

April/May 2008

**TOP SECRET**

# INTELLIGENCE

Mat Callahan's quarterly newsletter of music, art, and philosophy  
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Dear Friends:

This is a special edition of my newsletter. Usually, publishing is coordinated with tours or public appearances that make a connection between the printed word and those spoken or sung out loud. Now, however, I want to call attention to an important essay written by my dear friend, Thomas Powell. It concerns Friedrich Hayek, a little known economist whose influence is nonetheless extraordinary. As financial crisis deepens and pundits ponder "What Went Wrong?" it's quite timely to be discussing one of the current regime's principle architects. If we want to untangle the often arcane and contradictory claims of economists and policy wonks we have to uncover their source. To this end Tom has done a great deal of research. In fact, we began speaking about this subject more than two years ago, well before the current crisis broke and before Hayek's connection to government was widely known. Subsequently, numerous articles and books have called attention to his role in world affairs. Perhaps the best known (notorious might be a better word) is the autobiography, "The Age Of Turbulence", by Alan Greenspan, retired chairman of the Federal Reserve Board. In it Greenspan reveals his close association with Ayn Rand who, in turn, was an advocate of Austrian School economist Ludwig von Mises. Von Mises, as we shall see, was Hayek's mentor and colleague in developing the neo-liberal theories that illuminated the Reagan and Thatcher governments. These won Hayek a Nobel prize in 1974. (he shared this with Gunnar Myrdal, however. Myrdal was unalterably opposed to Hayek, philosophically and politically, even calling for the abolition of the Nobel Prize in economics since it was given to Hayek and later to Milton Friedman!) In any event, it's worth noting that Tom was onto the significance of this before many had even heard of Hayek.

What is most noteworthy, though, is that Tom effectively dissects the basic building blocks, philosophical and historical, of Hayek's thesis. This is important for at least two reasons: First, efforts to blow away the clouds of obfuscation can inadvertently produce more fog unless we engage in critical inquiry and debate. Name calling or labeling a set of ideas is not adequate to either understanding them or to diminishing their pernicious effects. Second, all too often discussion of economics, politics, science, or for that matter, any subject using reasoned argument, lets everyone off the philosophical hook. In other words, no one is held accountable, no one need justify their positions according to any sort of moral or ethical code. It is too often assumed that "serious" means "realistic" or "objective", as if dispassionate observer status confers trustworthiness or better judgement. What Tom argues, however, is that this is a crucial part of the problem. Without any moral criteria we are incapable of any more than endlessly circuitous and ultimately futile discussion. It might sound knowledgable or portentous but it is nonetheless empty, devoid of purpose other than its own self-perpetuation.

Tom and I would be pleased if you send your comments either to this address [info@matcallahan.com](mailto:info@matcallahan.com) or directly to Tom's: [Unfinityorbust@cs.com](mailto:Unfinityorbust@cs.com)

## News April/May 2008

There are two items I'd like to bring to your attention. First, please visit our new duet website for all the latest information regarding live performance. There you can also listen to recordings of our music, read reviews of our shows and communicate directly with Yvonne and me. The link:

<http://www.matandyvonne.com>

Second, a tour of the Northwest is being organized for October 2008. This is divided into two parts. One part is booking speaking engagements at schools the theme of which is "The Trouble With Music". The second is organizing concerts for the duet. Fortunately, there appears to be a growing interest in the book. Certainly, the issues it raises remain "hot topics". Please contact Jen Angel if you have any questions or suggestions regarding an appearance by yours truly.

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# Moral Failure in the Philosophy of Friedrich Hayek

By Thomas Powell

Friedrich Hayek, 1899-1992, is far from a household name, but Hayek was one of the most influential thinkers of the 20<sup>th</sup> Century. He was its preeminent apologist for capitalism. Hayek gained interest early on in his career as the critical adversary of his friend and colleague, J.M. Keynes, the architect of the welfare state. Hayek's subsequent academic career featured long stints at the London School of Economics during W.W. II, and at the University of Chicago throughout most of the Cold War. At both institutions his duties were light, providing him ample opportunity for research and writing. He produced several volumes during these mid-century decades on a wide variety of subjects including economics, politics, law, social justice, philosophy, psychology, epistemology, individualism, and scientific process. In 1974, Hayek won the Nobel Prize in economics for his early theoretical work on monetary policy. This distinction propelled him from academic cloister to the attention of both the Thatcher government in Great Britain, and the Reagan government in the United States, such that his economic philosophy was translated into public policy by Alan Greenspan, et. al. Hayek's social/political theories have been widely popularized by William F. Buckley and Ayn Rand, and he has become the unofficial "Godfather of Libertarianism." Hayek's imprint is readily apparent within neo-conservative economic policy, especially in regards to the globalization of production and the assault on trade unionism, and less overtly within the ideology of such imperialist doctrines as *The Project for the New American Century*.

The depth and range of Hayek's thought was extensive. Throughout a century of convergent specialization, Hayek was the synthesizer of the big picture. His was the meta-view. While Hayek's interests were expansive, on the personal level we see in Hayek the evolution of an individual who experienced a profound insight early in his intellectual life, and then systematically applied this paradigm to the world for the next six decades with profound impact. His theoretical work gained traction for two reasons. First, the beneficiaries of Hayek's argument are clearly the elite of society. His economic philosophy sides decidedly and unambiguously with the current rulers of class civilization, providing them with a profound intellectual cover against the charges of moral degeneracy and criminality. Second, Hayek's social philosophy, which co-evolved with his economic theories, is incredibly seductive because it empowers the individual against the "tyranny of the collective." Within Hayek's writing is a direct appeal to the individual ego, similar to that undercurrent in Nietzsche. This is both the strength of his writing, and the inherent danger, for it is persuasive and heady stuff.

As Hayek continues to attract ever larger audiences of both critics and boosters, it is evident that his ideas are not going away any time soon. While there is much of interest in Hayek, I believe his broad conclusions are fundamentally flawed, and the translation of theory into praxis by his followers has greatly contributed to the appalling misanthropy and reckless environmental degradation pursued under today's global leadership. In this essay I will attempt to briefly outline the central themes of Hayek's economic model and social thought for those unfamiliar with his work. A growing rank of Hayek scholars have already produce significant criticism of his views, and I will include some of these objections. However, the main thrust of this essay will be to critique the underlying presuppositions of Hayek's epistemology which have not been challenged in the literature, and to investigate the failure of Hayek to elaborate a cohesive moral argument in support of his market-based order.

## The Economic Foundations for Hayek's Theory of Mind

Hayek's formative ideas came out of the Austrian economic school, a peripheral European circle dominated by his mentors, von Mises and Menger. The significant assumption of this school was a broad emphasis on the individual as the core economic unit. It was held that decisions by individuals acting in their own self-interest dictated the

demand, the supply and the cost of goods in the marketplace. The nature of the economic world was decidedly subjective. This view of a subjective economic order derives from the larger assumption of the German organicist tradition which asserts that society itself evolves over time as the aggregation of individual acts of self-interest. Historical events and social institutions are built by individual members of society acting in coordinated self-interest one deed at a time. Society is therefore cumulative and durational. This accretion or conglomeration is an organic process which evolves in unexpected ways, rather than following any specific design or trajectory. While initially embracing youthful socialist values, Hayek converted to the organicist subjective world view, and articulated it into the fully fleshed out argument of *The Pure Theory of Capital*, 1941. Throughout his career, Hayek remained in the organicist intellectual tradition. He single-handedly evolved it, but he remained true to its core concepts.

The individual viewed as the fundamental economic unit implies an underlying democratic order in market capitalism. We vote with our dollars is the popular expression. While this sounds good, it is in fact a relativistic democracy for individuals can interact in many ways with the market, as consumers, as labor providers, manufacturers, retailers, brokers, investors, and etc. The individual's level of participation in the market order greatly impacts the value of one's vote, as does the aggregation of individual votes into blocks. But in each case Hayek asserts, the individual's interactions with the market will represent that individual's own self-interest. As economic animals, the bottom line is we all operate out of a primordial self-interest. The market is an institution of human civilization which has evolved into what it is today, not by design, not by supervision or plan, but evolved in response to the cumulative historical input of generations of individual self-interest. Thus, in Hayek's estimation, as in the view of all liberal economic theory, the market deserves the highly rarified position it enjoys in human affairs.

According to Hayek, the individual in turn is the total aggregation or accumulation of his own sensory experiences which include his conscious and unconscious memory of such experiences, his education, thoughts, and feelings. We are the product of our senses and our mind, and each individual at any given moment in time is the accumulation of all experience and thought up to that moment. Thus we are binary beings of material and mind. As economist, Hayek is unabashedly a materialist. Mind is the organic product of the evolutionary achievements of the body. Mind derived from body, after all, organisms must eat before higher functions are possible. This exclusive arrangement, mind/body dualism, is the underlying definition of the sensory human being upon which Hayek's entire opus is built.

The exact relationship between the body and the mind is a debate on which there is no epistemological agreement. It is one such pairing in the larger architecture of oppositional dualism which is central to Western thought itself. Oppositional dualism conceives the world as containing pairs of qualities which are adversarial or mutually exclusive. Day and night, man and woman, good or evil, idealism vs. empiricism vs. romanticism vs. pragmatism vs. capitalism vs. communism, these are such opposing qualities. Reality exists in large part as the constant struggle for dominance between oppositional pairs perceived by various authors, which leads ultimately to the dialectical progress of history. By contrast, Eastern dualism as expressed in yin and yang, attempts to balance opposing forces as the dual constituents of a larger unitary whole. Balance is the mantra. The most significant binary opposition in Hayek's world view is the unhappy relationship between the individual and the collective. Hayek's organicist assumptions regarding the composite nature of social institutions, creates a perpetual conflict between the individual accomplishment and the collective institutional whole. In society's economic success, who is entitled to the rewards, individuals as owners, or the collective masses?

The rise of the individual in human affairs is a recent phenomenon. Jaspers argued that the individual ego-self does not differentiate substantially from the collective group identity in human history until the "Axial Age", six centuries of profound religious and philosophical speculation which occurred in the great agricultural civilizations from the Mediterranean to China between 800-200 B.C.E. Following

Jaspers, Hick proposed that the purpose of religion during this period evolved from the ritual role of “cosmic maintenance” into the novel arena of “individual transformation,” or what Eisenstadt called “transcendental consciousness.” In the materially affluent agrarian civilizations of Greece, Persia, India, and China, the questions arose, does human existence have some greater meaning beyond material well-being? Is there something more to life than simply satisfying our desires? Individualism, and individual self-actualization initially arose out of a perceived dissatisfaction with the pleasures of material well-being.

Doubtlessly, the most far-reaching dualistic pairing in Western thought was made by Plato who proposed that the world consisted of two principles, form, which was the ideal, non-material blueprint, and substance, which was the flawed, material expression of the ideal. Reality was fundamentally divided into non-material instructions, and material constructions. However, regarding the human entity, Greek philosophy generally held that the mind, meaning more specifically the rational intellect, was but one component of the psyche or soul, that larger part of our being which included, life itself, emotions, inspiration, morality, and religious belief. Aristotle in the *Metaphysics* differentiated a man into a composite of form, matter, and psyche, and “is not each man’s soul peculiar to him?” Here, Aristotle provided us with both the three-part being, and the individual as unique subject. However, mind, body, and soul, this triadic definition of humanness precedes Aristotle by dozens of millennia. It is both pantheistic and animistic in origin. Gimbutas identifies it in the 25,000 B.C.E. *Venus of Willendorf* and similar Ice Age carved figurines. In early 5<sup>th</sup> Century Christian thought, Augustine of Hippo declared, “*credo ut intelligam*”, I believe so that I might understand, thus continuing earlier Greek subordination of mind to soul. Nevertheless, the triadic makeup of the human being as mind, body, and soul evolved with Christian theology into its parallel divine manifestation as Father, Son, and Holy Spirit.

Mind/body dualism resurfaced in the 17<sup>th</sup> Century under Descartes who argued from the premise of doubt that only God’s existence was sufficient reason for the existence of individual mind. Newton refuted with a mechanistic and deist explanation claiming that the perfection of the cosmic motion of the moon, the planets, and the seasonal migration of stars was indication of the unseen hand of God. Diderot rejected the unitary materiality of nature implied by deism, arguing instead that the unifying principle was great diversity at the molecular level. Diderot further argued that all of nature could be explained from a scientific, material view such that the human soul was unnecessary, and therefore did not exist, a blasphemy which landed him briefly in prison. Meanwhile, manufacturing, banking, and trade with overseas colonies flourished, while novel discoveries in science dramatically expanded human knowledge of the world. Bolstered by deep-seated anti-clericalism, Enlightenment brought the ascent of the bourgeois class to power in Europe. Religion was subordinated. Monarchies fell as political and economic power shifted. The materialist paradigm surged to become hegemonic in the mind/body debate. The great historical upheaval of the Enlightenment was accompanied by the expulsion of the soul as a fundamental constituent of being human. Civil society was best left godless.

Hayek’s interpretation of mind/body dualism reflects Enlightenment values. The three-part human being of antiquity had become streamlined into the soulless binary being of modernity. Without soul, our eternal sea anchor, Hayek could plausibly claim that we are not the identical individual on successive moments or under equivalent stimuli, for in the interim we have consciously or unconsciously inputted new data, and therefore we have evolved. Under this regime, the individual is always made anew at each moment of existence. As we are a cumulative process, we are perpetually regenerated by sensory stimulus which our minds process. This state is defined by Hayek as the “sensory order.” Human beings exist in the perpetual state of becoming.

From this remarkable experience of the perpetual state of becoming, the only world-view available to us is the subjective. This condition is reinforced by the inherent atheism of the binary formulation of human existence. We do not enjoy the benefit of God as a fixed, objec-

tive reference point. Therefore, all reference to the world outside ourselves must be in relationship to ourselves. We can only see the world through our own personal rose-colored glasses. Individually we may share similar equipment, common experiences, circumstances and education with others, but each of us as one individual is singular and unique. Therefore Hayek proposes, the reality of the world, itself, is formed by the composite of all individual subjective realities. What we believe to be the real, is in fact the relational. Objective reality simply cannot exist. The end result of this picture of a subjective, composite reality absent of any sacred referent is the egotistical elevation of the individual to quasi divine status. This will be discussed later.

The arbiter of subjectivity is, of course, the individual human mind. But the mind is a curious and limited entity. In *The Sensory Order*, 1952, Hayek argued that the mind orders reality. Human consciousness, which Hayek held to be the mind, is the “linking” of sensory experience through the mechanical processes of the brain. The mind derives from the organic activity of the brain, and does not exist external to it. In other words, the material world precedes the mental world in the pecking order of mind/body duality. The human mind is the product of countless generations of biological evolutionary adaptation. This lengthy organic history finds expression in the astounding computational capacity of neuron and synapse within the brain. The brain’s architecture far exceeds the requirements of any thought.

The disparity between the mechanical potential of the brain and its actual usage, Hayek maintained, indicates that the mind is not capable of fully knowing itself. While the mind can contemplate the content and meaning of thoughts and feelings, the mind does not have simultaneous access to the complexity of neuron and synaptic process which generated those thoughts. The mechanical thought generating process is not available to the subject during the act of thinking, nor are the myriad autonomic processes which the mind routinely performs. This fact, Hayek suggested, places a fixed boundary on our capacity to think, and indicates the possibility of further limitations to rational exploration. Hayek concluded that: a) the mind is self-referential, b) imperfection is a condition of mind, c) the mind is evolutionary, and d) a layer of the mind is unknowable to the conscious self. Because of these inherent limitations on rational thought, and because we are dependent upon our minds to interpret the world for us, our knowledge of the world can never be objective.

### The Economic Model

Friedrich Hayek was a very private individual. Even in Kresge and Wenar’s *Hayek on Hayek, An Autobiographical Dialogue*, 1994, there are few personal statements. Therefore, the literature remains oblivious to the possibility that something truly remarkable occurred to Hayek early on in his academic career as an economist. For lack of a better term, we might call this event an epiphany. Sometime, probably in his late twenties or early thirties, Hayek had a profound insight into the nature of human social organization which completely transcended the existing scope of his teachers and those of his contemporaries. This was the transformative event which made him a generalist, and informed all subsequent expansive pursuits of intellect. Without this great insight, his arguments would lack persuasion, and he would not be of interest to us today.

Out of the observations of mind and market Hayek came to a startling discovery. Complex systems of order could arise spontaneously. These complex orders appeared to “self-generate” in a manner which contradicted previously held assumptions of great causal chains of being. The new orders were not acausal, but they did appear to be alineal. From the mutually beneficial interactions between sensory orders, i.e. human beings, more complex organizational structures such as institutions, the “extended order”, spontaneously arose. This spontaneous order was not passed along from one individual to the next like a row of dominos; it was spatial. The extended order occupied a space, and the individuals within that domain self-organized into a “pattern” of mutual benefit even if they never met. Higher levels of order spontaneously arose from the interactions of lower levels. Hayek’s model does not claim order from disorder. Higher order arose spontaneously from existing order.

To avoid confusion it should be noted that Hayek used this term extended order to refer to human society in general, to the building process of social institutions, but most specifically to the marketplace. The extended order marketplace was the unique creation of the organic aggregate of human society. Hayek wished to differentiate the radical difference in quality between the spontaneously, self-generated marketplace, and the hierarchical social institution such as the army. The extended order marketplace is the higher level of complexity, self-generated from the economic interactions of its members. This extended order allows individuals to coordinate their economic activities without direct contact or knowledge of each other. Furthermore, the extended order is not a fixed thing, but a growing evolving process. The global marketplace of today had its early origins in the village markets of yesteryear.

Hayek proposed that lower levels of order were capable of producing higher levels of order through their own internal process. The resulting order produced by this internal self-organization was of a qualitatively higher degree of sophistication and structure than anything which could be produced by externally imposed hierarchical means. Such higher complex orders facilitated the interaction of their membership while evolving their own distinct subjective identity. New nested orders could spontaneously differentiate from the internal dynamics of higher order thus forming interlocking networks. The extended order as envisioned by Hayek was a dynamic pattern of three dimensional, spontaneous growth which occurred in remarkable and unexpected ways over the duration of time. Instead of growing old, diminishing and dying as a single organism does, the marketplace becomes richer, more complex, and more dynamically interrelated over time. The totality of Hayek's understanding of the marketplace was revolutionary. Though he did not have the language for it, Hayek's model anticipated the architecture of Chaos Theory by four decades.

Hayek further argued that the extended order marketplace has become so complex and all embracing that it is not possible for anyone in a complex society to subsist outside of it. For better or worse, we are all the subjects of our cumulative and historical creations. Institutions embody the practicable wisdom and experience of civilization, and we should not cavalierly act to throw them out. The complexity of the extended order marketplace as the accumulation of an infinite number of individual decisions past and present, is an order of such magnitude that no one individual, nor any group of individuals could possibly comprehend all the relationships and expectations it embodies. This was the central criticism which Hayek leveled against socialist economies in *The Road to Serfdom*, 1944. It is pure hubris to believe that centralized economic planning on the societal level is possible. The analogy of the mind to the brain was appropriate; the computational possibilities of individual economic actions far exceeded the ability of any central authority to think it through, much less manage it.

In the modern economy, Hayek asserted, knowledge is dispersed. At all levels of participation from consumer to producer to investor, knowledge is private and privileged. A manufacturer of industrial widgets has specific knowledge of material costs, suppliers, labor costs, manufacturing process, plant overhead, competitors, market conditions and incentives, distribution avenues, advertising, retailers, inventory, incidental costs, taxes, insurance, and etc. This constitutes the "tacit knowledge" of the individual entrepreneur which cannot be centralized into an umbrella management authority. Investors, assembly line workers, and consumers possess comparable tacit knowledge in accordance with their roles, which likewise is not available to others, and which informs their participation in the extended order marketplace.

How then is this decentralized knowledge coordinated? Hayek concluded that the unifying principal which allows the coordination of so many disparate agendas, products, needs, and expectations, is a feedback process embodied by money. Money is neutral in the sense that it is equal to all things. Price, the purchase cost of some good or service in monetary terms (which is not the same thing as its value Hayek reminds us,) carries fundamental information to all participants in the market. Price fluctuations announce scarcities, surpluses, infla-

tion pressures, marketing ploys, external crisis, or some other criteria which stimulate individual decision-making. Falling retail prices may indicate surplus inventory, and bode pending layoffs at the widget factory. When individuals participate as consumers in the market, their choices effect the price of goods. Price fluctuations, therefore, function as the internal communication system which allow individuals to coordinate their market activities. Price is the "vehicle for discovery." Money is the universal medium of feedback.

In Hayek's opinion, the market based economy represents the highest or most equitable form of distributive wealth for a society. Both the socialist economy and the mixed-market welfare economy fall short of this goal. Hayek's arguments bunch into three broad categories: 1) Market based societies are much more productive and varied than socialist societies in the absolute number of goods and services provided. Market based societies are more efficient with lower production and distribution costs. The checks and balances of price fluctuations reduce waste, overproduction, and labor costs. Hence, greater productivity means greater generation of wealth, means more investment, leads to economic expansion and market growth. All this is the result of a) direct competition, b) the superiority of decentralized market planning, c) versatility to changing technology, changing market conditions, social or environmental pressures, and d) the absence of endemic corruption. 2) The second category is more controversial for here Hayek suggests that "trickle down" from the greater wealth generated by free market systems provides a higher living standard to the poor than the redistribution policies of a socialist economy. In the welfare economy, wealth siphoned off for redistribution purposes to elevate the living standards of the poor, stagnates investment and economic expansion. Therefore he asserts, the individual in a market economy enjoys greater economic justice than his counterpart under a socialist system, or a welfare market economy. 3) The third rationale is political; citizens in market based societies enjoy the benefits of the rule of law, habeas corpus, a free press, free movement, meaningful elections, greater affluence, and hence, greater personal freedom. By contrast, socialist economies tend to become increasingly stagnant and authoritarian.

Hayek's most ardent denouncement of socialist economies is reserved for what he calls, "collectivism." This is a broad tar brush term which Hayek employs to describe the economic leveling of class society which is the stated political goal of socialism. Collectivism means placing the needs and desires of the group above those of the individual. In Hayek's view, collectivism is anathema to economic growth because it misunderstands the institution of money. Collectivist redistribution policies establish rules which effectively quash individual initiative and the profit motive, thus collectivism dries up the mechanisms of a dynamic growth economy. The centralization of economic planning within a bureaucracy leads to further inefficiency and economic malaise.

There appears to be a contradiction of terminology and value here inherent to Hayek's definition of the concept collective. Clearly, the organicist model of the cumulative, evolutionary growth of human society, and the aggregative extended market order as defined by Hayek are the collective achievements of all current and preceding generations of individuals. By arguing that the great social institutions of humanity are aggregative or cumulative, Hayek is being disingenuous when he narrowly defines and denounces collectivism. While the creation of the economic wealth of civilization has followed unplanned pathways, nevertheless as Hayek presents it, these pathways represent the unified democratic achievement of all subjects. But Hayek will not allow that the benefits of such collective accomplishments should be distributed democratically.

The governance of the marketplace must be free from external manipulation, Hayek insisted, for the marketplace, as the extended order, is self-governing, and self-correcting. The marketplace has its own internal structure and rules of engagement which individuals learn to follow out of a broader understanding of their own self-interest. To cooperate is individually advantageous. Hayek proposes that the only legitimate role for government in economic affairs is to enforce the rules of market engagement. The function of government as lawgiver,

and as constable to prevent and punish criminal behavior is time honored and established in custom and law. Given human nature and the consolidation of wealth into the marketplace, it is inevitable that some percentage of individuals will resort to criminality. To protect society and its resources, the government has a duty to define and suppress economic crime. Hayek also acquiesces that government may have a smaller charity role to provide a minimal "safety net" for those few individuals who for whatever reason are incapable of effective engagement in the marketplace, though this should not be misconstrued as a more general welfare.

But what other roles should government play in the economic affairs of society? Should government expedite the extraction of minerals and fossil fuels from public lands by multi-national corporations? Should government auction off timber allotments and public airways? Should government provide tax breaks and subsidies to certain industries? Should government negotiate international treaties on trade and tariffs? Should government permit labor to organize trade unions and strike? Should government legislate environmental policy and standards? Should government build military forces to invade and colonize other nations for the economic benefit of its own society? Clearly, these questions are not simply economic concerns. These issues transcend mere economics to cut to the core character and values of society. These questions are inherently moral questions. On such moral economic issues, Hayek's legalistic/rational arguments consistently aligned with ownership.

### The Question of Social Justice

The concept of social justice has a venerable history. It appears in the Old Testament. It appeared dramatically with the Levellers in the English Civil War. It is on the lips of every great social movement, the French Revolution, the abolition of the slave trade, the emancipation of women, the Russian Revolution, the Chinese Revolution, and the colonial liberation wars of the past half century. Those who witness their own oppression cry out for justice. And equally, all who are oppressed have experienced the economic roots of injustice as that correlation between wealth and organized repressive violence. Therefore, proponents of the welfare state from the aristocratic class, such as Keynes, demonstrate a pragmatic class interest when they propose the redistribution of wealth in society through progressive taxation, reigning in the abuses of the privileged, legitimizing the voice of labor in government, free public health care, and similar measures which would create a more economically just society. Such leveling policies might well serve to extend the dominance of the current ruling class in the face of widespread dissatisfaction of the masses, and the real possibility of political revolution.

In his rejection of Keynes, Hayek brings forward the perspective of the organicist tradition, and Austrian preferences for craft and efficiency. Indeed, the youthful Hayek was critical of Keynes lack of craft as economist. However, from the disaster of two world wars, and the pending collapse of empire, Keynes, the statesman, understood the necessity of society rebuilding through a more equitable sharing of a smaller pie in post-war Britain. Hayek, the brilliant young immigrant economist, wanted to grow the pie.

When Hayek makes comparisons between market economies and socialist economies, or welfare market economies, it must be remembered that he is making meta level evaluations. Justice in Hayekian terms means the aggregate justice of a society, as contrasted to individual justice. This expansive justice is generalized like flood waters to find some median level. But what society-wide criteria do we use to define aggregate justice? And how can we quantify it. This question was similarly faced by Utilitarians of the 19<sup>th</sup> Century who wished to discover "the greatest good for the greatest number." Bentham proposed the hedonistic calculus by which moral decisions could be evaluated quantitatively based on the pain or pleasure felt by those impacted. Action should be judged by consequence, rather than from motivation. This principle remains one of the cornerstones of moral philosophy today. But Bentham's thesis, *An Introduction to the Principles of Morals and Legislation*, 1789, contains a second, equally relevant theme. Implicit within the constructs of utility lies the vision that

human society is progressing towards the moral utopian future. The philosophy of utility implies destiny; there is meaning to individual life, and there is a goal towards which we struggle together.

Hayek followed Bentham's lead to argue for a justice calculus. However, instead of a morality basis for calculating justice which is difficult to quantify and subject to debate, Hayek proposed to use economic criteria. Social justice could best be judged by a society's accrued wealth and living standard. Economic well-being was the most equitable and universal indicator of social justice. Hayek argued three things: 1) The economic system which produced the greatest wealth was superior. 2) Greater wealth generation meant a higher standard of living for all members of society. 3) A society which could support the greatest number of people was a superior society. Hayek concluded that capitalism, therefore, was superior to all other economic systems because it generated much greater wealth. Capitalism was the best of all possible worlds because rising waters lift all boats.

The problematic in this view is the role of money. Money, as the neutral equivalent to all, becomes the common yardstick of justice. Money purchases justice. Hayek cannot avoid this equation as intrinsic within his calculus. It is as unconvincing as it is unpalatable. Just as damning perhaps, the liberal economic order which Hayek espoused lacked a compelling vision of the future. It offered immediacy and tremendous material affluence. It offered opportunity for the clever individual to raise himself up by his bootstraps. It offered freedom for individual initiative, and escape from the repressive conditions of traditional societies. But what Hayek's liberalism lacked was precisely the collective "we" component. There was no compassion for the "we the people" which is the core of social justice in a moral society. In Hayek, there was no social glue beyond economics. Beyond crass material well-being, what is the purpose of life? What is the meaning of human existence? Without the we there is no compelling destiny narrative.

It appears Hayek understood this former shortcoming, but to the latter he remained antagonistic. Hayek argued that there was no moral basis for a critique of economic exchanges in terms of perceived injustice. Injustice, he proposed, must be differentiated from misfortune. Misfortune may befall anyone. Acts of God or weather, train wrecks and falling tree limbs, genetic defects and catastrophic disease, or being born into squalor. Misfortune is an organic part of the human condition, from which one has no inalienable right to recourse. By contrast, injustice requires intentional action on the part of the abuser. It is the fact of intentionality, not merely its appearance, which constitutes injustice. Therefore Hayek concluded, the unforeseen, negative, or collateral effects of actions which were undertaken with no intent to harm, are simply misfortunes which cannot be construed as intentional injustice. The impoverishment of the poor in a market economy is not the moral responsibility of the beneficiaries of that system. Nor by extension, is ownership responsible for the unanticipated pollution caused by industrial processes undertaken for the public good, i.e. economic growth.

Two additional positions relative to social justice for which Hayek is routinely vilified stem from this legalistic and staunch ideological defense of the free market model. First, Hayek was vehemently anti-union, and second, Hayek saw no problem in the growing disparity of wealth between the elite and the poor which began anew under the Thatcher and Reagan regimes. Hayek believed that unions represented an external coercive force, not unlike government, that meddled directly in the marketplace, negatively interfering with the price fluctuation mechanism. Union intervention in the market created labor inefficiency, false expectations, and siphoned off investment capital. Given his model, perhaps Hayek could alternatively have viewed trade unions as a novel and organic institutional order created from the internal dynamics of the extended market order. That he chose to reject trade unionism reflects his own class antagonisms, more than a compelling argument for the purity for his theory.

The growing disparity of wealth Hayek explained as evidence of a long-term healthy economic expansion. The liquidation of under-utilized industrial assets begun in the 1980's, and the redirecting of investment capital into new technologies, the shifting of manufacturing over-

seas, the rapid growth of consumer goods, home ownership, and etc., indicated, that while the wealthy have grown disproportionately wealthier, the poor have also grown wealthier, not poorer. Hayek would claim that all classes have benefited from economic expansion, thus vindicating his model. The counterclaim that the cost of this great economic expansion has been born by peoples throughout the third world, by the global environment, and by other species was never germane to Hayek's model.

### **Actual Costs of Market Economy**

The above summary of Hayek's economic and social philosophy is incomplete. His curiosity extended into many fields which are not possible to summarize here. Hopefully, I have provided an accurate overview of the direction of his thought, and of the epistemological assumptions which underlie them. In the remainder of this essay I propose to challenge Hayek's assumptions and his conclusions in four areas: 1) The "actual" costs of economic expansion under market conditions; 2) the epistemological validity of subjectivism; 3) the failure of Hayek to provide a liberal moral philosophy; and 4) the implications of the concept of extended order.

First, I will define "actual" in the meaning that Husserl provides us following Aristotle, to exist in space and time, as opposed to merely possible. Therefore, when we say the actual cost of the marketplace economy of the United States, we must include the costs of waste disposal and global environmental degradation. We must include in our cost estimate the human misery throughout the world, especially in the most impoverished regions, as the legacy of slavery and colonialism, costs from extractive industries, from the destruction of subsistence agriculture, from endless wars, from repression, and from pillage by corrupt puppet leaders. We must include in our costs the plunder taken by the elite criminal element in our own profit-driven society. We must include the costs of military aggression. We must include the costs of usury and debt financing. These are costs which we are all well aware of now. Following the logic of Hayek's legal distinction between misfortune and injustice, once the effect of one's actions are known to produce harm to another, failure to remedy is no longer unintended consequence nor ignorance. Failure to remedy becomes willful negligence, a legal liability which must be borne. Under Hayek's logic, ownership may escape liability for past injustice, but once injustice is discovered, ownership becomes accountable from that moment forward. Where deceit can be demonstrated, as in the case of the tobacco industry, ownership's liability for reparations is retroactive. As they are discovered, all the costs mentioned above including our collective ignorance become actual.

Hayek's claim that human society and its institutions constantly evolve is a valid observation. However, we should be clear that culture evolves according to the model of Lamarck rather than Darwin. Social evolution accrues generationally through education, rather than by random genetic mutation. Even so, history, including meta-history, clearly illustrates that societal evolution has not been a steady gradualism as the organicist model would seem to favor, but occurs more along the lines of Gould's punctuated equilibrium model. With this in mind, let us look again at that core construct of market economy: "money". Second perhaps only to the notion of "God", money is the most abstract concept in the human repertoire. The mental formula that money is equivalent to all things was in place long before Judas accepted payment, but under free market conditions the value of money has evolved. It is not that the usage of money as legal tender for the exchange of goods changed, nor did the benefits of its accrual, nor its propensity to elicit immoral or criminal behavior. As human economy evolved through agriculture, industrialization, and into high technology, as the global population burgeoned such that much of the world now lives in mega-cities, and as most of the human race is now completely removed from any direct relationship with food gathering or food production, the role of money as the common unit of exchange has assumed inestimable proportions. Money is now indispensable in all our lives. It has attained deity proportions. That is a universal reality. It is a novel and radical condition, relatively speaking, in the evolutionary history of our hunter/gatherer species.

Conversely, as the value of money has appreciated in actual terms, the value of things which can be purchased with money has diminished. While inflation and speculation drive up prices of some items, the net result of valuable money is to cheapen all that it buys. The devaluation of all that money can buy, is an actual cost which must be figured into our bookkeeping. This phenomena points an accusing finger towards a fundamental moral crisis of modern civilization; what is the meaning of "value"? Not for naught, "money corrupts" is a truism. Lamentably, it seems all things nowadays have a price tag. No religious icon nor family heirloom is too sacred for the auction block. One may purchase the legal right to poison the air with carbon dioxide. One may buy surface water at this location to mine ground water in another. Real estate speculation has become a venerable craft. We fill our gas tanks from the Carboniferous formation, 65 million years of sunshine. Earth, air, water, and fire, and as with all commodities, they experience price fluctuations in the marketplace. Price fluctuations are readily manipulated by the savvy, and in the marketplace, price has no one to one correspondence to "actual value." The centrality of money to our lives has devalued all things. It has subverted the meaning of value.

Part of Hayek's astuteness which brought him early recognition, and the invitation to present at the London School of Economics, was his clarity of mind regarding the proper nature and function of money in a free market economy. Economic boom and bust cycles were the norm and had been for the whole of the 19<sup>th</sup> Century. Inflation was chronic and cyclical in every European currency. Hayek proposed that by a central control of interest rates, the money supply could be controlled, which in turn would control inflation. Hayek's second insight was to understand how market price fluctuations provided information which could be used predictively with good results. These were structural methods which improved market function. They made markets more efficient by reducing wild fluctuations.

Proponents of liberalism argue that these contributions of theory were good as they helped stabilize the market and facilitated long term economic expansion. But once again, what calculus of good should we use to validate this equation? If we use Hayek's material based calculus then yes, the market has grown dynamically. If we wish to look at a results based calculus we instead discover hidden actual costs in environmental degradation, human misery, staggering waste, and in the huge surge of global corporate piracy. Improved methodology does not equal morality. If we accept such a calculus we accept crooked bookkeeping. The economic affairs of human beings are fertile ground for inequity and injustice towards our brethren, towards other species, and towards our mother Earth. It has been so since homo sapiens and canine joined forces to co-evolve together. But let us not shift blame to our best friends.

Earth is a remote and isolated micro speck in the vast ether of space. It is a finite quantity, it is our only possible home, and home as well to the myriad species whom we cannot live without. The liberal market paradigm of boundless economic expansion is delusional. Hayek's famous paradigm, "the best economies are the ones which can support the greatest number of people" is antithetical to the reality of global climate change. Earth is not the central bank from which to make endless withdrawals, nor is it the commons' dump in which to pour our effluent. Our overextended credit will be called in. A wiser course would be the Keynesian expediency, to proactively reorganize our aggregate self-interests into a much smaller piece of a flourishing, planetary pie.

### **Subjectivism**

Subjectivism is an attractive philosophy to the Western mind for it implies an essential, underlying, democratic order. It is a participatory order with each individual adding one pebble at a time to the conglomerate rock of civilization. We are, heroically, all units of oneness. The ethical relationship between subject and government was argued at length in ancient Greece, but our modern ideas were carved during the Enlightenment. Hobbes proposed that the social contract between the governed and the government formed the only basis of legitimate authority. Locke extended this reasoning to suggest that the principle

function of the state was to protect the natural rights of the citizen to life, liberty and property. Rousseau, in response to Locke's narrow class interests, insisted that society was the subordination of the individual subject to the "general will", a democratic principle opposed to the divine right of kings.

More specific to the concept of the autonomous subject, Mandeville argued that the individual acting in self-interest was a good thing as it allowed society to advance and prosper. Competitive self-interest was a form of checks and balances on individuals which encouraged cooperation with neighbors, thus leading to the positive formation of customs, laws, and institutions. The obverse condition, universal altruism, would lead to societal stagnation. This is a persuasive argument with one serious shortcoming as eloquently stated by Orwell in modern times, "all pigs are equal, but some pigs are more equal than others." Engels traced how the inequities between individuals magnify over time to become institutions. Class stratification arose within the new agriculture economies of the Tigris, Nile, and Indus Rivers. Sedentary agricultural societies produced greater abundance, relative economic stability, population exposition, craft specialization, social classes and class conflict. Individual families accrued wealth and political power through the institution of inheritance.

Inequalities between individuals extends far beyond means into character, skills, intellect, fitness, education, gender, race, age, personality, and etc. Such inequities of means and attributes between individuals is a universal constant. That each subject is unique, ironically, becomes a statement of objective fact. The subjectivist world view does not prevent us from making objective statements about the world.

Today's subjectivist hegemony arrived by a circuitous path. Along with king and church, the absolutist world of tautological statements of fact was ultimately deposed by the Enlightenment revolution. A new division of labor followed. Philosophy would concern itself with the objective investigation of mind, the ideal realm, while science would provide us with objective knowledge about the material world. This was a productive arrangement. But the coziness of this two pronged objectivism collapsed in the first decades of the 20<sup>th</sup> Century when the ambassadors of science, Einstein, Heisenberg, and Gödel, came forward one by one to inform the public that the previous universal constants of time and gravity were in fact relative to one's position and motion, that a whole other quantum world existed upon which our reality was dependent and in which individual events were fundamentally unknowable, and that closed mathematical systems like logic could not be constructed free of internal contradictions.

Objective reality collapsed. Philosophy suffered a blow from which it has yet to recover, while scientific knowledge became propositional and probabilistic. Scientific spokesmen like Feynman and Bronowski explained the process of scientific doubt, and the necessary violence of the "experimental box" which ruptured the interconnectedness of all things in the world. Scientific methods can give us high quality information. They can provide us with persuasive evidence sufficient to make informed decisions about the treatment of disease or the consequences of global warming, but science cannot provide us with certainty. This is because certainty never was a property of mind or body. Doubt is a property of mind, but certainty is not. Certainty is a belief, and as belief, its location resides within the soul.

The current academic acceptance of the subjective world view is not the result of Existentialism nor French post-Modern linguistic theories. Post-Modernism is but one expression of the subjective world view which has arisen as the aggregative effect of two and a half centuries of anti-clerical mind/body dualism. Post-modernism could as reasonably be understood as the nostalgic, existential, longing for an objective order by claiming the absurd: that personal subjective views are objective to the observer, and therefore of equivalent value. Thus the ego soars to lofty proportions. The fundamental problem which we are discovering today from the lack of balance between subjective and objective world views is precisely the problem of value. We face a crisis of values which is a moral quandary. The issue has been festering for decades, and we should be relieved that both the religious fundamentalists on the right and radical ecologists on the left have dragged their respective versions into the forefront of public debate. They are

not so far apart as they claim. We need to understand the moral failure of modern society.

### The Failure of a Liberal Moral Philosophy

Hayek inherited subjectivist assumptions about the world, and incorporated them into his intellectual tool kit without questioning their truth. This is not unusual for we all inherit the belief structures of the past, and it is in the nature of inherited assumptions that they remain invisible to us such that we cannot see how they inform our own ignorance. Assumptions are learned opinions. They are cultural propaganda, the group-think, and the ideological pillars of the collective. Assumptions are the product of mind. Bigotry and prejudices, religious sectarianism, elitism and righteousness, unchallenged opinions about the nature of reality, we are as likely to be molded by our ignorance as by our knowledge. The core assumption in Hayek's philosophy is that human beings are binary beings, comprised of body and mind exclusively. His philosophy is built upon this assumption. There are additional, critical class assumptions and attitudes revealed in his leadership of the Mont Pèlerin Society, and from the economic policies of that think tank. In railing against collectivism, what Hayek hides deceitfully is the collective interest of his cohorts in that group and their wealthy benefactors.

From the vantage of historical perspective, we can now observe that economic liberalism produces astounding social complexity, tremendous science, amazing feats of technology, rational law, stunning art, great affluence, and rarified eroticism. It also has produced colonialism, imperialism, endless wars, staggering poverty, overpopulation, species extinction, environmental degradation, and global climate change. It has not produce moral philosophy. Morals come from the soul, that offending part of our core being which was amputated as the necessary political act of Enlightenment self-mutilation.

But what is the soul? Religions generally view the soul as the individual's non-material essence of being which connects each of us to all other souls and to the cosmic divine essence. In this regard it precedes both body and mind and possesses eternal existence. Theological expectations of the soul include belief, devotion, self-sacrifice, ritual, and prayer. But the soul also appears to have many tasks in secular affairs such as cementing the bonds between individuals into community, proscribing moral behavior, and envisioning the origin and destiny narratives of the group. The soul is the vital part of our being. It is our connection to life, itself, and to other living things on this planet, such that we recognize intuitively the difference between animate and inanimate things. It is our soul that recognizes the departure of life at the deathbed of a loved one, before the analytic mind takes over. It is to the soul of the prey that hunters traditionally make their requests. The soul is the fountainhead of inspiration and artistic creativity. Tolstoy claimed the role of art is to build community. Bronowski concluded that inspiration in both art and science share a common source within our being. And lastly, though it is not the final role of soul, we must recognize the soul as the seat of compassion which allows us to recognize both the joys and the sufferings of all others. The soul resides in our being regardless of whether our mind is cognizant of it or not. It is the deliberate rejection or the repression of the soul which causes one trouble.

In *The Fatal Conceit*, 1988, Hayek at last attempts to address a moral theory of mind as he approached the venerable age of ninety. With a vulnerability not often found in his other works, Hayek states, "Our moral traditions, like many other aspects of culture, developed concurrently with our reason, not as its product. Surprising and paradoxical as it may seem to some to say this, these moral traditions outstrip the capacities of reason." (p.10) This statement is remarkable for Hayek, the meticulous rational craftsman, acknowledges two things. First, he doesn't know where moral traditions come from, but second, he does understand that they come from a greater depth within our being than reason. And as he cannot locate that wellspring of moral beliefs, he is left with description.

Hayek offers that mankind achieved civilization by developing and following rules that often time forbade him to do what his instincts

demanding. These rules constituted a “new morality” apart from an instinctual, impulsive and unreflective conduct. Morals are therefore a learned tradition, not innate behavior. Morals are concerned with effects in the long term indicating extended causal understanding. Moral behavior is a pre-requisite for further cultural evolution, such that morality and culture co-evolved. And as moral conduct is counter instinctual and must be passed to successive generations via education, it therefore validates the Lamarckian model of cultural evolution. Because of its centrality, Hayek further surmises that moral behavior must have evolved from the exigencies of economic behavior.

From the co-evolution of moral behavior and culture evolved mind, and later rational thought. The brain is the genetic potential, but mind is the product of education and acculturation. Reason is not the guide, but rather the product of cultural evolution and morality. Hayek accepts that large abstract concepts like property, freedom, and justice, are first rooted in morals, and only later refined by intellect. Morality as well is only later abstracted into laws, such that apparently contradictory statements like, “the greatest possible freedom for all consists in restricting the freedom of all by abstract rules”, has meaning.

Hayek’s understanding of the moral extended order is completely rational. The self-generating, spontaneous order, which has become his trademark, appears here prominently. All the themes of Hayek’s ontology, that which he holds to actually exist, are likewise present: 1) The direction of history is progressive and aggregative; 2) Spontaneity and self-generation are inherent properties of order; 3) Body precedes mind. The capacity of the physical world to self-organize far exceeds the potential of mind to comprehend it, meaning that there are large areas of existence which are completely impenetrable to our minds; and 4) There exists in Hayek’s philosophy the subtext of destiny, i.e., that the nature of the world coupled with progressive human history has some meaning.

All four of these items have been visited earlier, but it is this last item which is most interesting now for it places Hayek and Marx and Jesus, and all who have ever preached or ever believed in a redemptive, utopian future for our species in the same boat. Possession of a vision of a transcendent destiny gives meaning to one’s life. There must be a reason for our suffering, and a reward from our labors. Where, and how far, and what must to be done to collect is up for debate, but the mythos of a transcendent state on or beyond Earth is a universal belief. Furthermore, the meta narrative promises us this paradise as our just reward for moral behavior. Moral behavior may not be answered under present difficult circumstances, but it will certainly be compensated at a future date. This is not folly, not wishful thinking. The promise of a better future, of some emancipated state, or reunification with the All, or wherever the desirable locale just beyond our present reach may be, this special place represents the same need in every script, and that is the profound individual longing of our alienated and wounded self to return to the loving embrace of the whole. Paradise represents the requital of that castaway traveler, our estranged private soul. Paradise manifests the psychological need of all subjects to return to the warmth of the collective hearth and home.

As Hayek cannot acknowledge the existence of the soul in his binary world, the vision of paradise offered in his agenda is tentative and not convincing. There simply is no redemptive home to return to. In fact, the Western world has now achieved the comfort level promised us under the liberal vision, and for myriad reasons we find it vacant and wanting. The liberal order has little to offer a three-part human being beyond perpetual existential consumerism. Pride, covetousness, lust, anger, gluttony, envy, sloth: if I turn on my television set for an evening, which of these seven sins won’t I see promoted to me in advertisements for increasingly toxic products? There is no further vision, no greater destiny, no collective goal to unite people to work towards. There is no sacrifice required, no moral behavior demanded. We are merely asked to spend money, to endlessly buy on credit disposable products to keep the economy stimulated. Where in this scenario is the requirement for the soul?

By contrast, the promise land of King’s dream is primal and immediate. It is a powerful vision of justice where righteousness rolls down like waters. King informs us that our task, is to “build the beloved com-

munity.” Living one’s life as a moral being is to intuitively understand the benefits of this conduct. Moral behavior comes from loving our neighbor, in spite of himself. Loving thy neighbor simply because he is deserving of love, is the most profound act of building community. In theology this act is called “agape.” The shallow love and elevation of the self is called “eros.” The liberal subjective world order is enveloped in eros, and that is why it is incapable of locating a moral basis for its existence. Hayek cannot produce a moral philosophy of liberalism, because morality comes from the human soul. Hayek cannot present a worthy destiny to aspire towards because the recognition of destiny is a moral understanding, not a rational concept. And lastly, Hayek misguidedly attacks the collective, because he fails to comprehend that the organic collective which created the moral order in the remote past, it is the same organic collective which embodies the moral order in the now. Hayek forfeited his soul, and his philosophy reflects it.

One hundred thousand years ago, the briefest wink in geological time, our Cro-Magnon ancestors learned to love their fellows. To grow up together, to trek the savannah through hardship and reward together, to raise their children together, and to grow old together. They built community upon the open and exposed plain as their evolutionary survival mechanism. And thus our progenitors discovered the soul. Building community and loving thy neighbor is a moral undertaking which makes higher culture and intellect possible. Hayek is partially right, moral behavior requires rules beyond instinct, but rules are only possible when there is the sense of community and common purpose which transcends material economics. Gathering and hunting were not such arduous tasks. Early humans had a great deal of free time on their hands for entertainment and for collective social activities, for creating culture in general.

### Implications of Spontaneous Order

In concluding this essay, I think it is absolutely critical to examine the full implications of Hayek’s most important discovery. Hayek envisioned the extended order market as a network. The membership of this network contained all individual sensory orders. The extended order market was a spontaneously generated higher order which was greater than the sum of its individual sensory order parts. Its organizing principle was constant and continuous feedback through a universal constant called money. Money, as price fluctuations, carried information to all participants allowing them to coordinate their activities in this decentralized system. Each sensory order in cooperation with other sensory orders contained the potential to spontaneously generate new systems of interlocking order. A pattern of dynamic growth emerged as individuals cooperated with other individuals, frequently unknown to each other, to create new forms of order. My desire to build a beautiful jewelry box from exotic African hardwoods may be connected to clandestine logging camps and deforestation in the Congo. Thus, a highly dynamic growth pattern of self-generating, spontaneous order emerges. As new connections are made, new orders formed, the entire network expands. Extended order becomes more than a term for the marketplace. Extended order, as organizing principle, becomes a formula for spontaneous, decentralized, self-generating growth.

By the mid 1980’s, half a century following Hayek’s seminal discovery, two objects entered popular culture through computer modeling and glossy photography which visualized in a stunning manner similar, dynamic, growth phenomena. The first from the field of mathematics was the fractal, a psychedelic, computer generated, iterating pattern. The second from the field of medicine was the carcinoma. This imagery revealed dynamic network growth and cell mutation which rapidly penetrated and fed off the host organism. Scientists discovered that spontaneous pattern repetition, and interlocking patterns of organization could explain very complex natural phenomena which had previously been inexplicable through traditional linear causality. Nature and human activity it appeared, carried the potential to organize itself into non-linear patterns. These complex organic structures obeyed the laws of economy of structure and the conservation of energy. The primordial chaos of Biblical proportions became the new field

of complex systems. The term chaos was differentiated from the term randomness, and redefined to signify a higher level of non-linear order.

In hindsight, it should not be a surprise to us that dynamic growth patterns were first recognized in the field of economics. Socialism, both Soviet socialism and national socialism were growth economies by the late 1930's in direct competition with Depression capitalism. National socialism which was a war machine in already industrialized societies, responded well to centralized planning. Soviet socialism was a much more difficult economy in a vast territory with little industry, little infrastructure, and an ambitious social agenda, but largely due to the chronicity of inherited problems, it too responded to centralization and grew dramatically during its first decades. Each economic system rolled out its politicians and economists to validate competing claims. Hayek, from the old Austrian school which feared the Cossacks and despised the brutish Nazis, became the bulldog of capitalism. Initially, his critique that the economies of advanced societies were too complex to be centrally planned was not overly persuasive. That idea did not gain traction until the 1960's when Soviet agriculture and industry began to routinely fall short on production quotas.

Hayek's vision of an unfettered capitalism was formal and rational. It existed first in the ideal. The extended order as a spontaneous growing order of economic relationships between sensory orders mediated by the feedback of price fluctuations was open-ended and boundless. Why should it not grow indefinitely? Why should it not bring wealth and justice to all? What Hayek failed to see, even when it became glaringly obvious late in his life, is that such dynamic growth processes cannot go on indefinitely. All dynamic growth must be bounded. Even cosmic inflation, that miraculous growth spurt of our incipient universe following Big Bang, was brief and circumscribed according to Guth. Dynamic spontaneous growth is only possible under certain favorable conditions, and those conditions are always localized.

Dynamic growth occurs within a matrix which we can envision as an encompassed fertile zone. Crystal growth requires a confined space where the proportions of certain gases, minerals, water, temperature and pressure are benevolent. Each of these ingredients brings to the mix its own internal order. Which precedes, the matrix or the crystal is a chicken and egg argument. What is interesting is that the fractal has no material existence until it is plotted on paper via the computer program. A fractal pattern, as in the Mandelbrot set, derives from a mathematical algorithm. This algorithm is simply an instruction for an iterating process. It has no physical existence. Algorithms are the forms in Plato's ideal universe. They represent the rules, the instruction manual, the potential. How things play out in the material world is always flawed from the ideal because of local conditions and inconsistencies. Turbulence occurs at the nodes and interstices of overlapping patterns causing eddies and flaws of iteration. Existence in the material world creates the unique individual. The ideal formula does not. Matter responding to both rules and roadblocks creates the richness of the world about us.

Biological life on Earth has existed for some three and a half billion years. The first unicellular prokaryotic organisms like algae had very little internal structure, but they were the only game in town for more than two billion years, and they altered the Earth's atmosphere creating the matrix for the evolutionary arrival 1.4 billion years ago of larger, more complex eukaryotes cells such as amoebas. Multicellular life began at the Cambrian explosion 570 million years ago with a tremendous invention and disparity of body types. Two catastrophic mass extinctions since then have reduced the number of body types to a fraction of the original complement, but following the extinctions a lot of fresh real estate opened up for new colonization. Through the evolutionary mechanisms of speciation outlined by Darwin, that is through random genetic mutation and environmental selection, the survivors regrouped, diversified, and produced successively more complex flora and fauna.

The evolutionary path of life on Earth has not been gradualism over the long haul as Darwin hoped. It has instead followed a path of punctuated equilibrium. Nevertheless, an apparent pattern has emerged in the increasing tempo towards less fundamental disparity or architec-

tural variety of body types, but much greater nuance amongst fewer designs with ever increasing complexity and interrelatedness. In the most recent period, the last 100 thousand years, the human species has diversified out of the matrix with the curious ability to evolve culturally as opposed to merely genetically. Cultural evolution follows a different growth model than does biological evolution. It follows the model of Lamarck where learned traits can be passed on to one's successors.

Human society and the extended order market are the matrix within which the spontaneous, self-generating Lamarkian algorithm has run amuck. The former hard boundary of genetic evolution as the mechanism of change and growth for living organisms has been rent. The new Lamarkian organizing principle, that learned knowledge can be passed along generationally has taken hold within the planetary matrix. Human cultural evolution is a novel, spontaneous, self-generating form of order which has not worked out its political relationship with the existing forms of order within the larger bio-geological matrix of planet Earth. The consequences of Hayek's pro-capitalist policies are clear evidence of this phenomenon. Now, we need to be concerned about two things. First, how do we police ourselves to curb the human carcinogen. And second, how are we going to cope in the future with the Lamarkian algorithm when it shows up in other organisms. It may already have appeared in viruses. Hayek also claimed the centralized planning stunted growth. That prospect does not sound so bad now. This is our immediate challenge.

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