Book Review Column


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The late William W. Bartley, III, Professor of philosophy of science, and Senior Fellow at the Hoover Institution, Stanford University, has added another important book to his many major publications. It is a well-written, scholarly volume of multidisciplinary essays ingeniously weaving together complex, wide-ranging, pressing problems and issues pertaining to liberty, knowledge and other forms of wealth, and education. The book’s intriguing title refers to Karl Popper’s epistemological limitations created by our unfathomable knowledge, and to Adam Smith’s economics: the unfathomability of knowledge serves as a source of unmeasured wealth. The sub-title embodies the author’s question: “But how much growth of knowledge takes place in these halls of learning?” (p. xviii). Bartley’s negative answer to this question is explained in the Introduction (p.xvii): a “veil of deception” drawn to camouflage the deep chasm between the ideal of the university as a competitive market for ideas, and its reality of acute interventionism demanding allegiance to falsehoods perpetrated by “reigning doctrines, or fashions, or ideologies ... govern[ing] research and appointments in many fields ... stifling much genuine innovation”. The author’s manifesto of liberty follows in a Prologue that can be read independently. It expresses Bartley’s radical approach to liberty: a focus on freedom to (and not to) supply, and freedom to (and not to) receive; and a rejection of any reliance upon the State in matters other than “protection [of a citizen] against certain sorts of dangers from others to his life, health, and property” (p.17). Bartley’s twin-freedoms are a pre-condition for a free order (including property rights) and are, in turn, dependent upon the development of such rights. His wide-ranging State-related examples rule out any thought of compromise: the State is “rarely competent ... it debases whatever it touches” (p.14), and invariably ends in bankruptcy, cultural and fiscal. The volume’s themes are developed in nineteen chapters divided into four parts containing some much revised versions of previously delivered lectures, some new, and others, essays that have been published elsewhere. A Coda extends the Prologue’s theme of freedom of the individual to the freedom of nations.

Part I focusses on two of Popper’s seminal insights: the inherent unfathomability of knowledge - a characteristic which rules out the claim that knowledge is manifest, and severely limits the extent of our ownership and control over knowledge, over other persons, and over the development of the arts and sciences, as it does our powers of prediction, accessibility to knowledge, and prospects of liberty - and objective knowledge (couched within an evolutionary epistemology), knowledge that, to an extent, counteracts the limitations imposed by its unfathomability. For, since objective knowledge may be treated as an external product (like a bird’s nest), it is amenable to detachment (alienation) from its producers, and to critical examination, and education. Bartley’s examples of unfathomable knowledge range from written products like books to manufactured pills or drugs, all sharing a potential for being understood or utilized in an as yet unimaginable way, a potential that may or may not ever be realized. He discusses the use of unfathomable knowledge as “the linchpin” in Popper’s refutation of determinism in all its forms, and in his own complete undermining of the sociology of knowledge, of Marx’s alienation, and of most forms of utilitarianism. Hayek’s ideas on spontaneous orders (like tradition, law, language), and institutions like markets are introduced as parts of objective knowledge that, in the process of their evolution, have become “storehouses” of an unmeasurable amount of invaluable knowledge - fragile orders and institutions requiring care in the handling of such tacitly stored knowledge. Bartley then links
unfathomable knowledge with the goodness of the competitive market process, a goodness manifest in its attributes: a feedback, and signaling device for guiding action, and a "discovery process" facilitating the tackling of problems of knowledge, including how to best utilize existing dispersed, incomplete knowledge, and that of its unfathomability, namely, new knowledge about already existing products as yet not possessed by anyone: and the identification of error.

Part II takes up the book's question on the universities' contribution to the wealth of nations from an economic perspective; and, with the aid of wide-ranging examples, reaches the deeply disturbing conclusion that the organization of universities into guild-like, mutual protection rackets to "control the intellectual landscape" (p.109), minimizes voluntary exchange, and intellectual property in many areas of knowledge. The outcome is an improper channelling of self-interest manifest in a slump in the universities' production of new and true knowledge brought about by a proliferation of failed ideas, of which the most damaging are: the traditionally taught sociology of knowledge - a discipline virtually all the premises of which are contradicted by the theory of unfathomable objective knowledge - and Thomas Kuhn's dictum encapsulated in his claim that, "the abandonment of critical discourse" is what "makes the transition to science" (p. 84). Bartley's analysis of the relationship of economics and epistemology leads him to conclude that, with knowledge as "a primary component of capital", epistemology is made "the economics of knowledge" (p.89); and that economics and epistemology partake with biology, the theory of evolution, and general systems in the broad investigation of the general conditions responsible for nurturing (or hindering) the growth of all forms of wealth, including knowledge. His recommendations for improvement include: Popper's "constitution of learning", with its system of rules facilitating greater competition, as a means for avoiding the deflection of criticism and the entrenchment of false ideas; and replacement of the sociology of knowledge with the economics of knowledge to encourage the practice of traditions of research that aim to increase knowledge, and overcome the recurrent booms and slumps in its generation.

Part III examines the "curious case" of Karl Popper: whereas eminent scientists and the public respond "exceptionally favorably" to Popper's ideas making him, "one of the most celebrated, decorated, and richly acknowledged philosophical, scientific, and literary figures of the century" (p.185-86), in "professional philosophy" he is "the unmentioned, unacknowledged, outsider looming behind most debates" (p.193). For his successful rehabilitation of the critical approach in resolving the crisis that has plagued the philosophy of science from its inception, Popper was falsely labelled a "positivist"; and Popperians, who, through search for new and true knowledge by means of contact, criticism, and communication, are capable to address the wider community and make substantial contributions, continue to remain marginal in university departments that serve only "their own perpetuation", but not "vič u vič the wider culture", where it is members of such departments who are "marginal" (p.206). In his overview of the history of philosophy of science, Bartley includes its major problems as perceived by its leading practitioners. He highlights the structural differences which separate Popper's world view from that of "professional philosophy", particularly the contextual differences between Popper's and Wittgenstein's positions, and the sense in which their respective ideas form a "watershed" causing a "paradigm shift"; and subjects all the ideas discussed, including his own, to critical scrutiny. On the essential differences between Popper and his late student and colleague Imre Lakatos, Bartley gets to the core of Lakatos's takeover of Popper's "metaphysical research Program"; whereas for Popper, in matters pertaining to truth, ideas, not words, count, for Lakatos, "ideas are of secondary importance compared to the names one gives them: if you give your ideas good names, they will be accepted - and you will be named the father" - the public relations tactic successfully tried out by Lakatos in what he had labelled "scientific research Program"; and it won him "great acclaim amongst both scientists and philosophers" (p.269).

In Part IV Bartley "uses" Hayek's insights on how the general "foundations" of modern Western culture came into being, illustrating that the unifying factors of the world's people are of a spontaneous character: when individuals follow, not instinctual demands, but spontaneously arisen "moral standards and legal rules of procedure governing property and commerce", their interaction "brings about spontaneously, and then binds together the extended, open, order of human cooperation" (p.275). He clarifies this point in his Coda, illustrating how music - a "perfect example of [Hayekian] spontaneous order" - serves as a universal rule-based language that, without inhibiting individual expression, enables it to become communication. For his historical
interpretation he draws on Stephen Kresge's insights: the 19th century is distinguished by "a common European and North American culture wherein more individual liberty, and more wealth had accumulated in the course of a mere century than ever before in human history"; whereas the 20th century is marked by divisions rooted in fanaticism expressed in unification by force, and enhanced by explanations of the "cultural relativism of law" fostering the philosophy of "anything goes". His examples are meant to illustrate that it is integral to reflective beings to conceive of themselves not in terms of consensus but diversity: "a subtle mosaic of traditions" (Gray, 1987, quoted on p.271), facilitated only through a general adherence to the rule of law as a means for attaining many different purposes, hence peaceful coexistence. In other words, cultural isolation and protection are detrimental to the human condition, whereas a "culture clash" is beneficial, especially in a modern extended society where it encourages creativity, innovation, and the growth of knowledge. With knowledge "a two-way street", science (a spontaneous social order) is a major unifying factor - a lesson he claims the Japanese have learnt to their advantage, but which most of the leaders of the third world, leaders who respect political or other dogma more than even the "facts" side of science, have yet to learn.

For this reviewer - who, over the past decade, has come to respect and admire the author and his writings, and to enjoy and appreciate his friendship - the development of his innovative insights on the interrelationship of economics and epistemology, conjoined with his twin-freedoms adds up to a powerful argument for the open society with its competitive market process, and rule of law. It is only in regard to some details, and mostly within the domain of economics, that differences in interpretation arise. For instance, Bartley’s subscription to Adam Smith’s view of political economy as a science of wealth raises the question of whether this pre-1870s view may still be accepted as valid, in the sense of giving economics science a nature and scope of its own. I would say not, if we take into consideration the post-1870s arguments, particularly those against its failure to incorporate into economic theory the subjective aspects of the human mind - valuations, expectations, etc. (see Kirzner 1976:chap.2; Lachmann 1986:chap. 2); and the subsequent challenge by the proposition that human (goal-directed) action is better suited to give economics science a nature and scope of its own, in the sense that such action entails plans, hence it alone can explain market phenomena and events. This change in focus is said (Hayek, 1955:31) to have facilitated the greatest development in economics science: "... every important advance in economic theory during the last hundred years was a further step in the application of subjectivism". For it not only embraces all aspects of wealth, but takes economics science to catallactics (exchange in its broadest sense), and, allotting valuaitons, expectations, and other activities of the human mind their rightful place within political economy, it facilitates the elucidation of market relationships over time (loc. cit.). Economics science as goal-directed action thus fits in even better than economics as a science of wealth with Bartley's themes of knowledge as a form of wealth, and twin-freedoms.

In his discussion of the triumph of Ricardianism over Smithian economics, Bartley rejects the argument of continuity in their thoughts as misleading: "the research programs underlying their several approaches are so different in aims, assumptions, and problems" (p.138). He points to Ricardo's emphasis on laws of the division of wealth amongst society's classes in terms of proportions as the cause célèbre that (in words attributed to Jevons), "shunted the [economics] car" along the wrong track. For Bartley it is a track with a different problem of coordination associated with "classical and neoclassical economics out of which the theory of equilibrium arises" (loc. cit.). That more on the problem of economic growth and development may be found in Smith than in Ricardo is not disputed, not so that Ricardo's focus on the division of wealth embodied a different outlook on the subject. For, as pointed out (Kirzner op. cit.:21), those writers who focussed on any one aspect of wealth as the economist's "peculiar interest", saw "the distinctive peculiarity of economic phenomena" as having to do with "a particular class of objects [wealth] as its special province of study". Thus, whilst it is true that Ricardo subordinated the problem of price determination to the problem of the distribution of wealth, not he, but John S. Mill (1871:Books I & II), distinguished between laws of production (arising from technical conditions), and laws of distribution (influenced by institutions, including property distribution as a product of historical change, and society's customs and laws; and it was Mill who seems to suggest (Book III), that distribution is not a matter of "valuation", but of "historical accident", Blaug, 1962:164-65). Not surprisingly, in the economics literature, the so-called "Ricardian vice" refers not to the division of wealth but to Ricardo's methodology - namely, the conjunction of macroeconomics with formalism.
(the use of abstraction to tackle real-life problems). For, whereas macroeconomics came to characterize classical political economy in general (see Eagly, 1974:2, also noted in O'Driscoll, 1977:138), and the emphasis on wealth came to be seen as a contribution to the development of the theory of macro-aggregates, especially in the theory of employment, and economic growth (cf. Lachmann, loc. cit.), not so Ricardian formalism of which there is no trace in Smith; and it was such formalism that, in an important sense, the marginalists' revolution was against. Concerning the timing of that triumph, Bartley's choice (p. 136) of Alfred Marshall's time is not disputed, for it is indeed to Marshall's "counter-revolution" that the development of British 'neoclassical economics' as a "horrible brew" of the merger of marginal utility theory with Ricardianism is attributed (O’Driscoll, op. cit.:139). As for its influence on the theory of general equilibrium, Hayek's remark (1941:47, n.1) that, "the classical English economists since Ricardo, and particularly J. S. Mill ... were in some regards more Austrian than their recent Anglo-Saxon successors", seems to put it into perspective. "Ricardian or classical roots" may indeed be found, inter alia, in Austrian capital theory, notably, his notion of time as a 'measure' of capital, his rudimentary idea on economics at the margin, etc. As for the classical and neoclassical sources of equilibrium, it is among the later Anglo-Saxon economists, the self-confessed Cambridge neo-Ricardians, that one finds a combination of a theory of wealth with Ricardian formalism, a focus on Ricardo's analysis of social classes rather than on individuals, and on aggregate variables rather than on relevant market microeconomic prices. Unlike the general equilibrium approach that allows for the development of a theory of demand, the Cambridge neo-Ricardians' approach (Sraffa ct. al.) has been distinguished (Nuti, 1974:357-58) by its "general equilibrium approach with the preference side chopped off" - the approach that, of the two, is more in the spirit of Ricardian macroeconomic formalism. Both approaches, however, share the defect of an inability to incorporate the activities of the human mind into their theories.

Bartley's association of equilibrium theory with "impersonal forces", and hence with participants who are relieved "of any responsibility for what really does happen..." (p.139), is open to question. For "impersonal forces" (interrelationships) characterize the competitive market process, as in Adam Smith's sense of exchange taking place not from "benevolence"; in Philip Wicksteed's same sense of impersonal economic relations as the best way for pursuing one's interests, and indirectly benefiting others; and in the catalytic sense of the impersonal interrelationships by which Hayek distinguishes his modern extended society from the more primitive face-to-face one. In all three examples, participants must assume responsibility for their actions. In the context of equilibrium theory, "automatic" or "mechanical" are perhaps the adjectives better suited to describe the "forces" that relieve participants of responsibility for what happens. (For further discussion, see Moldofsky, 1982:152-68.)

Bartley's focus on the essential role performed by economic criteria in the assessment of institutions (including halls of learning) is well taken, as is his argument that epistemology and economics are inextricably interwoven. He is also correct to point out that, "to see economics as a branch of epistemology ... will not work" (p.90, n.3). for economics has always included the growth of knowledge among its concerns, whereas epistemology has rarely concerned itself with other kinds of growth that are of concern to economists. But does his opposite view - that the "theory of knowledge [epistemology] is a branch of economics" (p.89) fare any better? Now, if economics is a science with its own nature and scope, then, does not the idea of branches (be it epistemology, labor, agriculture, etc.) imply a compartmentalized, fragmented economics science? This is not to say that epistemology does not come within the scope of economics, but only that the view of epistemology as a branch of economics is suspect, if only because segmentation, be it of economics science, or of knowledge (a Wittgensteinian "vice" severely criticized by Popper and Bartley) is undesirable, or even unwarranted. To put it somewhat differently, it is not disputed here that economics and epistemology are closely interwoven: there can be little doubt that epistemology undergirds economics (as it does any science), in the sense that the direction taken by (scientific) theory depends on the theorist's epistemological framework; likewise, it can hardly be doubted that, when economics is viewed as a science of human (goal-directed) action, every such action, scientific or other, comes within its scope. This means that the principle of human action is applicable to all aspects of social life, including scientific activity, activity pertaining to knowledge and its growth, all of which come within the scope of economics. (For further discussion, see Moldofsky, 1987:336ff). Hence the most that can be claimed here is that economics
and epistemology must confront one another; and that Bartley’s insights on the need to replace sociology of knowledge with good epistemology and good economics are on the whole valid, and relevant.

Finally, Bartley’s (approving) remark on public choice theorists, who link their work to the reform of failed institutions, that they "(...) tend to be influenced by Popper and Hayek" (p.81) raises the question: do they? For whereas Bartley takes a strictly Hayekian approach in his discussion on the fragility of spontaneous orders and institutions, cautioning that attempts to reform them may “make things worse, not better” (p.82), not so the accredited Head of the Public Choice School, and Nobel laureate in economics James M. Buchanan (who, among others, is referred to in the above statement). Declaring himself to be a “constructivist rationalist” (in Hayek’s sense of self-conscious design), Buchanan takes Hayek to task for his cautionary words on reforming spontaneous orders, words he equates with a “counsel of despair” (1977:30-9; and these sentiments reappear in some of Buchanan’s subsequent publications). As for being influenced by Popper, Buchanan reveals (1990, Vol.1(1):12-13), his preference for a Lakatosian scientific research program, stressing the need for some “hard core” aspects in economics to remain outside the domain of critical examination. It would thus seem that, without further explanation or discussion, Bartley’s above remark is at best misplaced.

Though wishing neither to minimize nor exaggerate the above contested points, I would still venture the claim that their significance diminishes in the light of the author’s larger presentation, a claim that I intend to clarify in the following attempt to tackle the question: has Bartley attained the aim of his book’s argument - "to advance liberty, to increase knowledge and other forms of wealth, and to improve education" - and has he addressed its intended readers - those “interested in philosophy, political theory, economics, and education”? (p.viii). I would say that by refraining from “haggling” about details that arise only within particular structures Bartley remained free to do that which others have failed to undertake: examine the “paradigm-shift” associated with the rise, development, and assimilation of Popper’s and Wittgenstein’s ideas, along with connected social and institutional questions. He thus explains and discusses Popper’s “fundamental reexamination of the philosophy of science from within science and on behalf of a more adequate scientific view of the world” (p.183); and he contextualizes Wittgensteinian doctrine of the fragmentation of knowledge, revealing its structure. Concerning the heart of the dispute - that the problem of induction cannot be solved, nor can scientific method be charted in a purely deductive way - Bartley shows (loc. cit.), that this negative conclusion, reached through the chain of argumentation made by (Wittgensteinian) “professional philosophers” from theories of science that are “inductivist, subjectivist, positivist, instrumentalist, behaviorist, materialist, monistic”, is a mistaken conclusion. For, by “unfusing” justification and criticism (that were mistakenly, if “unconsciously”, “fused” by Wittgenstein), and using the nonjustificational character of his approach as the key to his solution, Popper has succeeded to solve the problem of induction to give a “deductivist, realist, anti-positivist, anti-instrumentalist, anti-behaviorist, anti-materialist, [and interactionist] approach that strikingly challenges their method and its conclusion. But Popper’s solution to the problem of induction does more than render obsolete classical philosophy and replace it with a new evolutionary epistemology; for it turned out to be “exemplary” for a wide array of disciplines including: epistemology, the theory of learning and history of art, biology and evolutionary theory, ethics, and educational theory. All in all, there is more to the differences between Popper’s and Wittgenstein’s world views. In Popper’s vision of the world, there is neither perfection, nor the expectation of anyone discovering all there is to discover; for solving one problem brings forth new ones, and “great men make great mistakes” (Popper, 1945: Preface). In Wittgenstein’s vision of the world, the (philosophical) genius (such as he believed himself to be), inspired by a flash of insight, is capable of completing the development of an entire discipline, as, when he wrote his Tractatus. Wittgenstein, “was sure, like Hegel before him, that he had finished philosophy once and for all”: for the genius “arrives at truth by grace, and not by works” (Hampshire, January 31, 1991:3, 4 & 6; see Monk, 1990). On the negative side of Popper’s ideas, Bartley highlights and discusses their major shortcomings, and the extent to which they have been corrected, or even superseded by the attempts of others, including himself (and he does likewise regarding the criticisms of his own ideas, and his responses). It is in this sense that Bartley’s book offers those interested in philosophical theory a fuller, more rigorous, presentation than the usual of the problem situation in modern philosophy, and philosophy of science.

Bartley’s successful attainment of his other aims
is, in a sense, predicated on his above achievements. After all, coming to grips with problems in philosophy is as important for the growth of science as it is for that of philosophy, as Bartley notes in the greatest scientists’ involvement with philosophy, and finds support in Hayek’s observation (1976:267), that “almost all the great economists were also philosophers, and, at least in the past, all the great philosophers were economists”. Not surprisingly, Bartley’s distinction between good and bad philosophy (and epistemology) sheds much light on the problems of education, where he undertakes his analysis from within the system itself, focussing on its structure, and, with a view to the book’s question of whether western universities live up to their tasks as halls of learning, he comes up with both damnation and salvation. His damnation focusses on the system’s above noted anarchistic organizational structure of “fiefdom…” that destroys or excludes whatever may contribute to the growth of knowledge (and other wealth), be it competitive exchange, curiosity, creativity, or imagination, turning western universities into secure fortresses for failed theories that belong in museums for failed ideas. His salvation lies in an understanding that not planned design, but the nurturing of such institutions is required, if an ecology conducive to the growth of knowledge is to emerge, develop, and be sustained. It is here that an appreciation of the role of economics in the understanding, and assessment of institutions comes in, an appreciation which economists must be amongst the first to endeavor to acquire; and this they, like any other scientist intent upon escaping from a primitive, muddled (scientistic) outlook, cannot possibly do without understanding their discipline’s philosophical and epistemological problems. Here Bartley’s elucidation of the fundamental fallacies of the sociology of knowledge - particularly its exclusion of any, and every, thing associated with freedom of choice and voluntary exchange, fallacies emanating from a miscomprehension of, or lack of interest in, economics - and of the philosophical theories that are compatible with it (and with which many an economist is enamored) - inter alia, relativism, conventionalism, instrumentalism, and hermeneutics - offers such practitioners an invaluable service. For it sheds light on how and why such theories are incompatible with, what he terms, the “economics of knowledge”, and alerts them to the high costs exacted from them: the denial of an objective standard; for, giving up the aim for truth, they end up contradicting, and frustrating their own aims.

Though the economics literature abounds with criticisms of the various failures of the theory of general equilibrium. Bartley’s arguments from physics, or logic still add credence to the conclusion that the general equilibrium project “is not just useless, irrelevant, and futile. It is incoherent” (p.137). He also sheds light on the mysterious persistence, or even growing dominance in the economics profession of, inter alia, general equilibrium theory, mathematical economics, and econometrics that “pass as economics” even though they do not incorporate the growth of knowledge, or of any other form of wealth in their scheme of things. Finally, his thesis on the consequences of the unfathomability of knowledge may be applied to unravel some of the mysteries in the history of economic thought. For example, it elucidates the sense in which theories, like those by the two great economists Pareto and Walras, that were conceived in the spirit of catallactic inquiry, subsequently came to play a major role in the altogether different paradigm of general equilibrium. (Cf. Lachmann, op. cit.26.)

For lovers of liberty Bartley also offers that which others have failed to do, namely, a political philosophy that is compatible with Popperian evolutionary epistemology and methodology of unlimited critical rationalism, and with Austrian (Hayekian) economics: his unlimited critical rationalism rejects the ideas of “liberal ideologues” who seek to give liberal values unquestionable claims on reason; and his Popperian epistemology highlights the limitations imposed by the unfathomability of knowledge. Thus, notwithstanding our certainty about “what we are saying and what we are doing, we cannot - because of the unfathomable content and unpredictable consequences that are silently interwoven into virtually every statement we utter, into all our reflections and into every act we commit - know what we are saying or what we are doing” (pp.54-5). It thus follows that, when acting, we’ll do well to consider “the best examined information available”; but, it is futile to attempt “to base morality on calculations, positive or negative, that are impossible in principle”, for the “hard logic of unfathomable knowledge” rejects the possibility of formulating a criterion for moral evaluation (p.55 & n.45).

The ideas of liberal ideologues are, no doubt, rejected by many other writers, but the problem of the unfathomability of knowledge does not necessarily concern those writers, who may thus reach altogether different conclusions. For instance, John Gray shares with Bartley both rejection of the
ideas of liberal ideologues (1989:18) and a concern for real individual human beings in the real world, but, taking a different (philosophical) approach, he reaches different conclusions. Thus, in his discussion of the moral standing of monetarism (ibid:39), Gray argues that if “stable overall prices” is what it is about, then, “monetarism so understood has a clear foundation in ordinary morality”; and he goes on to seek its “justification”, not in the economic growth that stable money is assumed to facilitate, but in a specific list of “the moral hazards of inflation”. His list includes the “corrupting effects on the ethics of contractual exchange”, and “equity”, suggesting a kind of “suffering-minimising negative utilitarianism”, a term used by Bartley (p.54), albeit in a different context, and which Bartley’s conclusions, derived from the problem of unfathomable knowledge, render impractical and refutable, irrespective of whether the actions entailed are or are not “from high morals”. For Hayek too (1988:66), the notion of morals is applicable only to those general and abstract rules that come into play in individual decisions taken in accordance with individual aims”, and hence monetarism does not qualify; the notion of morals is inapplicable to it. As for Gray’s attempt to justify it, as noted above, justification does not stand up to Popperian critical scrutiny, and, as Hayek argues (ibid:69), there can be no moral justification: moral traditions, “cannot be constructed, justified or demonstrated, but their processes of formation can be partially reconstructed, and in doing so we can to some degree understand the needs that they serve”. In his argument for limited government and a market economy, Gray abandons economics science for ethical considerations (p.77), thus literally giving up the only known means for overcoming, albeit partially, the limitations imposed on our knowledge and reason in certain areas (cf. Hayek, ibid:62). All in all, Gray’s philosophy “discourages” him (p.18) “from expecting too much of general principles”, and “teaches” him that “policy and practice are always under-determined by them”. He ends up with a view of limited government as one which “restricts itself to setting a framework ... that encompasses ... policy which addresses the distributural and cultural pre-conditions of a stable market order” - “limited government with positive tasks ...” - a view that smacks of “free market conservatism”, and with a theory of liberty that focusses chiefly on the free market system (ibid:75): “only market institutions can give practical realities to the values of liberty and human dignity”. In contrast, the limitations imposed upon us by the problem of unfathomable knowledge, and the possibilities opened up by objective knowledge, exclude conservatism as the form of liberty from Bartley’s scheme of things; and his twin-freedoms - indispensable to the autonomous independence of the individual - extend his theory of freedom to encompass, and yet go beyond Gray’s emphasis on, free market enterprise: in Bartley’s vision of the world in which we live and work, serious problems emerge side-by-side with possibilities for learning from error, and for gaining access to means that may facilitate a fruitful confrontation of such problems.

That this thought-provoking, radical book (published posthumously a few months after Bartley’s unexpected, untimely death), advances understanding in the areas of liberty, knowledge, and education can hardly be disputed; but whether it will or will not succeed to satisfy the expectations of those readers at whom its argument is directed, is a judgment that, in the final analysis, will be theirs. In any event, the book offers thoughtfully composed headings and sub-headings to ease entrance to its rigourously argued text; the numerous contemporaneous examples drive home many important insights; whilst its extensive scholarly footnotes offer a wealth of information, including invaluable bibliographical material. Its analysis and discussion, pregnant with ideas, offer a special bonus for the more ambitious readers - namely, “sketches” of “two promising lines of epistemological, legal, and economic research...” (p.56). For those who are not familiar with the author’s work, or those who, for some reason or other, rely mostly on Lakatos and/or Kuhn as “authorities” on Popperian ideas, a quick glance at Bartley’s recent achievements may attest to the calibre of his work, and its potential for providing some missing links or filling in some serious gaps in many a research programme. For among such achievements are included: the confidence invested in him by Sir Karl Popper, and by Nobel laureate in economics Friedrich Hayek (to whom this volume is dedicated), two of this century’s greatest minds who have entrusted Bartley with the writing of their intellectual biographies; the General Editorship of Hayek’s Collected Works; and responsibility for publication and editing of the three volumes of Popper’s Postscript to the Logic of Scientific Discovery, where, (1983, vol.1:18-22, 27-8 - the volume which Popper dedicates to him), one may find Popper’s acknowledgement and, what seems to me, acceptance of Bartley’s correction and extension of his “critical rationality”. Bartley’s emphasis on the direct relationship between
the health of our institutions and our willingness and abilities to shed false theories and misguided assumptions that distort our vision, and his uncompromising emphasis on a methodology that shies away from accepting anything at face value, anything that relies on justification, and excludes critical examination make this book a timely publication in a troubled world of extraordinary change, a publication deserving a wide readership.

References
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