

Free Thought and Free Trade: The Analogy Between Scientific and Entrepreneurial Discovery Processes

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I. The Market Order as an "End-Independent" System

To state with precision and force the economic and moral imperative of the free market has been of the utmost concern to some of civilization's foremost thinkers. From the early writings of the classical political economists and moral philosophers, to the most recent works of modern authors, the combined effect of these intellectual efforts has been the development of an argument displaying increased clarity, urgency, and polarization of theme.

Today, a defense of the open society finds its ultimate foundations based upon neither the vast material prosperity the market generates for members of society nor the many richly diverse moral and cultural institutions created under the tolerant liberty of the rule of law. Rather, its defense rests upon the very process by which these highly valued events were permitted to emerge.

To those who would defend the economic and moral necessity of the spontaneous order, it has become increasingly apparent that a precise, enduring account of the nature of its value cannot be made contingent upon an arbitrarily chosen handful of material or institutional outcomes precipitated by it. It has instead become clear that the market's significance must lie *beyond* these ever changing "particulars," that its efficiency and power must be attributable to some universal quality intrinsic and eternal to its operation through time.

II. Competition as the Engine of the Free Economy

For the individual who finds himself placed almost as if by accident in the wake—*and as waker*—of the explosive evolution of the catallaxy, there can be only one distant feature that can meaningfully be described as its essential and timeless

advantage. This unique asset represents the axiological hallmark of the free economy, and will at once be recognized as such by all who acknowledge the existence of a philosophical correlation between freedom and justice.

The prosperity generated by a free society must ultimately be traced to the market process *itself*. Competition, that necessary and essential method of valuational trial and error or “conjecture and refutation”¹ via the mechanism of profit and loss, is the greatest attribute of the free economy. Competition, the rivalrous struggle for excellence and improvement in the marketplace, is the only process by which the *subjective* significance of privately valued particulars can be rendered *objective* knowledge to individual producers. It is only under a regime of free trade that every decision made for the “good” or “needs” of others can be objectively *tested*, through the attempt—voluntarily—to trade the products of self-effort with others at an agreed-upon price.

The “efficiency” of the free economy, then, is displayed not in one of the many “outcomes”—the diverse array of economic goods and services—its operation generates, but in the power of the very process through which these valued outcomes are discovered and created. It does not refer to a discrete “state of the world” or a point on a “production possibility frontier,” but rather to the essential process of competition, a process generating a continuous sequence of *ever-improving* economic states over time. The essence of the market order is found in that “dynamism and progressivism inherent in capitalism and free enterprise.”² Its virtue is embodied not in a particular “stock” of concrete results, but in a general “flow”—the constant flow of entrepreneurial discoveries spontaneously generated under institutions protecting the right to private property and to contract. The importance of free trade in free markets is displayed not in a final attainment of market equilibrium, but in the process of competitive *evolution*; not in the achievement of Pareto optimality, but in the forces of economic progress.

III. The Analogy Between Market and Scientific Discovery Processes

The dynamic process of free competition, through which all economic improvements are objectively discovered,³ is that procedure in the realm of human choice and action which corresponds to the method of *scientific* discovery⁴ in the domain of human thought and knowledge. The market method may be viewed as analogous to the scientific method. Entrepreneurs form conjectures about consumer wants, and submit these value theories to the test of profit and loss in the same manner in which scientists studying the physical universe formulate and test their hypotheses about the natural world.

The technical similarity between the logic of scientific discovery and the logic of entrepreneurial discovery suggests that there may exist a similar argument for supporting the two methods. Just as the classical liberal defends the importance of the free economy on the grounds that it provides us with the *only* means of

generating impartial and objective knowledge of the relative worths of different entrepreneurial conjectures, so too is the individual scientist compelled to value the scientific method for its unique quality of producing certain, demonstrable knowledge of the relative worths of competing scientific theories. The greatest strength of either system ultimately lies in the *procedure* followed by all. Particular outcomes or theories in both scientific and entrepreneurial realms come to be regarded as significant, efficient, or valuable only in light of the fact that they were fairly won in accordance with the rules of the game⁵ embodied in the method of competitive trial and error.

For both the scientific and market community, then, the guiding principle or rule behind the process of discovery is the *same*: "A 'fair' result is a *tested* result." Or, as Jacob Bronowski stated it, "We OUGHT to act in such a way that what IS true can be verified to be so."⁶ *This* is the principle of equal justice, the principle underlying the entrepreneurial discovery process of competition.

IV. Economic Indeterminacy as the Essential Problem of Central Planning

For both the scientist and the classical liberal, the most highly valued process is that essential mechanism by which our knowledge of the internal (or subjective) and external (physical) worlds, respectively, is increased. The least-preferred system must therefore be embodied in those institutions which would suppress or deny this method of knowledge-attainment, systems which instead produce dogma and demagoguery which discourage the systematic search for epistemic or entrepreneurial truth, and which arbitrarily *dictate* what scientific and economic truth shall be.

The dilemma of the closed society revolves not simply around its inefficiency, lack of prosperity, or failure to industrialize. It is founded on a problem much more fundamental than any of these. The inherent weakness of socialism ultimately lies in its lack of a procedure by which to *test* the economic validity of various programs and plans its rulers might devise for society. Without the impartial test provided through free exchange in the marketplace, an objective measure of the relative values various goods and services hold for others in society is *impossible*. The very use of the term "value" to describe what amount to *untested* entrepreneurial conjectures put into practice by authoritarian regimes is essentially meaningless. The dilemma of the bureaucratized society is a dilemma of *indeterminacy*. A world in which economic plans for satisfying social needs fail to be submitted to the unique and irreplaceable social test of competition is a world in which all such plans must be viewed as equally valuable—or, valueless⁷—to us. This is what Mises meant by the "planned *chaos*"⁸ of socialism. And it is this economic indeterminacy which represents the central problem of the command society.

V. Conclusion: Free Thought and Free Action as the Actualization of Human Potential

Neither economic nor scientific progress can continue for very long if the many individuals who are sustained by its many material benefits fail to value the competitive *process* of "conjecture and refutation" *above* any of the numerous concrete rewards resulting from it. In both scientific and entrepreneurial realms, the highest good manifests itself in that vital and dynamic discovery process by which human progress is made. The argument for *both* free scientific and entrepreneurial inquiry is the same; he who admits the validity of one cannot deny it to the other. What Jacob Bronowski once said of the scientific discovery process holds with equal force for that competitive discovery process that is the market order:

"Science is not a mechanism but a human progress, and not a set of findings but the search for them. . . . Science at last respects the scientist more than his theories; for by its nature it must prize the search above the discovery, and the thinking (and with it the thinker) above the thought. In the society of scientists each man, by the process of exploring for the truth, has earned a dignity more profound than his doctrine."⁹

Notes

1. Karl R. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* (New York: Harper & Row, 1963).
2. Ludwig von Mises, *Bureaucracy* (New Haven: Yale University Press), p. 13.
3. F. A. Hayek, "Competition as a Discovery Procedure," *New Studies in Philosophy, Politics, Economics and the History of Ideas* (Chicago: University of Chicago Press, 1978), pp. 179-90.
4. Karl Popper, *The Logic of Scientific Discovery* (New York: Basic Books, 1959).
5. F. A. Hayek, *Law, Legislation and Liberty*, vols. 1-3 (Chicago: University of Chicago Press, 1973, 1978, 1979).
6. Jacob Bronowski, *Science and Human Values*, rev. ed. (New York: Harper & Row, 1965), p. 58, emphasis in the original.
7. Either term is equally appropriate here, in such an indeterminate world.
8. Ludwig von Mises, *Socialism, An Economic and Sociological Analysis* (London: Jonathan Cape, 1951).
9. Bronowski, *Science and Human Values*, pp. 63, 64.