

The Challenge of Man's Future

Reviewed by Dennis Morgan

Published in 1954, Harrison Brown's *Challenge of Man's Future* certainly qualifies as the first "missed/misused signal" within the past 60 years since most of the parameters/variables for global analysis in Brown's study (i.e. population growth, resource depletion, alternative energies, and food production) were established.¹ Also, though *The Challenge of Man's Future* was published just a couple of years earlier than Hubbert's Peak, it is obvious that Brown drew upon M. K. Hubbert's pioneering work.² Furthermore, Brown's work was also influenced by Sir Charles G. Darwin's *The Next Million Years* (published in 1932), which Brown devotes a section of his final chapter to, describing it as "stimulating and highly provocative."³

Though Brown's work was considered "radical" at the time, he was vindicated in 1973 (shortly after the publication of LtG) when he received the Penrose Medal by the Geological Society of America. As an Associate Professor of the University of Chicago's Institute for Nuclear Studies and then Professor of Geochemistry at the California Institute of Technology, Brown approached the "challenge of the future" from a strictly scientific vantage point, emphasising the problems of exponential population growth and resource depletion while advocating research for alternative energies, technologies for the increase of world food production, and a foresight-conscious world development program.

Brown's book is divided into seven chapters with short, succinct titles. The first chapter, "Emergence," tells of an imaginary people thousands of years ago who established a civilisation, which grew to three million before collapsing due to excessive population growth, resources depletion, and environmental degradation. The second chapter, "Status Quo," describes the problems confronting the expansion of machine civilisation. In this chapter, Brown also proposes an end to war through the prevention of human misery. The third chapter, "Vital Signs," offers excellent diagrams through which to illustrate the problem of population explosion, which Brown focuses on exclusively. In this chapter Brown depicts how population can eventually level off, links patterns of birth with patterns of culture, considers the impacts of increased longevity, and discusses various methods of contraception. In Chapter four, "Food," Brown considers a number of ways to increase world food supplies and concludes that a twenty five fold increase of food supplies is possible through a variety of sources (including hydroponics and vast algae farms). He also proposes that world food supplies could be doubled with a capital investment of merely a hundred billion dollars – much less than world military expenditures.

¹ to be later used in *Limits to Growth* in 1972

² also a "missed/misused signal" – to be reviewed separately

³ However, the two books have some fundamental differences; for example, whereas the "predicament" of humankind, according to Brown, is mainly demographic and social (caused by the combination of the impacts of accelerating population growth, dwindling natural resources, unequal living standards, sharply different growth potentials, and war – the most immediate threat of all), Darwin's book is mostly biological and very long-range.

In “Energy” (Chapter 5), Brown describes and discusses the sources of energy use, the world supply of fossil fuels, and the future rate of consumption of such fuels. Interestingly, Brown’s “pessimistic” estimate of 75 years is quite close to present-day Peak Oil estimates. Also, Brown is quite optimistic about harnessing nuclear energy, though he does admit that the disposal of waste is problematic. Finally, he posits solar energy as the fourth and final stage of energy development in the future.

Chapter Six, “Things,” discusses the limitations, problems, and prospects of the production and consumption of vital mineral resources for industrial civilisation. In this chapter, Brown also discusses the prospect of water shortages and the problems associated with the disposal of hazardous, industrial, chemical wastes, the pollution of rivers from sewage, and the consumption of river water from the ever-expanding networks of aqueducts, dams, reservoirs, and sewage treatment/water purifying plants. Brown foresaw seawater desalinisation plants as one solution to the problem of water depletion.

In Brown’s final chapter, “Patterns of the Future,” he summarises the conclusions of the previous five chapters with some degree of techno-optimism, by saying that though resources are being rapidly consumed, new resources are continually being discovered through increased knowledge and technological developments. He fervently believed that a “high standard of living” can be maintained by extracting everything from the abundance of substances on the earth’s surface such as “air, seawater, and ordinary rock.” Also, solar energy is seen as a major source for “man” to “operate his factories.” He concludes that the resources are available to permit humankind, in principle, to “provide adequately for a very large population for a very long period of time.”⁴

On the other hand, Brown emphasises that this vision of the future can only come about through a foresight-conscious world development program; however, he also foresees formidable difficulties concerning the industrialisation of overpopulated, underdeveloped countries and does not believe that a transition from a partly industrial to a fully industrial world can be successfully negotiated since the transitional path has become too complicated and problematic for remaining underdeveloped countries to be able to follow. In other words, he recognises that the model of development of the developed world is not a sustainable model for the future development of underdeveloped countries. His pessimism on whether or not humankind will make the transition to “a successful world development program” is reflected in his writing that the nature of man makes “remote the possibility that the steps necessary for complete transition will be taken” – that though “we have the ability to do it,” whether “we have the vision and the will is another matter” (Brown 1954, p. 26)

Finally, Brown is also somewhat pessimistic that his vision of the future will be realised due to increasingly devastating wars and the rapid consumption of fossil fuels before alternative energies are given the necessary time to be sufficiently developed; hence, he seems pessimistic about the future of industrial civilisation, writing that, if industrial civilisation eventually “... succumbs to the forces that are relentlessly operating to make its position more precarious, the world as a whole will probably revert to an agrarian existence” (1954, p. 26).

⁴ as quoted by Blacker (1954), p. 159-60

Brown also expresses his distaste for large increases of population with the rationale that the “greater the population density of an industrial society becomes, the more elaborate will be its organisational structure and the more regimented will be its people,” leading to the “robotisation of the individual” – a great dilemma for the preservation of individual liberty.⁵ Brown asks whether, in the long run, it is indeed the case that “industrial civilisation and human values are incompatible.” For Brown, this is the most perplexing crisis that cannot be solved by “... mathematics or by machines, nor can it ever be precisely defined. Solutions, if they exist, can only arise in the hearts and minds of individual men.” (Brown 1954, p. 28)

It is no secret that Brown, like Charles G. Darwin, was a eugenics advocate; however, he also appreciates the dilemma involved, writing that the “precise control of population can never be made completely compatible with the concept of a free society ...”⁶ Still, it is understandable why some have been put off by Brown’s advocacy of a broad eugenics program, which he justifies as a simple matter of “rules of behavior” – just as we have rules “designed to keep us from killing each other with our automobiles, so there must be rules to keep us from killing one another with our fluctuating breeding habits and with our lack of attention to the soundness of our individual genetic stock.”⁷ Hence, Brown makes no apology for advocating population control through birth control by looking at the problem of exploding population as a biological evolutionist would – that Nature Herself will control population mercilessly, without distinction, if humankind does not act upon foresight to control itself.⁸

Brown fears that if a world development program is not pursued with necessary investments – which he believes is not at all expensive compared to the amounts nations spend on armaments and waging war – then civilisation will succumb to forces that will cause it to regress to an agrarian society, in which case history will also revert to cyclical rather than progressive time. He considers the price of stabilisation *if* civilisation survives its collapse:

if wars are eliminated, if the population as a whole is stabilized within a framework of low death rates and low birthrates – will there continue to be human history? The terms ‘stability’ and ‘security’ imply predictability, sameness, lack of change. And these terms further imply a degree of organization – universal organization to avoid war, local organization to produce goods efficiently – and organization in turn implies subjugation of the individual to the state, confinement and regimentation of the activities of the individual for the benefit of society as a whole. (Brown 1954, p. 26)

Brown (1954) then considers whether or not the rapid transition to a technological society through increased human organisation would constitute the “end of history,” since even though there emerges a “... universal, stable, efficient, industrial society within in which all persons have complete personal security, their actions are completely controlled. Should

⁵ as reported by Blacker (1954, p. 160)

⁶ as quoted by Blacker (1954, p. 160)

⁷ as quoted by Blacker (1954, p. 160-1)

⁸ Ibid

that time arrive, society will have become static, devoid of movement, fixed and permanent. History will have stopped” (p. 26).

This is what Brown describes as “the horns the dilemma” – for what purpose, he asks, is industrialisation if “we end up by replacing rigid confinement of man’s actions by nature with rigid confinement of man’s actions by man?” If we must pay for longer life, material possessions, and personal security with regimentation and controlled thought and actions, then is it worth the price? Would the “... lives of well-fed, wealthy, but regimented human robots be better than the lives of their malnourished, poverty-stricken ancestors?” (Brown 1954, p. 26). With these questions Brown considers that modern industrial society is on a “unidirectional” road to totalitarianism that future men will not be able to resist or rebel against because science and technology has placed in the hands of rulers of nations “weapons and tools of control, persuasion, and coercion of unprecedented power.” (Brown 1954, p. 26) Brown (1954) warns that we have “... reached the point where once totalitarian power is seized in a highly industrialized society, successful revolt becomes practically impossible. Totalitarian power, once it is gained, can be perpetuated almost indefinitely in the absence of outside forces, and can lead to progressively more rapid robotization of the individual” (p. 26).

Harrison Brown’s pioneering, prescient, thought-provoking study of *The Challenge of Man’s Future* is perhaps the first serious treatise on the predicament of human civilisation in the foreseeable future. Many of the themes he framed, the global problems he posed, and the suggestions he made were later followed up by a number of works within FS; also, many of his forecasts were amazingly accurate, and some of his predictions turned into self-evident proofs. However, for the most part, the “challenge of the future,” as presented by Brown, has yet to be seriously confronted and responded to in a meaningful way to bring about the needed transition to a sustainable world. Instead, through ignoring and denying the “missed signal” of Brown’s “challenge,” the spectre of catastrophic futures still looms over humankind.

Sources

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