

Information-energy metasystem model

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Abstract

Purpose – The human system is developing into a global biocultural superorganism. However, in the process of aligning a stable global goal state, contemporary human control systems appear to be inadequate structures. The purpose of this paper is to help humanity contextualize the nature of our highest control systems and guide future structural control system decisions, by proposing the application of an Information-Energy Metasystem Model (IEMM).

Design/methodology/approach – IEMM is an evolutionary-cybernetic model built with biological, anthropological, and historical data, and constructed utilizing two cybernetic theories: metasystem transition theory and control information theory (CIT). The IEMM suggests that major control transitions are dependent on specific information-energy control and feedback properties.

Findings – Throughout our evolutionary history humans have stabilized three distinct metasystems in the general organization of bands/tribes stabilized by language-hunting feedback, chiefdoms/kingdoms stabilized by writing-agricultural feedback, and nation-states stabilized by printing press-industrial feedback. In the future, IEMM predicts that new global (or “glocal”) controls based on the internet as an information medium, and renewable energy as an engine for stabilization, could potentially generate a fourth metasystem. However, this is largely dependent on our own ability and willingness for fundamental structural control innovation.

Originality/value – This is the first paper to analyze the contemporary control system structure within the context of the whole of human evolution.

Keywords Governance, Communications technologies, Cybernetics, Control systems, Complexity, Energy technology

Paper type Conceptual paper

1. Introduction: complexity and control

Cybernetic theory attempts to understand how complex adaptive systems function through control and feedback mechanisms. Evolutionary theory attempts to understand the processes that explain change over time within complex adaptive systems in relation to environmental conditions. In this paper, I utilize two evolutionary-cybernetic theories: metasystem transition theory (MSTT) and control information theory (CIT) to build a fundamental model of human governance transitions: Information-Energy Metasystem Model (IEMM). This model should prove useful as the complexity of human-world relation increases, ideally functioning to contextualize evolutionary human governance transitions in the hopes of allowing us to understand and direct the future of the human systems relation to the world as a whole.

I sought to construct this model because humanity appears to be approaching a modern crisis of governance as a result of emergent ecological, economic, and social commons problems. In other words, nation-states are insufficient structures to deal with global problems which threaten the future of human stability and also prevent the possible achievement of a future peaceful human-world symbiosis, as originally envisioned by the founders of enlightenment (e.g. Kant, 1784). Here I believe evolutionary-cybernetic theory can be applied to make sense of our contemporary controls because governments are complex adaptive systems that evolve over time and exhibit control and feedback processes similar to other evolutionary-cybernetic phenomena (e.g. biological systems,



computer networks, etc.). Indeed the original conception of cybernetics was used as an ancient control analogy for “steering” government (Heylighen and Joslyn, 2001). In this view governments control the human “ship” (society), which finds itself to be perpetually navigating a confusing, unpredictable, and increasingly complex “ocean” with “multiple ships” (environmental feedback). The question before us now is whether or not our ships will (or can) converge toward a “common shore.”

In the twenty-first century our governments are encountering complex global problems unforeseen by the founders of modernity (e.g. climate change, global oligarchy, biogenetics, and robotics potentials, etc.), while also managing informational and energetic flows that have no historical precedent (e.g. National Security Agency (NSA), global fossil fuel consumption, etc.). In the background of these emergent challenges the contours of our new geopolitical landscape are largely being shaped by the evolution of the internet: a medium for borderless and distributed flow of information which increasingly enables organization of activity on global scales. In other words, the internet and the socioeconomic modes of interaction and production it enables, consistently reduces the physical friction on human thought and action which limited the organizational capacities of historical humans, creating a hyper-connected (i.e. converging) world in the process (Heylighen, 2007).

The leading hypothesis to explain this new emerging world is the “global brain” (GB) hypothesis (see: Goertzel, 2002; Heylighen, 2007, 2015a). The GB hypothesis posits that a self-organizing planetary intelligence, mediated via the internet, will allow for a new level of control organization this century. In simpler terms: as the complexity of our system (measured in distinctions and connections) continues to quantitatively increase, there will be also a concomitant qualitative change in the way humans organize geopolitical structures. The GB hypothesis predicts that this qualitative change will result in contemporary institutional organizations based on centralized, hierarchical forms of control becoming outcompeted by more distributed, heterarchical forms of control. Thus the GB hypothesis predicts a future human society based on self-organization, instead of the tendency of historical human societies, which have been typically organized via centralized control structures. Indeed, the internet is already beginning to profoundly alter the nature of human-human, human-computer, and computer-computer interactions, with the future potential to play host to new forms of distributed economics, corporations, and even governance (Last, 2014).

Modern nation-states are a good example of a centralized, hierarchical organization that will face increasing internal and external pressure to adapt to more distributed modes of control as the world becomes more complex. Unsurprisingly, there is already evidence that our “ships” are not able to adapt to both the scale and speed of our most urgent social, economic, and ecological problems. For example, the list of global problems that appear endemic and make our system increasingly fragile are all challenges too great for any one nation-state: ecological footprint, CO₂ emissions, forest areas, fresh water resources, income/wealth inequality, terrorism incidents, criminal organizations, political/financial corruption, unemployment, voter turnout, freedom/human rights (Glenn *et al.*, 2014).

Furthermore, there is little hope that these issues can be solved within our existing structures, as nation-states have become increasingly susceptible to international corporate influence, which erodes democracy and directs control attention away from people and ecology, and toward corporate profit only (i.e. new forms of authoritarian capitalism). These emergent problems are not problems because we lack the intelligence to acknowledge and address them. Instead, these problems are problems because we

lack the effective mechanisms for fostering and maintaining new forms of distributed intelligence, which can maximize new governance potential, and create a more inclusive world.

Therefore, we must fundamentally re-think the nature of human controls: without the courage to acknowledge that nation-states are inadequate structures, globalization is “just a sham” (Graeber, 2004, p. 77). True globalization is the regulation of global corporate activity and end to the national regulation of people. Part of the problem is that the psychology of the modern mind has been so fundamentally shaped by the nation-state that it is difficult for most to imagine the structure of a different (i.e. borderless) world. Or even more problematic, the modern mind has been so fundamentally shaped by the nation-state that we have forgotten that the nation-state was never supposed to be a permanent sociocultural reality, but a means to an end: i.e. perpetual peace/international harmony (e.g. Kant, 1784). However, remaining symbolically faithful to the nation-state, when its function as a structural control is so clearly endangering socioeconomic and ecological progress, is dangerous as many of our most pressing problems related to economics, ecology, and social space do not have borders (i.e. they are global, with an earth-space boundary only). How do we design ourselves toward such a world where our sociocultural reality is in symbiosis with our contemporary economic and ecological reality?

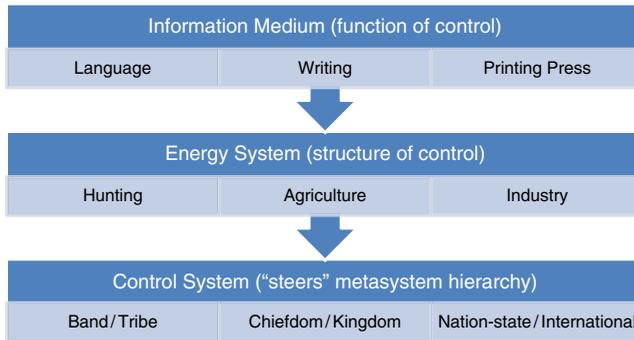
2. Theoretical foundations of IEMM: MSTT and CIT

I propose the IEMM as a conceptual tool that can be applied to our current control situation. The function of the model is specifically to contextualize evolutionary/historical human control transitions in the hopes of finding a meaningful trend or relationship that will help us understand the complexity of the evolutionary “ocean” we are currently navigating. Therefore, the IEMM should also prove to be a useful guidance tool when we are making decisions regarding the future nature of control structure. In an attempt to be all encompassing this model aims to incorporate the whole of human experience and control organization from our emergence as a species to our emergence as a global civilization/superorganism.

As the name IEMM suggests, the concepts of “information” and “energy” both play a dominant role in the model’s prescriptive and predictive power (Last, 2014). Information mediums are understood to be platforms for the organization of controls, and energy systems are understood to be engines for the stabilization of control organization. In this framework new control systems only emerge and stabilize when a new information medium evolves and acquires prolonged and stable access to an energy system. This process can open an information-energy feedback process between control system and society as a whole. Historically, three such information-energy systems have emerged and stabilized in the human system (see: Last, 2015) (Figure 1).

2.1 MSTT

The IEMM is constructed utilizing biological, anthropological, and historical data (see: Last, 2015), as well as two cybernetic theories: MSTT (see: Turchin, 1977) and CIT (see: Corning, 2007). According to MSTT, a metasystem (or “major transition”) occurs when living systems achieve higher system organization from the controlled coordination (i.e. control system X) of previously disparate subsystems (i.e. $A_1+A_2+A_3$) (Turchin, 1977; Goertzel, 2002; Last, 2015). In our current context the information medium for control system X can be considered the internet, and the disparate



Notes: Human metasystems appear to be phenomena intimately dependent on information mediums, energy systems, and the synergistic feedback processes they can maintain; Information mediums tend to act as the functional tool for the organization of control system resources, capital, and people, and energy systems tend to act as structural stabilizers of control system organization

Figure 1.
Human metasystem
control hierarchy

subsystems A_1, A_2, A_3 can be considered nation-states (i.e. we need to use our new information medium to cooperatively organize a global commons).

Metasystems occur as a step function separating two qualitatively different levels of organization that can be approximately measured as a sigmoid (S-shaped) curve (Modis, 2012) (i.e. as quantity of interconnections increases, a new qualitative organization must emerge to maintain a new level of complexity). Therefore the metasystem represents a punctuated equilibrium-like process characterized by an accelerated period of subsystem integration, before stabilizing into a new level of organization (Heylighen, 2007, 2015a). In the human system, metasystems have generally stabilized within three different levels of complex organization: hunting, agricultural, industrial (Niele, 2005), and within three different broadly defined forms of control hierarchies: band/tribes, chiefdoms/kingdoms, nation-states (see: Last, 2015). The next system is likely to be constructed utilizing solar power (and a diverse mixture of other renewables, e.g., geothermal, wind, etc.) with a more distributed control organization that transcends contemporary nation-states (i.e. self-organized).

Metasystems occur when environmental conditions favor an adaptive pressure for increased biological or technological information processing capability (Smith and Szathmary, 1995). Under these conditions functional synergies between cooperative agents that were previously impossible (in this context geographically separated human groups) can produce the emergence of higher complexity and control organization (Corning, 2002, 2014). The coordination of higher controls begins by the cooperative/inclusive utilization of emergent information processing capabilities in a collective information medium, which allows for qualitatively new interaction potentiality (Heylighen, 2006). Control innovation utilizing a new information medium can then allow for higher integration and a new level of complex organization (Heylighen, 1995). Throughout human evolution control innovation has occurred on three emergent information mediums: language, writing, and the printing press (Last, 2014), which have changed the qualitative nature of human interaction potential (bands, kingdoms, nations, etc.).

The contemporary human system gives the appearance of approaching a higher metasystem. As mentioned, the highest human controls manifest in select nation-states (e.g. USA, China), and more recently in emergent international governance (e.g. United Nations, European Union) and corporate networks. However, as suggested, human cultural flexibility, technological potential, and increasing internet-related evolutionary convergence pressures suggest that our current control systems do not represent a complexity plateau.

2.2 CIT

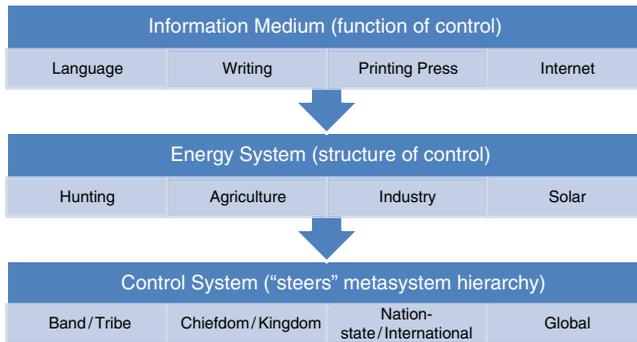
The IEMM is also built utilizing CIT (see: Corning, 2005, 2007). CIT posits that all living systems (biological or biocultural) possess “control information” (I_C): I_C is the relational capacity to use information in the acquisition, disposition, and utilization of energy for cybernetic processes (i.e. control and feedback). CIT emphasizes that information cannot simply be quantified as an “amount” measured in bits, as traditional information theory (i.e. “Shannon information”) suggests (see: Shannon, 1948). This is because measuring the amount of information explicitly ignores the function-laden (content and meaning) nature of information used by living systems (Kauffman *et al.*, 2008). Consequently, there is no correlation between Shannon information and the physical structural order observed in living system organizations (Kauffman, 2000).

To bridge this gap I_C is a concept that represents a living systems capacity to control the capacity to do work (i.e. the functional relationship between goals inherent to cybernetic informational processes and physical structural order). In this theory, the “amount” of I_C is a manifestation of a living systems “power” to use information to control available energy for purposeful cybernetic activities, and not simply in the amount of information, nor the amount of energy (Corning, 2007). The difference is of fundamental importance to the construction of this model, because the sheer amount of information or energy in a system is not our concern. Instead we are concerned with how information and energy is purposively organized (i.e. do we create an increasingly unequal and unstable world? Or do we create an increasingly equal and stable world?).

I_C can be mathematically formalized as: $I_C = (A_U/A_i)$. In this formalization A_U = total quantity of available energy accessible for control processes by a cybernetic system and A_i = total available energy cost associated with bringing A_U under control and utilizing control (see: Corning, 2005, 2007). By applying CIT to our understanding of the MSTT control hierarchy, we can conceptualize human evolution as three nested information-energy systems that have managed to acquire, distribute, and utilize ever-more energy for feedback, and ultimately for continued reproduction of the highest control (Figure 2).

CIT is integral to the development of MSTT. First, although the evolutionary emergence of new information processing functionality is a pre-condition for metasystems, this property is not sufficient. Instead, the emergence of higher metasystem is likely dependent more on how new information processing functionality is meaningfully utilized by users toward the organization of a new control system. Therefore, new organizations are not the direct product of “more information” in a system. The mere presence of increased internet access and faster computation on its own will not fix our control issues. Increased access to bits of information simply creates new control information potentiality (I_P).

The best recent example demonstrating the difference is perhaps the controversy surrounding the NSA in the USA where increased informational capacity was purposefully (and secretly) used by a centralized government for spying on its citizens



Notes: Throughout human evolution control systems have been stabilized by I_C feedback between three broadly defined information-energy metasystems; In accordance with MSTT and CIT the information medium for the functional organization always precedes the emergence of a new energy structure and new control system; If our evolutionary history repeats itself, we appear to be trapped in the middle of a major system transition towards a higher level of control organization; The Internet would provide the foundations for new distributed control, solar power (along with other renewables, which are also ultimately, solar) would provide the foundations for a new distributed energy source

Figure 2.
Potential future
human metasystem

and the rest of the world. Here increased I_P was a detriment to democracy, safety, and privacy. However, if we were to organize a metasystem transition, our new informational capacities could be distributed, in order to ensure that all citizens had better knowledge of government activity, and were able to effectively regulate the behavior of control systems, through collective standardization (i.e. surveillance to sousveillance).

Thus, the difference between “Shannon information” (which focusses on quantity) and “ I_C ” (which focusses on purposeful organization) is an important reconceptualization in information theory for understanding metasystems. Too often we frame the solutions to our problems in term of quantity, i.e., we need better information technologies or more energy. But actually transforming higher I_P into useful collective beneficial modes of information control requires a purposeful re-organization of that new potentiality. Thus, we need to re-focus on creating new organizations, new ways for purposeful interconnection: government and society as a laboratory of new relationships.

Furthermore, when CIT is combined with MSTT we get the mechanism for metasystem disintegration or stabilization (Figure 2). If there is I_C breakdown in feedback, the control hierarchy is likely to disintegrate into smaller subsystems. However, if there is functional I_C synergy in feedback, the control hierarchy can survive and replicate as an integrated whole. This is why the first priority of both the USA and the Islamic State of Iraq and Syria (to use two extreme examples) is the use of information technology to find, secure, and maintain a stable energy supply. Of course, this is true of any control system, as the continued replication of the highest control can then in turn generate the socio-ecological/economic conditions for yet another metasystem transition toward deeper integration.

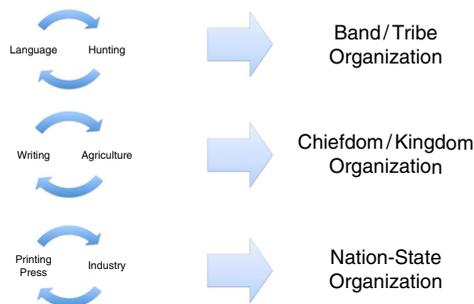
In our context, modern governments in the developed world are attempting to maintain stable I_C feedback between outdated information-energy systems (print media, telecommunications, and fossil fuels). Again, the USA is a good example of a system primarily concerned with defending its own fossil fuel reserves (i.e. “petro-dollars”), and using print media and telecommunications to foster support for such a national agenda (i.e. the USA media since the 1970s). However, the internet increasingly allows for the disruption of this information-energy stability, providing a new distributed platform that transcends centralized organization and national boundaries.

3. IEMM: a model for human control transitions

As mentioned above, according to the IEMM there have been three human metasystems built around the control of three mostly distinct primary energy sources. These metasystems include hunting, agricultural, and industrial organizations (Last, 2015) (Figure 1). The control of these energy sources was always organized through the utilization of a new information medium to connect previously disparate subsystems: language, writing, printing press. All of these human metasytem transitions can be characterized by subsystems of lower control becoming integrated under new control regimes: bands/tribes, chiefdoms/kingdoms, nation-states/international.

The modern nation-state sits atop an ancient human metasytem control hierarchy of ever-more diversely integrated subsystems (Figure 1). However, its status as the highest control is by no means destined to continue indefinitely; but rather it is contingent on the breakdown, stability, or new synergy of I_C feedback (Figure 3). These I_C feedbacks in a sense “dictate” whether our current system hierarchy will collapse under the weight of poor socioeconomic decision making, or whether our current system’s hierarchies will become integrated and re-organized within yet another higher-level control system.

In this context the primary challenges for humanity this century includes the prudent utilization of our emerging global nervous system (i.e. GB) and the stabilization of an equitably distributed and sustainable global metabolism (i.e. global body). According to MST and CIT, the establishment of a new metasytem is by no means guaranteed (i.e. the human system is not a pre-determined Newtonian clockwork). Instead, a new metasytem can only be established through our own ability for evolutionary innovation. However, if we are successful in forming a new metasytem,



Note: Throughout human evolution emergent information mediums have allowed human groups to organize controls around feedback with a new, more abundant energy source

Figure 3.
Information-energy
feedback and human
metasystems

then there is the potential to create organizations as different from our present state, as the agricultural organizations were from industrial organizations, or as foraging organizations were from agricultural organizations. This would be realized by establishing globally distributed controls with the ability to stabilize feedback between the internet and new energy sources (i.e. renewables, fusion, etc.). The central problem when confronting this future is figuring out how to control local-to-global (“glocally”) within a distributed structure.

In order to address this problem in the IEMM framework we must first start by acknowledging that the control approach through the early process of globalization in the twenty-first century has forgotten that the local world still exists. Nation-states, as well as emergent international government and corporate networks, are attempting to globalize by “scaling-up” the processes that proved successful in the industrial period. That is to say that small groups of increasingly centralized organizations have a near totalitarian hold on the direction of globalization (i.e. North American Free Trade Agreement (NAFTA), Trans-Pacific Partnership (TPP)), creating a homogenous “Potemkin Village” (i.e. a fake construction) in the process. This approach is disastrous because people are losing control over the contours of the world in which they exist (authoritarian control instead of democratic control), rendering local sociocultural knowledge unimportant to the socioeconomic forces directing collective human existence.

However, the ironic nature of the globalization process is that – in order to be successful – we must build it from the bottom-up (i.e. glocally) and establish a real type of “Global Village,” by increasing individual stability and valuing local knowledge. In the context of the IEMM this appears to be the case because control structure has been developmentally constrained by the nature of the information medium used to build the controls. For example, in bands/tribes decision-making tends to be more decentralized and egalitarian because language is a democratic property of human biology. All decision-making within the band/tribe was “open” and “distributed” in such a way that the collective always exercised greater power than any “alpha” individual within the group (Boehm, 1997). Consequently, energy flows in bands/tribes never approached the “closed” and “centralized” natures that manifest in historical organizations and lead to exaggerated levels of inequality.

In chiefdoms/kingdoms decision making became increasingly centralized because writing was a medium built on scarce resources and a high-degree of cultural mediation (i.e. it is time-consuming to learn how to read/write). Therefore, small groups of wealthy literate individuals with access to writing materials and time to learn the art of reading/writing could use the knowledge gained from these activities as a tool to coerce the poor illiterate majority. This relationship started to change with the development of the printing press. The poor illiterate majority increasingly became the poor literate majority and eventually forced the organization of more decentralized controls (e.g. the critical modern revolutions: English Revolution, French Revolution, American Revolution, etc.). Therefore, in most nation-states, decision-making became less centralized because writing became massively reproducible, making it easier for individuals to learn about the nature of government (e.g. Kant, 1784), and generally harder (in comparison to pre-modern agricultural sociopolitical structures) for individuals to take advantage of society as a whole (with obvious and notable exceptions).

Today we exist in a world where high-speed internet may become universally accessible well before we reach mid-century, potentially allowing for a world in which all humans have relatively equal access to information. Such an environment would

enable the emergence of more egalitarian and distributed organization. We have already seen that a better-educated and increasingly inter-connected world is less tolerant of the abuses of concentrated power (Glenn *et al.*, 2014). Perhaps Occupy Wall Street and the Arab Spring provide the best examples of internet-enabled bottom-up coordination specifically directed against concentrated power structures. Furthermore, we exist in a world where renewable energy allows entire communities to go “off-grid” and become self-sustaining (Rifkin, 2014). Consequently, controls within the next information-energy system could be based fiercely on egalitarian principles of direct democracy, somewhat similar to the villages of our foraging ancestors (Boehm, 1997). Historically, such an “ideal” organization has been called a direct democracy, and if achieved, its nature would in a sense invert the current structure of government (i.e. human collectives would be in charge as opposed to political representatives).

The IEMM should prove a useful guidance tool when we are making decisions regarding the future nature of control structure. Considering that our planet is developing a new higher information medium, we appear to be in the early stages of developing toward a higher metasystem, with potentially higher I_C feedback. However, we must remember that information and energy are of equal importance to the persistence of living system complex organization and so our current controls are likely to retain power as long as fossil fuels remain the dominant mode of energy production. Therefore, moving forward, we should put heavier emphasis on the importance of not only the further democratization of the nation-state utilizing the internet, but also on the acceptable behaviors of control systems to acquire and stabilize energy sources.

5. Contours of control in the twenty-first century

The theoretical and empirical foundations for a new form of distributed controls are already emerging. In recent years there has been a flourishing of thought-provoking analyses suggesting that nation-states should start a transition to some form of distributed “e-democracy” (e.g. Dahlberg and Siapera, 2007; Chadwick, 2009; Noveck, 2009; Fountain *et al.*, 2011; Last, 2014a). Fundamentally, the goal of e-democracy is an attempt to open government by improving public access to data, encouraging public participation in the decision-making process, fostering evidence-based decision making, and decreasing hierarchies (see: Fountain *et al.*, 2011).

Based on the IEMM I have proposed my own tentative framework for thinking about global controls in the twenty-first century. In my framework, we should be thinking about ways to organize a global commons through digital, distributed, and democratic mechanisms:

First, digital decision making allows us to best maximize the utility of new information acquired by the collective intelligence of our system in a distributed fashion. Distributed refers to a “spreading out” of decision making throughout the entire human system, and collective intelligence refers to the efficient organization of all aggregated knowledge, understanding, and experience. Essentially, this combination of distributed decision-making and enhancing collective intelligence will allow humans to efficiently draw upon the collective knowledge of all people, which in aggregate can be used to make better general commons decisions than decisions made by small groups of specialists. In other words we need to find a way to draw upon the “wisdom of the crowds” in order to continually maximize long-term problem solving and opportunity exploration for everyone.

Second, we can maximize distributed collective intelligence by constructing an information medium via the internet specifically for large-scale argumentation (or free and fair idea competition). Such a digital medium would allow us to harness the self-organizing power of stigmergy. Stigmergy is a mechanism of indirect coordination that can occur within a shared medium capable of recording and stimulating action potential between networked agents (Heylighen, 2015b). Various social web sites, including Wikipedia and Reddit are stigmergic in nature. This seemingly simple stigmergic property has also been observed in a number of complex systems, including biological superorganisms, like ants and termites. In theory, a stigmergic information medium designed for the organization of the commons would allow us to have a discussion/argumentation space to re-think the foundations and direction of globalization.

Finally, a distributed and digital government must enable a direct democracy (or participatory democracy), where people can vote on the ideas/policies themselves, as opposed to voting on politicians (i.e. representatives of the people) that function as (in many historical and contemporary contexts) unreliable and easily corruptible middlemen. This “voting on ideas” process can be designed in a simple way with basic cybernetic principles of “input,” “processing,” “output,” and “feedback” (Table I). Of course, such a process would also have to incorporate sophisticated mechanisms of reputation and trust to ensure that the medium itself cannot be corrupted, and mechanisms of socioeconomic motivation to ensure that the medium remains functional. Here when it comes to reputation, trust, and motivation in a digital participatory medium, we can learn from examples of many other internet-based social mediums that have utilized these mechanisms for various functional purposes.

To conclude, I have attempted to propose a model for thinking about our control situation. The emergence of the internet has created the foundations for an increasingly global world. However, small networks of socioeconomically privileged people (and non-people, i.e. corporations) are largely shaping the contours of this global world, creating a Potemkin Village instead of a true Global Village in the process. Therefore, we must consider ways to approach a new form of globalization that is shaped by the whole of humanity. This will require a metasystem transition toward a higher level of systems complexity by bringing down the established control hierarchy. In its place, we have the chance to establish controls that maximize distributed intelligence and direct democracy within a digital medium that functions from “local-to-global.”

Of course, this will require massive control innovation and a cultural revolution committed to radical distribution of concentrated power. Here we can learn from the founders of enlightenment if we have the daring to actually realize their transcendent dreams. There is no reason why control needs to possess a specified physical location in

Principles	Description
Input	Stigmergic and self-organizing social space for policy proposal with mechanisms to motivate inclusive public participation
Processing	Collective argumentation networks for policy based around social algorithms quantifying individual “trust” and “reputation”
Output	Voting for proposed policy distributed via e-mail/app (transition from voting on people→voting on ideas)
Feedback	Votes classified and implemented or revised based on public response

Table I.
Distributed digital
democracy

a truly mature information age. Instead, power could be distributed among all interconnected citizens of an egalitarian Global Village. Such an organization should allow us to safely navigate the next frontier metasystem of humanity's evolutionary experiment.

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