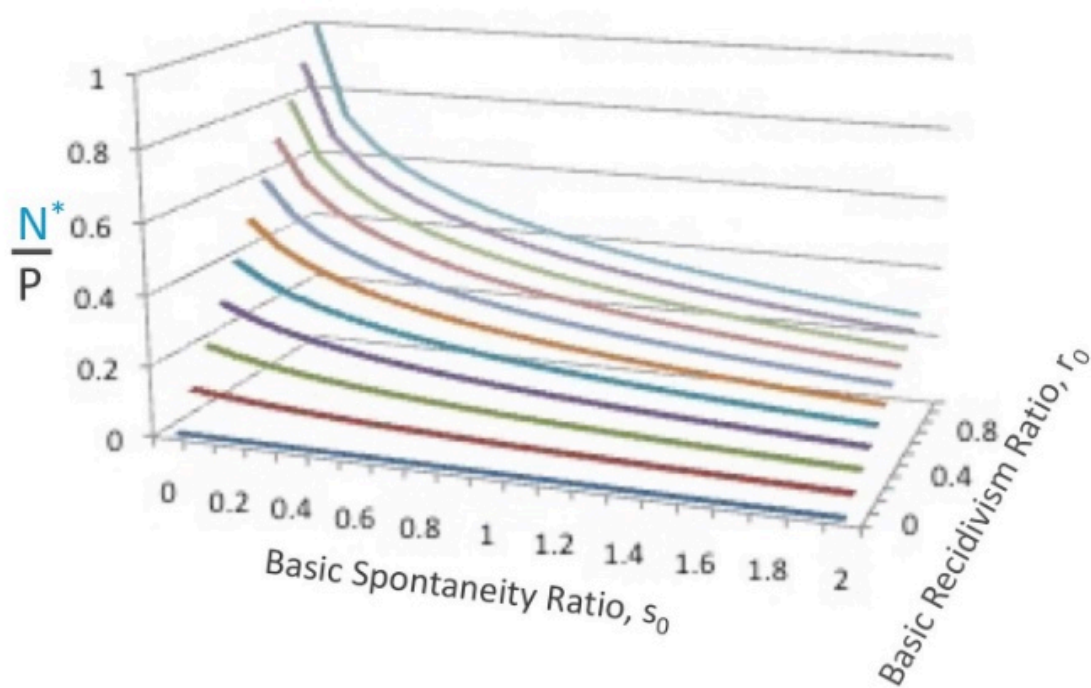


Fig 3.3: Wireframe plot of the residual Carnism in the population as a function of the basic spontaneity and recidivism ratios.

Hill et. al. has calculated an asymptotic closed form solution to the SISa model, which shows that the residual Carnism in a VEGAN world is minimized by reducing the Basic Recidivism Ratio, $g/\beta P$, to be much less than 1, while maximizing the Basic Spontaneity Ratio, $a/\beta P$. A 3-D wire plot of the final proportion of non VEGANs in the human population illustrates these points.

The Basic Recidivism Ratio is the inverse of the Basic Reproduction Ratio that most of us are now familiar with now, due to the media saturation on COVID-19. For VEGANism to become a truly infectious social contagion, the Basic Recidivism Ratio must be engineered to be much less than 1. In that case, we can show that the residual Carnism in proportion to the total population will be strictly less than the Basic Recidivism Ratio.

For VEGANism To Grow Exponentially

Let $0 < r_0 \ll 1$

$$\begin{aligned} \text{Then } V^* &= \frac{P}{2} (1 - s_0 - r_0 + \sqrt{(1 + s_0 + r_0)^2 - 4r_0}) \\ &\simeq \frac{P}{2} (1 - s_0 - r_0 + (1 + s_0 + r_0) (1 - \frac{2r_0}{(1 + s_0 + r_0)^2})) \\ &= \frac{P}{2} (2 - \frac{2r_0}{(1 + s_0 + r_0)}) \end{aligned}$$

$$\text{or, } \frac{V^*}{P} = \frac{(1 + s_0)}{(1 + s_0 + r_0)}$$

$$\frac{N^*}{P} = \frac{r_0}{(1 + s_0 + r_0)}$$

Fig 3.4: If the Basic Recidivism Ratio is much less than 1, the residual Carnism in the population will be less than the Basic Recidivism Ratio.

So how do we go about minimizing recidivism and maximizing spontaneity? The [VOMAD 2019 Survey](#) showed that the number one reason why people go VEGAN is because they watched a feature-length documentary. The top two documentaries that convinced people to go VEGAN were “[What The Health](#)” and “[Cowspiracy: The Sustainability Secret](#)”. At [Climate Healers](#), we are co-Producers of these documentaries along with [Countdown to Year ZERO](#) and [A Prayer For Compassion](#). Together, these four documentaries address the **Health, Environment, Animals and Love** aspects of the VEGAN transformation, enabling us to **HEAL** on our journey back home to who we really are. Therefore, in conjunction with the Physician’s Committee for Responsible Medicine (PRCM)’s [21-day VEGAN Kickstart program](#), we have created a [21-days to](#)

[HEAL](#) program in which participants are requested to watch these documentaries and meet with the producers and cast members of these documentaries during the course of the program. We conjecture that this educational approach will strengthen the resolve of those going VEGAN and minimize recidivism.

How To Go Vegan & **HEAL** in 21 Days

Step 1 - watch the following documentaries to learn and connect:

<p>/ Health</p> <p>/ Environment</p> <p>/ Animals</p> <p>/ Love</p>	<p>> What The Health learn how veganism is able to help prevent and reverse our deadliest diseases</p> <p>> Cowspiracy: The Sustainability Secret learn how veganism is the most impactful choice we can make to reduce our environmental impact</p> <p>> Countdown to Year Zero learn how veganism is able to help prevent biodiversity loss and the extinction of wild species</p> <p>> A Prayer for Compassion learn how veganism aligns with all major religious traditions and the Golden Rule</p>	<p>/ Human</p> <p>/ Earth</p> <p>/ Animal</p> <p>/ Liberation</p>
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May 2



May 9



May 16



May 23

Then join the director(s) + cast on the days above for Q&A and discussion via Zoom.
 Session #1: 9-11am PDT | Session #2: 3-5pm PDT | Hosted by: Dr. Sailesh Rao

Step 2 - go Vegan! Join the 21-day Vegan Kickstart program from the Physicians Committee for Responsible Medicine: kickstart.pcrm.org

Find more information at: climatehealers.org/21days

Fig 3.5: A 21-day program to HEAL, addressing Health, Environment, Animals and Love, in order to minimize the Basic Recidivism ratio.

There is no better way to maximize the Basic Spontaneity Ratio than through the food system. We currently have a food system in which animal-exploiting, disease-promoting, planet-destroying Meat And Dairy (MAD) products are heavily subsidized by governments everywhere. Instead, we can create a new food system from the ground up in which nutritious, healthful, immune-boosting, whole-foods, plant-based VEGAN meals are heavily subsidized everywhere. Since our national governments are unlikely to implement such a radical shift as evidenced by the [Presidential executive order](#)^[2] in the US, we need to start with local governments and just ordinary people.

Enter the [K-Mama](#) app. The purpose of the app is to connect restaurants and commercial food providers with people who wish to eat healthful, immune-boosting meals and gift them to their less fortunate neighbors. 99% of the COVID-19 casualties in Italy and 95% of them in New York city suffered from [pre-existing conditions](#) mostly arising from bad nutrition, but these chronic conditions can usually be treated with a few days to weeks of good nutrition.

Those who join the app enter their location first. Then they identify whether they are a food service provider or a user. On each day that they are open, providers agree to supply a single healthful, immune-boosting whole-foods plant-based VEGAN meal. Providers can create their own meal recipes and they can choose from the numerous healthful, immune-boosting whole-foods plant-based VEGAN meals compiled by the [Physicians Committee for Responsible Medicine \(PCRM\)](#), [Forks Over Knives](#), [Dr. McDougall](#), [SHARAN India](#) and other organizations. When a user orders the meal and pays for it, the provider agrees to duplicate the order and make a “gift” meal available in the gift pool (Buy One Gift One). Users can choose to gift more than one meal by paying extra and providers can choose to add more meals to the gift pool as they wish. Twice a day, the providers agree to distribute all accumulated ordered meals with appropriate processes for hygiene. Providers earn “Karuna” (Compassion in Sanskrit) points for every meal they provide under this program.

Users can pay for a meal from providers within the delivery area, in which case a duplicate meal will be added to the “gift” pool and Karuna points accrue to them. Or they can select a meal from the “gift” pool and order it, in which case also Karuna points accrue to them. In addition, every user gets Karuna points added to their account each day as long as they stay in the program. The purpose of these Karuna points is to enable cities and communities to participate in the [Karuna Games](#) with leaderboards to determine the most compassionate community, city and nation in the world.

Through these interventions, we aim to accelerate the growth of the VEGAN movement and minimize the residual Carnism in a post pandemic VEGAN world. In summary, to paraphrase Martin Luther King, Jr. from his book, “[Stride Toward Freedom](#)”^[12], we assert the following six principles of VEGANism:

1. VEGANism is a way of life for courageous people
 - It is active nonviolent resistance to evil
 - It is aggressive spiritually, mentally and emotionally
2. VEGANism seeks to win friendship and understanding
 - Its end result is redemption and reconciliation
 - Its purpose is the creation of the beloved community for all life

3. VEGANism seeks to defeat injustice, not people
 - It recognizes that evildoers are also victims and are not evil people
 - It seeks to defeat evil not people
4. VEGANism holds that suffering can educate and transform
 - It accepts suffering without retaliation
 - It acknowledges unearned suffering is redemptive with tremendous educational and transforming possibilities
5. VEGANism chooses love instead of hate,
 - It resists violence of the spirit as well as the body
 - It is spontaneous, unmotivated, unselfish and creative love
6. VEGANism believes that the universe is on the side of justice.
 - It has deep faith that justice will eventually win
 - It asserts that if there is a God, that God is on the side of justice

Dr. King wrote these about “Ahimsa” or nonviolence, but nonviolence is a value (culture), while VEGANism is its implementation (civilization) and it is now time to get our civilization in alignment with our culture. Finally, to paraphrase Mahatma Gandhi, we assert that

“It is our duty to induce people, by every honest means, to go VEGAN.”

This requires us to tell a new story for humanity in which we belong exactly as we are and in which we are all returning home to our true compassionate selves because we have finished our tasks in our current phase of existence.

4. Transforming our Story : A New Story for Humanity

Imagine that after sculpting David, we discover Michelangelo trying to kill himself by banging his chisel into his stomach with a hammer. We stop him and ask,

“Why are you killing yourself?”

He replies,

“Look at the mess I’ve made with the pieces of marble lying on the floor. How am I going to clean that up with my hammer and chisel?”

Wouldn't we tell him that he needs a different set of tools, for example, a bucket and a shovel, to clean up the mess, following which we can all enjoy the beautiful David that he had painstakingly sculpted? This is precisely what the animals are trying to tell us with their COVID-19 intervention.

We have done something amazing - sculpted a David - but we are in the process of killing ourselves and all life, because we are unwilling to let go of the colonialist tools we used for the sculpting — capitalism, property ownership and animal agriculture. In Nature, every species has a role to play and though at first glance, the species might seem destructive, upon closer examination, we invariably discover that it has a constructive role to play. While at first glance, the elephant breaking branches off trees might seem destructive, upon closer examination we discover that sunlight streams to nourish the underbrush where the tree branches are broken. Where the elephant trampled on bushes, new pathways are formed in the forest for all the animals to use. Finally, where the elephant dropped huge mounds of poop, new jackfruit trees are born. There are no exceptions to this simple rule of Nature and perhaps, humans are no exception either.

Over the past 3 million years, the Earth had gone through several ice ages and interglacial periods with swings in global temperature of around 10 deg C. Every transition from a warm period to an ice age involved tremendous suffering with life dying out in most parts of the Earth except around the equator. During this period of great suffering, the Earth spawned us a species and put us in an environment of abject terror. We are a singularly vulnerable prey species. We don't run too fast, we don't hear too well, we don't have a keen sense of smell, we don't climb trees too well and we don't have sharp claws or big teeth to ward off predators. We were easy prey until we learned to control fire and build weapons to kill from a distance. Even then, it was only when we formed a partnership with dogs about 50,000 years ago that we truly turned the tables on our predators. Dogs lent us their keen sense of smell and hearing, and with them on our team, we became truly powerful. We then spread throughout the world in the Great Migration and colonized every part of the Earth, terrorizing our would-be predators.

Prof. William Ruddiman continues the new story with his [Early Anthropocene Theory](#)^[13] (EAT). As per EAT, in the present Holocene era, when the Earth emerged from the ice age into a warm period, humans burnt down forests to clear land for agriculture and in the process, pumped greenhouse gases into the atmosphere, kept the Earth's temperature constant and prevented the onset of the next ice age. Without human intervention, the Earth would have returned to another ice age around 5000 years ago, just as it had done 3 ice ages ago when the warm period closely matched the present Holocene era. Then in the industrial era, we discovered fossil fuels and burnt them, thereby raising the Earth's temperature by 1 deg C. In the process, we built all the tools and technologies needed to become aware of our ecosystems role as the "thermostat" species of the planet. We have actually created "homeostasis" for Gaia on planet Earth and we are now at a crossroads with two options before us:

The Early Anthropocene Theory

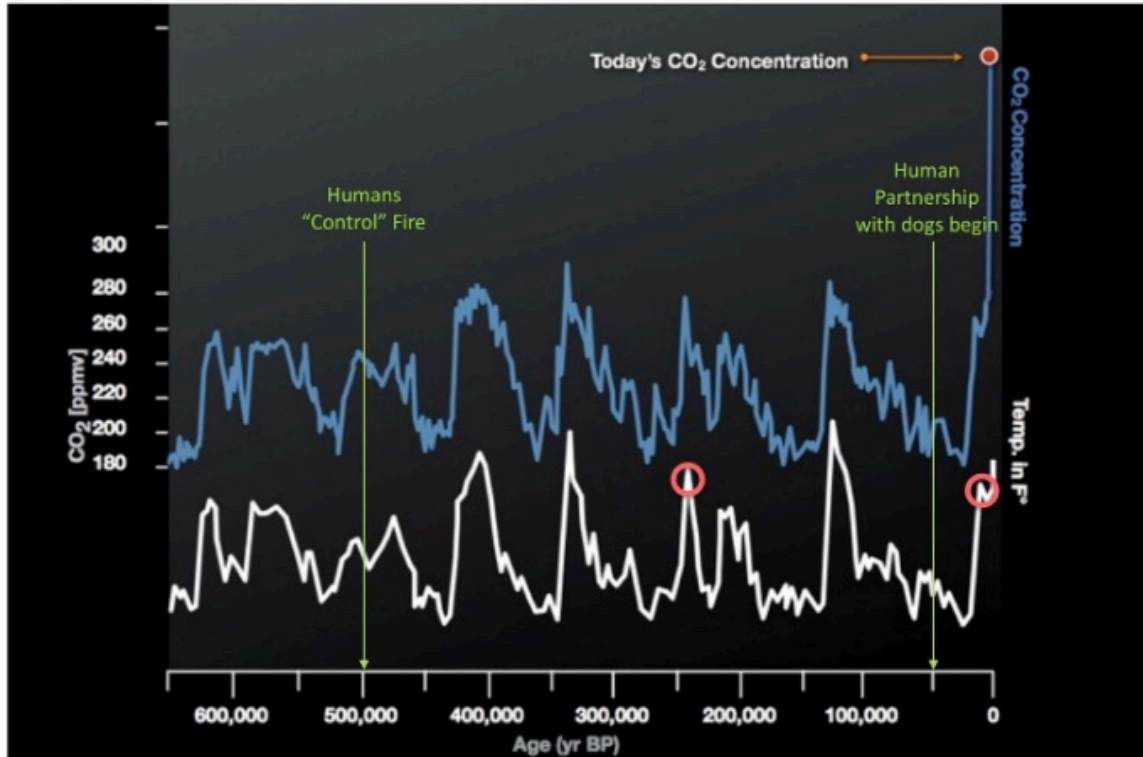


Fig 4.1: Retelling the story of humanity from the perspective of always belonging in Nature, as the species tasked with creating homeostasis for planet Earth.

A) **The “Go Extinct” Option:** Continue with our animal exploiting, disease promoting, planet destroying, economic growth paradigm and kill ourselves off, OR

B) **The “Transform” Option:** Transform our civilization to bring it into alignment with our culture and consciously assume our ecosystems role as the caretaker or thermostat species of the planet. This requires going VEGAN, restoring the forests that we destroyed for animal agriculture and transitioning to a sustainable, renewable energy economy. Then the fossil carbon we added to the atmosphere during the industrial era will still be in the atmosphere thereby preventing the Earth from returning to an ice age (see green line in Fig 4.2). This also requires implementing true Human Earth Animal Liberation (HEAL) by replacing our colonialist tools of capitalism, property ownership and animal agriculture with a form of “contribution”ism, Earth stewardship and the care and respect for animals, respectively.

Life's Thermostat Setting

Annotated graphics from William Ruddiman, 2014.

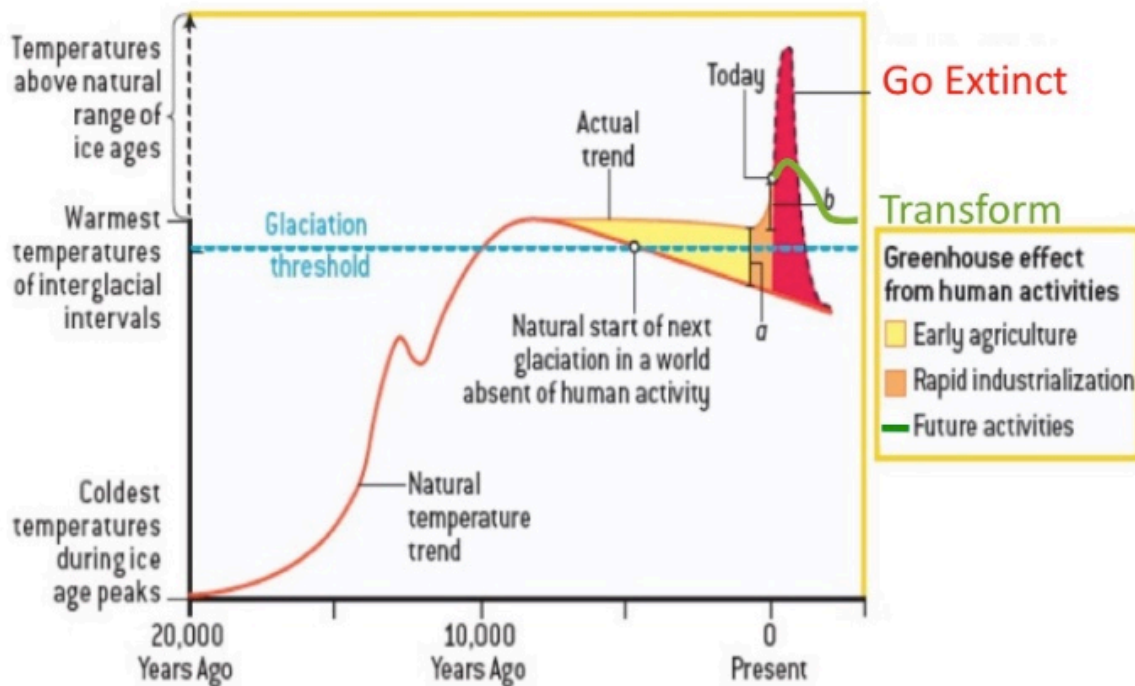


Fig 4.2: During the past 10,000 years until the industrial era began, humans have kept the temperature constant on planet Earth, preventing the onset of the next ice age.

In this new story, homeostasis for planet Earth is a co-creation of humans with other animal species. Cats and dogs have played very important roles in this co-creation, not just by lending their sense of smell and hearing to enhance our own, but also by keeping our compassionate hearts intact with their unconditional love. Other animals paid a heavy price as we were quite the sociopathic species in our “caterpillar” phase, using animals and killing them at will while spewing toxic waste with abandon.

Now bats and pangolins(?) have teamed up to transition us from the “caterpillar” phase into the “chrysalis” phase through the SARS CoV-2 virus. In this chrysalis phase, we can introspect to ponder our options for the future. When a massive change like this is forced upon us, we at first react with fear. In this “Fear Zone” of the chrysalis phase, we buy guns, stock up on things, get angry and lose sleep over the change. But once we accept that we are in this phase for the long haul, we enter the “Learning Zone”. In this zone, we relinquish our need for control, recognize the wisdom in Nature, accept that we are in the “chrysalis” phase and realize that only the truth can save us.

The Vegan Metamorphosis

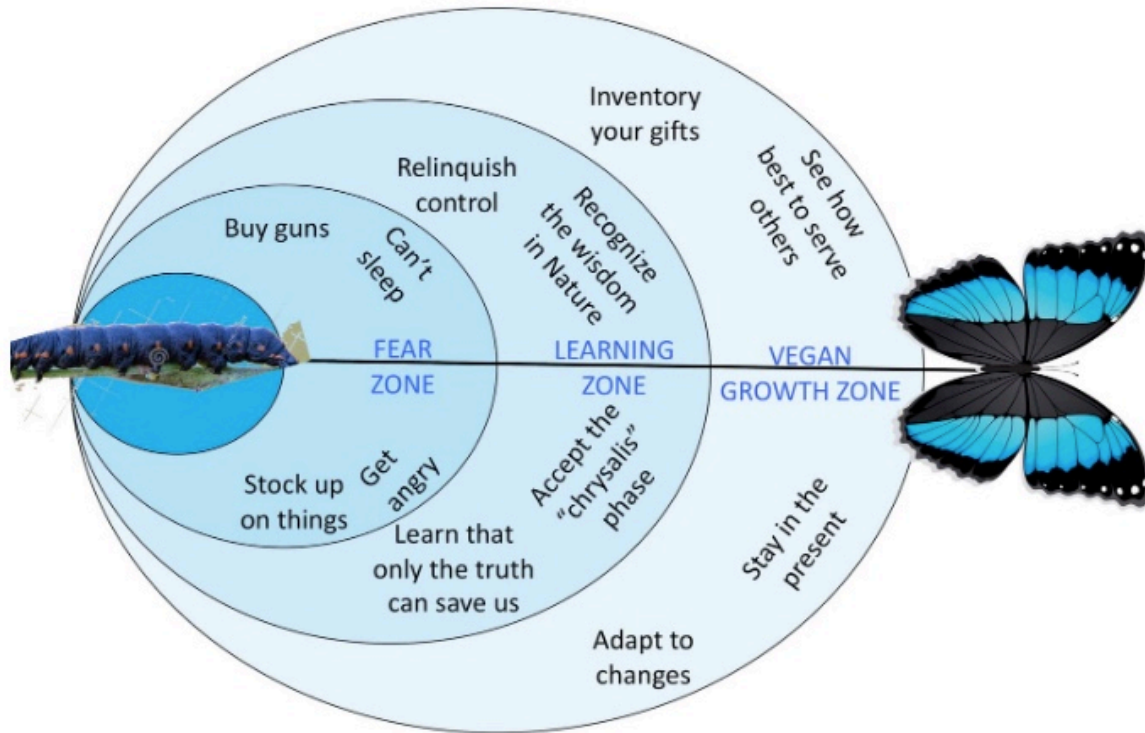


Fig 4.3: The COVID-19 pandemic has transitioned humanity from the “caterpillar” phase to the “chrysalis” phase, from which we can emerge into our “butterfly” phase.

In the Learning Zone, we go VEGAN for that’s where the truth about our health, the environment, animal exploitation and our inner selves would lead us. Then we enter the “VEGAN Growth Zone” where we inventory our gifts and assess how best to serve others in these ever changing circumstances. It is in this zone that we create the institutions and infrastructure for the “butterfly” phase of humanity’s existence.

In the butterfly phase we will consciously assume our role as the Thermostat or Caretaker species of the planet. But to do so, we must transform the game that we are playing. The money game that we play today is designed for endless economic growth and it is unfit for a sustainable civilization. The new game that we need to play in its stead must be sustainable and thereby assure a form of collective immortality for our species.

5. Transforming Our Game of Money

The ability to play sophisticated games distinguishes humans from other primates and makes us so much more powerful than them. It is through these games that we coordinate our actions among millions and even billions of us to accomplish monumental tasks. The games that we have been playing have put us in a dominant position of power over others, but we are now facing numerous existential crises for which the only answer is to transform our way of thinking. As [Kathleen Wallace](#) writes,

“The only answer is to revisit everything we’ve been taught — all that we have been immersed in from childhood. From that, perils exist, some start to question these things only to be led to an even darker, vindictive place in their minds. The more difficult path is allowing an opening up to new ways of thinking — understanding that the path out will only be through extending rights to others and confronting terrible truths about ourselves — that we feel it’s our right to take from others. It is not. We need to start respecting those who are human, animal, even the mountains and rivers. This is not our usual way of thinking. But this is the only way to get to a future that will look like something worth having.”

Please note that respecting those who are human, animal, even the mountains and rivers, is something that our indigenous brothers and sisters routinely do. Therefore, this transformation is merely a return to our indigenous roots while overcoming centuries of industrial indoctrination. In addition, we need to go beyond extending rights to others and move on to fulfilling our responsibilities as a species. We know that most of the Earth needs to be remediated and regenerated if life is to thrive again within our lifetimes. This is best accomplished by playing a new game in which we all know that we are being treated fairly and in which we feel secure enough to routinely contribute to the good of the whole. As Buckminster Fuller said,

“If you want to teach people a new way of thinking, don’t bother trying to teach them. Instead give them a tool (game), the use of which will lead to new ways of thinking.”

Today, the game of money coordinates our actions across the globe, across religious, national and racial boundaries. Most people play this game out of fear, the fear of hunger, poverty and ultimately, death. Since this is a primal game of survival, it begins with the commodification of Nature and animals, since these are the original losers in this competitive game.

At present, all money is created in the form of loans. Assuming a 10% “fractional reserve” requirement, when a bank receives a \$100 deposit, it can lend out \$90 as loan, while retaining \$10 for servicing withdrawals. This \$90 in freshly minted money, when deposited back in the bank, results in another \$81 as loan, and so on, ad infinitum. In this way, the original \$100 deposit results in \$900 of money created in the form of loans, which have to be paid back with

interest. Since there is no money created for the interest, this system promotes competition among us for the scarce money “resource”, as well as an impetus for economic growth.

This game of money begins with the assumption that we are not entitled to any of the Earth’s bounty unless we are contributing to the human economy and earning money. There are four ways to earn money in this game: 1) beg, 2) borrow, 3) become a wage slave, or 4) create something new and unique. Since it is the rare human who can be so creative, most of us are being factory farmed into the first three options.

This game of money is not sustainable. Firstly, endless economic growth is not possible on a finite planet. Since the game has a built-in impetus for economic growth and its rules commodify animals and Nature, its growth pushes the limits of ecosystems until their services collapse.

Secondly, this game uses a supply/demand economic pricing mechanism, which leads to the creation of artificial scarcities. Due to this pricing mechanism, abundance has no value in the game. Anything that is abundant, for e.g., pure water, will be turned into a scarcity, e.g., through pollution, so that it can be sold for a price. An abundance of plant foods is turned into an artificial scarcity by passing them through animals — which reduce them by a [factor of 40](#)^[14] — so that we can compete over these scarce, disease-promoting animal foods. An abundance of human health is turned into artificial sicknesses through these bad foods so that we can be sold health care services.

Finally, the game of money depends on marketing and lies to get the public to play along. For example, we are told that animal foods are the only source of protein, when in reality, all plant foods have protein and many of them more protein than animal foods on a calorific basis. Indeed, all animal protein is essentially [recycled plant protein](#), for only plants have the capacity to fix nitrogen and form the building blocks of protein through photosynthesis. Nevertheless, the recent [Presidential executive order](#)^[2] appealed to this protein myth while decreeing slaughterhouses to be “critical infrastructure.” Surely, the White House team has enough scientific acumen to know that it is flat out wrong?

We propose a new game, called Aquarius, to be played in conjunction with the current game of money in order to effect a smooth transition to a sustainable system founded on science and the truth. The game of Aquarius axiomatically implements the two core values of our culture — equality of all independent of race, age, gender or national origin plus the inalienable right to life, liberty and the pursuit of happiness — while providing an accounting mechanism to ensure that the total footprint of humanity does not exceed prescribed limits. In this game, tokens flow into the heart of every player’s account at a constant and equal rate determined by the total population of humanity. Each token is a multi-dimensional ecological footprint allowance,

representing a certain unit CO2 footprint allowance, land-use footprint allowance, energy footprint allowance, etc., which can be exchanged between players in a marketplace. From the heart of the player's account, the flow into the pocket of the account (see figure below) is regulated by acts of compassion, but there is a minimum flow rate that can be designed to be adequate for a sedentary lifestyle. As the player performs acts of compassion, the flow rate to the pocket increases to accommodate the needs of those acts. There is also a minimum flow rate into the "community chest", which is the tax that each individual pays to be part of the game. However, if the player is sedentary for too long, the tokens fill up in the heart and the flow rate to the community chest increases. In this manner, those who are sedentary contribute the most to the community.

The New Aquarius (♪) Money Game

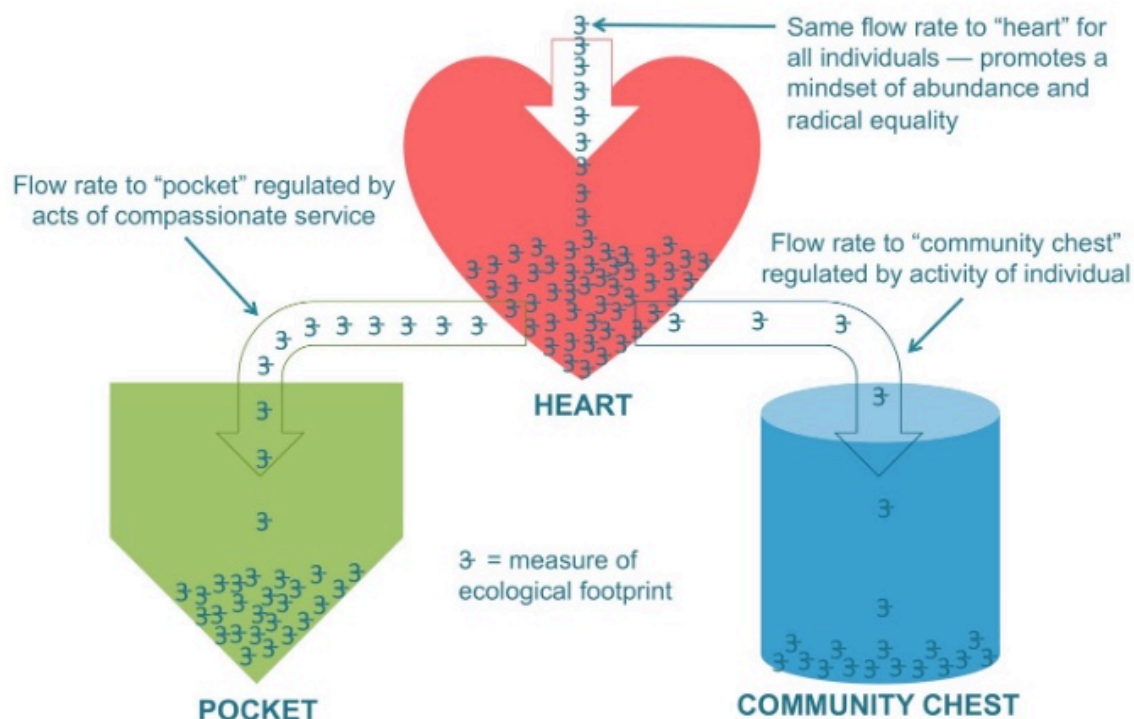


Fig 5.1: An overview of the new game of Aquarius which is designed to transform humanity from a "predator" species to a "caretaker" species.

Unlike the current money game in which all money flows down from a central bank in the form of loans, in Aquarius, all tokens flow up from individual players to the community, which has an Aquarius account with exactly the same architecture as the individual player's account. The community can then be part of a larger community and so on, until there is an Aquarius

account for all of humanity from which global footprint allowances are drawn. When a player consumes a product, the ecological footprint of that product is retired from the pocket of the player's account. In order for this accounting to be correct, the TRUE cost of the product must be calculated in terms of its CO2 footprint, energy footprint, land use footprint and so on, and stored in the Aquarius database. The purpose of the Aquarius game is to monitor our ecological footprint accurately and ensure that it is within bounds as we fulfill our responsibilities as the caretaker species of the planet. Therefore, the Aquarius game can only work in an open source economy and ecology, in which all novel ideas are viewed as contributions to the community.

Clearly, the Aquarius game can be played in conjunction with the current money game. Players can voluntarily monitor their ecological footprint using the Aquarius game and ensure that they are within their limits. They would still be purchasing products using standard currencies, but only those VEGAN products with Aquarius entries would be accounted for in the Aquarius game. Over time, as more and more people play the Aquarius game, the current game of money would become increasingly redundant.

Unlike the current money game, which generates economic activity from a foundation of fear, the new Aquarius game generates economic activity from a foundation of love. People would do things because they want to contribute to the good of the whole. While we are in the process of modeling whether this new approach would be sufficient to generate economic activities to meet all the needs of humanity and the planet, at a Community Kitchen in Phoenix, AZ, we have run a weekly social experiment for the past few years in which those who consume a pay-as-you-can VEGAN meal are requested to volunteer to clean the dishes, the kitchen and the dining area. If there are not enough volunteers, the work doesn't get done. Thus far, we haven't had a single day in which the work wasn't done, even though many of the volunteers were well-to-do and would likely have declined to do that cleaning work if we had paid them \$15/hr.

It is through the promotion of such conscious volunteerism, with accurate feedback on our ecological footprint usage using the Aquarius game, that we can safely transition to a [Kate Raworth](#)^[10] style doughnut economy for humanity. Such an economy is necessary when we assume our ecosystems role as the thermostat or caretaker species of the planet in the "butterfly" phase of our existence.

6. The 7 Core Shifts to a Post Pandemic VEGAN World

In our caterpillar phase, we called ourselves "Homo Sapiens Sapiens," which is Latin for the "wise, wise Hominid" species. Have you ever met a truly wise person who goes around calling himself wise, and that too, twice? Calling ourselves "wise, wise" is a sure sign of our narcissism and insecurity. It is time to acquire some humility and perhaps name ourselves based on our

intended character instead of a self-proclaimed attribute. Therefore, we propose changing our designation from “Homo Sapiens Sapiens” to Judy Carman’s “[Homo Ahimsa](#)^[15]”.

“Ahimsa” is a Sanskrit word that has been called the [most beautiful word](#) ever uttered in any language by the VEGAN philanthropist, Philip Wollen. It means “nonviolent”, which defines an essential character trait of humans when our actions are aligned with our hearts. The designation, “Homo Ahimsa” is a combination of Latin and Sanskrit words, which signifies our unity across cultural and racial boundaries.

As we play the game of Aquarius, we will begin to think differently. Aquarius flows are continuous which will give us a sense of security and a mindset of abundance. From that mindset, once our basic food and shelter needs are taken care of, we will want to contribute towards the good of the whole.

Current Money Game vs. Aquarius

Current Money Game (\$)	Aquarius (3)
Money created in banks with Required Reserve Rate (RRR) = 3% - 10%. Automatically creates class warfare.	Money flows into every account in the form of a maximum footprint allowance. Automatically creates radical equality.
Promotes diseases and divisions (humans)	Promotes health and unity (humans)
Promotes destruction and pollution (earth)	Promotes regeneration and remediation (earth)
Promotes death and cruelty (animals)	Promotes love and kindness (animals)
Promotes a culture of consumption	Promotes a culture of compassion
Promotes a mindset of scarcity	Promotes a mindset of abundance
Promotes acquisition of money as the primary goal of human activity	Promotes service to others as the primary goal of human activity
Based on marketing and lies	Based on science and truth
Economic activity motivated by fear	Economic activity motivated by love

Table 6.1: A comparison of the current “fractional reserve” money game vs. the new game of Aquarius.

We know that the only way to avoid our own extinction is to transform from a predator species to a caretaker species. The purpose of the Aquarius game is to enable 7 Core Shifts in our global

industrial society so that we can smoothly transition from a system of normalized violence to a system of normal nonviolence and become that caretaker species.

The **first shift** is from Speciesism, Colonialism, Racism, Ableism, Patriarchy (SCRAP) to VEGANism and radical equality. We cannot solve our social justice issues one at a time, but we can solve them all together with a gradual transformation of the money game. The current money game itself promotes all these injustices and indeed, when we pay for animal foods, we pay for SCRAP. Speciesism is built into the production of animal foods.

It is for the consumption of animal foods that a majority of the tropical deforestation is occurring. Whenever we cut down forests, we are displacing indigenous people, essentially telling them that their culture is inferior to ours and must step aside. That is Colonialism 101.

Today, factory farms and slaughterhouses are located where POC live so that the animal waste, diseases and pandemics affect them the most. That is Racism 101.

Slaughterhouse work results in some of the highest levels of workplace injury and Post Traumatic Stress Disorder (PTSD). The disabled workers are then discarded by the slaughterhouse owners without recourse. That is Ableism 101.

Animal “farming” requires the outright abuse of the feminine. That is Patriarchy 101.

In contrast, in a post pandemic VEGAN world, when we are playing the Aquarius game, we will be practicing VEGANism and radical equality.

The **second shift** is from diseases and divisions for humanity to health and unity for humanity. Currently, our industrial society openly promotes diseases by subsidizing known carcinogens and other unhealthy foods in a sick-care system, which is then euphemistically called the “health care” system. In contrast, through the K-Mama app and in a post pandemic VEGAN world, we will be promoting healthy, immune boosting whole-foods, plant-based living and therefore, health and unity for humanity.

The **third shift** is from destruction and pollution of the planet to remediation and regeneration of the planet. In the current money game, we minimize cost and maximize efficiency to the detriment of the planet. For instance, when Unilever had to close its thermometer plant in upstate New York to comply with the Clean Water act in the 1970s, it moved its operations to Kodaikanal in India and continued with the same [mercury pollution](#) over there. Such destruction and pollution would be impossible to execute in an open source economy and ecology. This would allow us to focus our attention on the remediation and regeneration of the planet so that life can thrive.

The **fourth shift** is from death and cruelty to animals to love and kindness for animals. That is the very essence of the shift from a Carnist world to a VEGAN world.

The **fifth shift** is from a culture of consumption to a culture of compassion. In the current system, corporations make products and then use all sorts of psychological trickery to make people consume those products. Without constantly selling more of their products each quarter, they would wither away and die. In the post pandemic VEGAN world, the opposite scenario would occur, i.e., people would ask for products and co-operatives would form to make those products and then dissolve. Since all knowledge will be open-source, these cooperatives can be revived as and when needed.

The Greatest Transformation in Human History!



Fig 6.1: A summary of the “greatest transformation in human history” along with the 7 core shifts.

The **sixth shift** is from a mindset of scarcity to a mindset of abundance. The current money game itself imposes a mindset of scarcity in the current system. In contrast, the Aquarius money game fosters a mindset of abundance.

The **seventh shift** is from a money driven economy to a service driven economy. Currently, most of us go to work not because we want to, but because we have to, just to earn some money. In the post pandemic VEGAN world, we will go to work because we want to serve others.

When put together, these 7 Core Shifts and the resulting transformed human presence on earth will likely be viewed as “the Greatest Transformation in Human History” by future historians. On the other hand, if we don’t get this right, it will be viewed as the greatest blunder in human history.

7. Realizing the Dream

Telling a new story and creating a new game is part of an attempt to realize Rev. Martin Luther King’s dream of a beloved community where what we say and what we do are actually in alignment. After all, he was calling for America to become what it always wanted to be. The vision of the Founding Fathers of America can be viewed as a “specification” for our civilization and with modern software tools and with good engineering, we have made the case that we can actually transform our civilization to meet these specifications.

The birthing of a new world requires the creation of new constitution, a new monetary system, new institutions and new infrastructure. The new game of Aquarius can lead us to this new world, but as we journey towards it, we must make preparations for all the other collateral we need.

A new constitution for a VEGAN world can be created in alignment with the “[Codes for a Healthy Earth](#),” but this requires the legal profession to get involved. The Codes begin with the affirmation that the only legitimate purpose of governance is to protect and cultivate the health and vitality of the planet and all its inhabitants for generations to come.

There are [many questions](#) about the new institutions that we have to create for a VEGAN world and we need spiritualists, ecologists, economists, health care professionals, political scientists, social scientists, artists and story tellers to get involved. We need to get all major and minor religions to promote VEGANism and we need to VEGANize the major epics and fairy tales so that we don’t traumatize our children with stories of routine violence. In health care, we need to focus more on preventive medicine and less on the maintenance of chronic diseases.

There are [many questions](#) about the new infrastructure that we have to create for a VEGAN world and we need architects, scientists and engineers of all stripes to get involved. We need to honestly assess the toxicity of all our industrial processes and redesign them all to be as non-toxic as possible. We need to start designing things for maximum durability instead of planned

obsolescence. We have to implement living spaces that are compatible with our responsibilities as a caretaker species of the planet.

Many of us are now meeting regularly online to work on these open questions. Please join us at climatehealers.org or veganworld2026.org.

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