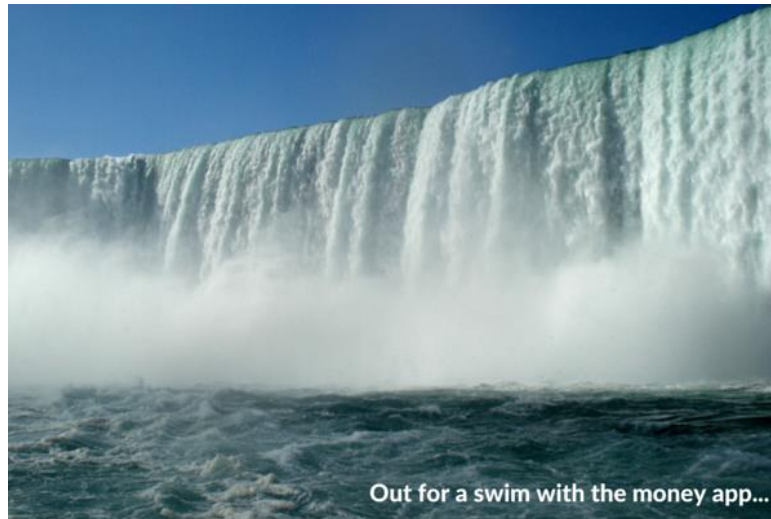


August 4, 2015



## **Monetary Code: Non-selectable Culture Code.**

**Bryan Atkins**

Survival is largely a function of processing complex network relationship-information with sufficient speed, accuracy, and power. Examples: a gazelle processing flight from a lioness; an immune system processing viral invaders; a nation state processing the development of an atomic bomb before its rival; or a culture processing its newly complex relationships with the atmosphere, carbon, methane, energy generation, agriculture, transportation, etc.

Our dominant information-processing structure for culture's interface with reality — humans using monetary code — lacks reach, lacks sufficient processing speed, accuracy and power to generate selectable relationship hierarchies in and across geological, ecological, biological, cultural and technological networks, and across time.

Monetary code, a vital coding structure developed to augment human survival, has been rendered non-selectable culture code. Exponentially accelerating complexity has eroded its efficacy.

\* \* \*

**Complexity:**

“There were 5 exabytes of information created by the entire world between the dawn of civilization and 2003; now that same amount is created every two days.” Eric Schmidt, former Google CEO

### **Selection:**

The accelerating expansion of human culture — our exponential increases in number, knowledge, and technological prowess — *continually* yields both an unprecedented impact in and across geo, eco, bio, cultural and tech networks, and an ever-more complex cultural organism interacting with the ever-more complex relationships, the ever-more complex environment generated by its vast reach.

*Exponentially accelerating complexity has changed the process of natural selection.*

**The natural selection test has become more complex for many species. Genetic codes remain on the exam; culture codes have been added.** For example, elephant survival is not merely a function of its biological genome, but a function of the human cultural genome as well, i.e., moral, legal, monetary codes, etc.

Because human culture is an increasingly powerful driver of evolution, its coding structures have also become increasingly important — to generate functional networks that can support life. The current coding structures that comprise our cultural genome, that is, our moral, religious, legal, monetary, and etiquette codes, combined with human intelligence, can't process the exponential increases of information with sufficient speed accuracy and power. This inability leads to network collapse and human extinction.

### **Code:**

Intellectually, politically, we haven't understood or embraced the importance of code. Code is not some abstract human creation. Code is fundamental reality, nature tech for building and maintaining complex structures. Code is manifest physics. Code is *physics generated* (sometimes by human constructors) and *physics efficacious infrastructure* for complex network relationships in the more evolutionarily recent biological, cultural, and technological networks. The fundamental building block for these networks is code.

Here are some examples of coding infrastructure for these networks: genetic, microRNA, language (spoken, written), math, moral, religious, legal, monetary, etiquette, and software code.

Codes are the gears for functional network relationships. When we add new aggregate information structures to networks: people (5.5 billion since 1915), technologies (fertilizers, medicines, chain saws, cars, jets, etc.) and waste (carbon, nitrogen, poop, etc.) we disrupt the functioning of network relationships. Just as the exponential addition of 90 children to a 5<sup>th</sup> grade classroom with smart phones to a class of 10 ten without smart phones wholly changes the network, so do our additions of people, tech and knowledge wholly change network relationships. And just as the larger class will need new codes to delineate the new relationships to retain the efficacy of the education network, so does our cultural genome need new codes, and I contend, whole new coding structures, to retain the efficacy of geo, eco, bio, cultural and tech networks, i.e., networks that support life.

\* \* \*

### **Historical Precedent for Additions to Our Cultural Genome**

In the transition from simple hunter-gatherer social structures to the exponentially more complex information architecture of city-states, we added coding infrastructure to our cultural genome — writing, legal, etiquette, and monetary codes. In other words, we upgraded our culture-tech for information processing.

Adding to our cultural genome mimics a pattern in biological evolution. Like this: “The rule of thumb is that the complexity of the organism has to match the complexity of the environment at all scales in order to increase the likelihood of survival.” Yaneer Bar-Yam *Making Things Work*

To better adhere to this survival-rule-of-thumb, to pass our endless natural selection tests, requires the addition of new coding structures to our cultural genome.

### **Monetary Code**

While not the only code used for human culture's interactions with reality, monetary code is primary.

Selected genetic codes are primary for the body's generation of network relationships congruent with survival. In the cultural organism, humans use monetary code in an attempt to calibrate the relationship-value information of immensely complex interacting components in and across networks. Monetary code is also used, albeit often unconsciously, to configure relationship-value *across time* as well — weighting the effects of additional carbon, sugar, people, waste and myriad other components on future network relationships.

Again, humans using monetary code lack sufficient knowledge and reach, that is, we lack the necessary information-processing power, speed and accuracy to generate selectable network relationship-hierarchies. This contributes to network dysfunction, whether obesity, climate change, political gridlock, etc.

Again, increases in complexity erode the efficacy of code, its ability to generate functional network relationships. This is apparent in the human body. The amount of sugar the average American consumed in 1822 over five days can now be had in one can of soda. The body's coding structures for generating homeostasis, for processing relationship information congruent with health and survival, begin to breakdown. Network relationships become aberrant, manifesting as disease — obesity, diabetes, etc. Similarly, carbon increases disrupt the atmospheric network, yielding a "diseased" climate.

Exponentially accelerating complexity has also greatly reduced the efficacy of significant portions of: religious code, 1898 legal code, and 1998 software code.

Imagine a biological genome that ignored innumerable relationships in its environment; or an immune system that failed to respond to invaders with sufficient speed, accuracy and power. Said genomes and immune systems would be unlikely to pass their natural selection tests. That's what we have with monetary code, and our cultural genome in general.

### **The Complexity-Deficient Reach of Monetary Code:**

We have about five times as many words in English as we did in Shakespeare's era. Imagine the difficulty of generating written code for five times as many words using pictograph code instead of alphabet code. For processing additions to the language network, alphabet code has much greater reach, greater processing speed, accuracy and power than pictograph code.

Let's shift to complexity increases in the cultural organism: please remember to add 5 exabytes of information every two days. We're asking humans to calibrate selectable relationship hierarchies for this added information and the new complex relationships it generates by using a thousands-of-years-old cultural coding mechanism: monetary code. Ain't working, can't work. The information-processing structure — humans using monetary code — is not sufficient.

The complexity-deficient information processing of this portion of our cultural genome distills like this: machines using software code are to humans using monetary code as alphabet code was to pictograph code.

### **To Close**

I currently know of two theoretical, albeit incomplete, cultural coding structures that might improve our navigation of complexity. One of the new coding structures replaces monetary code. These theoretical constructs are complex, component-aggregated structures that use quantum computers, software code, ubiquitous networks sensors, etc., components that when integrated into a whole, form a new information-processing structure, a neocortex of sorts for culture's interface with reality. These particular variants may or not have selection merit. I do think they are a strong start.

Monetary code and much of our current cultural genome is complexity inadequate, hence non-selectable. I contend that we need to initiate Manhattan-Project-like efforts in response to exponentially accelerating complexity and the many network diseases and mismatches it has sired. Our exponential increases in knowledge and technology

have already begun the response-process. Whether we can bind together in a concentrated effort to create functional additions to our cultural genome, I don't know.

It may already be too late to halt our demise. Or, as many fine minds have said, it's human hubris to think we can be stewards of such complexity.

If there's any hope, I think, like aggressively pushing a loved one out of the path of an oncoming bus, we have to be willing to devalue, *not our humanity*, but some *parts* of our etiquette code *as needed*, and risk skinned knees and feelings discussing this. And we need to devalue other "holy" codes as well. The Bible, the Quran, the Constitution and monetary code are not adequate relationship infrastructure for our interface with our new, unprecedented (*daily!*) complex reality. And like an immune system responding to threats that disrupt the body's homeostasis, we need to, aggressively and rapidly, generate coding variation for the cultural organism's interface with reality because . . .

Ladies and Gentlemen: *It's Triage Time.*

---

Bryan Atkins: I am a noun and a verb, a temporary aggregate information structure that processes complex network relationship information, albeit often inconsistently and mistakenly, in an attempt to retain my aging structural integrity. I created [postgenetic.com](http://postgenetic.com) and have had the pleasure to read and to interview many fine human processors over the years.

---

*MAHB-UTS Blogs are a joint venture between the University of Technology Sydney and the Millennium Alliance for Humanity and the Biosphere. Questions should be directed to [joan@mahbonline.org](mailto:joan@mahbonline.org)*

MAHB Blog: <http://mahb.stanford.edu/blog/monetary-code-non-selectable-culture-code/>

