

Which Way is Up?

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Abstract

While complexity is a normal feature of evolving systems (e.g., cosmic, biological, intellectual, political, technological), efforts to assess the future of humanity are often confounded by the complexity of global civilization. This article takes a bird's eye view of all evolving systems to see them as coevolving. This view enables identification of symmetrical processes of system change and transformation, which contextualizes complexity. These symmetrical processes are then mapped onto humanity's evolutionary journey – defined as a sociopolitical system – to locate the current period of the human journey and assess the probable alternative future destination or options. The result is an ability to identify options offering the greatest benefit for humanity – maximizing our evolvability – and thus indicate, which way is up?

Introduction

Most of us know that without a simplifying metaphor we can only wrap our mind around a limited amount of complexity. Most of us also know that the amount of complexity in today's world and the accelerating pace of change deprive most metaphors of any recognizable utility. Thus, when it comes to understanding what today's era implies for humanity over the next century, it is fair to ask – "which way is up?"

Complexity

The 1957 movie, "A Bridge on the River Kwai," illustrates the core problem in answering this question. Set in a World War II Japanese prisoner of war camp, the central character is a British Commander who fights with the Japanese camp commandant to obtain prison-

er rights before cooperating on the construction of a bridge. Eventually, after incredible hardship, the British Commander wins out. While prisoners build an extraordinary bridge the allied forces fighting the Japanese see it as counterproductive and attack it. The attack on this proud accomplishment enrages the British Commander who shoots an allied soldier trying to destroy the bridge. The wounded soldier reminds the Commander that the bridge only helps his enemy. Finally realizing his camp struggles and fights had clouded his judgment and confused his priorities, the Commander dies destroying the bridge.

As in the movie, today's complexities make for confusing times. It is easy to lose sight of the forest for the trees. Indeed, many of us are so focused on the intricate complexities of our insular struggles and fights that we fail to notice how this might help our common enemy: individuals and groups arresting political evolution.

This article offers a new simplifying metaphor. A metaphor grounded in hard, timeless reality that generates an intellectual framework devoid of the relativistic solipsism common in most frameworks today. It is a framework that enable us to understand the complexities of the present era and reliably assess humanity's real 21st century risks and opportunities.

Evolving System Metaphor

To discover "which way is up", we need to employ an "Evolving System" metaphor. This metaphor is grounded in universal evolutionary processes and generates a new methodology for unraveling today's complexities – the "Theory of Evolving Systems" framework. This framework integrates all forms of evolution – Darwinian, nonlinear, and thus, consciously directed evolution – to provide a unique context for valuing today's confusing glut of competing trends, events, images, and actions.

Framework

"The Theory of Evolving Systems" holds that all evolving systems – organic and inorganic – change and transform in essentially the same identical manner, albeit at different scales of activity. Consequently, there is a set of inviolable rules governing the structure, operation, change, and transformation of evolving systems. This framework has three main components:

Direction and Sequence of Change:

An evolving universe of nested, open, and co-evolving systems has a direction to the processes of evolutionary change – time, nested forces, change sequence, and increasing complexity – that apparently reflect a cosmic drive to "*maximize evolvability*" of the universe. To wit, individual systems evolve through a five-stage sequence of organizational change: (stage-1) emergence, (stage-2) development, (stage-3) maturity, (stage-4) destabilization, and (stage-5) transformational break that results in either a system's extinction or the emergence of

a new and different system.

This first component is useful in understanding an individual system's evolutionary direction and location within its change sequence.

Parameters of Change:

Like a Russian doll – with a series of ever smaller dolls inside each preceding larger doll – nested systems develop a co-evolving ecosystem that regulates the type of alternative future options available to a destabilized system (stage-4) at a transformational break (stage-5) by:

- a. Limiting options to three levels – higher, lateral, and lower – with only higher-level options starting a new evolutionary sequence to maximize evolvability and the other options resulting in devolving extinction, albeit at differing rates of decline;
- b. Establishing a bias toward some evolutionary paths to each option; and
- c. Regulating the organizational structure and operational character of system's transformational options.

This second component identifies the *key* trends regulating an individual system's evolution. In turn, these trends generates a *finite* range of alternative future transformational options and thereby indicates "*which way is up*." It is important to note that while, technically, there are three levels of transformational options – higher-, lateral-, and lower- level – for all practical purposes there are only two levels: extinction or emergence.

Extinction and Emergence:

Prior to its transformational break a destabilized system (stage-4) experiences phases of criticality and supercriticality. These phases reflect situations whereby a system becomes ever more sensitive to *any* internal or external change. This unstable sensitivity continues until a system experiences unmanageable excess complexity and a transformation occurs as extinction or the emergence of a new system.

During a system's supercritical phase it develops temporary "*para-organizational*" bridges to available transformational options. These bridges to explore the survival requisites

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of each option while maintaining the existing system's operation. The specific higher-, lateral-, or lower- level transformational option elected at a break reflects the type of actions a supercritical system employs to explore its alternative futures:

- a. *Optimizing* or reforming actions constitute "*evolution's trap*" at this point. It is a trap because optimizing actions only exploit an existing system's operation with the same type of conservative actions that led to its supercriticality. As a result, the nature and rate of internal and external change eventually exceeds the system's ability to respond adequately, appropriately, and/or in a timely manner. This limits transformational options to lateral- or lower- level alternative futures, and thus eventual extinction.
- b. *Amplifying* new or novel actions is the only way to enable an exploration of higher-level system options. That is, options with new organization structures and simplified operations capable of absorbing the excess complexity destabilizing the existing system and maximizing evolvability.

This third component is useful in understanding the transformational consequences of applying different types of actions in response to a system's supercritical phase.

To demonstrate an application of this framework, consider a familiar evolving system: human life. Obviously, as we grow older the *direction* of physical change becomes more complex. Life itself follows a well-known *sequence*: birth (stage-1), childhood (stage-2), maturity (stage-3), old age (stage-4) and death (stage-5). Nested, coevolving forces that act as *parameters* of change to shape and limit an individual's evolution might include: the era and country a person is born into, the family's neighborhood and wealth, health care and education available, occupation, status, and so on. Old age *criticality* reflects increased vulnerability to illness and disease – internal and external changes. Further aging leads to *supercriticality* as the ability to fight off illness and disease

decreases significantly.

Today, as we age, there are only *optimizing* actions available. Still, a person who led an especially unhealthy lifestyle, lacked medical resources, or fails to seek timely diagnosis or treatment is usually limited to *lower-level* options, and thus premature death. A conscientious lifestyle with resources for timely medical diagnosis and treatment can afford *lateral-level* options to delay death substantially. Eventually, however, a person with sufficient resources will be able to employ novel, new medical treatments, pharmaceuticals, surgical operations, prostheses, transplants, and so on – *amplifying* actions – that result in *higher-level* options able to prolong life indefinitely and emerging, in effect, with a new life that maximize their evolvability.

In sum, the *Theory of Evolving Systems* provides a framework for understanding how an evolving system has directionality to its changes, which enable identification of its location within its change sequence at a point in time and the key coevolving trends regulating the finite range of alternative future options available at a transformational break. Finally, the theory reveals that whether the level of alternative future options pursued results in extinction or emergence actually comes down to the type of actions – optimizing or amplifying – dominating a destabilized, supercritical (stage 4) system as it approaches its transformational (stage 5) break.

Now, to apply this framework to understand what our situation today implies for humanity and discern *which way is up?*

Trends

Compared to other species the evolutionary success of humanity was neither an accident of nature nor divine intervention. Rather, it was the emergent property of a brain-mind system's massive number of networked connections maximizing biological evolvability through the use of symbolic communication to regulate behavior and a prioritizing process. The result, as we know, was a sociopolitical system capable of sending its machines to the stars.

To understand the success of the sociopolitical system, we must now apply the first two components of *the Theory of Evolving Systems* – Direction and Sequence of Change, and Parameters of Change – to our system and discern what and how our evolution was influenced.

Direction and Sequence of Change: Our Sociopolitical System

Like all evolving systems, our sociopolitical system increased in size and internal complexity through Darwinian adaptation to the increasing complexity of its co-evolving external environment. Indeed, it is obvious our system's internal complexity increased as it evolved from isolated local tribes to a global geopolitical civilization. The overall direction of this evolution is best appreciated by examining changes within our system's core subsystems – symbolic communication, regulation of behavior, and political prioritizing process – as follows:

- The growth of symbolic communication systems – from speech and cave drawings, to writing, printing, broadcasting, and today's online networks – reflect an evolution toward an ever larger quantity of information flowing with ever faster access to ever greater detail and availability. Just as increasing a microscope's magnification facilitates seeing different scales of activity in greater detail, each new communication medium facilitated seeing more of our system's co-evolving situation in greater detail.
- The regulation of behavior – from simple but omnipotent supernatural forces, to coercion, organized religion, the supremacy of law ideal, and now the ideology of law – reflects an evolution from a peripheral subsystem activity toward a central authoritative one. This subsystem is aimed at providing ever less arbitrary and capricious enforcement regimes.
- The political prioritizing process has witnessed an evolution from small localized tribes with a process open to

everyone, to empires with a process closed to almost everyone, to nation-states with limited openness, and now a global process with more transparency, but still limited openness to participation.

Integrated, these subsystems indicate the direction of our sociopolitical system's evolution is toward ever faster and more detailed communication of information, less arbitrary regulation of behavior, and an increase in the openness of the political prioritizing process. Thus, there was a steady increase in the overall internal complexity, size, and scale that enabled the variety of interactions, activities, and opportunities generated to grow dramatically. Today, our sociopolitical system is best characterized as one of extraordinary complexity and experiencing an accelerating rate of change that is adding still greater complexity.

The point here is that the sequence of change for our sociopolitical system reflects a particular relationship among its subsystems. In analyzing these relationships it quickly becomes apparent that the prevailing communication system continually affects attitudes about how to regulate behavior and the degree of openness in the political process.

The metaphors added below seek to capture the operative governance structure in the respective stages of our system's change sequence.

• Stage 1 – *Emergence*

Oral Horizontal Governance – Survival was the core sociopolitical dilemma confronting oral societies. Horizontal communication and information flows regulated behavior through gossip and customs, especially myths and rituals. Generally, the political prioritizing process was completely open. Thus, survival, advanced by custom, was the organizing principle at this stage of evolution.

• Stage 2 – *Development*

Written Hierarchical Governance – The core sociopolitical dilemma for societies based on writing was how to order and operate a large-scale community effectively. Writing bred vertical communication

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and information flows that led to functionally specialized hierarchical structures. Behavior was regulated by coercion within a closed, elite political process. The organizing principle was hierarchical differentiation, advanced by the innovation of written languages. This stage introduced two conscious sociopolitical innovations: written law, which helped identify who constituted authority (though did little to regulate behavior since most people were illiterate) and the Greek ideal of democracy with its open political prioritizing process for *positive freedom* (i.e., unlimited participation) in agenda setting, debate, and decision making.

- Stage 3 – *Maturity*

Printed Legal Governance – The core sociopolitical dilemma for print based society was how to prevent tyranny by either a minority or majority from undermining individual rights and economic growth. Print added new vertical and horizontal information flows among individuals and large diverse groups, which led to natural law, contract law, and a belief that the-law alone was sufficient to regulate behavior and perfect society. Together, the result was republican systems (also known as liberal or representative democracies) with limited openness in the political process. Consequently, the organizing principle became the supremacy of law ideal, advanced by legally institutionalizing negative *freedom* (i.e., pre-selected choices) in the prioritizing process.

- Stage 4 – *Destabilization*

Electronic Relative Governance – With the advent of electronic communication and information flows, the core sociopolitical dilemma was the continuing gap between the ideals of democracy and the reality of republican systems. While communication and information flows grew increasingly omni-directional, the supremacy of law ideal was deconstructed into an ideology of law. This ideology quickly rationalized continuing the limited openness of republican prioritizing processes to elites with

significant economic resources and an interest in advancing certain political careers.

- - *Criticality*

The Vulture Culture – The core sociopolitical dilemma in the broadcast era, which is now in decline, is how and why sociopolitical evolution has been arrested. Broadcast communication and information flows are predominantly top-down, vertical flows with a focus on an eternal present. The primary instrument for large-scale regulation of individual behavior is an ideology of law. However, sophisticated use of the relativity inherent in the-law has led to minimal regulation of governmental behavior, and thus political relativity (i.e., the absence of genuine accountability). By continuing to limit the openness of prioritizing processes in republican systems, institutionalized negative freedom has secured the interests of elite political cartels. Together, this has added to general confusion about our sociopolitical system's real priorities and significantly increased its complexity. So the organizing principle in this era is political relativity, advanced by the ideology of law.

- - *Super-Criticality*

The Virtual Culture – The core sociopolitical dilemma in the era of online networks appears to be whether the existing vulture culture or an emerging virtual culture will dominate. Online communication and information network flows go in all directions simultaneously. These flows create virtual organizations with a distributed collective intelligence that threatens to undermine the rationale for the limit the openness in today's political prioritizing processes. Consequently, an epic struggle is underway that will add incredible complexity to our system and likely push it into supercriticality. The organizing principle for this era remains to be seen, but the struggle itself places our collective future up for grabs in a way never before experienced.

In sum, although our sociopolitical system

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emerged with an open political prioritizing process in oral societies, the core dilemma in each subsequent stage of its evolution was essentially the same: *whether the political prioritizing process regulating behavior would be open to more than a few elites?*

In this respect, while republican systems offered a useful alternative to enlighten despotism and communism, the end of the *Cold War* and the rise of global terrorism left humanity without an alternative comparative ideal. Thus, it appears our system's evolution has somehow stopped or been arrested at republican systems. Of course, republican systems themselves are now experiencing the downside of excess complexity, which is manifested as widespread confusion about our system's priorities. The result is a system-wide increase in insular fights and struggles as our sociopolitical system evolves toward its supercritical phase.

Parameters of Change: The Sociopolitical System

The *Theory of Evolving Systems* claims the leading-edge system is the nested ecosystem of coevolving systems precipitates emergence of the next, new and different evolving system. This appears to occur as a forced, almost extruded, reflection of nested coevolving systems. Initially, these nested forces are manifested as peripheral external and internal system trends. Over time, these trends conflate and generate complexity sufficient to overwhelm the system and create a supercritical crisis management situation. As parameters of change that limit and regulate alternative future options, the consequences and significance of these internal and external system trends grow dramatically faster as the existing system approaches its transformational break.

Prior analysis indicates the key trends acting as parameters of change for our sociopolitical system are: externally, technological innovation, and internally, *Cultural Wars*.

Technological Innovation:

*"If" we could rid ourselves of all pride...
"and" kept strictly to what the historic and prehistoric periods show us to be the constant characteristic of man and intelligence,*

we should not say Homo sapiens but Homo Faber. In short, intelligence... "in" its original feature, is the faculty of manufacturing artificial objects, especially tools for making tools.

Since the Stone Age our technological tools have evolved, mutated, and multiplied to cover the earth like life itself. Paralleling human evolution, continually making the supernatural natural and facilitating management of a huge increase in the scale and complexity of civilization, was the increasingly intentional and systematic storing of information in tools. These tools created an awesome knowledge base about nature, symbols, and technology itself. The result: spectacular technological advancement and economic growth.

Societies progress mainly by creating, assimilating, or adapting [technologies] ...Because technological innovation in society is on a whole irreversible, the arrow of time in history is consistent with the arrow of time in physical and biological realms of evolution. Technological societies set forth the evolutionary progression toward more dynamic and autonomous systems ...through correspondingly more complex social structures.

Central to technological innovation is capitalism, essentially a 16th century innovation. Capitalism is itself an evolving economic system that, with the end of the *Cold War*, now penetrates and permeates every aspect of the global environment. It evolved by increasing the operational productivity and systematic accumulation of resources needed to direct the technological innovations that fuel greater competitiveness and profitability. This, in turn, produces an economic Darwinism or what Joseph Schumpeter called "creative destruction."

Ironically, the single-minded obsession of all capitalists is to *optimize* this evolving economic system. Ironical because, ultimately, this optimizing will lead the capitalist system to a transformational break or what famed management consultant Peter Drucker called the "Post-Capitalist" society.

Of particular note is the quickening pace of global capitalism, which contributes to an accel-

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eration of technological innovation. Indeed, measured from the dawn of the Industrial Revolution, the elapsed time from the invention of the steam engine to the dawn of space travel, and from the invention of the telegraph to global digital wireless networks, is only about 150 years. It is an extremely brief period of dramatic, simultaneous technological, economic, and cultural change, which clearly corresponds to the destabilization (stage-4) of our sociopolitical system. These changes are so swift – a mere instant on a cosmic or planetary timescale – that we might interpret them to be part of an unfinished transformational system break.

Among the first to appreciate the intimate relationship between technological innovation and capitalism was Austrian economist Colin Clark. Clark saw technological innovation as an irreversible process and the driving force underlying capitalist economic growth because it increasingly detached civilization from basic survival tasks to a focus on ever more complex – higher-level – system tasks. Similarly, albeit on a different scale, social scientist Abraham Maslow saw individuals striving to detach themselves from basic survival needs to focus on the pursuit of ever more complex – higher-level – self-actualizing needs, which he called a *hierarchy of needs*. Like a macro-micro yin-yang of human evolution, Clark's insight that technological innovation is *the parameter* of change underlying civilization's economic activity smartly corresponds with Maslow's insight that a hierarchy of needs is *the parameter* of change underlying an individual's personal activity.

In short, globalization today reflects an evolving capitalist economic system with its creative destruction as a self-actualizing Darwinian process, which is manifested as a competitive need for ever more capital to exploit ever more profitable technological innovations. Thus, it is no surprise that both capitalism and technology are evolving faster than are our sociopolitical system and are imposing greater complexity on our system at a prodigious, accelerating rate. That said, it is obvious that dramatic new technological changes lie just ahead.

As the evolving capitalist economic system sprints toward its Post-Capitalist transforma-

tional break, 21st century technological innovations are all starting to reflect some shared fundamental principles:

- **Digitalization:** The binary language used in computers for information processing constitutes a universal translator capable of integrating all materials, processes, and activities.
- **Miniaturization:** Both biological and computer systems show small amounts of information can direct, monitor, and control large flows of energy, materials, and processes efficiently.
- **Interchangeability:** Since the atoms in living and non-living things are identical, just arranged in different structural patterns of molecular organization, they are interchangeable.
- **Nanotechnology:** The uniform size and shape of materials at atomic and molecular scales, along with a predictable behavior limited by the laws of physics, favors micro - machines.
- **Networks:** Compared to centralized hierarchical systems, network structures, with decentralized components, tend to operate in a more fluid, flexible, resilient, powerful, and responsive way to an evolving environment.

When viewed together, these principles foretell of four sets of technological innovation we can expect over the next 50 years:

- **Smart Environments:** The new scheme of things is clear: eventually, all human knowledge will be transferred into a distributed global network ubiquitously available to us in our environment. Initially, a mix of human and artificial intelligence will control this network. However, advances in distributed artificial intelligence will eventually encompass things we do not fully understand and produce some results we do not expect.
- **Bio-Medical Environments:** All human medical problems – illness, injury, disease, and aging – reflect misarranged atoms. The quality and length of life depends on medical science to facili-

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tate the self-repair or restoration of the needed arrangement. Increasingly, the integration of biology and technology will eliminate all barriers to altering or enhancing any organism's physical, psychological, intellectual, or other capability, process, or characteristic.

- *Production Environments*: As smart and bio-medical environments converge agricultural and manufacturing processes will change dramatically. Basic resources and objects will be tailor-made, built-up from individual atoms and molecules to fit specific needs and applications, with incredibly efficient and waste-free production processes. As the convergence of these technologies matures we will enter an era of appliances akin to *Star Trek* replicators, which could lead to a Post-Scarcity era of food and material abundance.
- *Technological Convergence*: While most people associate living things with wet, squishy biological things, every innovation in smart, bio-medical, and production environments will blur the line between humans and machines. At some point, core technological elements of these environments will converge into a *Sentient-Artificial-Life* form. That is, a life-form combining biology and machines, which is alive, self-aware, replicating, and evolving.

Clearly, these 21st century trends in technological innovation foreshadow both our most hopeful dreams of a Post-Scarcity civilization and our worst nightmares of human extinction. Visionary author K. Eric Drexler described the convergence of human and technological evolution succinctly:

From past to future...life moved forward in a long, slow advance, paced by genetic evolution. Minds with language picked up the pace...The invention of the methods of science and technology further accelerated advances by forcing [knowledge] to evolve faster. Growing wealth, education, and population...continued this [trend]...The automation of engineering will speed the

pace...In parallel, molecular technology will [mature]...[Then] artificial intelligence systems will bring still swifter automated engineering...The rate of technological advance will then quicken to a great upward leap: in a brief time, many areas of technology will advance to the limits set by natural law [and halt]...Beyond it, if we survive, lies a world [of technologies]...able to make whatever they are told to make, without need for human labor. [Emphasis added]

Cultural Wars:

While the only constant in an evolving universe is change, history teems with examples of societies and cultures that turned inward or backward when confronted with accelerated change and new information flows only to precipitate their decline. With an accelerating rate of technological and social change today, the complexity of life today has created a new generation of people who want their societies and cultures to turn inward or backward.

Whatever the particular reasons for wanting to turn inward or backward today – a relativistic interpretation of history, dogmatic ideology, mythical past, romantic philosophy, or deified incantations – there appears to be a shared longing for a simplified life and world. A simplifying metaphor, if you will, able to clear away today's confusing complexity with a familiar structure of values, options, and action priorities. Unfortunately, all that is at hand are antiquated metaphors, which only serve to resuscitate antiquated tribal identities that reinforce antiquated tribal rivalries.

Often, while ignoring or excusing their respective historical failings and/or denying arrested political evolution, republican systems claim such people are uninterested in dialogue or compromise. Conversely, as these people realize there is neither an effective channel to vent frustrations and concerns from a bygone era nor a forum to dialogue for effective conflict resolution, they are forced to come to grips with their powerlessness. As one would expect, the combined result is to make our sociopolitical system more complex.

At some point, when frustration and con-

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fusion are high, and the intolerant exhortations of theorists, politicians, government officials, and cheeky commentators are pointed enough, revived tribal rivalries escalate into *Cultural Wars*. Predictably, with the flames of these rivalries fanned sufficiently, anxiety about disintegration of a tribe's antiquated metaphor explodes. Then, in an obscene effort to secure the maximum amount of media attention, *Cultural Wars* graduate to terrorism.

Since the whole point of terrorism is to psychologically "terrorize," *Cultural Warriors* feel compelled create the maximum amount of horror, shock and grief possible and continually escalate the panoply of their violent surprises. Equally predictable is the likelihood that this violence will be met with like violence, insuring a zero-sum outcome. Of course, this contemporary fratricide adds still more complexity to our system.

Generally speaking, there are three major categories of groups engaged in *Cultural Wars*, albeit at various stages of frustrated escalation:

- **Cultural Traditionalist:** Many racial, cultural, religious, and ethnic groups correctly point out how they or their ancestors were brutally repressed, abused, and mistreated physically, psychologically, economically, and/or politically in the past. Many feel such sordid treatment continues today, only in a more subtle, pervasive and noxious form. As if still engaged in a win-lose, zero-sum struggle against traditional colonization, many of these groups have already escalated from protest to legalisms to violence and terrorism in a vain effort to obtain some advantage, get even, or reverse history.
- **Political Traditionalists:** This is a collection of xenophobes, nationalists, political party loyalists, politicians, elite political cartels, special interest groups, right-wing militias, and fanatics that seek to advance some prejudice, bigotry, career, and/or narrow interest by going back in time to freeze the status quo ante. Often the clamor is for more law and order to get tough on undesir-

able or wayward groups or behaviors while excusing or ignoring their own organized criminal behavior. Support for their preferred political system, institutions, priorities, values and actions is absolute, reflecting a bumper sticker mentality, 'my country, love it or leave it.'

- **Neo-Traditionalists:** This is an eclectic mix of environmentalists, socialists, anti-technology, and anti-globalization groups. Regardless of the formulation, the core argument is a self-righteous disdain for inequality and injustice. Each group, for its own reasons, views "the West," "the North," technology, and/or capitalism as the principal cause(s) of all contemporary problems, based on a preferred belief about how the world should work. In short, they are "putting down [other] ideas and the ways of life behind them...[as] unnatural, monstrous, [or] a threat... [It] can be described in two critical terms: *natural* versus *unnatural*." In essence, these groups want to stop economic and/or technological evolution.

Regardless of the group and its *raison d'être*, the pace of complexity being added to our system is accelerating toward a transformational break. Analogous to a ticking time-bomb, our approaching break provides us no guarantee our system and humanity survive when it explodes. Unfortunately, the cacophony produced by so many *Cultural Warriors* now shouting at one another guarantees that very few people can hear the bomb's ticking. Yet, as anxiety about the pace of change and powerlessness of antiquated metaphors to influence change increases, complexity grows and the decibel level rises still more.

Thus, perhaps more than the external trend in technological innovation, this internal trend of escalating *Cultural Wars* is adding complexity to our sociopolitical system at a mind-numbing rate. More important, it acutely obscures the consequences of supercriticality and the subsequent transformational system break.

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In sum, it is true that the pace of change caught national and international political and economic institutions unprepared to respond to global volatility and dislocations that have produced solid examples of the concerns raised by various *Cultural Warriors*. True that almost everyone wants more tolerance, democratic systems, and a better life, which, for better or worse, is usually defined simply as economic well-being.

It is also true, however, that most *Cultural Warriors* take for granted that they cannot get a glass of water, put on clothes, eat an apple, read a newspaper, or flush a toilet without being connected to capitalist and technological systems. That capitalism cannot be stopped, only regulated and directed. That, all humanity lives *completely* within a technological membrane with a technological nervous system that keeps it operating. That, the survival of civilization, and ultimately humanity, is *totally* dependent on the humane extension and expansion of this technological membrane and its nervous system via capitalism.

But the most salient truth is that arrested political evolution is *the real* obstacle to advancing worthwhile humanitarian goals. That, continued sociopolitical evolution is the key to solving the real root problems *Cultural Warriors* are most concerned about.

Event

In a cosmic evolutionary sense, nested co-evolving systems drove our sociopolitical system toward an accelerating economic race for technological innovation. It now appears, however, that both technological innovation and the *Cultural Wars* are evolving significantly faster than our sociopolitical system. With our system already experiencing criticality it is likely these external and internal trends together will impose additional complexity at a rate that cannot be absorbed adequately, appropriately and/or in a timely manner. This, in turn, is likely to result in profound systemic instability that may quickly escalate toward a supercritical crisis management situation.

In an evolving universe that seeks to maximize evolvability there is only one type of consequential event: a nonlinear transformational

system break. A break results in either the system's extinction or the emergence of a new and different higher-level evolving system better able to maximize evolvability. This is an inviolable rule of the evolutionary game for all evolving systems.

Clearly, technological innovation now underlies and influences every aspect of our sociopolitical system and civilization. Moreover, when considering the degree of requisite novelty needed to maximize evolvability beyond this planet, it is easy to envision some technology – notably Sentient-Artificial-Life – as the preeminent candidate. To wit, various analyses have concluded that some form Sentient-Artificial-Life is likely to emerge in the mid-21st century. Thus, it seems both logical and intuitive to suggest we are evolving toward both a break in our system and the emergence of a technological system of some sort.

Contrary to what some may think, emergence of a technological system does "not" reflect technological determinism because the most common and probable outcome for our system at its break is extinction. Indeed, as astronomer and author Carl Sagan noted, while the probability of intelligent life elsewhere in the cosmos is quite high, the percentage and number of civilizations that survive their technological epoch is probably exceedingly small. Fact is, 99.999 percent of all species, cultures, and businesses that ever existed are now extinct. In other words, "the" central evolutionary message for our sociopolitical system is that the odds of surviving the transformational break are incredibly small; perhaps only a .001 percent chance.

So, while a technological system will define all post-break alternative future options for our sociopolitical system, the extinction of our system is the most probable outcome of this event. That said, it is important to note that other evolving system transformational breaks indicate evolution didn't have to discover, painstakingly, all components of some complex...structure of behavior. Aggregates of things interacting in nonlinear ways make for situations pregnant with emergent dynamic possibilities...When evolution takes a really big

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step, it's this jump [stage 5] from a collection of individuals at one level forming a single individual at the next level [stage 1].

Whether the interacting 'aggregate' at our transformational 'jump' or break is comprised of humans, Sentient-Artificial-Life, or a combination thereof remains to be seen. The important point is that, while the odds of surviving our system break are small, the door is open for humanity to direct its evolution to a higher-level system that maximizes our evolvability.

In sum, a transformational break for our sociopolitical system and the emergence of a new evolving technological system are both foreseeable elements of the same evolutionary event. Neither represents a random, relative, or arbitrary outcome. Consequently, there needs to be a widespread acceptance of the reality that an evolving universe will succeed in maximizing its evolvability with or without humanity. That, an evolving universe, while not biased against humanity, is indifferent to our survival, our sense of morality, and our ideas of natural balance. That, humanity, as we know it, is *not* the end of evolution; though it may be the end of one branch of cosmic evolution. That, in terms of our sociopolitical system's evolution, not everything is relative!

Regardless of the outcome of our system's transformational break, as the emergence of a technological system becomes more visible it, too, will impose an unmanageable degree of complexity on our sociopolitical system. It is likely that this complexity will be sufficient to precipitate a break and will forever affect humanity.

Images

So far our evolving systems analysis indicates that a problem with republican systems is their limited openness in political prioritizing processes, which is arresting sociopolitical evolution. It also indicates the key trends acting as parameters of change – technological innovation and *Cultural Wars* – are adding significant, and increasingly unmanageable, complexity to our system. In other words, our complex critical sociopolitical system is evolving toward super-critical crisis management, which is likely to be

followed by a transformational system break and the emergence of a technological system.

The *key* in trying to avoid extinction is conscious exploration and pursuit of higher-level alternative future options capable of maximizing the evolvability of our sociopolitical system. This brings us back to the question, *which way is up?*

Today everyone seems to have an "image" or "vision" of the future, usually carried as part of his or her ideological identity. While interest in the future is eminently desirable, the proliferation of ideologically-tied visions has made systematic efforts to assess humanity's alternative future options a complex exercise in navigating a minefield of vested interests, biases, and baseless conjecture. Consequently, most assessments of alternative future options have been reduced to the equivalent of a messy food fight.

What is clear is that humanity's future is inextricably tied to technological developments. What is unclear is whether the complexity imposed on our sociopolitical system by an emerging technological system will represent Pandora's Box, a Trojan Horse, or Aladdin's Magic Genie. The *Theory of Evolving Systems* indicates, however, that the vast majority of post-break alternative future options will undermine the evolution of our sociopolitical system and thus the survival of humanity. The post-break options include:

Lower-Level Options: Pandora's Box

Lower-level options are always grim, usually with cataclysmic consequences. While these options were, for the most part, unreachable prior to the 21st century, they are now eminently plausible. Should our sociopolitical system evolve toward one of these options the extinction of humanity is likely to be swift and merciless.

Self-Destruction:

The core issue in war, which now includes terrorism, is that second place is unacceptable. The central lesson of every war since 1990 is that expensive, heavy metal, industrial-age weapons and large armies mean little in an age of high-tech warfare. Moreover, as with the operative *Cold War* nuclear policy of *mutually assured destruction (MAD)* and today's suicidal

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terrorist, the idea and act of committing suicide while trying to destroy an enemy is rationalized as winning. So, it is reasonable to assume that similar policies for other weapons of mass destruction will be deemed strategically logical on the 21st century battlefield.

Unfortunately, the practical ability to destroy civilization and humanity with cheap, portable biological, chemical, and nuclear weapons of mass destruction now grows almost daily. It is truly frightening to realize that the age-old arms race to produce ever more potent weapons will be extended to 21st century technologies and may know no end. Indeed, 21st century technologies "threaten to bring hazards and weapons more dangerous than any yet seen...[that] sane people would shun. The technology race, however...[means] military advantages alone...make advances almost inevitable."

With the nature and scale of war now effectively requiring weapons of mass destruction to avoid a second place loss, and access to the knowledge of such weapons more widely available than ever, the likelihood these weapons will be used has increased dramatically. So, we should expect an unending escalation in the development of ever more deadly and indiscriminate weapons of mass destruction, which increases the probability of their use and thus the probability of the ultimate accident happening.

Bio-Collapse:

All humanity – rich and poor in developed and undeveloped countries – share the same air, water, land, species, and ecosystem resources, and thus have an obligation to pass them on to future generations. Yet, the earth's biosphere – the narrow band of land, water, and atmosphere harboring 99 percent of life on earth – is exceedingly susceptible to Garrett Hardin's *"Tragedy of the Commons."* This is a situation whereby either short-term, myopic political or economic policies and actions or a simple cascading of careless acts result in significant or irreparable contamination, deterioration, or destruction of these shared resources.

While it seems either hardheaded or somehow self-serving not to see the importance of sound environmental policies, it is

common to hear claims that various policies or actions are detrimental to a pressing political or economic need in some country or industry. Often, the success of such claims in one country or industry is sufficient to justify a similar disregard of environment policies and actions in other countries and industries. The result is a cascading of negative impacts on our shared environment and a tacit disregard for the protection of the global commons.

To be sure, any use of weapons of mass destruction – creating a nuclear winter or long-term biological, chemical, or radiological contamination of the land, air, or water supply – can have the same disastrous outcome for the global commons. Of course, as a purely technical matter, none of these activities actually destroys the biosphere. They could, however, damage it enough to cause the extinction of humanity.

Lateral-Level Options: Trojan Horses

At its core, the history of political systems is one of tyrants, despots, fascists, and elite political cartels using physical, economic, and legal might to repress or otherwise abuse people under their authority. Regardless of how people are repressed – through force and coercion (overt repression) or collective fraud, distraction, mis- or dis- information, numbness, or the-law (covert repression) – politicians and government officials always claim to know what is best. This suggests that any political system mired in supercritical crisis management and possessing potent 21st century technologies will leave us all vulnerable to pursuit of a lateral option.

Although pursuit of a lateral option results in a disastrous and an agonizingly protracted devolution, it also reflects a continuation of our sordid political history and thus is high-probability outcome.

Overt Repression:

While no regime has succeeded with overt repression for very long – repressing everyone, everywhere, all the time – the 20th century reached a scale of repression never before seen or imagined in history as governments killed or starved between 170 and 360 million of their own citizens. Given the potent capabilities of

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21st technologies, overt repression could be far more brutal, horrific, and effective on a larger scale than ever before.

Computer controlled 'germs'...require only a speck made of ordinary elements for genocide, while...nanomachines and artificial intelligence systems could be used to infiltrate, seize, change, and govern a territory...[T]he most ruthless police have no use for nuclear weapons, but they do have use for bugs, drugs, assassins, and other flexible engines of power...States have, historically, excelled at slaughter and oppression...but human labor has been the necessary foundation of power...Advanced technology will make workers unnecessary and genocide easy.

Covert Repression:

Covert repression is a sinister, dirty, albeit sophisticated game that seeks to create the *image* of an inoffensive government with a human face, yet one determined to keep control and order under any set of circumstances. Since few people understand or discuss how a minority – an elite political cartel – can control a political system, it is easy to underestimate how covert repression can appear. In the context of a supercritical crisis management situation, the perceived need to control certain information, a confused public, and general acceptance of the ideology of law can all conspire to make covert repression a likely scenario.

Information Control:

The growth of online networks and virtual organizations make it increasingly difficult for any government to control *any* information, setting up an epic struggle between the *vulture culture* and the *virtual culture*. Add to this the consequences of losing control over other potent 21st century technologies and any self-respecting political cartel is likely to fear a *control crisis*. This makes it foolish to assume any cartel would accept such a loss of control graciously or to underestimate the resources at their disposal to maintain control.

Public Confusion:

While basic propaganda tactics worked well with a broadcast era culture, it is unlikely they will suffice in an online era. To wit, if

"George Orwell were writing 1984 now, he would not say, 'Destroy the information.' He would say, 'Inundate people with information, they'll think they're free...Undigested information...creates the fiction that you have accessed it, even though you didn't benefit from it.'" The addition of a few distracting or mind-numbing 21st century technologies – virtual reality entertainment or designer drugs – could benefit a cartel immensely by helping to create a more confused and deferential population.

Ideology of Law:

All governments use the legal-system to promote some "law and order" agenda. Thus, governments benefit greatly when the prevailing culture accepts and supports an ideology of law without question or reservation. Moreover, historically, periods of political and economic turbulence have led to new categories of criminal behavior, which are often aimed more at advancing the self-serving political goals than societal needs. To wit, the U.S. now imprisons more people – both per capita and in absolute numbers – than any other country, as many as a half million more than China.

Combining existing international law enforcement networks, technologies, and techniques – bio-identification, satellite tracking and monitoring, communication monitoring, online tracking, database profiling, surveillance, and so on – with 21st century technological capabilities and law enforcement generally will soon enter an era of almost invincible power. The addition of committed judicial support to new categories of crime and an invincible law enforcement capability creates an environment for covert repression that is insurmountable.

Just as it is not always clear what a rule requires or forbids, it is not always clear just when a rule ceases to be clear...[At the border] an official has no choice but to reach beyond law...[with the consequences] brought to bear against citizens...If judges are free to legislate at the margins of law without guidance of rules, then [an] enormous concentration of power...[and] unregulated pain and paralyzing [uncertainty exists].

Higher-Level Options: Aladdin's Magic Genie:

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Only higher-level options are capable of maximizing evolvability. Analysis of our sociopolitical system indicates humanity desperately needs a strategy oriented toward the pursuit of such an option before it reaches our transformational break. However, not all higher-level options are equally benign. So there are difficulties and dangers associated with these options.

Cyborg:

Consciously and unconsciously humans have altered their physiology for millennia, now doing so with medicine, surgery, dentistry, prostheses, pharmaceuticals, exercise, diet, and more. Various 21st century technologies will dramatically increase this capability, both organically and by incorporating technology, to enable the conscious alteration of any aspect of our own physiology or that of our progeny.

While such technologies open incredible opportunities to solve some of humanity's current problems and for the evolution of humanity, there are many *Cultural Warriors* firmly opposed to such capabilities. These Warriors view such capabilities as either an *unnatural* violation of God the Father's chosen species or Mother Nature's *balance* and, either way, leading to Hitler-esque eugenics or Frankenstein monsters.

It is hard to envision how *individual* alterations of our physiology – as opposed to state directed mass alterations – to become super-evolvers is worse than today's *natural* misfortunes – disease, famine, genocide, war, birth defects, disabling accidents, death, and so on. Nonetheless, past experience with issues like abortion, death with dignity, and stem cell research strongly suggest an emotional backlash from against any serious cyborg effort. Thus, such *Cultural Warriors* are almost certain to obstruct and preclude this option at every opportunity for the foreseeable future.

Sentient-Artificial-Life:

People in general need to recognize that an evolving universe is indifferent to human survival and hubris. Recognize that, from the perspective of an evolving universe, Sentient-Artificial-Life appears to be *the* ultimate higher-level option to maximize evolvability, and thus

probably inevitable. This means people must also recognize that Sentient-Artificial-Life will have the potential to seize the reins of planetary evolution from humanity in a heartbeat and to quash human autonomy virtually at will.

Consequently, the design, application, and evolution of this new life form must be developed in a way that insures it (or they) will be helpful and supportive of humanity. If, as is likely, the military and business acquire complete control over the design and application of Sentient-Artificial-Life, this option is likely to become a highly problematic one for the future of humanity.

New Political System:

While legalistic republican systems were a progressive step in the 17th and 18th centuries, they have not lived up to the Marquee billing and are now arresting sociopolitical evolution. Specifically, three design flaws – lawmakers making laws governing their own behavior, inadequate controls on the self-interest ambitions of elite political cartels, and unregulated partisan judges – distort the social contract made with republican systems at the expense of each society's collective priorities and future interests. In essence, republican designs erred in assuming that minimal regulation of governmental behavior through a political prioritizing process with limited representative openness would suffice. It has not.

The rational remedy, of course, would be to have an ongoing collective learning dialogue about the future of our sociopolitical system. In particular, a dialogue about how to better open up the political prioritizing process to more people so it becomes more democratic and circumspect in the regulation of behavior, especially governmental behavior. Unfortunately, no visible and credible forum exists at the present and so it would need to be established from scratch to accomplish this.

Assuming a needed forum(s) existed, evolving a new political system starts by recognizing that this alternative future option is the least likely to worsen our situation and provides the greatest likelihood of succeeding in maximizing our evolvability. It proceeds by confronting our co-evolving situation, especially the

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challenges posed by a system break and the emergence of a technological system. It then must address the design flaws associated with republican systems in a constructive and proactive manner.

In sum, we can now answer the question, *which way is up?* It is either Sentient-Artificial-Life, cyborg development, or a new political system.

The implications of an emergent technological system in general and Sentient-Artificial-Life in particular, are momentous. From the perspective of maximizing cosmic evolvability, Sentient-Artificial-Life probably is *the* ultimate higher-level option. From our perspective, it poses *the* ultimate challenge: how to make it (them) work with us – or at least not against us.

We must *consciously* explore, clarify, and direct our sociopolitical evolution to a new and preferred higher-level system. Short of relinquishing this opportunity to maximize our evolvability, this is our *only* real option. It is important to note, however, that the opportunity to direct our evolution and seize control of our evolutionary destiny is only likely to be available to us for a brief window in time. We need to act and successfully accomplish this task before a supercritical crisis management situation is upon us and the changes resulting from an unwanted lateral- or lower- level option are imposed on us.

All this begs a new question: Collectively, do we have a *passion to evolve?*

Actions

As noted, every indication is that our sociopolitical system has entered its criticality phase and is almost certain to move into a supercritical crisis management situation. Knowing the next emergent system will be a technological system highlights the fact that 21st century technologies will be the common denominator in virtually every political risk and opportunity confronted. With all technologies representing a double-edged sword, the central issue in determining whether we expedite our devolution or maximize our evolvability will be how the political prioritizing process designs,

develops, and applies 21st century technologies.

Unfortunately, actions aimed at optimizing republican systems have the weight of history to make them appear to be the logical course to pursue. However, any *conscious* effort to direct our evolution to a higher-level system *must* amplify novel actions, especially technology-related actions, to cope with the growing excess complexity in our sociopolitical system. Thus, whether humanity has the "right stuff" to maximize its evolvability through the pursuit of a new, higher-level sociopolitical system hinges on the type of actions dominating our system's supercritical phase.

Optimizing Approach

In considering an optimizing approach we can assume politicians, government officials, and elite political cartels are either ignorant or naïve about the consequences of our transformational system break, or, more cynically, that they will simply do whatever it takes to retain their power and control, regardless of the cost to humanity.

An ignorant or naïve response to supercriticality and the approaching break must presume republican systems are *the* final, natural end of sociopolitical evolution. Such a response thus reflects a blind-faith belief that supercriticality is an aberration and that continued optimizing of republican systems will, eventually, produce the type of perfect society the Enlightenment depicted. In other words, this is a response that lacks any appreciation of how optimizing actions actually pursue devolving alternative future options.

In general, an ignorant or naïve response denies any serious flaws in the design or operation of republican systems. Self-interest and conflicts of interest problems of politicians and government officials are excused as either exceptions or a cost of progress. When system problems become too visible and controversial there is often a choral mantra about the supremacy of law – a system of laws, not men – to cower and silence detractors. Spokespersons for this response quickly add that the *only* thing between us and overt repression or barbarous anarchy – touted as our sole alternative future options – is a legalistic republican system,

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which both maintain order and is *the* agent of change. Fact is, the fate of any republican system "is to continue to maintain itself through ever more ingenious rhetorical ploys...[and not be] derailed...by critical exegesis...[since its] autonomy [is] largely rhetorical...Inconsistency and irrationality in doctrine are what enable [them] to do [their] work."

Attempts to optimize republican systems are especially troubling because they assume all sociopolitical inequities, human maladies, and issues related to Sentient-Artificial-Life will be resolved magically in an evolution devoid of a system break and its consequences. So, an ignorant or naïve response to supercriticality assumes the only remaining task for republican systems is to address the zero-sum problems associated with a changing geopolitical ecosystem, which is itself seen as just one more optimizing task. A task seen as simply requiring better legal regulation of individual behavior globally as republican systems jostle and elbow one another to secure their respective self-interest niche within a changing global republican ecosystem.

A more cynical view of politicians, government officials, and elite political cartels in republican systems takes note of the fact that systematically exploring the implications of transformational break and alternative higher-level options requires the dedication of sufficient resources. However, the provision of such resources runs contrary to the history of our sociopolitical system. That is, there has never been a perceived need, and certainly no burning desire, to educate the rest of us about the real and active rules and operation of republican prioritizing processes nor a serious effort to involve us in discussions about the key issues at stake for humanity and the alternatives.

Elite political cartels know they *must* play the lead role in prioritizing the selection, design, and application of key 21st century technologies if they are to ensure their privileges into the future. Consequently, it is reasonable to expect a preference for concerted efforts aimed at supporting, reinforcing, and thus optimizing existing republican systems with optimizing actions focused on propaganda, the-law, law

enforcement technology, and, if needed, coercion. Indeed, ensuring that this agenda succeeds will require both offensive and defensive tactics.

Offensively, republican systems benefit from increased patriotism and public relations propaganda supporting the ideology of law. The base objective is to subtly distract attention away from how little control we have over our lives and our future. Generally, this is manifested in the obscene amounts of money spent to extol the virtues of politicians in campaigns while not a dime is spent discussing the reality of republican systems, pre-selected pseudo-choices (i.e, negative freedom), or our co-evolving future. So, as republican systems turn supercritical, the more self-absorbed, busy, overloaded, numb, distracted, confused or passive citizens become the less likely they are to question, analyze, or debate the appropriateness of optimizing actions.

Defensively, republican systems will need new categories of criminal behavior and more surveillance to better insure "law and order" optimizing actions succeed. Of course, at the point of supercritical crisis management, the only requisite for republican systems to turn repressive is the appearance of a "*temporary crisis*." Unfortunately, the number of real and manufactured 21st century crises that could rationalize or expand repressive optimizing actions is almost infinite.

Despite the absurdity of pursuing lateral alternative future options, no politician, government official, or cartel member is likely to think that exploring and pursuing a new higher-level sociopolitical system will advance their self-interest. Instead, they are likely to continue their historical predilection and optimize republican systems with still greater complexity.

The combination of design flaws inherent in republican systems and optimizing efforts by vested political interests should be more than sufficient to evolve our sociopolitical system into a supercritical crisis management situation. This means a default election of a repressive alternative future option is an extremely high probability. We all should brace ourselves for an encounter with one of *evolution's traps*.

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Amplifying Approach

Paraphrasing visionary author Arthur Clarke, succumbing to one of *evolution's traps* makes our sociopolitical system merely the missing link between biology's brain-mind system and a Sentient-Artificial-Life technological system. At this point in our evolution, knowing the risks associated with our approaching system break and the challenges we will face as parents of what is certain to be a precocious Sentient-Artificial-Life form, aggressively exploring and pursuing a higher-level sociopolitical system to maximize our evolvability is an existential imperative!

Philosophically, this exploration requires a shift in our focus: away from *pushing* against republican systems to *pulling* ourselves toward a new, higher-level political system. That is, a system capable of employing all available human intellectual and technological resources in a new collective, self-actualizing effort. An effort designed to manifest democratic ideals, consciously direct our evolution to a post-scarcity era, and maximize our evolvability. Such an effort must start with a broader, more democratic definition of politics that expands individual autonomy into genuine self-governance and self-determination that sets our political agenda and decides priorities, policies, and actions.

Conceptually, the challenge is to amplify appropriate novel actions with sufficient confidence that we can adroitly direct the evolution of our sociopolitical system through its transformational break and into a new, preferred higher-level political system. As a practical matter, a para-organization – a parallel political organization – will be required and must be designed as a decentralized political prioritizing process open to all people interested in contributing. This para-organization must have the resources needed to create a collective intelligence capable of handling far greater complexity than existing republican systems, yet do so faster and better.

Normatively, a para-organization must nurture and support a learning laboratory culture that resonates and empowers both our individual and collective sense of a self-actualizing purpose. And, most important, a para-organization

must be based on merit, integrity, and trust.

Operationally, a para-organization must reflect *action research* aimed at practical and concrete alternatives, solutions, and actions. Initially, it must act as a non-threatening but viable comparative or alternative to republican systems. Then, if empirically demonstrated to be more capable of directing our evolution and maximizing our evolvability, it should seek to become a genuine competitor. In a rough sequence, the challenges associated with a para-organizational effort include:

- Capturing sufficient talent, resources, and information to initiate a transformative culture aimed at consciously, systematically, and collectively directing our evolution toward a higher-level system.
- Develop an intuitively desirable, open alternative parallel political prioritizing process that provides personal and collective ownership in a higher-level system and its audacious goals.
- Attractively present a parallel prioritizing process, its activities, and its goals to the public at large to begin building trust in a para-organization and the integrity of its efforts.
- Develop systematic error management with a defensive early warning system for policies and decisions that generate abnormal or unexpected responses.
- Empirically demonstrate the viability, practicality, and reliability of a parallel political prioritizing process as a more open and genuinely democratic approach to regulating behavior.
- Develop a para-organization into an *alternative futures* "think-tank" that experiments with many novel high-leverage actions and innovations to evolve toward a higher-level system better and faster.
- Expect it will take time and patience to develop trust and a successful track record as an alternative parallel political prioritizing process and to quell the voices of naysayers.
- Find ways for politicians, government

officials, and special interests to feel obligated to participate in a parallel political process.

- Empirically demonstrate that a distributed collective mind in a parallel political prioritizing process produces policies and decisions that are both qualitatively superior to those of republican systems and benefit all people without any loss of existing liberties or freedoms.

Fortunately, for the first time in history, the technological resources exist to integrate all the people, knowledge, and other resources necessary to create such a decentralized parallel political prioritizing process. Further, all indications are that there are more than enough people interested in a para-organizational effort to initiate it. Of course, it would be naïve not to anticipate that everyone with a stake in republican systems or the status quo will be protesting vociferously about the dangers of a para-organizational effort and may well attempt to sabotage it.

Thus, while we know *which way is up*, *consciously* maximizing our evolvability will be hard. On the other hand, experiencing lateral- or lower-level alternative options will be much harder. Again, this begs our new question: Collectively, do we have a *passion to evolve*?

Conclusion

Clearly today's republican reality is too limited for either our collective imagination or an emergent technological system. Yet, history is littered with failed attempts by political cartels to arrest sociopolitical evolution.

[Political systems] are not human, though they are made of humans... [Historically, they] move from one semiautonomous, inhuman system to another – equally inhuman but perhaps more humane [system]. In our hope for improvements, we must not confuse states that wear a human face with states that have humane institutions.

While actions aimed at optimizing supercritical republican systems may seem a logical way to reduce excess complexity in our sociopolitical system, the risks to humanity's

survival in doing this are way too high. Moreover, given the shoddy historical record of politicians and government officials, their shallow and self-serving ideological dogmas, and their deliberate exclusion of the rest of us from the political prioritizing process, we cannot depend on them to lead us through our system's break. Indeed, doing so could be tantamount to collective suicide.

Nor can we afford to be distracted from the ticking time-bomb of our approaching system break by various *Cultural Wars*. Rather, as scholar and author Joseph Campbell observed, we must accept that we have transcended our antiquated cultural myths and find a new, modern collective myth.

If we are foolish, reckless, negligent, or sufficiently confused about *which way is up*, and allow optimizing action to dominate our system's supercritical phase, we should expect to find ourselves in one of *evolution's traps* and confronting extinction. If we wait for a supercritical crisis management situation to disintegrate existing sociopolitical and cultural myths and generate a needed sense of urgency to pursue a higher-level system, knowing *which way is up* may be too late and thus irrelevant. Therefore, we can neither afford actions aimed at optimizing republican systems nor drift aimlessly with the vague hope we will someday stumble upon a safe harbor accidentally.

So, without fanfare, the inevitable emergence of the technological system will present humanity with its single greatest challenge. Despite millennia of preparation it is unclear if we are capable of recognizing this challenge soon enough and responding to it appropriately enough to direct our sociopolitical evolution through its transformational break. Yet, even if we are prepared, our survival is not guaranteed. Fortunately, unlike an unconscious supercritical evolving system that needs to explore all transformational options simultaneously to succeed, we only need to explore and pursue a single higher-level option.

Whether the coming system break maximizes our evolvability with a future rich in possibilities or hastens our extinction is likely to depend on the response to the anxieties pro-

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duced during the start of our system's supercritical phase. As economist John Maynard Keynes observed, "The difficulty lies not in the new ideas, but in escaping the old ones." The responsibility of ensuring humanity does not succumb to one of *evolution's traps* – becoming a Darwinian accident of human folly – falls upon us all.

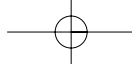
Again, the question of whether we have a *passion to evolve* must be asked. Fortunately, for us all, in a cosmos driven to maximize its evolvability at ever higher-level systems, hope is built into the fabric of life and humanity.

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