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Author(s): Donald K. Pickens

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Clarence E. Ayres and the Legacy of German Idealism

By DONALD K. PICKENS*

ABSTRACT. Based on the *Clarence E. Ayres* (1891–1972) papers at the University of Texas, this study traces the continuity among thinkers such as *Kant*, *Hegel*, *Veblen*, *Dewey*, and Ayres; the latter was a leading institutional economist following Veblen's death. Publicly acknowledging his intellectual debt to Veblen and Dewey, Ayres drew from these men some idealistic assumptions as well as the *historicism* that is implicit in his *technological determinism* or *instrumental* theory of knowledge. Thorstein Veblen and John Dewey owed a great deal to the philosophical tradition of *idealism*, regardless of the devotion to naturalism in their systems. The origins of Ayres's technological theory of *value* are found in Veblen and Dewey writings and back of them the legacy of *German idealism*. The vital link was a mutual acceptance that *freedom* was expressed in a cultural and historical form, realized in human activity. It was a *process*.

I

ACCORDING TO J. H. HEXTER, historians are either lumpers or splitters. The former are those scholars who lump data together, finding continuity and consensus in the whirl of the past, moving into the present; the latter, seeing diversity, draw distinctions and disunities in seeking some lawful uniformity in the multitude of past events.¹ For example, Thorstein Veblen (1857–1929) argued that Darwinism was the significant dividing line in the history of economic thought, and institutional economists have generally accepted this assumption.²

While this observation has real merit, it does not portray the complete situation. In the tradition of “lumping” this essay argues that additional philosophical traditions influenced the perspectives of Clarence Edwin Ayres (1891–1972), John Dewey (1859–1952), and Veblen. As the leading institutional economist of the generation following Veblen's death, Ayres readily admitted his intellectual debt to Dewey and Veblen. It was not their “personal authority nor even from any notable originality, but the clarity with which they had served as mouthpieces for the culture they express.”³ For Veblen, Dewey, and Ayres, their culture was

* [Donald K. Pickens, Ph.D., is professor of history, North Texas State University, Denton, TX 76203-3735.]

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scientific and rationalistic in orientation with Darwinism providing a generalized naturalistic context. In their celebration of Darwinism and the scientific method, they often denied the contributions of idealism to their thought.

The shape of 20th century intellectual history aided in their denial. Toward the end of the 19th century, reacting against atomic individualism and sensationalistic empiricism, Anglo-American thinkers expressed confidence in German idealism, aided in no small part by popular support for nationalism and progress. Challenged, however, by philosophic changes in the academy,⁴ German idealism retreated. Kantian thought retained its philosophic appeal via the efforts of such scholars as C. I. Lewis, who contributed to post-Jamesian pragmatism. "What happened to Hegel?" And the straight answer to that question is: "Although he may have been knocked about previously, he was killed in World War I."⁵ He became therefore the ghost in the machine—the technological process—of Ayres' institutional economics.

Born in Lowell, Massachusetts, Ayres was a clergyman's son. In 1912, he graduated from Brown University where, two years later, he received his M.A. He taught briefly at Amherst where Walton Hamilton introduced him to the writings of Thorstein Veblen. Later at the University of Chicago, Ayres talked with Veblen and Dewey but he never took any of their courses. He did study with professors greatly influenced by Dewey's philosophy. Professors such as James H. Tufts, Addison W. Moore, George Herbert Mead and Edward S. Ames taught Ayres pragmatism, Chicago-style. As he later observed, "From this time onward, Dewey and Veblen have defined the axis of my thinking."⁶ He received his Ph.D. in philosophy in 1917. Over the next several years he taught at the University of Chicago, Amherst, and Reed College. After briefly serving as an associate editor of the *New Republic*, he joined the Department of Economics of the University of Texas in 1930. A popular teacher, he was professionally and academically active for the next 38 years. He retired in 1968 because of ill-health.⁷

Ayres came to intellectual maturity during the Progressive Era when social optimism, the scientific method, and the search for the great community were elements in the same historic process. In brief, historicism—"the doctrine that all historical phenomena can be understood as historically determined, that all events in historical time can be explained by prior events in historical time"—was increasingly the secular philosophy of the day.⁸ Ayres was also heir to the idea of progress that developed within the history of the American social science.⁹

As early as his dissertation, published as *The Nature of the Relationship Between Ethics and Economics* (it was no.8 in a series of Philosophic Studies) (Chicago: Univ. of Chicago Press, 1918), Ayres saw ethics in idealistic terms.

"Ethics is," he wrote, "wholly social and there is no such thing as an individual, in the sense that it is absurd today to think of a 'moral agent' without at the same time thinking of him as a social product capable of producing certain changes in the social structure that surrounds him most intimately."¹⁰ Knowing and doing, men construct the world, their ethics, "out of the materials of the accumulated moral experience of the race."¹¹ His subordination of the individual to a larger process was similar to Hegel's philosophy of the Absolute.¹²

During his career, Clarence Ayers, like John Dewey his mentor, sought an empirical or "scientific" version of Hegelian social rationality without the German's metaphysics. As a left Hegelian, Dewey rejected the status quo and appealed to Reason, as scientific thought, "insisting that the given order of things is irrational as well as unjust."¹³ Ayers saw technology as Hegelian Reason and the institutions of contemporary life as also irrational and unjust.

Although both men were idealists, Kant's and Hegel's orientations were different. Kant divided the world between the phenomena, the world of things, and noumena, "thing-in-itself." By stressing that men could only know or be concerned with the phenomena, the real, culture and history, Hegel rejected this Kantian dichotomy. Kant's own rejection of metaphysics, the impossibility of knowing the "thing-in-itself" strengthened the later Hegelian claim that individual consciousness arises out of social interaction with people and institutions. Hegel's was the valid method for understanding the cultural world. History was a cultural science and knowledge had an essential unity. Other Kantian and Hegelian ideas influenced Ayers's view of history but the idealistic appeal to the unity of knowledge was central to Ayers's analysis.

Ayers's training in philosophy emphasized the essential unity of all knowledge.¹⁴ Accepting this Kantian unity, Ayers identified science as an instrument of precision to extend men's abilities of observation. "Technology was the only source of knowledge and genuine [*i. e.* human] values." While Ayers denied the Hegelian dialectic by name, his major work contained a species of absolutism—the life process of freedom, equality, security, abundance and excellence.¹⁵ For Ayers, technology was the *geist*, the spirit of the human experience, known as history; "technological change was largely autonomous, certainly and potentially continuous" as it overcame institutional rigidities."¹⁶ Ayers's technology and the Romantics' *spirit* were the same phenomena, "an active force imposing its will upon nature to create order and purpose," a self-perfecting process.¹⁷ "My feeling about the evolution of ideas is rather impersonal," Ayers observed. "It seems to me that in an intelligible sense, ideas evolve themselves, in various ways in various minds. If anything worthwhile ever comes of the arguments of theorists, it necessarily comes through the process of intellectual development

that takes place on both sides of the argumentative division."¹⁸ This process was innate to the human condition. Toward the end of his life, Ayres reaffirmed his Hegelian premise. "I am now convinced that the technological process is not only the dominant force by which all societies are ultimately shaped, but that this is true of human society or the human way of life itself."¹⁹

Change was the major characteristic of this life-process, this history or Hegelian *geist*. Culture, not biology, was the source for creating and understanding values. For Ayres biology was not a basis for understanding human behavior; men's actions were explained solely in cultural terms.²⁰ As a thinker in 20th century social science, Ayres challenged the belief that cultural progress was a direct continuation of biological evolution.²¹ Human nature (or experience) functioned quite independently of the geographical or biological circumstances of any assumed "natural" scarcity.²² (This division of the cultured realm from the biological order is a legacy from Hegelianism.)

II

BOTH VEBLER AND AYRES thought that classical economic theory supported a pre-Darwinian concept of economic order. Life was a product of continuous change; moreover, Darwinism contributed to the science of cultural anthropology by stressing the non-theological process of cumulative growth. The difference between institutional theory and classical economic theory was that the former rejected an automatic movement toward a given right and good end.²³ Darwinism "liberated" history and the social sciences from supernaturalistic metaphysics. They were now wholly natural and empirical sciences, an expression of naturalistic history.

The "Hegelian doctrine of *Prozess* in the philosophy of history [Pockman writes] prepared the way for the acceptance of Darwin and did much to help thoughtful Americans over the baffling difficulties involved in the synthesis of the religious heritage with the newer revolutionary discoveries."²⁴ Both Dewey and Ayres, for example, saw society as a life process "in which there is no such thing as a dualism between what is seen and what is behind the scene."²⁵ The result was freedom. For Dewey, Darwinism revealed that men were free to shape their corporate destiny, human culture.²⁶ Darwinism therefore allowed the intellectual abandonment of a given or permanent theory of human nature and the assumption of a changeless essence to human society. By technology, "progressive and developmental," the universe was open. "This circumstance which gives technology its peculiar importance in the analysis of culture—and most of all for economists—also can be understood only in terms of tools."²⁷

Veblen's contributions to Ayres's ideas are well known. Behind Veblen stood

Kant and his categorical imperative (each person is treated as an end-in-himself and not as a means to an abstract or metaphysical end). Veblen, the “Great Outsider” expressed the categorical imperative as his theory of the “instinct of workmanship,” using a more Darwinian label. Veblen was not a racist. As Joseph Dorfman, the leading scholar of Veblen’s thought, wrote, “I have a crazy theory that ‘instinct’ with Veblen was essentially a literary device, at most a regulative principle as against a constitutive one, in Kantian terminology.”²⁸ Veblen’s instinct theory was his term for a continuity, such as the technological process, that runs throughout all cultures, according to Ayres.²⁹

Kant’s contributions were great. Not only on individual thinkers such as Veblen but Kantian influences were also present in the development of American pragmatism, particularly on those individuals who looked toward William James for guidance and instruction.³⁰ In like manner, Hegelianism greatly influenced John Dewey’s instrumentalism which Ayres accepted as a synonym for the technological theory of value.

While the details of the origin of their friendship are apparently lost in time, their intellectual relationship was quite clear. Dewey appreciated Ayres’s term—technological theory of value—as being superior in clarity to his own term, instrumentalism. Dewey’s words are worthy of full quotation:

Your clear and empathic development of technology gave me something I wanted and didn’t know how to find. The word ‘instrumentalism’ was never a happy one, and probably invited some of the misconceptions that developed. If I had a full possession of my wits I would have used the name ‘technological’ as a description of scientific knowledge from the start. I had devoted a chapter to calling it an ‘art’ but that name is much too generic. I don’t suppose a technological theory of science would have won more assent than an instrumental one, but it would have expressed the idea in much more clear-cut way.³¹

It was not an idle compliment. Dewey acknowledged his debt to Ayres to other scholars. “Knowledging is the case of technology,” he wrote “running the gamut, like smelting crude ores and other technologies, from relatively primitive, undeveloped technologies to the relatively highly developed ones—latter are ‘sciences’.” This is the point I got from Ayres.³² And Dewey gave an Hegelian orientation to Ayres’s writings.

III

ACCORDING TO TRADITIONAL SCHOLARSHIP, Dewey, after an early career as an Hegelianist, broke with German Idealism by 1900. By the time of his departure for Columbia, he was free of Teutonic influences. Recent scholarship questions the importance of that assumed rupture, for the Hegelian idea of reality remained with Dewey. Since the world was mind and psychology was the study of mind,

it follows accordingly that psychology, not metaphysics, was the best philosophic method for human understanding of the world. It allowed for change (and progress) for man and his culture. Moral experience of the individual and the group shaped the world. At Columbia, Dewey was a part of the “service intellectuals,” the progressives, who saw in the bureaucracies of public education, universities, and government the means to effect a better America by reform and social justice. Dewey, himself, became a force for the just reconstruction of America albeit from a somewhat muted Hegelian perspective.

Meanwhile John Dewey never forgot the “permanent deposit” of Hegelianism in his pragmatism. “It was a factor in producing my belief that the only possible psychology, as distinct from a biological account of behavior, is a social psychology. With respect to more technically philosophical matters,” Dewey believed that “the Hegelian emphasis upon continuity and the function of conflict persisted on empirical grounds after my earlier confidence in dialectic had given way to skepticism.”³³ For Dewey, science was a disembodied force; therefore, he remained constant to Hegelian philosophy.³⁴ For Ayres, Dewey’s method justified studying culture which stressed social practices and human needs and eliminated any concern for epistemological speculation.³⁵

In fact, Dewey’s pragmatism assumed science was a community of investigators whose social and physical world responded to human purpose. Inquiry was open to virtually everyone.³⁶ This instrumentalism had the same effect as Ayres’s technological theory of value—of bringing rationality and abundance to the human world of culture. For Ayres, it was democratic and open. “The course of the species is largely determined by the play of impersonal forces. But those forces are more or less knowable not merely by intellectual leaders but by everybody, and indeed take effect in large measure by a process which could be described as the ‘becoming known’ of various major aspects of the situation of the species at any given moment.”³⁷

The reason Dewey and Ayres shared this point of view was Hegel’s *geist*, of course. “It starts with Mind immersed in Nature, and in the deepest rapport with its body and its environment, and shows us Mind gradually liberating itself from this bondage, and achieving the free universality of thought, which enables it to return to Nature and put *it* into chains, rendering it intelligible by science, and rendering it completely malleable to its purposes by the rational technology which springs from science.”³⁸ In *Toward A Reasonable Society* (1961), Ayres rhetorically expressed the same point of view when he wrote, “Is it not possible that values derive their meaning and their sanction not only from tribal deities, and not merely from parochial beliefs, but—at least in considerable part—from the human adventure itself, from the quest for knowledge, and ever more

knowledge, and from the never-ending struggle to harness the forces of nature to human use? Are there not in all society," Ayres concludes "two sets of value sacred and profane, so to speak; and is it not the former which differ so widely from people to people, whereas the latter are the same for all?"³⁹ A commonality, a sameness, existed in all human cultures. While the sacred and secular elements of culture operated everywhere, the process of technology, of subduing nature contributed to the eventual triumph of the secular, the scientific, over what Ayres characterized as the irrationalities of religion and mere ceremonialism.

It is not "accidental" that this human sharing in the same value system is a part of Hegel's famous contention that history was the progressive unfolding of freedom for all people. It is a freedom expressed in cultural/historical form. Freedom is "an aspect and a condition of technological process."⁴⁰ It is "a process of doing and knowing."⁴¹

Freedom means a full institutional response to the task of placing freedom and meaning in the human enterprise. For Ayres, it "does not mean the absence of government. To conceive it so is to lapse into primitive negativism. Organization we must have; and the more complex our activities become, the more complex and extensive the instrumentalities of organization are bound to be." It allows true freedom in a viable human context: "the freedom of government, and indeed of all the instrumentalities of organization from the tyranny of status; operational freedom; constructive freedom; the freedom to inquire; and the freedom to create."⁴² By this process free men became truly human.

As a Hegelian optimist, Ayres did not believe that this freedom came automatically and painlessly to the human condition; but what is real is also rational and what is rational is also real. "It is my deep conviction," he wrote four years before his death "to which my entire life work and experience converge, that superstition is fading away in all aspects of life and throughout the world. Thus I am a long range optimist." This optimism can not be denied. This optimism was Ayres's word for progress. It was the drive-shaft of history. "The process is slow, and the world will see vast conflagrations—perhaps even an atomic holocaust—before it becomes effective. But I am convinced that it is an irreversible process [the *geist*] which will therefore eventually prevail."⁴³

Unity prevailed: the realization that "correctly defined knowledge and wisdom are the same thing."⁴⁴ In such a manner men's lives gain value and significance in the unfolding of history. "The truth is that honesty, decency, and veracity are not only the best policy but the only policy in terms of which human beings can work together to live better than the animals."⁴⁵ Empirical cause and effect, the scientific method, meant a demonstrably better life for all men as they became the masters and owners of nature.

IV

REPEATEDLY, AYRES'S WRITINGS and teaching career stressed this unity of idealism. "If percepts without concepts are meaningless, it is likewise true that concepts without percepts are blind—which was only Kant's way of saying that symbols could not exist without things any more than man could make use of things without symbols. In short," Ayres maintains, "there is only one form of knowledge, the knowledge man has acquired in the course of his technological activities, activities in which things and symbols are fruitfully combined. Apart from these activities, symbols lead only to illusions"⁴⁶ and to a false sense of freedom since viable symbols must emerge from man's engagement with nature via the scientific method.

"All things are related—causally related," he maintained. Dualism and metaphysics were not possible or desirable in human history. "The metaphysical dualism of body and mind has been completely abandoned throughout science and with it the metaphysical uniqueness of the individual soul." This naturalistic element in Ayres's idealism liberated men since "all economic behavior is equally social in character." Abundance—the capacity of all men to choose their behavior—shall win against the individual necessity inherent in scarcity. "Already the possibility of abundance is beginning to haunt the economic thinking of our time as a corollary to the meaning of industrial technology."⁴⁷ Ayres believed his book *The Theory of Economic Progress* expressed both the consequences of the Veblenian view of the economic life process and Dewey's concept of life process.⁴⁸

The technological theory of value changed all economic thinking. For example, Say's law states that production equals consumption but the potential abundance of technology challenges the assumption of scarcity inherent in classical economic theory. From Ayres's perspective, "The distinction of 'consumption' from 'production' is synonymous with the distinction of 'ends' and 'means';" however, resulting from the technological process, "production for use" is a transliteration into economic terminology of Kant's categorical imperative."⁴⁹ As an heir to German idealism, Ayres's philosophy accepts the unity of ends and means, of subjective and objective aspects of experience and thought and the unity of the State and the individual and the harmony of universal reason and particular historical events.⁵⁰ "In a very real sense culture, no less than gravitation, is a power not ourselves."⁵¹ Civilization, in a very real sense was mind. "It does not derive from the personal genius or influence of any man; its direction has not been determined by any man and will not be; and the principle axiom in terms of which we shall represent it is not an expression of any man's individual acumen but a projection in words of a cultural actuality."⁵²

While rejecting the label of an Hegelianist, Ayres gave a Hegelian defense of that unity. Along with thinkers from Walter Lippmann to Rexford G. Tugwell, from Frank Lloyd Wright to John Dewey, Clarence Ayres was "convinced that rationalized technological growth did not destroy individual dignity but enhanced it."⁵³ As a pragmatic idealist Ayres (and some other progressives) questioned the timelessness and universality of true belief and subscribed to the contingency of all beliefs which, however, was made operationally valid by the human culture of inquiry.⁵⁴ It was Ayres's bedrock faith in the abilities of men to make sense of the world by giving value based on the unity of symbol and thing, of knowledge and action.

Finally, Ayres accepted idealistic historicism because he accepted, despite his protests and qualifications, teleology in human culture. He rejected several forms of teleology. Since nature was a mute backdrop to the drama of human culture, he saw no evidence of design or purpose in nature; equally, he rejected the assumed teleological shove of Adam Smith's invisible hand in behalf of atomistic individualism and hedonistic psychology. "My notion," he argued, "is that technological process has no more transcendental significance than photosynthesis." He further argued that the technological process was not teleological "since the judgments in question have no significance beyond that process."⁵⁵ As this essay indicates, he protested too much, for he wrote, elsewhere, "The inescapable truth is that human experience does manifest a developmental pattern of some sort. To close one's eyes to it is simply to go blind."⁵⁶

The enterprise of human culture carried its own values and meaning within itself, a form of teleology innately human. With knowledge being incomplete and tentative, the integrity and durability of inquiry, expressed by Ayres as the technological process, was the significant element for it meant that the physical and social world responded to a human version of teleology.⁵⁷ As an idealist in spite of himself, Clarence E. Ayres asked, What is truth? He answered, "To this I have a simple answer: Any proposition that can be verified with instruments—even a pair of eye glasses."⁵⁸ In Ayres's case, his idealism was the philosophical prescription of Professors Veblen and Dewey.

Notes

1. J. H. Hexter, *On Historians* (Cambridge, Mass: Harvard University Press, 1979), pp. 1-10.
2. Thorstein Veblen, *The Place of Science In Modern Civilization and Other Essays* (New York: B. W. Huebsch, 1919).
3. C. E. Ayres, "The Gospel of Technology," in *American Philosophy, Today and Tomorrow*, Horace M. Kallen and Sidney Hook, eds. (New York: Lee Furman, Inc., 1935), p. 27.
4. A. J. Ayer, *Philosophy In The Twentieth Century* (New York: Random House, 1982), p. 19; John Dewey, "From Absolutism to Experimentalism," in *Contemporary American Philosophy*, George P. Adams and William P. Montague, eds. (New York: Macmillan, 1930), p. 18.

5. Bruce Kuklick, "Seven Thinkers and How They Grew," in *Philosophy In History*, Richard Rorty, ed. (Cambridge: Cambridge Univ. Press, 1984), p. 132.

6. CEA Letter to Fred A. Coffey, Jr., May 9, 1955. no. 3F285 in C. E. Ayres Papers at The University of Texas Barker Center; see also letter to Douglas F. Dowd, Oct. 22, 1957 3F286 and letter to Burntrain P. Beckwith, Nov. 14, 1966, 3F285.

7. For background to Ayres's life and thought see "In Memoriam Clarence Edwin Ayres," *Journal of Economic Issues* 17 (September 1977), pp. 475-83; William Breit, "The Development of Clarence Ayres's Theoretical Institutionalism," *Social Science Quarterly* 54 (September 1973), pp. 244-57; William Breit and William Patterson Culbertson, Jr., eds. *Science and Ceremony, The Institutional Economics of C. E. Ayres* (Austin: Univ. of Texas Press, 1976). Professor Breit's scholarship dealing with Ayres was one of the inspirations for this paper; of course Breit is not responsible for the conclusions of my essay.

8. Dorothy Ross, "Historical Consciousness in Nineteenth Century America" *The American Historical Review*, 89 (October 1984), pp. 909-28.

9. Dorothy Ross, "American Social Science and the Idea of Progress" unpublished manuscript; Henry Pockmann, *German Culture In America, 1600-1900* (Madison: Univ. of Wisconsin Press, 1957) and Jurgen Herbst, *The German Historical School in American Scholarship, a Study In the Transfer of Cultures* (Ithaca: Cornell Univ. Press, 1965).

10. Page 57.

11. Page 23.

12. Peter J. Bowler, *Evolution, The History of An Idea* (Berkeley: Univ. of California Press, 1984), p. 101.

13. Joseph Featherstone, "John Dewey and David Riesman: From the Lost Individual to the Lonely Crowd," in *On The Making of Americans*, Herbert J. Gans, ed. (Philadelphia: Univ. of Pennsylvania Press, 1979), p. 28.

14. William Breit and William Patton Culbertson, Jr. "Clarence Edwin Ayres: An Intellectual's Portrait," in *Science and Ceremony, op. cit.*, p. 7.

15. A. W. Coates, "Clarence Ayres's Place In The History of American Economics," *ibid.*, pp. 27, 28-29.

16. R. W. Hartwell, "C. E. Ayres On the Industrial Revolution," *ibid.*, pp. 54-55.

17. Bowler, *Evolution*, p. 99.

18. CEA Letter to Frank H. Knight, April 23, 1935 no. 3F290 in Ayres Papers.

19. CEA Letter to Warren Sameuls, Jan. 11, 1972, *ibid.*, no. 3F294.

20. Ben B. Seligman, *Main Currents In Modern Economics* (Glencoe: The Free Press, 1962), p. 239.

21. Bowler, *Evolution*, p. 224; see also Anthony Leeds "Darwinism and Darwinian Evolutionism In the Study of Society and Culture," in *The Comparative Reception of Darwinism* (Austin: Univ. of Texas Press, 1974).

22. C. E. Ayres, *Toward A Reasonable Society, The Values of Industrial Civilization* (Austin: Univ. of Texas Press, 1961), p. 65.

23. David Hamilton, *Evolutionary Economics: A Study of Change In Economic Thought* (Albuquerque: Univ. of New Mexico Press, 1970), p. 28. See also C. E. Ayres, "Fifty Years' Developments In Ideas of Human Nature and Motivation," *American Economic Review*, 26 (March 1936), p. 236 and his "The Co-ordinates of Institutionalism," *ibid.*, 41 (May 1951), pp. 47-51.

24. Pockman, *German Culture In America*, p. 323. See also Donald K. Pickens, "Social Darwinism: The Bibliographical Survival of the Fittest," *Social Science Quarterly* 61 (September 1980), pp. 317-21 and John Dewey, *The Early Works, 1882-1892*, Volume One (Carbondale: Univ. of Southern Illinois Press, 1968), page xxxi of the introduction.

25. Alan G. Gruchy, *Contemporary Economic Thought, The Contributions of NeoInstitutional Economics* (Clifton, N.J.: Augustus M. Kelley, 1972), p. 92; Hamilton, *Evolutionary Economics*, p. 113.
26. Bowler, *Evolution*, p. 228.
27. C. E. Ayres, *The Theory of Economic Progress*, 2nd ed. (New York: Schocken Books, 1962), p. 111.
28. Joseph Dorfman Letter to C. E. Ayres, March 19, 1935, no. 3F286. See Joseph Dorfman, *Institutional Economics: Veblen, Commons, and Mitchell* (Berkeley: Univ. of California Press, 1963) and Joseph Dorfman, *Thorstein Veblen, Essays, Reviews, and Reports* (Clifton, N.J.: Augustus M. Kelly, 1973).
29. CEA Letter to Douglas F. Dowd, March 26, 1957, no. 3F286 and to Alexander Meiklejohn, December 13, 1943, no. 3F291.
30. Murray G. Murphey, "Kant's Children: The Cambridge Pragmatists" *Transactions of the Charles S. Peirce Society* 4 (Winter 1968), pp. 4-5.
31. John Dewey Letter to CEA, October 5, 1943 and June 6, 1944, no. 3F286.
32. John Dewey Letter to Arthur F. Bentley, September 13, 1943 in Sidney Ratner and Jules Altman, eds. *John Dewey and Arthur F. Bentley: A Philosophical Correspondence, 1932-1951*. (New Brunswick, N.J.: Rutgers Univ. Press, 1964), p. 177.
33. As quoted in John Dewey, *The Early Works, 1882-1898*, Volume One (Carbondale: Southern Illinois Univ. Press, 1969), p. xxxvi. For a full discussion of Dewey and Hegel see Neil Coughlan, *Young John Dewey, An Essay In American Intellectual History* (Chicago: Univ. of Chicago Press, 1975).
34. Charles Frankel, "John Dewey's Social Philosophy" *New Studies In the Philosophy of John Dewey*. Steven M. Cahn, ed. (Hanover, N.H.: The University Press of New England, 1977), p. 13. See also George Dicker, "John Dewey: Instrumentalism in Social Action" *Transactions of the Charles S. Peirce Society*, 7 (Fall 1971), pp. 223-24.
35. Richard Rorty, "Dewey's Metaphysics," *New Studies In The Philosophy of John Dewey*, pp. 53, 61-62. See also Kuklick, "Seven Thinkers," p. 133.
36. David A. Hollinger, "The Problem of Pragmatism In American History," *Journal of American History*, 67 (June 1980), pp. 93-97. For the European origin of this idea see Timothy V. Kaufman-Osborn, "John Dewey and the Liberal Science of Community," *Journal of Politics*, 46 (November 1984), pp. 1142-63.
37. CEA Letter to Frank Knight, Jan. 15, 1935, no. 3F290. Walter Lippmann shared this view. See David A. Hollinger, *In The American Province* (Bloomington: Indiana Univ. Press, 1985), p. 52.
38. John N. Findlay, "Hegel's Use of Teleology," *New Studies in Hegel's Philosophy*, William Steinbraus, ed. (New York: Holt, Rinehart and Winston, 1971), p. 105.
39. Ayres, *Toward A Reasonable Society*, p. 6.
40. *Ibid.*, p. 178.
41. *Ibid.*, p. 111.
42. *Ibid.*, pp. 185-86.
43. CEA Letter to B. Bounell, May 27, 1968, no. 3F285.
44. *Ibid.*, p. 258.
45. *Ibid.*, p. 270.
46. *Ibid.*, p. 107.
47. C. E. Ayres, *The Theory of Economic Progress*, 2nd ed., (New York: Schocken Books; 1962), pp. 91, 95, 307.
48. CEA Letter to John M. Gans, March 27, 1943, no. 3F287.

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50. Philip Wiener, "Pragmatism," *Dictionary of the History of Ideas*, Vol. III, p. 556.
51. Ayres, *Toward A Reasonable Society*, p. 289.
52. Ayres, "The Gospel of Technology," p. 37.
53. T. J. Jackson Lears, *No Place of Grace, Antimodernism and the Transformation of American Culture, 1880-1920* (New York: Pantheon Books, 1981), p. 90.
54. Hollinger, *In The American Province*, p. 20.
55. CEA Letter to Paul T. Homan, April 22, 1963, no. 3F289.
56. Ayres, *Theory of Economic Progress*, 3rd ed., (Kalamazoo: Western Michigan Univ.-New Issues Press, 1968), p. 321.
57. Hollinger, *In The American Province*, pp. 30, 34.
58. CEA Letter to B. Bonnell, July 11, 1968, no. 3F285.

A Dynamic Model of the U.S. Economy

A CHEMICAL PLANT is a model of input-output analysis. It combines many complex processes in the most efficient manner its designers can devise. That is also true, in a way, of the national economy, only the latter operates on a very much vaster scale. A chemical engineer, Walter F. Swanton, trained at the Massachusetts Institute of Technology and the University of Rochester and a former instructor at Annapolis, has attempted to produce such a model.

He reports on his research in a monograph, *Graphical Econometrics* (17 Pumpkin Hook, West Henrietta, NY 14586: 1986, \$5.00). As a start toward validating his systems approach, he attempts to estimate land rent, one of the most formidable challenges in statistical analysis. His experience as a division engineer, project manager and product manager for several leading chemical companies, as well as his years of research on this problem make his work thought-provoking for those whose education and training permit them to work in this area.

W.L.

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THE MODERN LANGUAGE ASSOCIATION of 10 Astor Place, New York, NY 10003 has announced the availability of version 2.0 of *Nota Bene*, a word-processing, text-retrieval and indexing program for IBM or IBM-compatible computers with hard disk drive or two double-sided floppy disk drives, at least 256 K of memory and DOS of 2.0 or higher. The price for non-members is \$400. MLA also offers a *Bibliography Generator*, assembling citations in MLA style, for \$59.95.