TOWARDS AN OPEN CIVICS

CIVIC INFRASTRUCTURES AS ENABLING CONDITIONS FOR A VITAL RESILIENT, AND PARTICIPATORY CIVILIZATION

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IN US WE TRUST

"We live in capitalism. Its power seems inescapable. So did the divine right of kings. Any human power can be resisted and changed by human beings. Resistance and change often begin in art, and very often in our art, the art of words." – Ursula K. Le Guin

This document is offered openly to the commons. This work claims no author; those who have contributed to the various streams present in the following pages are many. You might even say we are legion. Because, despite our unique geographic, historical, and cultural contexts, we are speaking with a unified voice. This voice moves through us. We hope it will move through you also as you take in these words and find whatever is good and true and and beautiful and useful to you among them.

This document has been created for civic innovators, organizers, and patrons as an argument for the decentralization of civic innovation and revitalization of civic systems in service of the transition towards a life-affirming civilization. It makes the case for the urgent creation of new coordination mechanisms in response to the existential mandate for humanity to evolve into a non-rivalrous, mutually responsible civilization.

We offer these words as a clear and simple prayer, that we might embrace the all-encompassing sobriety of collapse with an all-encompassing love for our fellow human beings and their sovereign rights to vitality, resilience, and choice. We do not claim to have invented these rights, rather we see them as intrinsic to the nature of love and interbeing, a sacred foundation of mutuality that is rooted deeper than any religion, culture, or creed.

OpenCivics is not a brand or business; it is a spark to ignite a renaissance of civic participation and stewardship, a recognition of our shared belonging to and responsibility for our world. OpenCivics is an invocation of a broader movement *towards an open civics* – a collective and evolving field dedicated to reimagining civic systems through participatory design.

While the words in this document are already dead, flattened expressions, they point to something alive, a spirit that lives within all of us that yearns for a more beautiful world.

This document is a seed, published under a copyleft open-source license as an invitation to all to adapt, expand, and evolve its contents, fueling an ongoing exploration of what it means to enact an open civics. It serves as a "living blueprint," designed to spawn new ideas, respond to emerging challenges, and address societal needs through collective input and iterative development.

We are here to collectively imagine and dream a different kind of future into being, and, if you're reading these words, that journey has already begun within you. The whispers of that future live in the words that follow.

These words are dedicated to all those who have carried the vision of a world based in consent, trust, and mutual benefit – but did not live to see its ultimate arrival.

Their dream now lives within us to carry forward.

To connect the words within these pages with your own as nodes in a web of co-evolution, we suggest adopting the document naming convention : towards-an-open-civics_YYYYMMDDHH

Find and fork this work from : go.opencivics.co/wiki and github.com/opencivics/wiki

OUR CRITICAL PATH

"Our integrity sells for so little, but it is all we really have. It is the very last inch of us, but within that inch, we are free... I shall die here. Every inch of me shall perish. Every inch, but one. An inch, it is small and it is fragile, but it is the only thing in the world worth having. We must never lose it or give it away. We must never let them take it from us." – V For Vendetta

THIS IS NOT A MANIFESTO

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete. " – R. Buckminster Fuller

History shows us that manifestos can give rise to monolithic, centralized movements, form in-group and out-group dynamics, and lead to forms of social organizing that are far too easy to topple or capture. Instead of a call simply to rise up and overthrow a system of power over others only to replace it with a new one, this is a call to root down into the places we call home and rise up together into a new epoch of shared power and shared responsibility.

This is also not a fully formed schematic of a perfect utopia. Utopias are neither real nor useful. We are protopian systems thinkers, more concerned with systems of care and a culture of profound empathy that help us to incrementally move forward together as one pluralistic and polycentric social body and planetary superorganism. This process will continue far after we die and will take countless shapes as our descendants determine for themselves what constitutes a more beautiful world.

We draw our inspiration from the Sunflower and g0v Movements in Taiwan, the Democratic Autonomy movement in Rojava, the Sarvodaya Shramadana movement in Sri Lanka, the compelling research and community organizing of thinkers and activists like Buckminster Fuller, Vandana Shiva, Barbara Marx Hubbard, Nora Bateson, Michel Bauwens, Forrest Landry, Daniel Schmachtenberger, Joanna Macy, Audrey Tang, Glen Weyl, Nathan Schneider, Richard Flyer, as well as organizations like Radicle Civics, RadicalxChange, Design Science Studio, Moral Imaginations, and The BioFi Project.

In earnest, we are imagination activists and pragmatic futurists, unwilling to accept the status quo of a sick planet and a sick humanity, driven to methodically adapt human civilization from the ground up.

Polycentric

A system or structure that has multiple centers of control, authority, or importance. In a polycentric system, power and decision-making are distributed among distinct entities or locations, rather than being centralized in a single point. This concept can apply to various contexts, such as governance, urban development, and organizational management.

Pluralism

A system in which multiple groups, principles, or sources of authority coexist and interact within a society. It emphasizes the acceptance and coexistence of diverse cultural, religious, ethnic, and political groups, allowing them to maintain their unique traditions and identities while contributing to the broader community.

Protopia

A term coined by futurist Kevin Kelly to describe a state of society that is continuously improving, rather than aiming for a perfect utopia or falling into a dystopia. Unlike utopia, which represents an ideal and often unattainable perfect state, protopia focuses on incremental progress and ongoing positive change. It acknowledges that while perfection is impossible, we can always strive to make things better, even if only by a small margin each day.

Superorganism

A group of synergistically interacting organisms of the same species that function together as a single, cohesive entity. This concept is often applied to social insects like ants, bees, and termites, where the colony operates as a unified whole with specialized roles and division of labor. Individual members of the superorganism cannot survive for extended periods on their own, as their survival and functionality are deeply interconnected with the group.

WHAT IS A CIVILIZATION?

A civilization is a collectively and dynamically composed construct. Put simply, our society is the product of the often unconscious and implicit cultural and systemic agreements that we enter into in order to participate. These agreements are shaped by our culture, formalized through our infrastructures, incentives and institutions and enacted through our interactions. Together, these reinforce the specific patterns of production, consumption, and social reproduction we call 'society' or 'civilization.'"

Infrastructures can be understood as underlying resource mechanisms like money, energy, supply chains or law that mediate or enable specific types of interactions. Incentives can be understood as reward mechanisms for taking particular actions. Institutions can be understood as the social mechanisms that govern the behavior of individuals within a community. Together, these foundations determine what we can create and what we will be rewarded for creating (production), what we are able to consume (consumption), and what kinds of agency we have to modify and perpetuate these systems (reproduction). The flows of resources, information, and currency move along the river banks created by these institutions which, in our current epoch, perpetually reinforce well worn patterns of rivalry, scarcity, and extraction.

Human civilization is, in effect, a decentralized metabolic process, moving energy around the planet while shifting its form. As a phenomenon, this is neutral. Ants create ant hills. Birds create nests. Foxes create burrows. Humans create civilizations. As fundamentally social, relational beings, hardwired by our evolutionary programming to form tribal groups, we are naturally inclined to reproduce the social constructs of our civilization within the space defined by our infrastructures, incentives, and institutions.

We collectively uphold and signal our alignment with these structures in order to belong to, and survive within, the human social organism into which we are born. As such, we are all responsible for participating in and maintaining the current epoch of human civilization which has produced a particular series of self-reinforcing effects and outcomes that could be called ecocide, technocracy, late-stage capitalism, or the meta-crisis. As a catch-all descriptor for our many concurrent crises, the meta-crisis describes an interconnected set of crises whose common feature is their systemic and self-reinforcing nature.

As Stafford Beer says, "the purpose of a system is what it does" In our current times, it seems as though the purpose of our civilization is to concentrate wealth and power while externalizing costs to the commons, resulting in ecological and social collapse as centralized power and externalized costs exponentially accelerate. Despite the narratives of "progress" and "democracy," a simple analysis of the outputs of our current civilization reveal that these narratives are, in fact, window dressing for a system that is failing to produce a healthy biosphere and a thriving quality of Life for humans.

These self-destructive phenomena are not so fatalistically bound to human nature as "capitalist realism" would have us believe. They are merely emergent outcomes based on the underlying set of agreements that form our infrastructures, incentives, and institutions, all of which combine to create the enabling structures of ecocidal and anti-social behaviors. These agreements, and the systems they inform, can be modified and transformed. Our history is replete with examples of these shifts occurring, most notably in the formation of the United States of America, a phase transition of power from a monarchic empire into a relatively self-governed nation. The founders of the United States were neither mythic beings with superhuman powers nor evil supervillains. They were, in fact, humans just like you or I, products of their time with the audacity to leverage the power of the word and collective action to invoke a democratic and isonomic social contract.

To better understand how we might reform our social contract by fundamentally shifting the underlying agreements of our current epoch, it is critical to describe the often invisible structures that compose our current global order and that have failed to produce wellbeing for people and the planet.

For the last 250 years, the state and the corporation have been the foundations of our species' first-ever globalized civilization. Implicit in both of these structures are the fundamental agreements of a rivalrous, zero-sum worldview in which hierarchical, bureaucratic institutions and extractive, capital-accumulating corporations govern the majority of human interactions and relationships. While this set of agreements or worldview seem "natural" or inherent to many humans today, prior civilizational agreements have been mediated by religious institutions, royal aristocracies, militaries, mercantile marketplaces, and feudal lords.

This abridged list of civilizational forms is offered merely to illustrate that civilizational forms are not fixed despite such an appearance to those who live within them. The Roman Empire likely seemed eternal to many Romans even as invaders were at the gate. The underlying agreements of our civilization are <u>"like water"</u> in that we are so subsumed by them that we take them for granted as intrinsic, barely even noticeable. But the cracks in the edifice of our current civilization are showing, reminding us that these are no more than collective agreements that can be changed. Shifting these agreements is an inter-generational phase transition, a challenging but necessary process that requires an ontological shift and deep cultural transformation.

Systems Thinking

An approach to understanding and solving complex problems by viewing them as part of an overall system, rather than in isolation. It involves recognizing the interconnections and relationships between different components of a system and understanding how changes in one part can affect the whole. This <u>method</u> emphasizes looking at patterns and dynamics over time, rather than static snapshots.

Exponential Feedback Loops

Self-reinforcing cycles within a system where the output of the system amplifies its own input, leading to rapid and often exponential growth or decline. In these loops, a small change in the initial state can result in significant and accelerating effects over time. This type of <u>feedback</u> is common in various natural and technological systems, such as population growth, financial markets, and viral spread, where the rate of change increases proportionally to the current state of the system.

Emergent

Phenomena that arise from complex interactions and cannot be easily predicted or understood by simply analyzing their individual components. In various contexts, emergent properties or behaviors are those that manifest as a result of the collective dynamics of a system, rather than from any single part of it.

Meta-Crisis

The interconnected and overlapping global crises that collectively threaten the stability and sustainability of our world. It encompasses a wide range of issues, including ecological collapse, economic instability, social inequality, and political dysfunction. At its core, the meta-crisis highlights our <u>systemic inability</u> to address these challenges effectively due to underlying flaws in our perception, understanding, and governance structures. This concept urges us to recognize the interconnected nature of these crises and to seek holistic, integrative solutions that address the root causes rather than just the symptoms.

Capitalism

An economic system characterized by private ownership of the means of production, market-based allocation of resources, and the pursuit of profit. In the context of the meta-crisis and exponential feedback loops, capitalism can be seen as both a driver and a product of these interconnected global challenges.

Natural

The term "natural" as a culturally constructed concept refers to the idea that what is considered "natural" is shaped by cultural beliefs, practices, and norms. Natural law is a philosophical theory that posits the existence of a set of moral principles inherent in human nature and the natural world, which are discoverable through observation.

THE ONTOLOGICAL SHIFT

An ontological shift can be seen as a transition from one way of understanding what exists or what it means to exist, to another, potentially radically different way of seeing and being. Changing one's ontology involves moving from one conceptual framework about reality to another, which can have profound implications for how we understand and interact with the world around us. The existential crises we face today offer us an initiatory challenge and opportunity to transmute collapse into rebirth, an opening to reflect on and evaluate the ontological basis of our current civilization. And through this free fall between epochs of history, we are liberated to heal the wounds of humanity's past and re-integrate ancient and nearly-forgotten ways of knowing ourselves and the world; a profound socio-cultural transformation from a worldview of fragmentation and separation to a worldview of interbeing and mutual interdependence; from a worldview of dominance and competition to a worldview of harmony and co-creation.

This ontological shift is already underway all around the world, despite the appearance of stagnancy driven by the media and legacy institutions. Legacy institutions will hold onto their ontological assumptions far longer than the general public as the result of the massive edifices and sunk costs embroiled in the foundations of our current epoch, motivated by intrinsic incentives to maintain a status quo that disproportionately benefits those who have already enclosed and are extracting from the commons we share. But if you look beneath the surface into emerging subcultures around the world, a new ontology is already emerging and traditional indigenous ways of being and knowing are being revitalized. Those who undertake this courageous cultural transformation have already begun to discover new ways of being that integrate different cultures and value systems to meet the converging challenges of our present context.

Joanna Macy describes this transition as "The Great Turning," a civilizational phase transition from an industrial growth society into a life-affirming society. Amidst this transition, Macy notes the three dimensions of The Great Turning as holding actions that slow the damage, analysis of structural causes and the creation of structural alternatives, and shifts in consciousness. While this thesis focuses more explicitly on an analysis of structural causes and the creation of alternatives, shifts in consciousness are often where deeply transformative changes first begin.

At the core of this ontological shift is a new story of what it means to be human on the planet we call home. While our most recent epoch of human civilization was formalized upon the underlying agreement that we are rational actors engaged in a zero-sum competition for scarce resources and dominance, contemporary biological, sociological, psychological, metaphysical, and complexity sciences tell a different story. These new and ancient understandings reveal that our relationships are what make our lives possible, rich and meaningful — and that the health of these relationships determines the health of the whole. An equally material and metaphysical insight, akin to the Buddhist notion of interbeing or the Zulu philosophy of Ubuntu, our collective futures are inescapably bound together.

Within this emerging ontology, humans reimagine themselves as intrinsically part of and responsible for the vitality of our planet, our communities, and our commons. We are transformed from passive citizen-subjects and consumers into active citizen-participants and stewards. Our sense of personal well-being, once limited to the lens of the isolated and fragmented individual, nuclear family, nation or ethnicity, is being challenged by our current existential civilizational crises to evolve into a more holistic perspective.

"In a real sense all life is interrelated. All men are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly. I can never be what I ought to be until you are what you ought to be, and you can never be what you ought to be until I am what I ought to be...This is the inter-related structure of reality."

— Martin Luther King Jr., Letter from Birmingham Jail

Civilization-scale decay, made visible through the crises of homelessness, addiction, mental health epidemics, wealth inequality, ecocide, and the proliferation of potentially dangerous exponential technologies like AI and gene editing, reveal that there is no refuge, no place in our globalized civilization that is insulated from the risks and impacts of existential civilizational collapse and deteriorating quality of life. While our fates have always been bound together, these runaway existential risks make our mutual interdependence visceral, obvious, and un-ignorable.

This realization is the basis for a kind of *sacred civics* as a transcultural, transreligious, and transpolitical understanding of our mutual belonging and mutual responsibility. This emerging civic virtue exists at the immanent substrate of our material reality, not needing to leverage any metaphysical claims to bind our culture and systems to an ethical foundation of care, reciprocity, and mutuality. <u>Scientifically and spiritually</u>, our individual survival and thriving are increasingly bound together by either the game theoretic lose-lose or all-win reality of the meta-crisis' runaway feedback loops. While many of our current systems reinforce an ontological frame of anti-social and ecocidal competition, our capacity for self-destruction, accelerated by the emergence of exponential technologies, requires a transformation in our fundamental relationships between self and other to reflect our new understanding of the interdependent nature of reality. By facing the reality that <u>"rivalrous dynamics, multiplied by exponential technology, are inherently self-terminating,"</u> we confront the existential mandate for humanity to evolve into a non-rivalrous, mutually responsible planetary species.

Drawing inspiration from the <u>Buen Vivir</u> movements in Bolivia and Ecuador as well as the <u>Gross National Happiness</u> Commission in Bhutan, we can see systemic implementations of this ontological shift towards inter-being and commons stewardship. Particularly in the Buen Vivir model, institutionalized in the <u>Bolivian</u> and <u>Ecuadoran</u> constitutions, well-being is described through an indigenous understanding of the mutually reinforcing relationships and scales of well-being, integrating individual, familial, communal, and ecological health. While these constitutional and governmental applications of an ontological shift have been difficult to reinforce due to the lingering effects of extractive multinational corporations, they offer a vision of an alternative approach to systems of governance and economy based on a new way of being.

Ontological shifts begin within an individual's beliefs, coalescing into social agreements and norms. Thus, no one can choose to make an ontological shift on our behalf. A new world only emerges when we choose a different way of being, courageously stepping outside of the confines of the unhealthy societal agreements that define many aspects of our current paradigm. Beginning in small pockets or <u>"islands of coherence"</u> which evolve into <u>"systems of influence"</u> through network effects, this emergent worldview will gradually develop its own culture, institutions, incentives, and infrastructures that <u>"make the old system obsolete."</u> As such, embedding this ontological shift into explicit new social agreements, formalized through the design of new open civic systems aligned with the life-centric principles of pluralism and mutually interdependent collective agency, becomes an existential imperative for the continuity of human civilization and perhaps Life on Earth. This simultaneously cultural and systemic intervention is an essential strategic leverage point or <u>"trim tab"</u> to shift our planetary macro socio-economic order. In this context, civic innovation can be viewed as the emergent creative impetus driving us to imagine and build the foundations of what could be called a "life-affirming civilization."

Ontology

A branch of metaphysics that deals with the nature of being, existence, and reality. It seeks to understand the fundamental categories and relationships of entities within the universe.

Existential risk

Any event or scenario that has the potential to cause the extinction of humanity or the irreversible collapse of human civilization. These risks are characterized by their severity and the scale of their impact, which could prevent humanity from achieving its long-term potential. Examples of existential risks include nuclear war, catastrophic climate change, pandemics, and uncontrolled artificial intelligence.

Interbeing

A philosophical concept rooted in Zen Buddhism, notably proposed by Thich Nhat Hanh. It emphasizes the interconnectedness and interdependence of all elements of existence. According to this concept, nothing exists in isolation; everything is interwoven and mutually dependent. This understanding informs ethical living, mindfulness, and compassionate actions, highlighting that our well-being is intrinsically linked to the well-being of others and the environment.

Zero-Sum

A situation in which any gain by one party is exactly balanced by a loss to another party. This means that the total amount of resources, benefits, or wealth remains constant, and one person's gain is another person's loss. Zero-sum scenarios are often used in game theory and economics to describe competitive situations where the interests of participants are directly opposed.

Civic virtue

The personal qualities and behaviors that contribute to the effective functioning of a civil and political society. It involves the dedication of citizens to the common welfare of their community, often prioritizing the public good over individual interests.

Islands of coherence

Small, localized areas or systems within a larger, chaotic environment that exhibit a high degree of order, stability, and functionality. These "islands" can influence the broader system by serving as models of coherence and potentially catalyzing wider systemic change. The concept is often used in discussions about social, ecological, and organizational systems to highlight how pockets of stability and innovation can drive transformation in larger, more complex systems.

Network effects

The phenomenon where the value or utility of a product, service, or platform increases as more people use it. Essentially, the more users there are, the more beneficial it becomes for each user. This can create a positive feedback loop, where increased usage attracts even more users, further enhancing the value.

Trim tab

Buckminster Fuller used the term trim tab metaphorically to illustrate how small, strategic actions can create significant change. Just as a trim tab on a ship or aircraft can adjust the course with minimal effort, individuals or small groups can act as trim tabs within larger systems to influence and steer them in new directions.

Commons

Resources that are shared by a community and accessible to all its members. These resources can be natural, such as air, water, and land, or cultural, such as knowledge and public spaces. The concept of commons emphasizes collective management and stewardship, often involving informal norms and practices that ensure sustainable use and equitable access.

INNOVATING CIVIC INFRASTRUCTURE

Despite a contemporary connotation with roads, bridges, and arduous town hall meetings, the origin of civics relates to an act of service, the choice to care for the life of another for no reason other than a profound devotion to the web of relationships that make our lives possible. Reclaiming this original spirit in a contemporary context, civics is both the creation and stewardship of civilizational systems of care.

In our contemporary context of centralized bureaucracies and corporations, little is currently expected of citizens with regards to civic service, the stewardship of our commons and communities. Where centralized government agencies do provide a necessary function of scale, they are often ineffective at resource allocation and are vulnerable to corruption and capture. The current role of citizen has devolved into either that of a passive recipient of government services or a voter for various levels of bureaucracy and executive authorities.

Humanity is beginning to remember that, as participants in civil society, we are all citizens of our world, and it is our mutual responsibility as citizens to serve as civic stewards. As civic stewards, it's up to us to create the conditions of mutually assured thriving. The choice to be a civic steward is to take responsibility for our civilization with courage, creativity, and devotion.

And when our systems of civic stewardship are insufficient to empower the necessary adaptive response to shifting circumstances or crises, some civic stewards rise into the role of civic innovator. The choice to be a civic innovator is to take responsibility for the improvement of civic systems that empower others to be civic stewards.

Civic innovation is the collaborative improvement of civic systems that are important for the public good. Civic innovation seeks to restore and renew the spirit of collective stewardship of our commons and communities by providing novel mechanisms for civic stewardship. When our legacy civic institutions fail to provide such mechanisms for holistic well-being and collective stewardship, it falls to us as innovators and as citizens to define and implement our own solutions.

The scope and scale of civic innovation required to meet our present moment of existential risk and civilizational collapse is unique in the course of human history. While all epoch-defining transitions have been consequential and all-consuming, never before has a globalized human civilization, equipped with existential exponential technologies, engaged in the degree of socio-economic reconfiguration required of us now. And yet, we can take heart in the knowledge that such transitions have occurred, however messily, throughout the history of our species. In each case, the imaginations of the civic innovators of those times were constrained and informed by the civilizational failures that they experienced. In our particular case, we are directly facing a world mired in the disastrous consequences of exponentially centralizing wealth and power. In dialogue with the systemic nature of these outcomes, we can envision a pluralistic society in which our civic infrastructures localize and distribute flows of resources and decision-making authority via open, participatory, and composable mechanisms.

This spirit of responsible civic stewardship as innovators calls for an open civics: a design philosophy for distributed collaboration and civilizational stewardship that engages in the evolutionary adaptation of our core civilizational systems via the direct participation of citizens. This philosophical approach engages the public and all relevant stakeholders in a participatory design process that empowers civic organizers, innovators, and patrons to work

better, together. An "open civics'' implies an approach to civic innovation that is non-rivalrous, non-enclosable, self-determined, and composable by citizens. These civic innovations can be best conceived as "open protocols," patterns of human coordination that provide the same civilizational services and utilities as traditional institutions using a networked approach.

The emerging Decentralized Civics (DeCiv) movement is modeling networked civilizational systems based on the pluralistic and participatory development of open-source software, stigmergic living systems patterns, open standards bodies, the symbiotic intelligence of an artistic or cultural scene, and commons self-governance principles. In an open civic system, institutions are supplemented or altogether replaced by extitutions (external, open organizations), infrastructures by open protocols (open-source, decentralized systems), and extractive incentives by prosocial incentives (rewards that encourage cascading benefits).

A key historical example of extitutional self-organization is the Free Breakfast for School Children Program (or the People's Free Food Program), a community service program run by the Black Panther Party that provided free breakfasts for children before school. The program emerged in direct response to the inadequacies of the federal government's under-resourced public school lunches. Run almost entirely by volunteer women from neighborhoods across the United States, this self-organizing pattern was a key political strategy for the black nationalist movement as it revealed the community's collective power to meet their own needs without relying upon large institutions. The FBI's COINTELPRO attacked and defamed the breakfast program and then, in the early 1970's, Governor Ronald Reagan's administration created a statewide free breakfast program with an underlying objective to seize the political power the Black Panther Party had gained. Modeling contemporary interventions off of the success of the Black Panther Party, we can enable and empower this same type of participatory stewardship from the bottom up through technological and social mechanisms that are inherently evolutionary, consensual, and adaptive to our current crises. This approach meets the existential failure modes of our current systems through the development of cosmo-local design patterns.

Cosmo-localism refers to the dynamic interplay between global coordination and hyperlocal participation. The notion of cosmo-localism allows for self-determination at the most local scale of an infrastructure or design pattern while enabling scaling, federation, and nesting into larger social bodies or associations. This pluralistic and composable approach to infrastructures, incentives, and institutions is simultaneously a strategy for enhanced system anti-fragility as well as an evolutionary feedback cycle that preempts the kinds of institutional decay and capture we face today. By designing civic systems according to this design philosophy, we envision an exciting new phase of open civic innovation; a Cambrian explosion of experiments in self-governance and self-determination that transforms the blighted landscapes of our social and ecological commons into a thriving substrate for mutual solidarity and well-being.

When networked together in the spirit of mutual solidarity through processes of consensual alignment at global and local scales, these experiments enable the development of dual power in place and network effects online, which can be leveraged to adapt or replace legacy institutions. Highly localized experiments in alternative civic systems which neglect the design imperatives of global interoperability may face an existential threat, remaining insular and vulnerable to cooptation or out-right destruction by legacy institutions and incentive models if they lack networked support, legitimacy, and funding. If successful, this distributed movement of alternative civic systems, modeled on the underlying ontology of interbeing, will form the foundations of a parallel society, a fork of our current civilization that will gradually draw energy, resources, and attention from our legacy systems. Investments in these parallel systems offer a pathway to compost capital through close loop value chains, removing our need for continuous non-profit funding by creating alternative economies that shift the incentive landscape from the grassroots to bioregional to planetary scales.

Historical examples of similarly innovative civic experiments range from the Zapatista Movement in Mexico to the Sunflower Revolution in Taiwan and the Democratic Autonomy Movement in Rojava. The Democratic Autonomy movement in Rojava arose in the context of institutional collapse during the Syrian Civil War, filling a power vacuum created by the conflict. Their anarcho-socialist parallel society prevails amidst these precarious conditions. While the Zapatistas have maintained their own social contract for decades without being captured by the Mexican federal government, they have failed to leverage their dual power to influence their legacy institutions to the same degree

that the Taiwanese Sunflower Movement achieved. The Taiwanese protest movement culminated in a negotiated deal that successfully asserted new forms of participatory civic innovation into their existing institutions through the vTaiwan and g0v programs and methodologies. These contrasting approaches reveal the strategic necessity to assert influence and develop dual power for the success of nonviolent social movements.

DeCiv also draws inspiration from the decentralized science movement, or DeSci, which posits that the scientific method can be applied through egalitarian, decentralized means, effectively opening the process of scientific discovery beyond the boundaries of large academic institutions. Similarly, decentralized civics is a field of applied research conducted by citizens, technologists, and community organizers to develop and deploy novel civic systems as open-source, participatory public protocols that provide for critical civilizational functions.

We envision a future in which open civic innovation evolves into a widely recognized and well-compensated field of prosocial socio-technical design, in which all citizens are empowered to listen to the needs of their communities and develop new civic systems that directly improve their community's quality of life.

To formalize, engage, and ethically steward this emerging field of practice, we feel it is necessary to form the OpenCivics Network, a community of practice and coordinating body for civic innovators, community organizers, and patrons in the civic domain. Similar to the role the Token Engineering Commons has played in the emerging field of token engineering by providing legitimizing and scientific grounding, we feel a responsibility to ensure an ethical and coordinated effort amongst civic innovators to create foundational utilities that empower civic stewardship and serve collective well-being.

The applied field of civic innovation and civilization system design has many antecedents and draws from many related disciplines, new and old. To catalyze a revitalization of the field and empower a more distributed approach to civilizational design while maintaining a shared ethical foundation, this thesis proposes three civilizational health indicators. These indicators offer lenses through which we can evaluate and understand the outputs of any open civic system that we may contribute towards as innovators:

Vitality is Life's capacity to create more Life, the embodied state of thriving that emerges from the interconnected levels of well-being and quality of life for individuals, communities, and ecologies.

Resilience is the state of and the capacity for adaptive self-organization sufficient to provide core life-support function across changing world circumstances.

Choice is the state of fundamental respect for the sovereign agency of all beings and the capacity of individual agents to express their agency and influence their circumstances.

These principles have been derived and distilled from a combination of systems thinking and first principles outlined by thinkers like Donella Meadows, Elinor Ostrom, and Daniel Schmachtenberger. In particular, Daniel Schmachtenberger's insights on the systemic drivers of the crises we face have provided a critical set of design criteria for new systems, new infrastructures, institutions, and incentives that are sufficient to effectively respond to and address what Daniel calls "the meta-crisis."

Stigmergy

A mechanism of indirect coordination between agents or actions through the environment. The principle is that the trace left in the environment by an individual action stimulates the performance of a succeeding action by the same or different agent. This concept is often observed in social insects like ants and termites, where the actions of one individual influence the behavior of others through the modifications they make to their environment.

Dual power

The creation and coexistence of two competing political frameworks within the same space. This concept involves the establishment of alternative, autonomous structures and institutions that operate outside of and in opposition to existing state and capitalist systems. The goal is to build a liberatory power that can eventually replace the dominant power structures, fostering a society based on self-organization, mutual aid, and direct democracy.

OUR CONTEXT IS CRISIS, OUR CRISIS IS A BIRTH

As renowned futurist Barbara Marx Hubbard said, "our crisis is a birth." The systemic breakdowns we face necessitate the emergence of entirely new systems and ways of being, reconstituting, renewing and reimagining ancient cultural foundations at a planetary scale for the first time. Never before in our history has our existential self-destructive capacity forced us to understand at the planetary scale how to explicitly align the underlying agreements and mechanisms of human civilization with living systems principles. We have had the freedom, throughout our adolescent history as a species, to explore many different expressions of how civilization could be organized. Now, our exponential technologies, driven by rivalrous dynamics to the brink of total species annihilation, are offering us a choice. We can either learn how to design and bind the underlying agreements of our cultures and systems in alignment with living systems principles and the holistic stewardship of the well-being of our planet, shifting the fundamental context of our modes of production, consumption, and reproduction, or we will destroy ourselves. While this proposition seems daunting, this alignment is materially the only viable path through the eye of the needle available to us as a species due to the runaway feedback loops of exponential technologies.

Looking at the world around us, it isn't difficult to see that we live in a world in crisis. Ecocide, biodiversity collapse, climatic shifts, extreme weather, mass climate migrations and refugees, catastrophic topsoil degradation and food system collapse, homelessness, mental health epidemics, ideological fragmentation and escalating polarization, chronic illness, wealth inequality and economic centralization, national and personal debt crises, inflation, the potential of peak oil, the rising costs of energy, resource extraction, genetically engineered bioweapons, the truth and meaning crisis, and severe social transformations and risk as Artificial Intelligence progresses are among the many runaway crises we face as a species. These converging crises are an existential threat to human civilization. At this stage in the exponential curve of multiple runaway crises, a collective fundamental phase-shift is extremely urgent. Interoperable transition methods and a shared sense of global human solidarity are critical to our species' longevity and survival.

Underlying these seemingly distinct expressions of civilizational decay and collapse are a shared set of systemic dynamics reinforcing the exponential feedback loops that drive these anti-social and ecocidal patterns. As a whole, these patterns can be referred to as wicked problems, the polycrisis, or the meta-crisis. The self-referential quality implied by the term *meta*-crisis refers to the particular self-reinforcing quality of systemic feedback loops whose path-reinforcing dynamics make self-correction more and more difficult as time passes.

While System Design

An approach that considers all components of a system and their interrelationships to optimize overall performance and sustainability. It involves understanding how different elements within a system interact and influence one another, aiming to create synergies and leverage points for improvement. This method is often used in fields like architecture, engineering, and environmental planning to ensure that all parts of a system work together harmoniously.

Tragedy of the Commons

An economic theory that describes a situation where individuals, acting in their own self-interest, overuse and deplete a shared resource, leading to its eventual destruction. This occurs because each person benefits directly from using the resource, while the costs of overuse are distributed among all users. The concept was popularized by ecologist Garrett Hardin in his 1968 essay, where he illustrated it with the example of communal grazing lands.

For example, in democracies around the world, the complex feedback loop of "regulatory capture" produces dynamics that undermine the public's ability to utilize the mechanisms outlined in constitutional frameworks for representative self-governance. Many elected officials, even well-intentioned ones, are elected into office to make change, but by the time they have the power to make that change, they are often already so influenced or inhibited by the incentives of corporate campaign finance and duopoly institutional entrenchment that they cannot effectively represent the will of the people who elected them. These elected officials may make some nominal or superficial gestures toward transformational change, but ultimately they are beholden to the already-captured institutions that provision them with access to power.

From the race to Artificial General Intelligence to the attention economy to military spending, multi-polar traps are system dynamics in which mistrust and rivalry force competing corporations and governments to continuously accelerate their tactics without regard for the consequences for and negative externalities to society. The behavioral dimension of a multi-polar trap is driven by the belief that "if I didn't do it, someone else would." This self-fulfilling logic, driven by an economic system that rewards the behaviors regardless of their existential risks they generate, creates a "race to the bottom" which risks the continuity of Life on Earth in favor of short term profits.

In the contexts of socio-economic, technological, and military industrial systems, the system dynamics of multi-polar traps, the tragedy of the commons, and recursive accumulation of wealth and power form a nearly impenetrable mess of misaligned incentives and runaway feedback cycles. In an ideal world, democracies would provide a countervailing influence on unrestrained, centralized corporate power, but the same forces that drive extractive and anti-social behaviors in the corporate sector have overtaken our democracies.

Seen in this context, the meta-crisis is a coordination and adaptation failure, a civic crisis stemming from the long term effects of separation, rivalry, and the consolidation of wealth and power on the public's ability to govern itself effectively. If markets, governments, and multinational corporations are systemically incapable of coordinating a response to the interconnected crises we face, it becomes self-evident that reformist efforts are ultimately insufficient to address our crises at the root. In actuality, despite the techno-optimism that occurs in elite conferences around the world, corporate-driven reformism not only distracts from the underlying system dynamics but also prolongs the perceived legitimacy of legacy institutions. While holding actions can slow the progression or reduce the harm caused by these systems, the systemic and self-reinforcing nature of these runaway processes implies that much deeper transformational actions are required to preserve the continuity of human civilization and perhaps even Life on Earth.
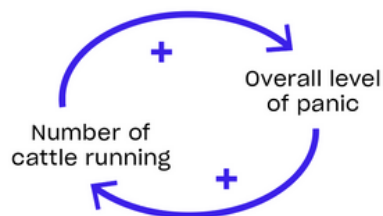
In short, the meta-crisis represents a nested set of feedback loops that not only drive exponential acceleration of existential risks but increasingly undermine our collective capacity to address those risks within the internal processes of our captured systems. In both our democracies and economies, these systemic drivers of runaway crises have consumed and undermined the capacity of elections and markets to mitigate them. Thus, we as a public have no choice but to formalize our own civic systems that address the failure modes of our current systems.

To design whole systems alternatives that avoid reproducing these failure modes, it becomes necessary to review the game theoretic probable outcomes driven by these current systemic dynamics. Only with a sufficient understanding of the impending collapse scenarios that loom on the horizon can we successfully generate anti-fragile coordination mechanisms that are sufficient to meet the crises we face. Schmachtenberger refers to the three probable outcomes from current runaway feedback loops as "the three attractors." The phrase "attractor" is a reference to chaos mathematics, a field of study regarding complex systems in which the number of and interactions between variables make linear models and predictions impossible. Attractors, or basins of attraction, refer to the bounds of a system which can be known even when the specific outcomes...

within those bounds are unknowable. While we can't predict the exact outcomes of the nested and complex systems that are driving the meta-crisis, we can make a reasonably informed prediction of the future systemic equilibria that may emerge as these feedback loops reach the exponential curves that we are now approaching or, in some cases, have already entered. The three probable attractors that Schmachtenberger predicts based on his game-theoretic study of current dynamics are chaos, authoritarianism, and distributed coordination.

The chaos attractor is defined by the collapse of institutions and centralized authorities under the weight of a plurality of distributed crises that fracture those institutions' ability to maintain legitimacy and control. In the absence of a new, mutually accepted social order, systems devolve into tribalism and neo-feudalism with different clusters of actors vying for power, legitimacy, and control, likely at the regional scale. This attractor implies a high likelihood of not only civilizational collapse but potentially human extinction.

The authoritarian attractor is defined by a techno-fascist crack down on individual agency in order to retain a sense of social order in the face of accelerating breakdowns and crises. We see early stages of this attractor emerging with online censorship and the rise of both globalized corporate authoritarianism as well as hyper-nationalist elected leaders who have leveraged xenophobia and a strongman ethos to gain power and influence. While both of those expressions of authoritarianism position themselves as antagonists to one another, they are mirror expressions of the same authoritarian attractor. Elites around the globe likely prefer this attractor as it allows them to retain power and wealth as collapse scenarios accelerate.

Lastly, the distributed coordination attractor is defined by emergent, agent-centric self-organization that is able to provide localized resilience to rapidly changing circumstances through decentralized mechanisms. Schmachtenberger calls this system equilibrium "the third attractor," a reference to the narrow path of systemic adaptation that simultaneously addresses the failure modes of our current systems while increasing the probability of avoiding the other two attractors. This attractor would result in a vast redistribution of wealth and agency, making it unappealing to elites but demonstrably more equitable, regenerative, and life-affirming than the other two possible attractors.

In this context, it becomes an ethical and strategic necessity to orient humanity's collective agency towards defining, designing, and deploying civic systems that create the enabling conditions for the third attractor.

Such systems would require three design principles to guide the development of modular, composable, and interoperable civic systems that optimize for the third attractor and avoid unintentionally reproducing the self-destructive qualities of our current civilization. Our critical path towards a life-affirming civilization is defined by self-correcting feedback loops, aligned incentives, and civic culture.

Self-correcting feedback loops refers to truly participatory democracy paired with a sufficiently educated public able to interpret the holistic impact of our collective agency. Distributed, powerful, collective agency is required to ensure that any unhealthy feedback loops that may emerge at any point in our collective future can be addressed and mitigated holistically. This can be achieved through direct democracy mechanisms, citizen assemblies, strong public education, traditional ecological knowledge and open socio-ecological data.

Aligned incentives refers to an incentive landscape in which individual self-interest is aligned with the collective interest of humanity and all Life on Earth. Pro-social incentives reward forms of value that create cascading benefits for humanity and the planet. Unlike our current incentive landscape which rewards extraction and enclosure of value, prosocial incentives reward contributions to the commons and markets that produce holistic well-being and mutual thriving. This can be achieved through an economic structure organized by a diverse array of different strategies like democratically governed worker-owned cooperatives, nature-backed currencies, and evaluative metrics like Gross National Happiness.

Civic culture refers to the revival of a commonly practiced culture of mutual stewardship and responsibility. Renewing our sense of mutuality and solidarity is a critical precursor to any of the downstream behavioral and socio-economic shifts described above. Deconstructing the

weaponized culture war dynamics that are currently being leveraged to reduce collective agency by pitting identity groups against one another can be effectively achieved through the lens of bioregionalism. Bioregionalism represents a philosophy of mutual belonging to the places, watersheds, and biosphere we call home as a fundamental basis for solidarity. Civic utilities like informal solidarity networks, connected locally and globally, that share resources and provide grassroots coordination infrastructure for mutual benefit are among the tools that directly support this civic cultural renaissance.

Put together, these underlying systems design principles reflect what could also be called a "life-affirming civilization."

Thus, this thesis attempts to offer a sketch of this design philosophy for distributed coordination, the basis of an open civics. This paper proposes an underlying participatory design methodology for self-organizing processes and resilient, place-based and cosmo-local infrastructures that provide the enabling conditions for a fundamentally post-capitalist and even post-nation-state human civilization. By providing an initial methodology that provides a process ontology for the fundamental elements, functions, and processes of distributed coordination, this thesis outlines both the core mechanisms of the OpenCivics Network as a set of emergent capabilities, as well as the Open Civic Innovation Framework as a coherent, overarching meta-framework for a participatory process of civilizational adaptation. By linking the many commons and peer-to-peer efforts to revitalize the civic design space, this framework provides a foundation for a fully distributed process, governed by those who engage in it.

This model is not intended to be complete or final in any sense, rather it offers a schelling point, a point of convergence and a starting point from which we might collectively, to coordinate the process of systemic adaptation and co-evolution.

Regulatory capture
When a regulatory agency, established to act in the public interest, instead <u>advances</u> the commercial or special interests of the industry it is charged with regulating. This phenomenon happens when the regulated entities exert significant <u>influence</u> over the agency, leading it to prioritize their interests over those of the general public. As a result, the regulatory body may act in ways that benefit the industry rather than ensuring fair and effective regulation.

Multi-polar traps
Situations where multiple actors, each pursuing their own self-interest, collectively contribute to a harmful outcome that none of them individually desire. This concept, rooted in game theory, illustrates how individual rational actions can lead to collectively irrational results. For example, in a competitive market, businesses might engage in practices that are detrimental to the environment or society to stay ahead, resulting in overall negative consequences.

Self-organization
A process where a system spontaneously forms an organized structure or pattern without external control. This phenomenon occurs through local interactions among the system's components, often driven by feedback mechanisms. Self-organization is observed in various fields, including physics, chemistry, biology, and social sciences. Examples include the formation of snowflakes, flocking behavior in birds, and the emergence of market dynamics.

Systemic failure modes
The ways in which a system can fail due to inherent flaws or vulnerabilities within its structure, processes, or interactions. These failures are not isolated to individual components but arise from the complex interdependencies and interactions within the entire system. Identifying systemic <u>failure modes</u> involves analyzing how different parts of the system can collectively lead to failures, often requiring a holistic approach to understand and mitigate these risks.

Game theory
A branch of mathematics that studies strategic interactions where the outcomes depend on the actions of all participants. It provides tools for analyzing situations in which players make decisions that are interdependent, meaning each player's strategy depends on the strategies of others. This field is widely used in economics, political science, psychology, and computer science to model and predict competitive behaviors and outcomes.

Decentralized vs distributed
Decentralized systems distribute control and decision-making among multiple independent nodes without a central authority, exemplified by blockchain technology. In contrast, distributed systems spread tasks and data across multiple nodes that work together, often with a central coordinating authority, as seen in content delivery networks (CDNs). While both involve multiple nodes, the key difference lies in the presence or absence of central control.

Agent-centric

A perspective or approach that emphasizes the role, experiences, and motivations of individual agents within a system. In the context of systems design, this can mean designing systems that orient around the behaviors and interactions of individual agents within a larger system, while providing mechanisms understanding how their actions influence and are influenced by the system as a whole.

Living systems principles

The fundamental characteristics and behaviors of living organisms, viewed as complex, open systems. These systems are self-organizing and interact continuously with their environment, maintaining themselves through the flow of information, energy, and matter. Key principles include order, sensitivity or response to the environment, reproduction, adaptation, growth and development, homeostasis, energy processing, and evolution. These principles help to define what makes something "alive" and illustrate how living systems sustain and evolve over time.

Regenerative

The ability or tendency to regrow, renew, or restore, especially after being damaged or lost. This term is often used in various contexts such as biology, medicine, and environmental science. For example, regenerative medicine focuses on repairing or replacing damaged tissues and organs, while regenerative agriculture aims to restore soil health and ecosystem balance.

Attractors

In chaos theory, attractors are sets of numerical values toward which a system tends to evolve, regardless of the starting conditions of the system. These attractors represent the long-term behavior of a dynamical system.

A POST TRAGIC PROTOPIAN AUDACITY

This proposed vision of possibility is inherently audacious. It invokes a radical reimagining of a human society rooted in love, care, and mutual responsibility. Such an audacious act of imagination is required to shift the overton window of perceived possibility. One of the greatest tools of manipulation used by systems of power is the belief that our current socio-economic order is a reflection of reality itself. A close examination of the natural world reveals that it is, in fact, cooperation and synergy that defines the success or failure of a species in the evolutionary process. This is also true of the evolution of human civilization.

This thesis emerged from direct experiences of awakening to a sense of the suffering of our world, a gradual and ongoing process of removing the veils of indoctrination to perceive the massive scale of violence, inequality, and injustice upon which our current society is based. Entering the trough of disillusionment as understanding of the depth of the crisis increases, it can be easy to choose either the path of dissociation and numbing or total annihilating grief. Both choices are entirely reasonable given the scale and profound tragedy of loss of human life and the mass extinction of other species, but a third response, holding the grief and possibility simultaneously, is also available. The post-tragic aesthetic and sensibility emerges through the embrace of our grief and empathy as fuel for our creative action. We are motivated to reimagine our world not in spite of our current tragedies but because of them. Similarly, solar punk and lunar punk as aesthetic and cultural movements have emerged as similar expressions of the dynamic balance between radical optimism and sobering realism in the face of extreme crises.

The radical reimagining of our human society emerges as an act of rebellion against the prevailing lack of socio-political imaginary that insists that capitalism is the only viable political and economic "forever" system. But unlike utopian claims that are usually driven by a single individual's imagined design of alternative socio-economic frameworks, the radical reimagining proposed by this thesis instead offers a set of mechanisms and processes by which we may collectively dream and enact a new world into being.

Protopia, a term coined by futurist Kevin Kelly in 2009, refers to a society based on incremental and mutually determined progress. By taking incremental steps forward together, grounded in our direct experience of reality and the collectively determined needs of our immediate communities, we are carving out alternative, imaginal spaces in which we can collectively dream and create a different kind of society together. Instead of proposing a utopian vision of how human society should organize itself, this thesis offers the OpenCivics Innovation Framework as a methodology for the distributed and collective process of civilization-scale transformation.

This transition will likely take place across a multi-generational time span before we arrive at a new, stable, system equilibrium, and it is a near certainty that the process will be disruptive and tenuous at points, but our audacity to dream of a more beautiful world as our current civilization degrades around us is the first step in that multi-generational process.

Our hearts have been broken thousands of times as we have felt and been transformed by the suffering of our world. The impulse to care and respond to this suffering is a natural response as empathic and social beings, a response that has been denatured by our social conditioning, wounding, and reliance on bureaucratic institutions to care for the collective on our behalf. Liberating this natural impulse to care for humanity and our world is the great work of these challenging times. Our choice to open our hearts after being let down again and again by our leaders and systems is a courageous one, but a more beautiful world can only emerge when we rise up together as a human species, facing the suffering of our world with compassion and wise action

we have the tools, methods, and frameworks ready at hand. From that place, an open civics is a call to awaken the spirit of care and compassion in the public and encode the spirit of non-rivalrous coordination among civic innovators, such that humanity can rise up together to collectively reimagine our world.

Overton window
The range of policies and ideas that are considered politically acceptable to the mainstream population at any given time. Named after Joseph Overton, a policy analyst, this concept illustrates how public opinion shapes what politicians can propose and support without appearing too extreme. The window can shift over time as societal norms and values change, allowing previously radical ideas to become mainstream and vice versa. Essentially, it defines the boundaries of acceptable discourse in the political landscape.

Imagination activism
According to Moral Imaginations, imagination activism involves expanding and exercising one's imagination to broaden ways of thinking and envisioning what is possible and achievable. An imagination activist not only enhances their own imaginative capacities but also equips themselves with tools, questions, and exercises to help others expand their imaginations. This approach aims to shift perceptions and translate new ways of thinking into actionable changes.

Post-capitalist
A hypothetical or emerging state of society and economy that exists after the decline or end of capitalism. In a post-capitalist society, traditional capitalist structures, such as the reliance on private ownership of the means of production and the pursuit of profit, are replaced by alternative systems.

System equilibrium
In the context of social, economic, and political systems refers to a state where all forces and influences within the system are balanced, resulting in stability and no net change over time.

Synergy
The interaction or cooperation of two or more organizations, substances, or other agents to produce a combined effect greater than the sum of their separate effects. This concept is often used in business, science, and other fields to describe how collaborative efforts can lead to enhanced outcomes that wouldn't be possible individually.

Post-tragic
The term post-tragic refers to a state or condition that emerges after experiencing a tragic event. Unlike the concept of post-traumatic, which often focuses on the lingering negative effects and trauma, post-tragic emphasizes a transformative process. It involves moving beyond the initial suffering and finding meaning, growth, or a new perspective as a result of the tragedy. This concept is often used in literature, psychology, and philosophy to describe how individuals or societies can evolve and find resilience after profound loss or hardship.

OPEN CIVIC CULTURE

"If man chooses oblivion, he can go right on leaving his fate to his political leaders. If he chooses Utopia, he must initiate an enormous education program - immediately, if not sooner."
– R. Buckminster Fuller

WHY CIVIC CULTURE

Properly understood, the systemic drivers of the meta-crisis make it clear that incremental and institutional solutions are ultimately insufficient in the face of the entrenched, systemic crises we face. The combination of the sluggish rate of adaptation and centralized approaches to change management within institutions calls for a more foundational and participatory strategy.

Understood as an adaptation and coordination failure, the meta-crisis only truly resolves through what Daniel Schmachtenberger has referred to as a "civic renaissance." Implicit in the term renaissance is the notion of rebirth and revitalization, a return to something that has been lost or degraded. In this sense, a civic renaissance is a return to a shared sense of mutual responsibility and care, rooted in an understanding that there is no "away" and it is within one's rational self interest to care for the wellbeing of our commons, communities, and planet.

Civic virtue is the personal expression of a broader cultural renaissance, referring to the ennobling choice to rise into stewardship and direct responsibility for the maintenance and embodiment of systems of care.

This type of civic culture is a precursor to the types of distributed coordination required to address the root drivers of the meta-crisis in our local communities and global commons. At the core, this shift revolves around ending our a reliance on centralized institutions to provision core civilizational utilities by restoring our fundamental rights as planetary citizens to self-determine and autopoetically enact our own civilizational systems through self-organizing collective action.

Unlike crises humanity has faced in the past, the complex, existential and all-encompassing nature of climatic shifts, supply chain breakdowns, and food system fragility require distributed, cosmo-local resilience and direct action.

For humanity to truly become a non-rivalrous, mutually responsible species, we must first develop the cultural capacities to effectively navigate prisoner's dilemma scenarios by choosing to coordinate and cooperate, avoiding lose-lose scenarios by seeing ourselves as mutually interdependent.

Instead of prescribing top down solutions that attempt to correct for the failures of our current systems, a distributed renaissance of civic culture would transform the substrate or soil of our communities, empowering ourselves to coordinate the production of networked and pluralistic civic utilities, from the bottom up.

This foundational cultural transformation may be more difficult than a top down technocratic response, but ultimately it is the basis of the kind of distributed coordination that Schmachtenberger describes as essential to the proliferation of the third attractor. While it may ring hollow to some who might view it as naive or idealistic to presume that such non-rivalrous cultures are possible, such a belief demonstrates reflects an inherent bias towards human nature.

The scientific foundations of the ProSocial model, which builds off of Nobel Prize winner Elinor Ostrom's study of commons governance patterns by integrating work in the fields behavioral psychology, evolutionary biology, and interfaith studies, demonstrate that "Modern evolutionary science tells us that behaviors and cultural traits evolve based on their consequences within a given context… The science of ProSocial is focused on understanding and fostering social contexts in which individual and group interests are aligned, such that cooperative behaviors are reinforced more than selfish behaviors." This science is well documented and the ProSocial methodology is a primary cultural toolkit for our civic renaissance.

REGENERATING WHAT'S BEEN LOST

While our commons and ecologies have been ravaged by extractive industries, so too has our <u>social fabric</u>. Accelerated by the <u>attention economy</u> and the <u>influence of social media algorithms</u>, humanity has been pitted against itself at a time when global solidarity is more needed than ever.

Regenerating the social fabric requires a fundamental shift in power dynamics, moving from rivalrous institutions and incentives, towards a pluralistic, polycentric, and prosocial approach to large-scale coordination.

Essential to this process is the concept of imagination activism, coined by the European research and practice centre <u>Moral Imaginations</u>, which brings community members together to empower people to create shared imaginings of the future

This bottom up approach to consensus building and direct collective action brings us out of our filter bubbles into immanent and embodied relationships with the humans and non-humans with whom we share our physical home.

Reliably, when we return to the common ground of shared being and belonging, our attention is directed towards creating safe places for our children and future generations, valuing intact ecologies that support essential ecosystem services, and recognizing the human need for connection, dignity, and purpose.

A key example of this material solidarity is the phenomenon of water stewardship. Across all of our ideological silos and bubbles, our material survival is inextricably rooted in our access to and the quality of our water. Weaving together farmers, residents, hunters, ecologists, indigenous first nations and others, we are compelled by our mutual reliance on clean water to protect and steward water as a sacred civic resource. These areas of mutual alignment are often overlooked within rivalrous social, economic, and political systems because they do not generate the requisite outrage and division upon which those systems thrive.

Therefore, regenerating our ecologies, communities, and commons becomes part of the same regenerative return towards the renewal and revitalization of local stewardship and direct civic responsibility for the systems that shape our well-being.

TRANSPOLITICAL SOLIDARITY

This expression of civic culture and cosmo-local orientation to stewardship defies the internal logic of the divide and conquer strategies deployed by our rivalrous political factions, invoking a new kind of transpolitical solidarity that is more concerned with quality of life and pluralistic, bottom-up positive sum collaboration.

By embracing a philosophy of pluralism and agent-centricity, we transcend and integrate the best of many different political philosophies as we coordinate at the local level to improve quality of life.

Divisive political ideologies become less relevant in this context as we are focused on the material conditions of our lives and are less concerned with the regulatory state and its top down restrictions or incentives.

Instead of competing to control the state's violent apparatus, communities can engage in a process of discovery that foregrounds shared alignment and emphasizes creativity and experimentation.
Such a process is measured by the intersubjective metrics of quality of life, determined based on the needs and perspectives of each individual and thus dependent upon a diversity of strategies to improve quality of life from the ground up.

This type of transpolitical ethos is rooted in the practice of commoning, a form of political consciousness that harkens back to grassroots populist movements throughout history. Our contemporary political consciousness has been fundamentally shaped by the forces of capital accumulation and first-past-the-post voting which leverage duopolistic control and lesser of two evils tactics to maintain a firm grip on the types of political orientations that are seen as legitimate. As Noam Chomsky writes, "the smart way to keep people passive and obedient is to strictly limit the spectrum of acceptable opinion, but allow very lively debate within that spectrum."

Open civic culture expands the spectrum of acceptable opinion by rooting into an overarching foundation of place-based mutual solidarity while promoting pluralism and consent with regard to the diverse strategies a community might employ to improve its own quality of life. By focusing on grassroots consensus-building instead of top-down technocratic control, open civic culture opens a new topology of innovation and direct action that simultaneously transcends and includes various political orientations and ideologies by de-centering "power over" relationships in service of consensual, "power with" relationships. This type of political orientation is not new. It represents a way of being that has been practiced by place-based communities throughout history. Its renewal is foundational to a movement of mutuality, solidarity, and care.

ENABLING STRUCTURES

While many examples exist worldwide of communities self-organizing in this fashion, usually under the duress of immediate crisis or institutional collapse, the protocols utilized by those communities are often informal and rarely reproducible from movement to movement.

A very particular subset of the various types of innovation we can engage in as a species, civic innovations are mechanisms that support these self-organizing movements and local community organizing in a pluralistic structure that is more concerned with bottom up coordination than top down control.

The goal of the Open Civic Innovation Framework and the OpenCivics Network is to provision these mechanisms to the public in a structure that can be easily adapted, composed, and forked to meet the direct needs of local community organizers.

As a pattern language for open protocols, the Open Civic Innovation Framework offers a meta-pattern for these types of utilities, enabling them to be easily composed into civic stacks and supporting the alignment of civic innovators as they consider how their innovations might be networked and interoperated.

The OpenCivics Network is a decentralized solidarity network that includes patrons, innovators, and local community organizers in a participatory and non-rivalrous co-design process, supporting coordination, funding, and applied research into systemic interventions that support direct civic empowerment.

By holding the process of civilizational adaptation as a non-rivalrous network, the OpenCivics Network connects civic innovators, organizers, patrons and the public while also providing key coordination functions in the form of formalized templates for impact reporting and project interoperability.

If successful, the collective impact of the framework and network, as a convergence and coordination point for innovators and the public, will give rise to new, open civic systems, animated by a revitalized civic culture, able to support the embodiment of an open civic culture through the design philosophy of open civic systems.

OPEN CIVIC SYSTEMS

MAKING THE OLD SYSTEM OBSOLETE

"It is now highly feasible to take care of everybody on Earth at a 'higher standard of living than any have ever known.' It no longer has to be you or me. Selfishness is unnecessary and henceforth unrationalizable as mandated by survival."
– R. Buckminster Fuller

Together, these enabling structures, composed of interoperable civic utilities, form new kinds of civic systems. These systems may be hard for us to conceive at present, given just how degraded our civil society and commons have become. But as our current systems continue to crumble around us, our imagination is the primary limitation on the kind of world that we can create next. Open civic systems simply make old systems obsolete by providing a higher quality of life for citizens by making better use out of existing resources, leveraging local knowledge and problem-solving, and anchoring networks of relationships. With this possibility as our north star, we peer ahead, beyond the horizon of our current systems, towards the rising sun of the third attractor.

Instead of fighting the existing world order, we can embrace the fact that it is already crumbling under its own weight. While holding actions are still needed to mitigate harm, we can soften into the liberation of knowing that our legacy systems are already actively undermining themselves through their increasingly evident contradictions and inability to effectively respond to mounting existential risks. Focusing on the fundamental building blocks that make a parallel society and economy possible, our energy can be channeled into producing localized systems that empower us to gradually withdraw our consent and participation from legacy systems.

THREE HORIZONS & THE THIRD ATTRACTOR
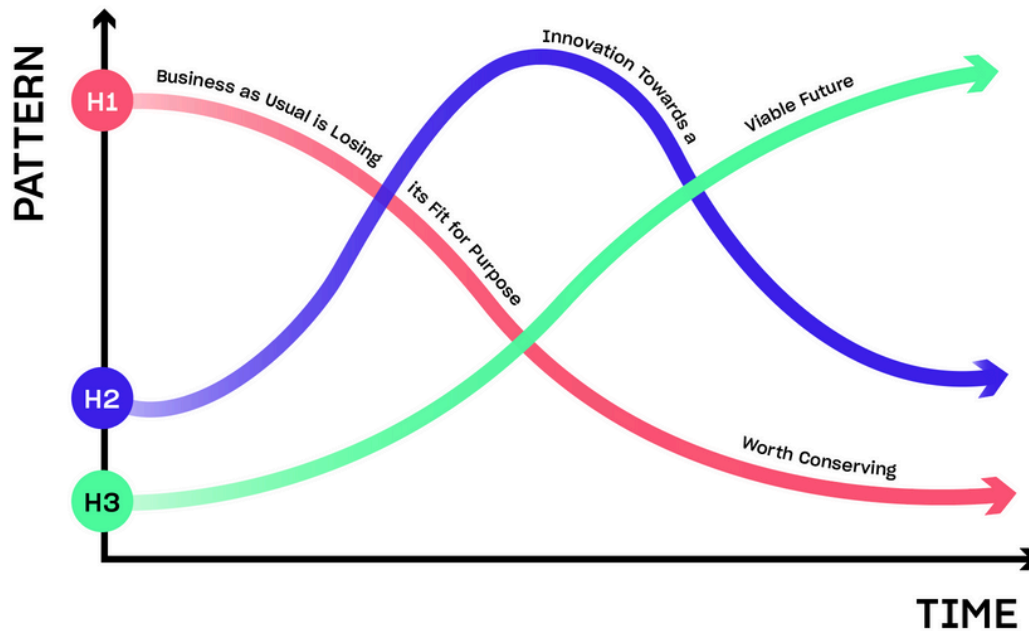
Within the <u>three horizons framework</u> approach to change management and paradigmatic shifts, the first horizon (H1) represents business as usual. The second horizon (H2) represents adaptations that occur in response to the failures of the status quo. These adaptations can prolong the dysfunction of the status quo by marginally addressing its insufficiencies (H2-) or they can create the enabling conditions for an entirely new horizon (H3) to emerge (H2+).

An analysis of the depth and scope of the meta-crisis' generator functions reveals that H2-innovations are not only 'too little, too late' when it comes to addressing the perverse economic incentives and regulatory capture that drive ecocide and anti-social behaviors, they're also likely to prolong the long disaster that we're currently embedded within. As such, it is critical to describe the third horizon or third attractor in greater detail, both to ensure any transitional approaches are indeed H2+, and to guide a process of distributed coordination towards the underlying frameworks and initiatives that will increase the probability of the third attractor's emergence.

This section of the thesis attempts to define the third horizon in the form of open civic systems, a design philosophy based on the indicators and design principles of a life-affirming civilization. Open refers to a design philosophy akin to the design of <u>open source software</u>. To empower truly distributed coordination in the re-imagination of our core civilizational systems, an open design approach enables any participant to modify, fork, or merge a design pattern in an evolutionary process of adaptation and natural selection.

Civic refers to the systems of care that undergird the incentives, infrastructures, and institutions of any given civilization. By focusing our attention on these underlying systems, we are able to shape the downstream flows of our democracies and economies.

According to Donella Meadows, "a system is a set of things—people, cells, molecules, or whatever—interconnected in such a way that they produce their own pattern of behavior over time. The system may be buffeted, constricted, triggered, or driven by outside forces. But the system's response to these forces is characteristic of itself." In short, a system is a set of feedback loops between components that produce their own emergent behaviors and effects. Thinking in terms of systems, instead of in terms of individual components, is essential to meaningfully and effectively engage with the complexity of our world.

The sections that follow will provide an overview of open civic systems as a precursor for a distributed coordination framework for the development and deployment of such systems.

CONDITIONS OF THE THIRD ATTRACTOR

Open civic systems require three primary conditions — based on the design principles of a third attractor — in order to avoid unintentionally reproducing the self-destructive qualities of our current civilization. Our critical path towards a life-affirming civilization is defined by self-correcting feedback loops, aligned incentives, and civic culture.

Self-correcting feedback loops refers to truly <u>participatory democracy</u> paired with a sufficiently educated public to interpret the holistic impact of our collective agency. Distributed, powerful, collective agency that is able to make decisions based on high quality and holistic sensing of ecological data and wisdom is required to ensure that any unhealthy feedback loops that may emerge at any point in our collective future can be addressed and mitigated holistically. This can be achieved through direct democracy mechanisms, citizen assemblies, strong public education, traditional ecological knowledge and open socio-ecological data.

Aligned incentives refers to an incentive landscape in which individual self-interest is aligned with the collective interest of humanity and all Life on Earth. Pro-social incentives reward forms of value that create cascading benefits for humanity and the planet. Unlike our current incentive landscape which rewards extraction and enclosure of value, prosocial incentives reward contributions to the commons and markets that produce holistic well-being and mutual thriving. This can be achieved through an economic structure organized by democratically governed worker-owned cooperatives, nature-backed currencies, and evaluative metrics like <u>Gross National Happiness</u>.

Civic culture refers to the revival of a culture of mutual stewardship and responsibility. Renewing our sense of mutuality and solidarity is a critical precursor to any of the downstream behavioral and socio-economic shifts described above. Deconstructing the weaponized culture war dynamics that are currently being leveraged to reduce collective agency by pitting identity groups against one another can be effectively achieved through the lens of bioregionalism, a philosophy that invokes our mutual belonging to the places we call home as a fundamental basis for solidarity. Civic utilities like informal solidarity networks, connected locally and globally, that share resources and provide grassroots coordination for mutual benefit are among the tools that could support this civic renaissance.

SYSTEM COMPOSITION

Our current system composition is defined by institutions, infrastructure, incentives, interactions and culture — whose systemic failure modes have been described extensively above.

To reimagine our systems in the context of an open and composable approach, it is necessary to understand how these three components currently exist and how they might be transformed.
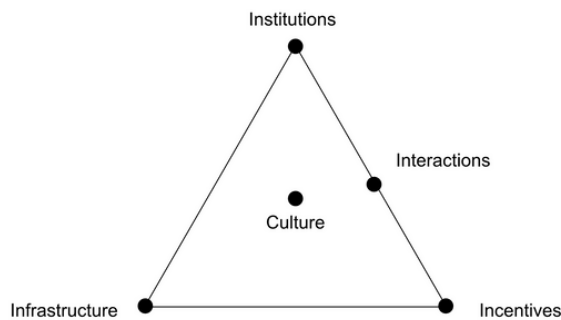
Institutions (Functions)
Institutions are the structured roles, rules, and norms that govern the behavior and interactions within the system. These are the formal and informal systems that provide stability, enforce policies, and guide decision-making processes.

Infrastructure (Utilities)
Infrastructure represents the physical and digital systems, tools, and facilities that support the system's operations. These utilities enable the functioning of the system's core activities and ensure that resources are effectively utilized.

Incentives (Mechanisms)
Incentives are the mechanisms designed to motivate and encourage desired behaviors and outcomes within the system. These can be financial rewards, recognition programs, advancement opportunities, or any other forms of motivation that align individual actions with systems goals.

Interactions (Flows)
Interactions refer to the dynamic flows of information, communication, and resources between different parts of the system. These flows ensure coordination, collaboration, and feedback among the various subsystems, enabling the system to function cohesively.

Culture (DNA)
Culture represents the underlying values, beliefs, and norms that shape the behavior and mindset of individuals within the system. Culture is a kind of social DNA of the system, influencing how people interact, make decisions, and approach their work.

TRANSFORMATIONS

Healthy System

Unhealthy System
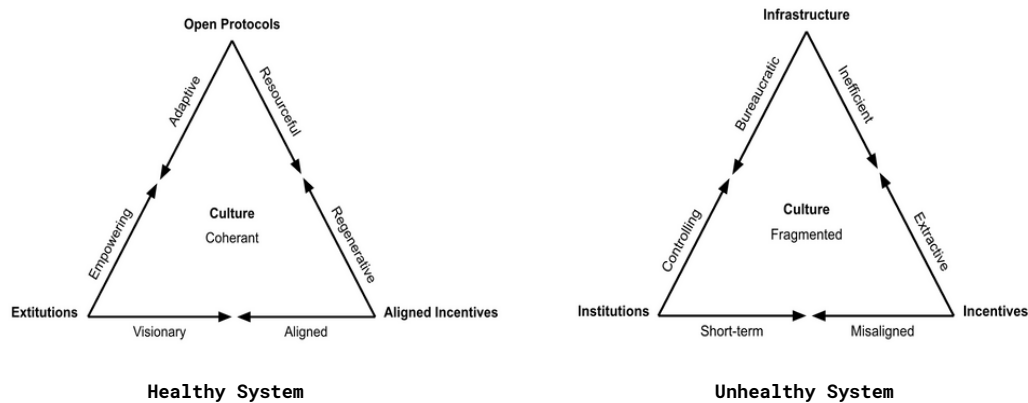
In an open civic system, institutions are transformed into extitutions, extractive incentives are transformed into prosocial incentives, and infrastructures are transformed into open protocols.

Institutions to Extitutions

Extitutions are frameworks for self-organization that provision the same services as traditional institutions through participatory coordination mechanisms. Instead of relying on enclosure to centrally coordinate these services and utilities, extitutions rely on open protocols to coordinate the provisioning of essential services through the web of relationships between members of the public.

Whereas bureaucratic mechanisms were developed to ensure quality and reliability of core civic utilities and services, extitutions take a more agile and consent-based approach that invites members of the public to elect into acts of service using decentralized mechanisms for attribution and compensation.

What these open frameworks lack in centralized management, they compensate for through transparency and choice. If a service becomes unreliable or poorly managed, citizens may utilize the open protocol framework to self-organize an alternative.

Examples of extitutions abound in crisis scenarios when centralized institutions are unable or unwilling to provision a core civilizational service, placing the burden of responsibility on everyday citizens to self-organize their own solutions.

Extractive Incentives to Prosocial Incentives

Prosocial incentives align positive feedback with holistic markers of wellbeing for individuals, communities, and ecologies. Such incentives would acknowledge the disproportionate value of a living tree when compared with the value of the lumber generated by its extraction.

Prosocial incentives can be designed into new types of markets that provide economic value to previously uncompensated actions or they can be embedded into currency models that reflect prosocial values. Incentives can also be aligned through the design of financial instruments that autonomously reward specified actions that are reported and verified by peers.

Reputation systems are another form of prosocial incentive in which trust networks provide a means of visualizing the prosociality of peers. Prosocial incentives are a decentralized response to the effects of extractive incentives landscapes in which unregulated market demand drives multi-polar traps, but instead of addressing these market failures with top down regulation, they instead attempt to link rational self-interest with mutual benefit through decentralized means.

Fragmented Infrastructure to Networked Open Protocols

Open protocols are the DNA of the social organisms that make up exititutions. By their very nature, they are non-enclosable and non-rivalrous patterns of human self-organization that can be modified and adapted.

Essentially a recipe book for particular forms of collective agency, they can be composed and restructured based upon local needs and "ingredients." By utilizing the same underlying pattern language, open protocols become an evolutionary phenomenon. Just as DNA composed of the same underlying proteins can be combined to create trees, whales, and humans, so too can open protocols be utilized to create community food sovereignty networks, home school associations, and communal maker spaces.

These patterns can evolve like DNA through the same process of natural selection that occurs in other living systems. Viewing infrastructure in this way, we evolve our understanding of infrastructures as simply a physical substrate in the form of roads or cables towards infrastructures as conceptual frameworks for physical coordination. Open protocols can still be utilized to provision large scale physical infrastructures, but their design implies a fundamental shift from top down coordination to bottom up coordination to meet the same needs.

Importantly, to achieve these ends, humanity must align upon an open pattern language for these protocols to ensure their scalability and replicability across differences and support innovators as they collaborate towards the interoperability and composability of the mechanisms they create.

SYSTEM DESIGN PRINCIPLES

As civic innovators build and deploy open protocols, civic utilities, and civic stacks that collectively form the civic <u>hyper-structure</u> of an open civic system, the following principles will be vital to ensure the strategic viability of such approaches. These characteristics or qualities are critical to ensure both theoretical and practical alignment with the open civic system design philosophy.

Modular refers to the design principle whereby a system is divided into separate, self-contained units or modules. Each module can function independently but can also be combined with other modules to create a more complex system. This approach allows for flexibility, scalability, and ease of maintenance, as individual modules can be updated or replaced without affecting the entire system. Modularity also empowers local communities to self-assemble their own compositions of various modules to meet their own needs based on their own goals and priorities.

Composable refers to the capability of any modular component of a system to be modified according to various parameters, enabling components to be configured to meet specific needs. In the context of open civic systems, composability allows for the fine tuning of modules to increase their adaptability and customization based on the unique requirements of different communities or projects.

Inclusivity ensures that the system is accessible and usable by all individuals, regardless of their background, abilities, or circumstances. In open civic systems, inclusivity involves designing with diverse user needs in mind, promoting equity, and ensuring that everyone can participate in and benefit from the system. This includes considerations for accessibility, language, and cultural relevance.

Interoperable describes the ability of different systems, organizations, or components to work together seamlessly. In open civic systems, interoperability ensures that various modules or platforms can exchange information and function together effectively, regardless of their underlying technologies or architectures. This is crucial for creating cohesive and efficient civic hyper-structures.

SYSTEM DESIGN ETHICS

The end goal of open civic systems is not simply a mental exercise in alternative systems design. Open civic systems are inherently designed to increase the capacity for self-correction that would directly empower citizens to move towards health and wellbeing.

To evaluate the success or failure of any open civic system, a triad of qualitative indicators are necessary as a rubric for a healthy civilization. These heath indicators, or system design ethics, shouldn't be considered as separate domains but rather as interconnected criteria for holistic evaluation of systemic adaptation and design.

Resilience

Resilience is the state and the capacity for adaptive self-organization sufficient to provide core life support function across changing world circumstances.

As things change over time, resilience ensures we have the ability to adjust and adapt without compromising our essential needs. The philosophy of decentralization is inherent to the philosophy of resilience, because centralized structures are fragile and non-adaptive whereas decentralized structures are modular, adaptive, and redundant to ensure their ongoing function as circumstances stress the integrity of a system. For example, imagine compostable bioplastic 3D printer micro manufacturing to minimize dependencies on international industrial supply chains. The creation of decentralized local infrastructure allows us to more easily meet needs locally and adapt to change.

Examples of indicators of resilience include:

• Diversity
• Redundancy
• Adaptive Capacity
• Interconnectivity

Choice

Choice is the state of fundamental respect for the sovereign agency of all beings and the capacity of individual agents to express their agency and influence their circumstances.

Designing for choice compels us to design systems that support agency, not constrict or take it away. Systems of self-definition are systems in which agents opt-in and choose how they want to participate. Choice also implies that agents have the ability to assert their will and change their situation if they are not satisfied or fulfilled. In Elinor Ostrom's foundational work on governing the commons, she states that people who are affected by a governance structure should be able to participate in it and modify it. Choice is fundamental because unless all agents are able to participate in the design and application of our systems, systems designers may leave out critical capacities and inclusions by not consulting or engaging with particular communities, producing unhealthy cultures of dominance.

Examples of indicators of choice include:

- Opt-in and opt-out mechanisms
- Flexible participation levels
- Participatory decision making
- Feedback and conflict resolution mechanisms
- Modularity and composability
- Access to information and data self-custody

Vitality

Vitality is Life's capacity to create more Life, the embodied state of thriving that emerges from the interconnected levels of well-being and quality of life for individuals, communities, and ecologies.

Vitality is based on the indigenous <u>Quechua</u> principle of Sumak kawsay, which means "I am well because you are well". This implies that our ecological, communal, and individual thriving are bound together. For truly holistic thriving to occur, a system must concern itself with the all interconnected scales and expressions of wellbeing.

Examples of indicators of vitality include:

- Cultural diversity
- Engagement
- Community vitality
- Ecological diversity and resilience
- Living standards
- Psychological well-being
- Self-reported physical health
- Use of time
- Education

STIGMERGY: THE NATURE OF OPEN CIVIC SYSTEMS

Across the natural world, we can see examples of nature engaging in positive sum feedback loops in which plants, animals, fungi, bacteria, water, light, and soil exchange energy and information for mutual benefit. The sum total of these interactions is the "web of Life," a nested set of relationships that form a complex adaptive system that is self-regulating, self-healing, self-reinforcing, and continuously evolving.

Stigmergy is a type of swarm intelligence in which individual agents, taking their own actions, signal those actions to other agents in such a way that other agents can contribute in a positive sum feedback loop. Examples of stigmergy in non-human organisms include ants, termites, bees, flocks of birds, bacteria, and slime mold. In humans, we can see examples of stigmergy in Burning Man, open source software development, Wikipedia, the Occupy movement, and various internet experiments. More akin to jazz music or an improv troupe than an institution or organization, stigmergy uses a simple set of decentralized rules to support individual agents in contributing to mutually beneficial goals. What is lost in terms of the linear clarity derived from centralized planning and control is greatly outweighed by the unplannable complexity and beauty of a swarm contributing their unique gifts towards an emergent structure.

"The concept of stigmergy has been used to analyze self-organizing activities in an ever-widening range of domains, including social insects, robotics, web communities and human society. Yet, it is still poorly understood and as such its full power remains underappreciated. This paper... [defines] stigmergy as a mechanism of indirect coordination in which the trace left by an action in a medium stimulates subsequent actions... [Stigmergy] enables complex, coordinated activity without any need for planning, control, communication, simultaneous presence, or even mutual awareness. The resulting self-organization is driven by a combination of positive and negative feedbacks, amplifying beneficial developments while suppressing errors. Thus, stigmergy is applicable to a very broad variety of cases, from chemical reactions to bodily coordination and Internet-supported collaboration in Wikipedia."

- Stigmergy as a universal coordination mechanism I: Definition and components by Francis Heylighen

In all of these instances, the positive sum feedback is mostly driven by contributions and alignment. Contributions that attract more contributions feed back on themselves. These rewards are intrinsic to participation. No one needs to direct or command them to occur. When it is clear how to contribute without stepping on someone else's toes (literally or metaphorically), humans naturally want to converge around shared efforts in which their participation is meaningful and purposeful. This is a form of participatory commons governance in the sense that it empowers us to collectively steer the ship of a common effort through our contribution instead of through our top down control of others' agency.

Open civic systems create scaffolding for stigmergic coordination by providing open templates for agent-centric coordination. Institutional functions and all other functions of a society are ultimately based in human coordination, making open civic systems capable of achieving the same outputs as any centralized institution. Open protocols, the DNA or source code for open civic systems, function similarly to the pheromone pattern languages of ants that inform how agents communicate and stack their contributions. In this way, open civic systems integrate human social systems with the patterns of living systems.

In the same way that an ant colony or bee hive can be considered a macroorganism, an emergent whole with its own form of collective agency, a human social organism is the equivalent design pattern for human coordination. Social organisms grow out of a core mission, vision, and culture that is defined in the nucleus of the social organism's social DNA. This social DNA serves as a north star as it is encoded and reproduced by agents through means of peer accountability, empowering human agents to opt-in to social organisms with whom they align at the fundamental DNA level. This core DNA also informs the functions, roles, flows, and membranes that are required for the social organism to achieve its purpose within its social ecology. Distinct from institutions or corporations that tend to function as a kind of "zombie" or cancerous social organism, never dying or engaging in reciprocal flows with their environment, social organisms are intended to be conceived, gestated, matured, and decomposed as the entire social ecology continues to evolve and transform to reflect the needs and desires of the many generations of agents who animate them.

While this fundamental transformation in human social behavior and structure is profound, it reflects patterns that exist all around us in the natural world. A human civilization based on these fundamental design patterns would represent a truly open civic system, able to easily adapt to changing circumstances, respond to collectively determined needs, and provide cosmo-local feedback cycles in which the collective superorganism of humanity could continuously learn and grow as peers.

POLYCENTRICITY: HOLONS OF SELF–ORGANIZATION

"A holon is something that is simultaneously a whole in and of itself, as well as a part of a larger whole. In this way, a holon can be considered a <u>subsystem</u> within a larger <u>hierarchical</u> system" - Wikipedia

Embracing the living systems view of the interrelatedness and complexity present in our ecologies, and perhaps our future human systems, we begin to view components of a system as nested wholes or holons.

This fractal perspective allows us to view the world through the lens of polycentricity, a way of seeing that can contextually shift depending on which holon we're seeking to understand. Because each component is a whole unto itself within a fractal web of relationships, polycentricity emerges as a way of engaging with the sovereign sphere of each holon while acknowledging that a complex system will contain many component parts which are themselves sovereign wholes. This whole systems approach allows us to engage with and design human systems that reflect the various interconnected holonic scales of a complex system, from the sub-atomic to the molecular, cellular, organismic, social organismic, ecological and biospheric scales. At each scale, the autonomy and healthy reciprocal flows within and across each holon will affect the health of the system.
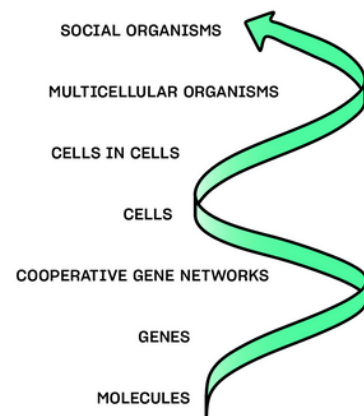
This living systems understanding is reflected in political philosophy through the principle of *subsidiarity*, an idea which emerged out of the <u>natural law philosophy</u> of Thomas Aquinas and the neo-Calvinist political philosophy of <u>"sphere sovereignty,"</u> which states that "social and political issues should be dealt with at the most immediate or local level that is consistent with their resolution." <u>Alexis de Tocqueville</u>'s <u>Democracy in America</u> offers a description of the principle of subsidiarity in early America. Tocqueville observed that "decentralization has, not only an administrative value, but also a civic dimension, since it increases the opportunities for citizens to take interest in public affairs; it makes them get accustomed to using freedom. And from the accumulation of these local, active, persnickety freedoms, is born the most efficient counterweight against the claims of the central government, even if it were supported by an impersonal, collective will."

While 21st century American democracy has fallen claim to profound centralization and <u>regulatory capture</u>, the same spirit that Tocqueville noted in early America is being revitalized and reimagined in a contemporary context through the reemergence of the bioregional movement. A <u>bioregion</u> is defined as "an ecologically and geographically defined area that is smaller than a biogeographic realm, but larger than an <u>ecoregion</u> or an <u>ecosystem</u>, and is defined along <u>watershed</u> and hydrological boundaries," and the bioregional movement is an emerging social effort to reorganize our civic participation in the context of a whole systems approach to regenerating our bioregions.

A beautiful living example of a cosmo-local and polycentric approach to whole systems thinking, bioregionalism embraces the holonic nesting of our belonging to and embeddedness within our living systems. Thinking bioregionally shifts our perspective towards the holonic nature of our relationships. Instead of seeding a new kind of nationalism wherein the locus of power and identity is an abstract nation state, bioregionalism sees humanity as part of a single biosphere and global human community while localizing our actions at the scale at which closed loop systems are most needed and relevant. In this sense, bioregionalism and a living systems view of civic infrastructure are one and the same.

BLOCKCHAIN: PEER TO PEER CYBERNETICS

To build the infrastructures of open civic systems that align with this holonic and polycentric view, new technological substrates are needed. Although the early stages of the internet were defined by peer to peer interactions <u>between academic institutions</u>, our digital commons was quickly captured by centralized "web2" entities like Google and Meta who realized that by placing essential internet services on their own servers, as opposed to self-hosted ones, they could extract attention and advertising revenue. What followed was a classic multi-polar trap in which misaligned incentives and the enclosure of our digital commons led to a race to the bottom in which the monetization of our attention became an arms race between increasingly monopolistic tech giants. At the core of these dynamics is the infrastructural failure of the "client-server" model which prevents users from interacting with one another outside of a centrally mediated context.

To both address these dysfunctional system dynamics as well as to create alternative systems, it becomes necessary to develop decentralized technological substrates in which users may interact with one another peer to peer and produce novel forms of autopoetic self-governance that are not possible within centralized technology platforms. Blockchains are one such technological substrate which leverage the power of encryption and competition between nodes in a network to secure an immutable ledger of interactions, maintaining trust between parties without relying on a centralized structure. While not without fault or its own forms of centralized capture, blockchains — and similar P2P technology — represent a significant step towards a technological substrate for civic infrastructure that supports composability and interoperability.

EMERGENT SYSTEM CAPABILITIES

This design approach to open civic systems is directly connected to the development of open source software, applying the same methodologies for social systems. Coherence and consensus in this stigmergic and evolutionary landscape is determined based on swarm intelligence and the utility of the outputs themselves.

As the system evolves, patterns that produce positive outcomes will be selected, with forking and merging of patterns achieving the same effects as genetic mutation and reproduction. Through an open protocol pattern language, these learnings and evolutionary adaptations can be cosmo-locally shared and integrated, allowing humanity to learn together how best to design and deploy open civic systems.

These types of network effects and swarm dynamics are not possible through centralized approaches, but they are also potentially fragile unless the underlying signaling pathways are clearly defined and mutually established. Consensus is not necessary in the pluralistic approach to specific instances of the pattern, but strong consensus is necessary at the level of the meta-pattern in order for the evolutionary dynamics to take effect.

As civic innovators, patrons, and organizers align and coordinate as a community of practice, novel capacities emerge as the cumulative effects of networked civic utilities are developed. The gravity of this alignment and coordination gradually pulls legacy systems and human attention from one basin of attraction to another. This collective effort also produces the emergent effect of *scenius*, an acceleration of creative capacity through the dynamic interplay and exchange between aligned innovators. The strength of these feedback loops produces rapid iteration, participatory co-design, and addresses the blind spots created when centralized groups attempt to impose their vision or process on those they intend to serve.

If humanity can align around open civic innovation models, our collective intelligence can be harnessed to collaboratively compose the civilization that we share.

OUR CHOICE

"The impossible happens." – R. Buckminster Fuller

Our collective future remains a mystery. And yet, around the world there is a rising yearning for profound systemic change. Ignored by legacy institutions of politics, media, and technology, this yearning can be harnessed by those who provide a sincere, distributed, and coordinated avenue for direct participation in the reimagining of our world.

We call the bluff of narratives of progress and naive techno-optimism that tell us to stay home on Tik Tok, placing orders on Amazon while the world burns around us and our so-called leaders continue to shred the future of the rising Millennial and Gen Z generations through further extraction, military spending and indebtedness.

While we cannot predict when a large-scale planetary revolution will occur, we can prepare the soil for its optimal success. We envision the next Occupy Wall Street, Arab Spring, or Sunflower Movement occurring with the support of the civic utilities we create today. Instead of protesting corrupted and dying institutions, the defining movements of the 21st century can and must hold a positive image of the future that expands the scope of our imagination and guides our collective action towards creativity and experimentation.

In these uncertain times, civilizational collapse scenarios are abundant. From top-soil degradation and food system collapse to climate mass migration to extreme weather to biological warfare and the looming threat of mass global conflict, we can't predict when and how our systems will collapse, but we can say with certainty that the <u>long disaster</u> of late stage capitalism has already begun.

As such, it is our responsibility as innovators and as a public to build the lifeboats and parallel systems that can catch humanity as it falls from one social order into another. It is both our ethical duty as well as our transformative opportunity to align, coordinate, resource, collaborate, convene, and learn as a global community developing the civic infrastructures of a world built upon love, care, and mutuality, empowering the public to co-steward and self-determine our collective future, together.

In Us We Trust.

ACKNOWLEDGEMENTS

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APPENDIX

/ OPENCIVICS THESIS

The OpenCivics Thesis exists to articulate the systemic failures and challenges of contemporary civilization while proposing a transformative vision for a collaborative and resilient future. It aims to motivate individuals and communities to engage in self-organized civic innovation and stewardship, fostering a culture of collective responsibility and active participation.

go.opencivics.co/thesis-wiki

/ OPENCIVICS CONCEPTS

OpenCivics Concepts is a living repository of key terms and ideas that are critical to the theory and practice of open civic innovation. These concepts are intended to evolve as the field of open civic innovation matures and grows into an established discipline.

go.opencivics.co/concepts-wiki

/ OPEN CIVIC INNOVATION FRAMEWORK

The Open Civic Innovation Framework is a guide for designing and implementing self-organized open civic systems that promote vitality, participation, and resilience while addressing societal challenges. It aims to empower communities and individuals to actively participate in local stewardship and civic engagement through participatory design methodologies that prioritize collective well-being and shared responsibility.

go.opencivics.co/framework-wiki

/ OPENCIVICS NETWORK

The OpenCivics Network is a community of practice and solidarity network working to renew civic culture and adapt civic systems to create the conditions for a vital, resilient, and participatory civilization to emerge. Together, the OpenCivics Foundation, Consortium, and Labs, serve the OpenCivics Network.

go.opencivics.co/network-wiki