E. C. HARWOOD’S VISION AND ITS REALIZATION*

There are three major areas in which E. C. Harwood wrote extensively: 1) He perhaps is best known for his work in technical economics. 2) He also published in the area of social philosophy, particularly on those social, political, and legal arrangements most conducive to advancing civilization. 3) He placed strong emphasis on inquiry into the process of human knowing, especially as applied to scientific method. In all three areas, his views frequently were controversial and ran counter to prevailing opinion. In addition, those who agreed with him in economics might not agree with his views about human nature, and vice-versa.

Before I discuss Harwood’s achievements in each of the three areas mentioned, I will make a few comments on him as a person, for his career was highly unusual. He was a West Point graduate and had a distinguished career as a military officer. His training in civil engineering in many ways influenced much of his later thought in philosophy of science. He was in charge of the engineering work in the Cape Cod Canal improvement program in the 1930’s. In the late 1920’s he began to give serious attention to economics. Although he did some graduate work in that field, he never took a Ph.D. and to a considerable extent was self-taught in economics. He applied his studies of money-credit relations and of the business cycle to investment topics and became a highly successful financial adviser. But that was not enough for him. He also devoted much effort to work in the philosophy of science.

Nearly a quarter century ago, when I was a young Assistant Professor of Philosophy, I came across a notice about a summer research project to be conducted at the American Institute for Economic Research, on the methods of inquiry used in the social or the behavioral sciences. At that time I had not heard even the name of E. C. Harwood or of the American Institute. Our university library contained two of Harwood’s books. On reading them, I realized how close our views were in philosophy of science, so I applied for the summer position and was fortunate enough to get the job. I assumed at the time that philosophy of science could only be a hobby for E. C. Harwood, for I could not imagine that he had had the time to delve deeply in that area.

However, to my astonishment, I found that he had mastered a great deal of technical philosophy. I learned that he had been driven to those studies because of his work in economics. In pondering the question of why the various schools of economics come to such opposed conclusions, Harwood decided that a basic problem was how humans can reliably come to know anything. Because philosophers had written extensively on the basis and nature of knowledge, he turned to their writings and studied them on his own. Even now I recall vividly a discussion he and I had about 20 years ago, when some technical aspect of Aristotle’s philosophy arose. I was astounded at the detailed mastery Harwood seemed to have of that point, even though he detested Aristotle. I, who was a Ph.D. in philosophy, was forced to go back to Aristotle’s text, and I realized that it was I and not Harwood who had misunderstood the point.

Whatever may be said for or against the field of philosophy, it is not one that is easily mastered in the technical sense, and to have achieved that through independent reading, on a “do it yourself” basis, is a rare event.

At this point, so that you will not be tempted to
jump to a mistaken conclusion, I should emphasize that Harwood was not at all opposed to formal education. Indeed, he was actively involved in sponsoring scholarship and fellowship programs, and he taught in a program of graduate courses given at the American Institute. A few comments on his views of teaching are appropriate. He taught military engineering for a number of years at the Massachusetts Institute of Technology. Although he enjoyed having brilliant students in his classes, as probably all professors do, he worked very hard with those students who were not adept at the material involved. Wherever possible, Harwood tried to combine formal instruction with "field work" or its equivalent in an actual research project. He also strove to find a beginning point that was of interest to the student, no matter where that beginning point might fall in terms of the overall logical structure of the material. When he found a successful beginning point, he then would move in both directions, so to speak — to both the more specific and to the more general.

His teaching at MIT led Harwood to believe that too often the entire educational system puts undue emphasis on grades as grades. In the seminars conducted at the American Institute, Harwood assigned no formal grades to the students, nor even a formal written evaluation at the end of the course, as sometimes is done when grades themselves are not assigned. New students sometimes were delighted to be informed of the no-grading policy. Often, however, that delight was of short duration. Harwood required brief written papers from each student for each seminar session. He then wrote extensive comments on each such paper. Some of his comments raised doubt about the factual or logical basis for what the student had said. Other comments referred the student to this or that book, article, or source of data. Yet other comments showed how the student's ideas could be expressed more clearly, economically, or adequately. Under that teaching device, both the brilliant and the less brilliant students were more or less forced to work very hard. Lazy students in particular found it extremely difficult to go on being lazy.

**SOCIAL PHILOSOPHY**

I turn next to a brief summary of Harwood's views on social philosophy. Perhaps his major theme was the importance of individual freedom and social justice in the further development of civilization. One of the great enemies of freedom, in his eyes, was a powerful government. However, he rejected the views of anarchists and some current "Libertarians" who wish to eliminate any role for government. For Harwood, one of the major tasks of government is to provide for an effective judicial system that will maintain what informally may be called the "rules of the road." He also viewed government as necessary for national defense, to conduct foreign relations, and the like. But highly interventionist governments, whether in the form of the welfare state, socialism, or fascism, he opposed.

Another great enemy of freedom is special privilege, whether granted by governments or resulting from culturally entrenched patterns going back into the distant past. In many areas of our planet, the granting of vast areas of land to some aristocrat had the result of exploiting those who actually worked the land. Monopoly privileges granted by governments also tend to exploit the many for the benefit of a few.

Another enemy of freedom is sociocultural arrangements in which large groups of people, simply because of accidents of birth, are restricted to certain occupations or endeavors, whatever their individual talents may be. Harwood wrote often on chattel slavery and on serfdom in this context, but he opposed also more subtle ways in which restriction of opportunity is based on birth.

Harwood, then, was a zealous defender of the freedom of each person to apply his or her talents to various endeavors without restriction except where those endeavors would restrict the similar freedom of other humans. A major cause for the lack of progress, he believed, was the fact that so many humans in so many countries in so many time periods have not been permitted to apply their abilities as a result of cultural tradition, law, or the prevailing economic system.

In one sense, then, Harwood was an egalitarian, but the equality he emphasized was that of opportunity rather than equality of reward. He strongly opposed any socialistic or romantic notion of equality of reward. On the contrary, he advocated that in general those who perform best should be rewarded most. In that connection, Harwood argued that the human behavior called "economic competition" also necessarily involves "cooperation." Rather than develop his argument in detail, let me illustrate by an example.

Suppose someone finds a way to make a high quality tool — a hammer — and sell it for less than do other manufacturers. That obviously involves competition among the manufacturers. But those who need hammers now can obtain what they require at less cost than formerly, so they cooperate with the manufacturer by buying his product. If the sales are good, the manufacturer makes a larger profit and has additional resources that may be used, say, to develop yet another tool that sells more cheaply than was customary. That success
where, the Keynesian view that gold is a “barbarous relic” was so widely accepted that a “gold bug” such as Harwood was deemed a misguided fanatic or worse. However, the worldwide monetary mess in recent years had led some economists to reconsider, and the academic journals now contain many criticisms of Keynes that were made by Harwood long ago.

Harwood repeatedly discussed what he called the “embezzling” that results when there is a prolonged depreciation in the paper currencies. The type of simple example he often gave is as follows: Suppose some parents thriftily start putting aside funds to pay for the college education of their very young children. If inflating proceeds at 10 percent per year, as it did in the United States recently, within 8 years the purchasing power of what originally was saved is halved: i.e., the original dollar saved will buy only half of what it would have bought when it was saved. If even higher rates of inflating should occur in the future, the reduction of purchasing power is even more rapid. We now hear from some who optimistically state that inflating in the United States may be held to “only” about 5 percent per year, but even at that rate, within 15 years the purchasing power of what was saved would be halved.

Although at times any emphasis on “sound money” has been viewed as antediluvian, blindly “right wing” or the like, I note that one can find “sound money” advocates even among socialists. For example, George Bernard Shaw, although a famous socialist, said the following about gold in his book An Intelligent Woman’s Guide to Socialism and Capitalism (1928):

“To sum up, the most important thing about money is to maintain its stability, so that a pound will buy as much a year hence or ten years hence or fifty years hence as today, and no more. With paper money this stability has to be maintained by the Government. With a gold currency it tends to maintain itself even when the natural supply of gold is increased by discoveries of new deposits, because of the curious fact that demand for gold in the world is practically infinite. You have to choose (as a voter) between trusting to the natural stability of gold and the natural stability of the honesty and intelligence of the members of the Government. And, with due respect for these gentlemen, I advise you, as long as the Capitalist system lasts, to vote for gold.” (p. 263)

Not only Harwood, then, but a socialist such as Shaw, recognized how helpful deprecating the currency can be for politicians wishing to be reelected. Government printing presses can print an endless amount of currency, when that is permitted, but the resulting inflating brings with it many woes.

HENOY GEORGE

Before moving to the third area emphasized by Harwood, I shall discuss the influence of Henry George on Harwood’s views in the areas of social philosophy and economics. Harwood had high praise for George’s emphasis on the importance of clear communication in economics, on the need for
land reform, and on the importance of freedom and justice in advancing civilization. Harwood, like George, was much concerned about the adverse social effects found in partially free societies. In Harwood’s words:

“The results of imperfect or partial freedom were not all good. Great material progress came, but the greatly increased production of wealth was not equitably distributed to those who produced it; as a result, 12- and 14-hour days for women and children were common in the factories of England, more extensive and more degrading poverty pervaded the slums of Europe, and urban and rural slums developed in the United States.” (“A Modern Economic Scientist’s Appraisal of Henry George,” AIER Special Bulletin, July 18, 1952.)

Henry George, according to Harwood, diagnosed such problems well and provided much useful information on how those problems could be resolved. However, some of George’s followers mistakenly have viewed his proposed “single tax” on land site values as a panacea for all social problems. According to Harwood:

“I know that some of Henry George’s more enthusiastic followers...apparently believe that Henry George provided the knowledge that will enable us to cure all the economic ailments of Western Civilization... But those who are applying the scientific method in the field of economics already know of specific economic ills for which the knowledge contributed by Henry George provides no remedy... Henry George’s remedy will no more cure a rotting currency than knowledge of the circulation of the blood will provide a cure for pneumonia.” (Ibid.)

In short, Harwood was unstinting in his praise of what he viewed as the major contributions of George, while remaining critical of other areas of Georgist thought. As we shall see shortly, Harwood similarly lavished praise on some, but not all, of John Dewey’s views.

**METHODOLOGY**

In the last two decades of his life, Harwood placed great emphasis on what philosophers call epistemology; the title of one of his papers was “How Do We Know That We Know Anything?”. He concluded that one important reason that humans, including specialists, so often disagree on policy matters is that they all have become bogged down in a semantic swamp. He focused major attention on clear communication and the links between the use of a key word and what observable processes are thought to be designated by that word.

After reading the epistemological works of many traditional philosophers, Harwood chanced upon the work of the American philosophers Charles Peirce, William James, John Dewey, and Arthur Bentley. In Harwood’s opinion, those writers had hit upon an excellent revolutionary idea. Rather than assuming that traditional views of the mind, of human knowing, etc., are sound and that scientific inquiry is to be judged by traditional epistemology, those writers reversed the process and began to apply modern scientific inquiry to human knowing behavior. When that is done, much of the traditional view of how we arrive at knowledge and how knowledge is to be tested is seen as literally outdated.

To describe the many complex issues involved is far beyond what can be done in a general speech. However, I perhaps can communicate to some extent part of what is involved. The ancients, not to mention many philosophers today and many scientists who unwittingly repeat what the philosophers taught, tended to view knowing as something done by the “mind.” The “mind” was viewed as a thing or entity, having a form of special, non-physical, existence. Usually the “mind” was thought to have a universal structure of some kind, and to operate by certain innate rules. Through the “mind” we can come to know the truth, with certainty, at least some of the time.

For Harwood, the “mind,” as a separate and distinct entity, cannot be observed and need not be postulated. Human thinking is exceptionally important, but that is best viewed as a form of behavior, as a major way in which humans adjust to the problems they encounter. Those problems may be immediately practical, or as “theoretical” as developing a new mathematical theorem. The history of scientific development shows that often what was taken as final, certain, and absolute turns out later to be in error, either in detail or fundamentally. Harwood, then, rejects “certainty” as either the beginning point or the desired ending point of inquiry. We cannot expect to achieve TRUTH, but we often do achieve “warranted assertions,” which consist of the best possible description of certain relationships at a given time, yet which possibly may be modified in the future if new evidence so requires.

Harwood believed that the importance of not prematurely closing inquiry, because of a belief that the Truth has been reached absolutely, is illustrated by developments in physics. At one time the Newtonian framework, including the doctrine of absolute space and time, was thought to have provided the key to all the pertinent problems. However, later physicists found that parts of the Newtonian framework simply did not work in some areas of investigation. Relativistic physics was developed and was highly successful, although to
believe that it is "the final word" flies in the face of the history of science.

Harwood, following Dewey and Bentley, advocated the use of the transactional mode of inquiry in studying human behavior. That is another complex topic, but I shall try to communicate at least the core idea involved. In transactional analysis, the units being studied are not presumed separate elements of some kind that on occasion are found interacting together, but rather the unit of study is the full transactional field in which the behavior of interest occurs. Indeed, the presumed separate elements often literally do not exist separately, but exist only in conjunction with something else.

Let us consider a simple example, in which one human borrows either money or some other object from another human. In such a transaction, the literal existence of the borrower depends on the existence of a lender. There can be no borrower without a lender, or vice-versa. Obviously there can be a person who would like to borrow $1,000 but cannot find a lender, but every actual loan requires both a borrower and a lender. Moreover, to describe that transaction fully almost always requires attention to the cultural context in which it occurs. Laws may regulate many aspects of a loan; even if the participants decide to flout the law, description of their behavior will involve a description of the law that is flouted.

In a similar way, Harwood argued that knowings and knowns are so related transactionally. Knowings simply do not exist without knowns, and vice-versa. Knowledge is not viewed as existing in some special realm, with the mind as an entity at times "latching on" to bits of that knowledge. We must, instead, study human knowing behavior in conjunction with the correlative knowns, and vice-versa.

I turn next to Harwood's account of how useful inquiry proceeds: The inquirer faces a problem (from the most practical to the most theoretical). To solve the problem, one need not begin from some assumed absolute certainty or Truth. Typically the inquirer makes some observations and then formulates a conjecture about the relationships involved. That conjecture then is tested against further observations. In typical cases, those additional observations reveal some defect in the initial conjecture. The conjecture may be modified again, and yet further observations made. Perhaps typically the modified conjecture still will be defective, so it will be further modified and tested against yet further observations. If inquiry is successful, at some point the conjecture is so well confirmed that it is accepted as a warranted assertion. However, it is not viewed as certain, or as absolutely correct, or as immune to change. Further evidence may show that the conjecture requires yet further modification. In that sense, there is no necessary end to inquiry, yet the progress in understanding the behavior involved may be great, as great as that achieved in modern physics.

The general method of inquiry as just discussed is applicable, according to Harwood, not only to the so-called physical sciences but to the social and behavioral sciences, to national policy questions, to many of the interrelationships among humans that often are called "moral," etc. But even that method of inquiry is not viewed as final or as sacrosanct; the description of the method probably will be improved through time and even might at some point be replaced by something better.

I mentioned earlier that in my opinion Harwood's engineering background is reflected in his views about scientific method and human knowing. In particular, I had in view the close link he urged between the development of a conjecture and its testing. One of his major methodological criticisms of Keynes was that Keynes piled conjecture upon conjecture without testing at each step of the way. Harwood opposed a bifurcation between theoretical work and laboratory or testing work; keeping the two in tandem, transactionally, was viewed by Harwood as highly important.

Unlike some, then, Harwood viewed his conclusions about substantive matters in economics as subject to the continual confirmation mentioned above. None of his conclusions were thought to be final, absolute, complete, or as immune to change if new evidence so requires.

At this point I wish to read you a long quotation from Harwood that illustrates the way in which he brought together his views on human knowing, social philosophy, and economics. The quotation is from his paper, "Stop Thieves," published in 1978:

"Beavers build dams, birds build nests, bees construct cells for honey, and spiders weave webs, but these activities have become programmed in the genes that they inherit from their ancestors. Infant beavers, birds, bees, and spiders, even if separated from their parents at any early age and denied an opportunity to learn from their kind, nevertheless will build and weave as their ancestors have done, no better and no worse. "Humans, however, are greatly different. Try to imagine a human infant separated from its kind at an early stage of life but somehow enabled to survive, perhaps as a mother ape adopts and wet nurses it. What kind of a house would that human build when it reaches maturity? Would it prefer French cooking to Boston baked beans? And would the mature human who survives in a family of apes be clothed?"
“As we all know, the human infant has no inherited genes that will program or guide his activities at a suitable age to build a certain type of dwelling, or to prepare his food, or to weave his clothing. . . .

“Humans have the capacity for learning to a unique degree. . . . Language is an important aspect of the learning process, and humans have barely begun to know scientifically about language. Even the seemingly simple question, How do we know that we know anything?, has not as yet been satisfactorily answered although philosophers have been discussing it for more than 2,000 years. . . .

“Nevertheless, by means of language and other developments humans have learned how to learn from their fellows. Moreover, by writing and by constructing lasting artifacts humans have learned how to teach their youth. The learning achievements have become, in effect, a means of giving a ‘head start’ to each generation. . . .

“Everywhere and at all times humans have exhibited this learning faculty. The varying degrees in which it is used cannot be ascribed to differences in original capacity among different races of men. All, whether black, white, or yellow, and wherever they may reside on the face of the globe have this faculty. The people who today exhibit the greatest degree of development attributable to learning were savages within historic times. In many instances, former cradles of learning and the arts are today inhabited by barbarians. . . .

“About 800 years ago, when our present civilization was beginning to arise from the dark ages that followed the decline and fall of Rome, a segment of the new civilization existed on an island west of Europe. For reasons that we may never understand fully, the humans in that developing social order focussed primary attention on justice as a means of ameliorating and improving their condition. They developed procedures and principals that were embodied in a succession of court decisions and became known as the Common Law.

“The Common Law established the rights to life, liberty, and justice. Freedom for each individual provided opportunity to use his abilities. Physical harm to anyone as well as harm by coercion became a violation of law, the increasingly respected Common Law. Liberty implied freedom to travel, to make contracts, to manage one’s life. Justice meant protection of one’s right to property whether self-created or obtained by exchange. As the Common Law evolved, it terminated many special privileges of feudal lords and kings.

“By the time of the American Revolution, several of the colonies . . . had adopted principles and procedures of the Common Law in their respective Constitutions. These were known as the Bill of Rights, which subsequently became the first ten amendments to the Constitution of the United States.

“Thus was initiated the most remarkably successful experiment in social order that human beings have devised. True, chattel slavery in some of the states was protected by the Constitution, and there can hardly be a greater denial of justice than chattel slavery. However, that situation was remedied during the Civil War.

“. . . the process of inflating has introduced a new form of slavery, a . . . lawful process for expropriating the surplus product of all who work. In less than four decades, the inflating process has robbed the American people alone of more than $2 trillion of their surplus product that they supposed had been saved for their declining years or as life insurance for their dependents. The process of embezzling the surplus product of producers . . . has been systematically applied by the politicians and money managers, who are the principal beneficiaries of the process. . . .

“As it happens, during the past 100 years when the potential benefits of a more nearly just society were reflected in astonishingly increased production of wealth, a great advance also occurred in the field of philosophy. After many centuries of failure, success was attained in describing useful procedures of inquiry. For this development we can thank a succession of American philosophers, Peirce, James, Dewey . . . and . . . Arthur Bentley. Now, human beings have not only the success achieved largely by trial and error in the physical and physiological sciences but also a description of how progress may be made in the social sciences. . . .

“Is it not almost as certain as anything can be for human beings that the advancement to a higher and better civilization depends primarily on such inquiry and the implementation of its results?”

ORGANIZATION OF THE AMERICAN INSTITUTE

My final topic this evening concerns the institutional framework devised by Harwood to further develop and to disseminate work on the lines just indicated. In the period just before he founded the American Institute, he was offered financial support, but he did not wish to be beholden to a few donors of large gifts. In order to protect freedom of inquiry, he also wished to avoid relying on large contributions from any special interest. At the same time, he wished for the widest and cheapest dissemination possible of the Institute’s research.

The solution was to offer for sale products that would sell well enough to fund the research effort, some results of which were bound to be unpopu-
lar — even with some friends of the Institute. From the beginning, the Institute published, in addition to its "theoretical" work, practical booklets on how to avoid financial tangles, on budgeting, and the like. In addition, it offered investment advice for payment, based on the money-credit, business cycle, and other research. Those "commercial" ventures proved successful enough so that the Institute had its own financial basis and was thereby enabled to be independent of any major external source of funds.

There is another side to this coin: In addition to his fear that research might have to flow in lines acceptable to large donors if such gifts were accepted, Harwood feared that the research staff might become overly "ivory tower" and cut off from the "real world." By viewing the practical, commercial, work of the Institute as a laboratory application of the "theoretical" research, there was a type of built-in protection against merely "ivory tower" research.

In order to distribute its work as inexpensively as possible, the Institute always has solicited relatively small contributions from many people. Admittedly, on rare occasions a $5 donor will think that gift entitles the donor to tell the Institute how it should do its work, but we don't find that to be the problem we might encounter if we faced the same situation with a $1 million donor. For completeness I should mention that the Institute does accept very large trust fund gifts of which the principal ultimately will go to the Institute, perhaps after several generations. However, such gifts are irrevocable, so a donor cannot threaten to withdraw the gift if we do not do as the donor wishes.

In conclusion, may I thank the audience for its patience in listening? I recognize that some of the topics I covered probably were too briefly discussed for you to make much sense of, or at least to consider seriously. Nonetheless, I hope that I have given you some notion of both the incredible range of Harwood's intellectual work and some notion of the type of conclusion he reached.

As I mentioned at the outset, many of his leading ideas were controversial, and those sympathetic to his work in some areas may be highly unsympathetic to his conclusions in other areas. I venture to say that Harwood's extensive work in such diverse fields, combined with his independence of what was merely fashionable in the academic world, was rare indeed. Perhaps even rarer was his ability to do both detailed, immediately practical, work and also work of great generality and scope. It was rather disconcerting for those who worked with him to see him shift from a highly technical philosophical point to an immediate administrative or even housekeeping problem, without "missing a beat." Much as he advocated the merits of the division and specialization of labor, at times he seemed capable of doing all the labor himself. He was a fascinating person to observe in action, and I hope that the world can produce more like him.
E. C. Harwood’s Vision And Its Realization