

RECLAIMING RATIONALITY AND SCIENTIFIC METHOD:: THE LIFE-COHERENCE PRINCIPLE AS GLOBAL SYSTEM IMPERATIVE

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Keywords:: academy, atomic individual, causal mechanism, collapse, competition, consistency, cooked science, corporation, correspondence/coherence theories of truth, common life interest, education, epistemology, financialization, game theory, GDP, global market, life coherence principle, life support systems, mathematics, meta-program, money sequence of value, overpopulation, pragmatism, prisoner's dilemma, rationality, research, ruling value syntax, scientific method, social choice, sustainability, truth, universities, validity.

Contents

- 12.1. The Nature of the Rising Global Crisis and Why It Cannot Be Seen?
 - 12.2. Recognizing the Connected Disasters and Their System Causal Mechanism
 - 12.3. The Ultimate Issue:: Society's Rule System Decides Life as Better or Worse
 - 12.4. The Driver of the Ruling System:: Self-Maximizing Rationality with No Life Base
 - 12.5. The Regulating Sequence of Rationality and Its Alternative Step By Step
 - 12.6. The Hidden Mechanism:: Private Financial Subjugation of Society and the Academy
 - 12.7. Prisoner's Dilemma and Game Theory:: The Paradigm of Scientific Rationality
 - 12.8. The Underlying Incapacity of Critical Responses to the World Disorder
 - 12.9. The Failure of Rational and Scientific Method to Understand Global Collapse
 - 12.10. The Unexamined Problem of System-Cooked Science
 - 12.11. The Life Coherence Principle:: The Missing Consistency of Scientific Rationality
- Glossary
Bibliography
Biographical Sketch

Summary

This chapter explains what has long been missing across domains and levels of analysis:: (1) the life-blind inner logic regulating the dominant paradigms of "rationality" and "scientific method"; (2) the reasons why it selects for unforeseen consequences of ecological, social and economic collapse; and (3) the life-coherence principle which identifies and corrects the derangement.

12.1. The Nature of the Rising Global Crisis and Why It Cannot Be Seen?

Humanity's governing rule system has generated a fatal contradiction. There is a deep-structural contradiction between its life-means support-system requirements, on the one hand, and the global system of private money-sequence and commodity growth, on the

other. It is not, as Marx taught, a contradiction between productive force development and capitalist relations because both grow in technological tandem while the world burns. It is a deeper contradiction of the ruling system with life and life support systems themselves. The meaning of this crisis has been tracked throughout in this study, as in Sections 1.12, and 1.14. through 9.10. to 11.5. and 11.12.

The reigning system is governed by private money-sequence growth as determining goal, and more priced-commodity yield growth is its justifying performance. Yet both of these ruling principles of value gain cumulatively violate life requirements at organic, civil and ecological levels. Although calls for a steady-state or no-growth system increase as the negative externalities of system growth destabilize the life of the planet, these rising calls usually remain stuck within the old concept of growth. Unlimited consumerism and inequality are rightly rejected, but no yardstick of life needs and capacity realization steers conception instead. To speak of “a fuller, greater, or better kind of development”, as Herman Daly, the most grounded of contemporary critical economists does in his *Ecological Economics and the Ecology of Economics*, is not made criterially clear by defining it as “qualitative improvement in the composition of the physical stocks of wealth that result from greater knowledge of technique and purpose”. How does one tell “better” from “worse”, or “qualitative improvement” from not? The problem here is one of repeating pro-value terms without principled meaning. This is a common problem, as we have seen, even with advanced theorists who know something has gone badly wrong. Life-value analysis meets such problems by its primary axiom and measure, explained in Chapter *The Primary Axiom and the Life Value Compass* on and systematically addressed ahead as “the life-coherence principle”.

The more prevalent problem is that system irrationality cannot be seen at all by its agents because they presuppose it as necessary and/or good a-priori. Critical philosophers too lack this grounding principle, as Sections 5.15. and 10.11. have explained at the most general normative-analysis level.

12.1.1. The Idea of an Invisible Hand Regulating Competition to an Optimal Result

The idea of an ‘invisible hand’ adjusting supply of private commodities to private money demand by self-maximizing competition among atomic agents is the theodicy of a ruling system which can see nothing else. There has been much said and unsaid about this logic of “the free market”, but the concept of “free market” itself has remained confused. The free market of local and independent artisans not affecting supply or demand explained by Adam Smith has almost nothing in common with the transnational-corporate oligopolist system regulating the world today. At the same time, the universal human life needs and the life support systems which lie at the base of the economic enterprise are blinkered out. If the economics is critical rather than propagandist, the generic life-standard regulators required to govern at the system level are lost in local examples without a principled ground of alternative.

12.1.2. Logical Confusion Reigns

Logically speaking, one cannot deduce from *what many individuals with money want in*

private markets the meaning to *what their common organic, social and ecological systems require through generational time to reproduce and flourish*. The meanings of the italicized predicates are not remotely equitable or deducible from the other. Only magic thinking can bridge the yawning logical gap, and only habituated presupposition of it can fail to recognize the absurdity of the equation. This is the logical core of the problem. But it is fortified by other mythic equations. Purchases of commodities are equated to an increase of utility or happiness, although the commodities may cause ill-being. “Consumer choice” by individuals possessing money is thought to be the meaning of “freedom and democracy”, although the majority have less. We may see in these and other instances how the reigning thought system has locked into a life-blind circle of conception.

12.1.3. System Idolatry an Old Impasse, Global Life Despoliation a New Problem

As in past orders but more dangerously, system idolatry entails perception of it as inexorably driven by higher laws which mankind cannot modify or interfere without punishment for deviation. Thus it is common to hear “the market punishes hard those who deviate from its laws” and “necessary sacrifices must be made to achieve development” – perhaps the lives of millions. This is what we have called “the system God”. One may observe this phenomenon all over – for example, in the pages of the *Economist* a lead common journal of the world’s elites over 150 years. Even if the god-system worshipped is no longer transcendent but immanent within the reigning order itself, faith in the infallible perfection of its design permits no other resolution to its problems than by its mechanism. Thus as system depredations of the conditions of existence become demonstrable, official solutions can be conceived only in its terms. That is why “the magic of the market” is called upon to reduce runaway system carbon pollution destabilizing global weather cycles by government rights to pollute rather than trade regulators to stop the polluters. Again and again, the system’s rule is extended to meet its own failures. The system’s rule is extended to meet its own failures. This is the economic meaning of Einstein’s observation, “we cannot solve the problems we face with the thinking which created them”.

In place of market magic, *social rations* of fossil-fuel consumption would directly reduce the pollution as has worked so well in emergency in the past. But such a solution remains unspeakable without a trading scheme for profit to fit the reigning system. The already-proven policy is therefore ruled out before consideration of it. In such ways, the ruling paradigm locks out corrections of its failures at all levels – the hallmark sign of its senescence. Yet even interconnected and dramatic collapses of the world’s life and life support systems continue to escalate with no connection back to the growth system itself as the causal mechanism. “Insanity”, observes Albert Einstein again, “is doing the same thing over and over again, and expecting different results”.

12.2. Recognizing the Connected Disasters and Their System Causal Mechanism

The phenomena of life and life support system despoliation relate back to a common cause, but system worship does not permit question of what is worshipped. Scientific reason goes deeper. It seek disconfirming instances of depredation of life and life by any *other* causal mechanism, and it finds the profile of confirmation spell out:: from the

bottom-scraped floors of oceans and phytoplankton-surfaces on which all life ultimately depends to continent-size rents in the ozone layer filtering deadly solar radiation. Which of the ecocidal destructions has *not* been step-by-step commissioned by self-maximizing money-value inputs seeking to become limitlessly more?

A May 10 2010 Report from the Convention on Biological Diversity (CBD) and the UN Environment Programme (UNEP) has concluded that “unless radical and creative action is taken quickly to conserve the variety of life on Earth, natural systems that support lives and livelihoods are at risk of collapsing”. It has warned that “business as usual is no longer an option”. Yet the unifying causal mechanism is still vague in conception, and the nature of the radical action required is undefined. One may pause here in reflection. What science, philosophy or economics school or discovery has identified the system causal mechanism *or* the logic of its resolution in principle?

The ruling system cause of the global crisis of life and life support systems is taboo to name, as explained in Sections 3.11, 9.13, 10.8, and 11.12. Cause-effect thinking at the system-wide level is suspended. This is why attention is focused on identifying any *other* threat to common security than the regulating system itself. No structural resetting has been worked out

12.2.1. The Pattern of Planetary Ecocide:: What Is Not Caused by What is Unnamed?

The systematic scope and depth of the world crisis of social and ecological life infrastructures need a unified delineation – from destabilized atmosphere, climate and hydrological cycles to uncontrolled carbon emissions by ever-rising commodity production and consumption. Which is not traceable back to the same common cause? What of the air quality people cannot breathe or are made ill by in the exploding business cities of the earth and the regions downwind from them? What of the fresh water left and available in aquifers and rivers across the Americas and Asia which have been exhausted and polluted by agribusiness, industry effluents, and ever larger-dollar schemes? What of the earth mantle and friable soils denatured, contaminated and depleted by factory farming, chemical inputs, exposure and overuse by mono-cropping for profit-rich markets? What of the oceans’ larger fish and fish stocks which have been stripped out by factory trawlers in ever wider depleted zones across continents? What of forests clear cut until only one percent of old-growth remains on earth with forest habitats still annually transmuted in country sizes into global market pulp-and-paper sales with tree plantations with no life left in them as the replacement? What of species extinctions and collapses thousands of times greater than the natural background rate featuring crashes of larger mammals and song birds to coral reefs to amphibians by destruction or poisoning of their habitats from high mountains to the world’s once richest seas?

The list of collapsing life and life support systems could be extended, from the oceanic feeding base of phytoplankton which is down 40% to the polar fresh-water ice caps melting into salt oceans. One principled generalization, however, captures the logic of the cause-effect mechanism across all these domains of cumulative collapse. No life or life support system is not in decline (*effect*) and every one is degraded or degraded

further by the same self-regulating corporate system (*cause*). Two deep-structural questions thus arise. Where in all the sciences, philosophies and economic schools does one find these cause-effect connections explained as a unifying mechanism? Where is a life-coherent system alternative conceived? The concept of “sustainability” is ubiquitous, as we know, but fails to answer either question. Rather, sustainability of corporate profits has been the code meaning under mantra repetition of the public slogan.

12.2.2. The Same Ruling Value Mechanism Is Blind To and Degrades Human Life As Well

If the ruling money-sequence growth system depletes the environmental conditions of human life, natural resources and sinks, it degrades and destroys human life as well by transitivity. This is well known, and the underlying principles are explained in Sections 6.7, 8.7.3.1 and 11.6.

Prior sections like Section 11.6 have spelled out why the system depletes human life and human life standards by the very logic of its growth. While it must be acknowledged that present elites enjoy very high standards in terms of life goods by privileged existences, universal human life goods for the vast majority annually deteriorate the lower and less secure one’s position is within the global system whose extremes of wealth and impoverishment escalate at the same time. It is well known now that the two hundred or so richest people in the world have accumulated assets that exceed the combined gross domestic product (GDP) of the 48 least developed nations, and that this same few hundred individuals have a combined wealth equal to the annual income of almost 50% of the world’s population. What is bracketed out of the figures is that they are system-caused results

In general, the trends of human quality of life on the planet in terms of the defining life goods identified in Section 10.12. are plummeting, and their downward slope is propelled by the same common cause. As a rising half of the world is destitute, public sectors and services are also privatized for profit, ever more of the younger generation have no vocational prospects, general exposure to deadly diseases increases by de-regulated working conditions and commodity toxins, and a global culture of increasing violence entertainment, waste and military spending continues or rises. Yet neither the catastrophic meta-pattern nor its causal mechanism is defined by the sciences.

As the explanatory analysis of the previous chapter has shown, international institutions to protect and serve the most vulnerable and least well-off persons and peoples are simultaneously ignored and unenforced. Again the macro mechanism at work is undeniable. Simply put, the system is structured and state-subsidized to grow corporate money-sequencing rights and demands first, while life-protective-and-enabling standards are simultaneously pre-empted or overridden as “barriers” to this growth. We need not re-iterate Chapter 11’s (*The Unseen Global War of rights Systems and its Principles of Resolution*) explanation. Comprehending the system pattern is demanded by scientific rationality, but is blocked against.

12.3. The Ultimate Issue:: Society's Rule System Decides Life as Better or Worse

The rules and governing institutions of a social system – ancient, feudal, capitalist, or socialist at the highest level of abstraction – are not given by Nature or God. They are constructed by societies with what they have to work with through generations. Yet what may be traceable in regulatory construction through every step appears to those who inherit the regime as given from without as iron necessity. The rule-system appears to be governed by physical laws, as explained in Sections 1.5, 3.4 and 9.5.2.

Even revolutionary science presupposes this logic of necessity, not distinguishing between rigidly governing rule systems within material ranges of material possibility and means, on the one hand, and inexorable laws of natural and human history, on the other. Karl Marx himself may have believed in the latter, but he was implicitly refuted by the very movements in his name. They succeeded most in preponderantly peasant societies without a capitalist wage-worker base which Marx assumed necessary to socialist revolution. In effect, these revolutionary societies dropped Marx's theory to act against the ruling order's deprivation of the majority's means of life. Such revolutions have proved that societies can evolve by their own rule systems within their ranges of material possibility, and that they work to the extent that they better provide universal human life goods, as criterially defined in Section 9.14. This is the sound value compass and measure by which stasis, change, reform or revolution can be scientifically and onto-axiologically judged as better or worse through time and in comparison across societies.

12.3.1. The De-Grounding of Economic Science

This is the value constant of judgment in any condition. Whoever is in charge and whoever is scientifically evaluating, the only rules that work in game or reality are *what better enable people's lives* – the social version of the *The Primary Axiom and the Life-value Compass*. The underlying problem has been denial or ignorance of any universal life-value standard as the prior analysis of this study has shown, or attachment to one which is false. Gross Domestic Product (GDP) is the familiar such standard, total money spent on commodity goods and services. It is undergirded by the utility calculus of the ruling economic science. What is not discussed is the complete break of this value calculus with classical political economy itself. What had been *necessary labor hours* at the average of its sector as the measure of the worth of a good – a value calculus evolved through Adam Smith, David Ricardo, and Karl Marx - was abolished. It was replaced by *money-price paid* as the measure of value. This was much easier than the scientific heavy lifting of establishing the necessary labor hours of society to produce any good to identify its *labor value* – what people actually had to do to produce the goods sold. The new surface money count had another easy advantage. It boxed out all former burning issues around the labor which made the value of goods not profiting from them – a problem not resolved, but eliminated by erasing class divisions and their conflicts of interest from the new economic science.

The value of anything now was the money price it could get on the market, period. All deeper value issues which have been the object of this inquiry and many others were thus erased (e.g, the issues specifically raised in Sections 2.4. and 3.6.). Once yoked to

money demand only as the measure of value, “revealed preference” as the new economics called it, anything was possible. The false equations multiplied. The only deciding parameters of value were money-demand accumulated and spent. Each equaled investment and consumer demand respectively, with commodities as the middle term. Their rise equals Growth, and Growth equals Prosperity, which equals Welfare. Freedom is the freedom of accumulated money demand to grow free from state interference, and of consumers with money choosing how to spend it as they please without taxes. The magic thinking metamorphoses of each into all and back into each was the unseen circle of the new de-based science of “neo-classical economics” and “neoliberalism”.

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Gandhi, M. (1935/2000), *The Bhagavad Gita according to Gandhi* 245 p. Berkeley, Ca.: Berkeley Hills Books.[Gandhi conceives the dynastic war of the Gita as an allegory for the inner war of the soul between the divine atman and the selfish forces of avidity.]

Georgescu-Roegen, N (1971), *The Entropy Law and the Economics Process*, 277pp. Cambridge Mass.: Harvard University Press. [This is an unanswered critique of neo-classical economics, "the new economics", by a trained physicist and economist demonstrating that the reigning model of economic science violates the second law of thermodynamics.]

Glasbeek, Harry (2002), *Wealth By Stealth:: Corporate Crime, Corporate Law and the Perversion of Democracy*, 286 pp. Toronto:: Between the Lines Press. [This work by a professor of law explains how the law protects corporate entities from rules and regulations that bind ordinary citizens to the virtual exclusion of any responsibility beyond stockholders.]

Gould, S.J. (1989) *Wonderful life :: the Burgess Shale and the nature of history*, 347 pp. New York:: WW. Norton. [A distinguished paleontologist examines the long extinct vertebrate world of the Burgess shale fossils in wider concern to rebut evolutionary-tree theory.]

Hartmann, Nicolai (1950), *Ethics*, 821 pp. London:: Allen and Unwin. [Originally published in Germany as *Ethik* in 1926, the author follows an ancient philosophical tendency since Plato to conceive moral values as akin to pure mathematical forms.]

Heidegger, M. (1977), *The Question of Technology and Other Essays* (trans. Lovitt W), 182 pp. New York:: Garland. [In this influential work, Heidegger explores the lamentation that "everywhere we remain unfree and chained to technology" (p. 5), an explanation in which technology's economic value selector and regulator is typically blocked out.]

Heraclitus (1987), *Fragments*, (trans. Robinson, T. M. as *Heraclitus, of Ephesus*), 214 pp. Toronto :: University of Toronto Press [Text and comments on arguably the first physical scientist whose recognition of perpetual change by conflicted tendencies is most prominent.]

Hobbes, Thomas (1651/1958), *The Leviathan*. Parts One and Two, 299 pp. New York:: Liberal Arts Press. [A first classic of the modern canon, Hobbes argues on a mechanistic basis that men are matter in motion moved by appetites and aversion, above all towards "power after power that ceaseth only in death" whose generation of interminable conflicts and war breeds an existence which is "nasty, brutish and short" until all yield up their powers unconditionally to an absolute sovereign, "the Leviathan" which "bears their persons" and imposes the peace by which all can live in fear only of it.]

Hodgson, Bernard (2001), *Economics as Moral Science*, Heidelberg:: Springer Press. [A scholarly critique of formal consumer choice theory which lays bare its dehumanization.]

Honderich, T. (1995), *The Oxford Companion to Philosophy*, 1009 pp. Oxford:: Oxford University Press. [A comprehensive and reliable dictionary of philosophy by experts in the field with useful bibliographies and philosophical maps.]

Hume, David (1960/1888), *A Treatise of Human Nature*, 709pp. Oxford:: Clarendon Press [Hume's classic study marks a turning point in philosophy towards what is now called "instrumental reason", characterizing the relation of reason to the passions as the opposite to the classical conception of reason as ruler from Plato to Spinoza: "reason is the slave of the passions, and can never pretend to any other

office than to serve and obey them”:: a prototype position of modern rationality which posits rationality as self-maximizing choice of desire objects.]

Huxley, Aldous (1956/1990), *The Doors of Perception-Heaven and Hell*, 185 pp. New York:: Harper and Row. [Deploying William Blake’s concept of “the doors of perception”, this is Huxley’s classic account of epistemological experimentation with mescaline-psychedelic in which “the brain’s reducing valve” of habit-formed selective perception is suspended with opposite possibilities of experience, “heaven and hell”.]

International Forum on Globalization (IFG) (1998). *The Siena Declaration On the Crisis of Economic Globalization*, Siena, Italy, September, 1998. [As cited in the text.]

James, William (1902/1990), *The Varieties of Religious Experience*, 517 pp. New York :: Vintage Books. [James here combines his scientific pragmatism with validating recognition of religious experience leading to the notion of “a mother sea of consciousness” as a dynamic “finite God“.]

Jonas, Hans (1966), *The Phenomenon of Life:: Towards a Philosophical Biology*. 303pp. New York:: Harper and Row. [A rich phenomenological study of outlooks on life and the human condition which is insightful on the modern alienation between the natural organic world as lifeless mechanism (*res extensa*).

Jablonka, E. and Lamb, M. (2005), *Evolution in Four Dimensions*, 472 pp. Cambridge Mass.: Bradford Books/MIT Press.[This book importantly argues against a received one-way dogma that evolution is a developmental system in which not only genes but heritable variations play a role in evolution through epigenetic, behavioral, and symbolic processes which can modify DNA sequences themselves by selecting which genes switch on and off.]

Jackson, T. (2009), *Prosperity without Growth*, 264pp. London:: Earthscan. [Herman Daly’s Forward captures what received economic science, economics and growth development have ignored - “throughput, the metabolic flow of useful matter and energy from environmental sources through the economic subsystem (production and consumption) and back to environmental sinks as waste”.]

Johnstone, D.B. *et al* (1998) “The Financing and Management of Higher Education:: A Status Report on Worldwide Reforms, 56 pp, Washington, D.C.: World Bank. (This influential work prescribes “entrepreneurship” by “institutions, departments, and individual faculty” to “improve education” and “benefit societies” without response to arguments of contradictions in principle between the nature of higher education and research and commercial models.]

Kant, I. (1992) *Cambridge Edition of the Works of Immanuel Kant*, 15 vols. Cambridge:: Cambridge University Press. [This includes all Kant’s work featuring *inter alia* his onto-axiological schism of rationality from the realm of desires and market mechanism.]

Kripke, S. A.(1980), *Naming and necessity*, 172 pp. Cambridge, Mass.: Harvard University Press. [This exemplifies philosophy as both scientific and concerned with objective explanation of ultimate categories – here the concept and referent of “natural kinds” (i.e, names like those for water or the human species which retain their meaning in all contexts as “rigid designators”, *not* mere conventions but necessary in all worlds.)

Kropotkin, P. (1955), *Mutual Aid:: A Factor of Evolution*, 362 pp. Boston:: Extending Horizons Books. [This is a classical argument for cooperation as a factor of evolution as distinguished from Darwinian competitive struggle alone, providing a wealth of data of pre-capitalist cooperative social formations.]

Kuhn, T.S. (1962), *The Structure of Scientific Revolutions*, 209 pp. Chicago:: University of Chicago Press. [This is canonical text on paradigm shifts in science following persistent anomalies building towards crises in the “normal science” of the day.]

Lane, R.E. (2000), *The loss of happiness in market democracies*, 465 pp. New Haven, CT:: Yale University Press.[This empirical study shows that rising income and growth negatively correlate with reported happiness after a line of sufficiency is exceeded.]

Lieber, J. (1975) *Noam Chomsky:: A Philosophic Overview*, 192 pp. New York:: St. Martin’s Press. [This work explains Chomsky’s linguistic theory and seeks to connect it to his analysis of public affairs via the unifying idea of an autonomously rational human nature.]

Locke, John (1690/1950), *The Second Treatise on Government*, 139 pp. New York:: Liberal Arts Press. [Founding classic of liberal value theory arguing for private property by labor right, but negating labor and non-scarcity provisos by introduction of money.]

Mackie, J.L. (1977), *Ethics:: Inventing Right and Wrong*, 249 pp. New York:: Penguin.[This text is representative of the dominant subjectivist view of Ethics that values and moral principles are merely “preferences”, with Mackie specifically arguing that any and all moral or ethical judgments of right and wrong, good or bad, are “false”.]

Manno, J.P. (2000), *Privileged Goods:: Commoditization and Its Impact on Environment and Society*, 252 pp. London:: Lewis Publishers.[This is a definitive documentation by expert witness of the devastating effects of the commodity measure of efficiency on ecological systems.]

Marcuse, H (1964), *One-Dimensional Man*, 260pp.Boston:: Beacon Press [Marcuse’s most famous work which was a central text of the 1968 student uprisings in Europe and America, a critique of capitalist technological culture and its reduction of life to a totalizing consumer-management culture legitimated by scientific positivism.]

Marx, Karl and Engels, F. (1975-), *Collected Works of Marx and Engels*, 44 vols. (Eds. R. Dixon et al). New York:: International Publishers [Marx’s tension between ultimate normative concerns and scientific positivism is of greatest relevance to this study.]

McMurtry J. (1986) “The Argumentum Ad Adversarium”, *Informal Logic*, VIII.1, 27-36. [Explains the underlying logical disorder of fallacies by diversion (ignoratio elenchi) as forms of switching the issue to an accepted enemy or adversary of the community addressed (e.g. “communist”, “liberal”, “unbeliever”), a track-switch of thought which is argued to be an widely regulating form of fallacious thought and social being.]

McMurtry, J. (1988) “The Unspeakable:: Understanding the System of Fallacy of the Media”, *Informal Logic*, 41::3,133-50. [This analysis sets out the general regulating framework of the “ruling value syntax” as a system of rules selecting against whatever invalidates the presupposed ruling order of control over society’s means of existence, and for whatever validates it - in correspondence to the degrees of each.]

McMurtry, J.(1998), *Unequal Freedoms:: The Global Market As An Ethical System*, 372 pp. Toronto and Westport CT:: Garamond and Kumarian [This work lays bare the ethical assumptions and assertions of classical, neoclassical and contemporary ethical and political theory as well as policy of the “liberal market order” as a global value system.]

McMurtry, J. (1999), *The Cancer Stage of Capitalism*, 311pp. London and Tokyo:: Pluto and Springer Press. [This study is introduced by a study of life-blind structures of thought since Socrates up to the current global system, and diagnoses the emergent world disorder as a carcinogenic autonomization of private money sequencing coupled with failure of social immune system to detect the derangement on the social level of life organization.]

McMurtry, J. (2002), *Value Wars:: The Global Market versus the Life Economy*, 262pp. London:: Pluto Press [This volume explains the underlying epochal principles of opposing value-systems in the ‘new world order’ across phenomena of wars, social system conflicts, ecological crises and public-sector meltdowns with a set of constitutional life standards for the global system.]

Merchant, Carolyn (1980), *The Death of Nature*, 292pp. New York:: Harper and Row.[This work provides a prototype eco-feminist analysis of the images of modern scientific mechanism since Bacon and their violent usurpation of the prior central metaphor of ‘earth as nurturing mother’.]

Mill, J.S. (1860/1996) *Utilitarianism*, 260pp. New York:: Oxford University Press [This volume contains up-to-date commentary on the classic statement of utilitarianism. Mill’s recognition of consistency with a “socialist order” are blocked out of contemporary market-utility science.]

Miller, Peter and Westra, Laura, eds (2002). *Just Ecological Integrity:: The Ethics of Planetary Life*, Boston:: Rowman and Littlefield. [Representative text of original work in environmental ethics by philosophers, social scientists and ecologists on the occasion of the Earth Charter.]

Mirowski, P. (2000), *Machine Dreams*, 540 pp. Cambridge:: Cambridge University Press [This study tracks the machine model in contemporary market economic theory into the “automaton theater” of

economic, military and decision-theory research, implicitly exposing the life-blind presupposition of limitlessly self-maximizing asset gain by market and military strategic rationality structured as a mechanical process.]

Monbiot, G. (2000), *Captive State:: The Corporate Takeover of Britain*, 430 pp. London:: Macmillan.[This analysis excels as a documented paradigm case of how contemporary states have been captured by private corporate power across ministries.]

Moore, GE (1909), *Principia Ethica*, 272 pp. Cambridge:: Cambridge University Press. [This is the classic work of ethical theory of the twentieth century, and paradigmatically exhibits the atomic-agent premises and world disconnection which have typified the dominant analytic school of Anglo-American moral theory since David Hume.]

Nadler, Z. (1975), *Values and Valuations*, 191 pp. Oxford:: Clarendon Press. [Useful scholarly account of what value systems are which, as others in the formalist tradition, avoids discussion of any substantive value.]

Newson, J. And Pollster, C. (2010), *Academic Callings:: The University We Have Had, Now Have And Could Have*, 388 pp. Toronto:: Canadian Scholars' Press. [This collection of 29 essays by senior scholars across the sciences and humanities provides rich inside analysis of the corporatization of universities and higher research, including by Joel Bakan, Frank Cunningham, Len Findlay, McMurtry, Dorothy Smith, John Valleau/Paul Hamel, and Woodhouse.]

Nietzsche, Friedrich (1964), *The Complete Works of Nietzsche* (ed. O. Levy). New York:: Russell and Russell. [Includes Nietzsche's master idea that "values are constructs of domination", with "slave morality" too as a will to power moved by resentment against the rule of "nature's aristocracy" to whose "free expression" inferiors "must be reduced to slaves, to tools".]

Noonan, J. (2006), *Democratic Society and Human Needs*, 264pp. Montreal and Kingston:: McGill-Queens University Press. [This study uniquely provides a life-grounded theoretical comprehension of liberal philosophy and doctrine across centuries and its conflict with human needs at the core of its program, explaining the underlying principles of struggle against this ruling ideology and its capitalist base as a movement of need-satisfying social democratization.]

Nozick, R. (1974), *Anarchy, State and Utopia*, 367pp. New York:: Basic Books. [This influential work rejects liberal arguments for equality of rights in favour of the rights of private property to trump any redistribution by taxation or otherwise as unjust.]

Nussbaum, M. and Sen, A. eds. (1993) *The Quality of Life*, 453 pp. Clarendon:: Oxford University Press. [Major collection of by philosophical leaders in the field including the editors, G.A. Cohen, Onera O'Neill, Hilary Putnam, Charles Taylor, and Michael Walzer, on equality, capability and well-being, gender justice, and standards of living, none of which grounds in life-value criteria or life support systems.]

Olson, M.(1965) *The Logic of Collective Action:: Public Goods and the Theory of Groups*, 176pp. Cambridge Mass:: Harvard University Press. [Along with Arrow's Paradox, the classical and more comprehensive statement of the problem of collective action based on individual choice functions alone.]

Ostrom, Elinor (1990) *Governing the Commons:: The Evolution of Institutions for Collective Action*, 280 pp. Cambridge Mass:: Harvard University Press. [Recipient of the 2009 Nobel Prize in Economics, Ostrom revealingly confines her study to small-scale commons organized and governed by individuals without government funding, legal enforcement or life-value criterion.]

Pareto, Vilfredo, (1971 [1906]), *Manual of Political Economy*, New York:: A.M. Kelley [This classic of rational choice theory and economic reason is the source of the famous principle of "Pareto optimality/efficiency", based on dyadic asset exchange with no relation to life needs.]

Patel, Raj (2009), *The Value of Nothing:: Where Everything Costs Much More than We Think*, 250pp. Toronto:: Harper-Collins [As the title indicates, explains how contemporary economic science and policy blinkers out the most important costs.]

Perry, R.B. (1969), *Realms of Value:: A Critique of Human Civilization*, 487 pp. Cambridge:: Harvard University Press. [Perry provides the most comprehensive argument for the general value theory of the

good = what is desired:: att a second-order level, an axiology to justify the value-system of a market order.]

Plato (1961), *The Collected Dialogues of Plato* (ed. E. Hamilton and H. Cairns), Pantheon Books:: New York. [The complete dialogues of philosophy's most famous author and his pervasive interlocutor model, Socrates, whose "Theory of Forms" posits pure, transcendental and eternal ideas of which all material entities are but inferior, mutable copies.]

Polanyi, Karl (1944/2000), *The Great Transformation*, 315 pp. Boston:: Beacon Press. [This canonical study lays bare a great fabric of violent life transition from pre-market village society through the utopian free market cataclysm to the 1944 understanding of community instituted by public institution and the welfare state.]

Press, Eyal and Washburn, Jennifer (2000), "The Kept University", *Atlantic Monthly* March 2000, 2-13.[A useful article which exposes the private funding distortions of the contemporary academy.]

Radhakrishnan, S. and Moore, C. (1957), *Sourcebook in Indian Philosophy*, 683pp. Princeton:: Princeton University Press. [This is a comprehensive collection of Indian philosophy and non-Western value understanding, including the full texts of the eleven principal Upanisads and the Bhagavad-gita, and substantial selections from early and late Buddhism.]

Rawls, J. (1971), *A Theory of Justice*. 542pp. Cambridge Mass:: Harvard University Press. [This is the recognized definitive work of the twentieth century in political philosophy, using a contractarian model to discover principles of justice with its paradigmatic starting point the principle of self-maximizing rationality "including wanting a larger share for oneself". A "veil of ignorance" over one's faculties and conditions of life decouples from conditions of life a-priori.]

Reid, G.B.R. (2007), *Biological Emergences:: Evolution by Natural Experiment*, 517pp. Cambridge Mass:: MIT Press.[This work by a biologist explains how the "autocatalyzing" organism is a coordinating system which reduces infinite interactive possibilities to predictable pathways of homeostasis but is sufficiently flexible to allow for emergence of new types of life, "evolution by natural experiment". Confirms life-coherence principle at organic biological level.]

Rescher, N. (1969), *Introduction to Value Theory*, 205 pp. Engelwood Cliffs, NJ:: Prentice-Hall.[This monograph by the most published analytic philosopher of the last century exemplifies the era's formalist method and symbolic notations purged of substantive issues.]

Robert, J.S. (2008), *Embryology, Epigenesis, Evolution*, 290pp. New York:: Cambridge University Press [The one-way, reductionist "genomania" which has swept over contemporary evolutionary biology and popular thought is critiqued as inferior science.]

Rorty, R. (1989), *Contingency, Irony and Solidarity*, 289 pp. New York:: Cambridge University Press. [With his earlier *The Mirror of Nature* (Princeton:: 1979), this work is the most prominent text of the anti-foundationalist movement in philosophy, denying any common standard of truth or value].

Rousseau, Jean-Jacques (1984), *Discourse on the Origin of Inequality* (trans. M. Cranston), 182 pp. Harmondsworth, Middlesex:: Penguin Books [Rousseau famously conceives human beings in their natural state of human language, reason and species sympathy before private property, division of labor and vain desires corrupt and alienate them.]

Rousseau, Jean-Jacques (1968), *The Social Contract* (trans. G.D.H. Cole), 100 pp. Harmondsworth, Middlesex:: Penguin Books [Rousseau's best known but widely misunderstood work featuring the grounding idea of 'giving the law to oneself' to resolve the conflict between individual freedom and state law, with citizens rationally willing "the common interest" to together achieve the "general will" of democratic government.]

Russell, Bertrand (1983-), *Bertrand Russell:: Collected Papers*, 29 vols. London:: Allen and Unwin. [Includes Russell's prolific corpus of philosophical and public works, including his of 'type theory' of logically higher and lower order classes of properties (e.g, the color property of colored objects is a higher order property than the combination of all of the members of the class of colored objects). His works on denotation and description, the logical foundations of mathematics, sense data and logical atomism, neutral monism, and probability comprise a string of innovative technical solutions and theories to resolve paradoxes of logic and science. He regretted twentieth-century philosophy's wide abandonment of

“understanding the world itself”, that grave and important task which philosophy throughout has hitherto pursued”].

Ryle, G. (1976) *The concept of mind*, 334pp. London:: Hutchinson. [This famous work in analytic philosophy explains externalist science standpoint as valid, reducing the human mind to a “ghost in the machine” when [a machine of] behavioural dispositions is all that is at work.]

Samuelson, Paul and Nordhaus W.D. (2005), *ECONOMICS*, 784 pp. New York:: McGraw-Hill. [The standard global reference text and classic of contemporary economic science in which cooperative enterprises are excluded and the self-maximizing meta-program is assumed.]

Sartre, Jean-Paul (1972), *Critique of Dialectical Reason*. 2 Vols. London:: Verso Books. [Sartre’s major later work seeks to synthesize undetermined existential individual freedom of choice (of which he is the major philosophical founder) with Marxian dialectical reason and class analysis in which life-coherence principle remains missing.]

Scheler, Max (1973), *Selected Philosophical Essays*, 320 pp. Evanston U.S.:: Northwestern University Press. [A representative collection of Scheler’s work which distinctively holds that values are objective and unchanging objects of emotions and feelings rather than reason.]

Schopenhauer, Arthur (1818/1957), *The World as Will and Representation*, 3 vols. London:: Routledge. [This is Schopenhauer’s definitive work, the classic “pessimistic philosophy” in virtue of its depiction of cosmic life as a round of blind desire, competitive struggle and suffering which leads reason to “denial of the will to live” itself for the quietude of absolute detachment.]

Schweitzer, Albert (1936), “The Ethics of Reverence for Life”, *Christendom*, 1, 225-39. [This is the most crystalline argument for Schweitzer’s flagship “new ethics” rejecting prior ethics like Kant’s. It calls for “an absolute ethics of will-to-live [which] must reverence every form of life, seeking so far as possible to refrain from destroying any life, regardless of its particular type”.]

Searle, J.R. (1997), *The Rediscovery of the Mind*, 512pp Boston:: MIT Press. [In this work, analytic philosopher John Searle argues against the dominant computer model of the mind and of cognitive science in favor of the irreducibly qualitative and subjective experience of consciousness not explicable by physicalist accounts or computational functionalism.]

Sen, Amartya (1977). “Rational Fools:: A Critique of the Behavioral Foundations of Economic Theory”, *Philosophy and Public Affairs*, 6, 317-44. [This landmark article challenges the standard selfish reading of the self-maximizing principle of rationality, with the ambiguous legacy of preserving the principle while completely eliding its dominant expression in money-capital sequencing.]

Sen, A (1998), “The Possibility of Social Choice”, 37pp. Trinity College, Cambridge:: Nobel Lecture [This lecture provides an incomparably rich documentation of the literature on social choice, demonstrating there is no conception of social choice in received social science or philosophy other than as an aggregation of individual choosers, an atomic metaphysics of choice to which social regulators cannot compute in principle.]

Singer, Peter, *Animal Liberation:: Man’s Inhumanity to Animals* (1983). 302 pp. Wellingborough, Northamptonshire:: Thorsons Press. [The definitive work by the best known advocate of animal rights deploys the utilitarian pain-reduction principle to argue against the standardized cruel abuse of domestic animals in factory food production, but fails to see the implication that pain-free domesticated animals have better lives within this condition, which further implies that they ought to substitute for animals experiencing far more pain and suffering in the wilderness.]

Smith, Adam (1776/1966), *An Inquiry into Nature and Causes of the Wealth of Nations*. 2 vols. New York:: A.M. Kelley. [This is the founding work of “the moral science” of economics by a moral philosopher in which the “invisible hand” of the competitive “free market” is understood to produce the “common good” by its self-regulating mechanism of supply and demand. Its ignored proto-evolutionary model of economic science is worth citing:: “Every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it. But in civilized society it is only among the inferior ranks of people that the scantiness of subsistence can set limits to the further multiplication of the human species; and it can so in no other way than by destroying a great part of the children”.]

Spinoza, Baruch (1985), *The Collected Works of Spinoza* (ed. E. Curley), 7 vols. Princeton:: Princeton University Press. [Spinoza's greatest work on *Ethics* is a deductive system modelled on Euclid's definitions, axioms and theorems in which God or infinite substance is conceived as the rational system of the universe in its thinking and extended modes and infinite attributes which can be better (more adequately) or worse (less adequately) comprehended, from vague and emotional experience through general reasoning to scientific intuition (*scientia intuitiva*) of the logically determined whole from the comprehensively rational experience of it - a classical rationalist ideal of the true "self interest" of the individual.]

Taylor, Charles (1989), *Sources of the self: the making of the modern identity*, 601pp. Cambridge, Mass.: Harvard University Press. [Taylor's magnum opus, it is classified as falling within the "communitarian" school of justice for its grounding in historically developed social relations and moral character in opposition to abstract liberal atoms maximizing self benefits.]

Vico, G. (1724/1984), *The New Science*, 445 pp. Ithaca, New York:: Cornell University Press. [Vico argues that humanity can only know for certain what it has created, an enlightenment view reversed by the contemporary idea that society is governed by iron laws it has not created.]

Woodhouse, H. (2009), *Selling Out: Academic Freedom and the Corporate Market*, 360pp. Montreal and Kingston:: McGill-Queen's University Press.[Woodhouse draws upon McMurtry's principles of contradiction between education and market models (1988) to spell out with in-depth case studies the systematic distortion of higher learning and research by the corporate marketization of universities.]

Weisbrot, M, Baker, D, and Rosnick, D. (2006). "The Scorecard on Development:: 25 Years of Diminishing Progress", *International Journal of Health Services* 36,2:: 211-234.[Scientific identification of the pattern of degrading human life systems during market-system globalization.]

Whitehead, A.N. (1938), *Modes of Thought*, 172 pp. New York:: Macmillan [Whitehead's most well known lectures on his "process philosophy" which conceives Nature as "alive", "feeling", "purposing" and ever "creative" in the energy flows described by physics (the totality of which processes he conceives as God), as opposed to "dead" and "inert" in the Newtonian tradition.]

Wittgenstein, Ludwig (1968), *Philosophical Investigations*, 260 pp. New York:: Macmillan. [Perhaps the most celebrated work of twentieth-century philosophy, it leads what philosophers have come to call "the linguistic turn" which decisively disconnects philosophy from the material problems of the world.]

Wollheim, R. (1984), *Thread of Life*, 288 pp. Cambridge Mass.: Harvard University Press. [A Freudian critique of the "thread of life" of an individual in which the roots of moral obligation and values are respectively reduced to persecution and depressive anxieties.]

World Commission of the Environment and Development (1987), *Our Common Future*, 400 pp. New York:: Oxford University Press. [This now canonical text led by an economist, also known as "The Brundtland Report", put the concept of "sustainability" on the world stage, but fails to provide a unambiguous criterion of its baseline concepts of needs and sustainable growth.]

M.E. Zimmerman, J.B. Callicott, J.Clark, G. Sessions, K. J. Warren eds. (1998). *Environmental Philosophy: From Animal Rights to Radical Ecology*. 490 pp. Prentice Hall:: London. (The most critically wide-ranging text in the field of philosophy of the environment with articles by such well-known figures as Thomas Berry, Aldo Leopold (the pioneer of the Land Ethic), Arne Ness (definitive account of Deep Ecology by the founder), Carolyn Merchant (defining excerpts form *The Death of Nature*), James O'Connor (leader of socialism and ecology movement), Tom Regan, Peter Singer, Paul Taylor (animal rights), Gary Snyder (bio-regionalism), and the editors (covering such fields as ecofeminism and social ecology).

Biographical Sketch

John McMurtry holds his B.A. and M.A. from the University of Toronto, Canada and his Ph.D from the University of London, England, and has been Professor of Philosophy at the University of Guelph for over 25 years and University Professor Emeritus since 2005. He is an elected Fellow of the Royal Society of Canada, and his many articles, chapters, books and interviews have been internationally published and translated.