



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

281.8
Ag835

5

Vol. 26 No. 3
OCTOBER 1987

Price R2,00
(+ GST)



Agrekon

**FOUR-MONTHLY JOURNAL
ON AGRICULTURAL
ECONOMICS**

Issued by the Department of Agricultural Economics and Marketing

USDA
NAT'L AGRIC. LIBRARY
RECEIVED
JUN 16 '88

ALTERNATIVE RESEARCH ORIENTATIONS FOR AGRICULTURAL ECONOMISTS*

by GLENN L. JOHNSON**

My objective today is to discuss the research orientations of North American agricultural economists. As ideas in science now pass much more quickly among countries than they used to, some of these ideas about research orientations are already familiar to you; others, perhaps, are not. Some of these ideas on research orientations have wide applicability. Last month, I was in the People's Republic of China developing an agenda for a joint meeting next fall of our International Association with the Chinese Association of Agricultural Economists. The ideas I discuss here did influence the structure of that meeting. These same orientations also shape the activities of the Social Science Agricultural Agenda Project in the U.S. In the fall of 1988 I hope to see many of you at the Buenos Aires meeting of the International Association of Agricultural Economists (IAAE) whose new journal *Agricultural Economics* also reflects these orientations. Though the orientations of agricultural and general economists in different countries are probably becoming more similar, they also change. The turbulence generated by such changes in our orientations makes it desirable that we have the kinds of exchanges I hope will take place at this meeting.

After some background remarks, I will examine three fundamental research orientations of economists, in general, and agricultural economists, in particular. These are the orientations of logical positivism, various forms of normativism, and pragmatic institutionalism. I will also touch briefly on existentialist psychology, not so much as a research orientation but as an orientation to life and how to work with people that is important in our extension or advisory, administrative, developmental and consultative work. The paper will close with a consideration of how we can accommodate the conflicts among the three research orientations. Because we adhere to different conflicting orientations even within ourselves, some of the needed accommodations are internal and personal. Other accommodations are needed to adjust to the conflicting orientations that arise among us as colleagues. I believe that attainment of such accommodations will increase our ability to serve our societies.

*This paper has benefited from comments and criticisms received at a seminar, Department of Agricultural Economics, Michigan State University, and from specific suggestions by John Hoehn. The author, however, is fully responsible for its content

**Michigan State University, East Lansing

BACKGROUND

A number of current developments in general economics and in the U.S. and world communities of agricultural economists indicate increasing concern about research orientations among economists and, indeed, all scientists. For instance, *Agricultural Economics*, the new Journal of the IAAE, has a considerably different orientation to research than the *American Journal of Agricultural Economics*. The new Journal is consciously oriented to multidisciplinary problem solving and subject matter as well as disciplinary research. The former two require broader, more flexible orientations to research than does narrower research on the discipline of economics or even applied economic research vis-à-vis agriculture. In the U.S., land economics used to be an inherent part of agricultural economics. The first post-World War II meetings of the American Association of Agricultural Economics (AAEA), then called the American Farm Economics Association, were held in Wisconsin under the substantial influence of the pragmatic land economists who were part of the Wisconsin school of institutional economics. Since then, land economists in the U.S. have been largely transformed into resource economists. Many who would formerly have been land economists and agricultural economists are now members of the Association of Environmental and Resource Economists (AERE) that now meets independently as well as jointly with the AAEA.

In general economics, there has been an increase in the number of books and articles devoted to research methodology and orientations. McCloskey (1983) now writes about alternative "rhetorics" for economics by which he really means alternative research orientations. He is adverse to what he calls "modernism". Modernism, in his view, is closely related to one of the research orientations, logical positivism, I will discuss later. Another important article by Cooter and Rappoport (1984) is entitled "Were the ordinalists wrong about welfare economics?" This article also examines the Pareto-optimality in welfare economics. Blaug (1980) refers to institutional economics as "story telling" while I (Johnson, 1986) find it one of three primary orientations of economists.

But the re-examination of research orientations does not stop with economists. Amartya Sen from Oxford now works rigorously on utilitarianism as both a philosopher and economist (Sen, 1984; Sen and Williams, 1982) and the new Journal, *Economics and Philosophy* (April 1985) to date examines "the

relevance of economic techniques, methods and conclusions to philosophic questions in ethics and social theory". More generally, philosophers are re-examining the research orientation of *all* scientists (Achinstein and Barker, 1969) including those of the biological and physical scientists often referred to as "hard scientists".

Returning to agriculture, there have been at least ten national conferences held in the United States in the last ten years on the subject of agro-ethics (Haynes and Lanier, 1982; Knowles, 1983; Comstock, forthcoming). Agricultural economists have played prominent roles in these conferences. I find the research orientations of the agricultural economists participating in these agro-ethics conferences to be increasingly more normative than those of the typical agricultural economist.

From the above and other evidence, I conclude that it is time to look seriously and carefully at our research orientations or, if you wish, our philosophic foundations. My broad objective today, as I implied in my introduction, is to present a paper that will be helpful both in understanding ourselves and each other. Such an understanding will further our ability to accommodate to differences in our individual and collective research orientations.

THE LOGICALLY POSITIVISTIC ORIENTATION

One important philosophic orientation of economists is known as logical positivism. This orientation has deep historical roots in the thinking of such empiricists as Locke and Bacon. Positivism or empiricism was formalized rather early by Comte. The later formalization of logical positivism was done by philosophers trying to explain the phenomenal success of the biological and physical scientists in using logic as well as experience to generate what is often regarded as value-free information about the physical and biological worlds. Though many successful current-day biological and physical scientists have never studied the formal structure of logical positivism, they daily practice something very similar to the logical positivism formalized by philosophers.

At any rate, logical positivism fits the "hard sciences" very well. Before trying to relate it to agricultural economics research, it seems worthwhile laying out the bare bones of logically positivistic techniques and procedures. Fundamental to logical positivism is the development of an analytical or logical structure. Many logical positivists have viewed *analytic knowledge* as purely logical and devoid of empirical content (Carnap, 1953). Preferably, analytic knowledge should be axiomatized and stated in terms of propositions, theorems and proofs. Another next step in logical positivism is to acquire *primitive undefined terms* whose meaning is regarded as based solely on experience, not logic. Such terms are regarded as primitive because we know their meaning from experience. They are called undefined

because they are experiential rather than based in logic. A third step in logical positivism is to combine the primitive undefined terms with the statements from the analytic system to generate *synthetic statements* that are, hopefully, descriptive of the real world. Logical positivists long maintained a distinct separation of the analytic from primitive terms and the making of synthetic or descriptive statements. Thus we find that a logically positivistic discipline such as physics has theorists who do little or no empirical work and empiricists who do empirical work to confirm (really disconfirm) synthetic descriptive propositions.

In logical positivism there are essentially three tests for truth. One is the *coherence* or logical test of truth used in evaluating the analytical component. The other is the *correspondence* test or test of experience used in evaluating primitive terms and descriptive or synthetic statements. The third test is that of *clarity* or lack of ambiguity - if the analytic and synthetic statements are clearly and unambiguously stated, the tests of correspondence and coherence can be precisely applied. When statements are vague, it may be impossible to apply either the tests of coherence or correspondence to them because they may have so many different meanings they cannot be easily contradicted by either experience or logic.

It is important, I believe, for us to understand that in logical positivism, no synthetic descriptive statement is ever regarded as completely proven or absolute objective truth is still uncertain truth. Disproof is easy - complete proof is regarded as impossible (Popper, 1959). Thus, any descriptive statement generated by logically positivistic procedures is only tentatively true and likely to be disproven at a later date as the theory and descriptive knowledge of a discipline expands to make it possible to apply additional tests of coherence and correspondence. Knowing this will make us more receptive to the possibility of objective knowledge of values but not of absolute truth when we consider other research orientations.

It is also important to note that there is a necessary "leap of faith" in logically positivistic procedures. The leap of faith involves the assumption that "there is something out there in the real world" that corresponds to our sense impressions of feel, taste, smell, sight and sound. Many philosophers stress that we never know the real world - that, instead, all we know is our interpretations of the meaning of our sense impressions.

There is still another important characteristic of logical positivism to note. This is its empirically untested, metaphysical presupposition that there is no reality with respect to goodness and badness to be experienced and known. This metaphysical presupposition makes it impossible, in the logical positivistic view of things, to conceive of there being primitive undefined value terms. This impossibility, in turn, makes it impossible, in the logically positivistic view of science, to generate synthetic descriptive statements about what really has value.

We have to be careful at this point on still another matter. This logically positivistic view of knowledge of values does not preclude research on *who* attaches how much of *what value* to *what* conditions, situations, things or acts. It is acceptable in logical positivism to research whether such and such a person or such and such a group attaches how much of what value to a condition, situation, thing or act but unacceptable to research whether a condition, situation, thing or act "really has" value. Logical positivists preclude the latter but not the first.

Logical positivism became so dominant among the "hard" sciences of the western world that it became known as *the* philosophy of science to the preclusion of alternative philosophies of science. Even social scientists came to think they were unscientific if not logically positivistic. Most of the social sciences went through phases in which aping the logical positivism of the biological and physical sciences became the "thing to do". Perhaps the most successful of these attempts was made by the psychologists. Their success in becoming logically positivistic, for example, has earned them higher regard in the U.S. National Academy of Sciences (NAS) and in the U.S. National Science Foundation (NSF) than any of the social sciences; as "behavioral scientists", they are about the only social scientists accorded full scientific status in the Academy.

Though logical positivism is a major important orientation in economics, we should note that logical positivism has been coming apart at the seams in philosophy since about World War II. Before World War II, the center of logical positivism among philosophers was in Vienna. The group of philosophers there who espoused logical positivism was referred to as the Vienna Circle. It contained many Jewish scholars. Under Hitler's fascist persecution, these scholars were dispersed throughout the world, many of them going to the United States to the advantage of that country. But it was not the physical dispersal of the logical positivists from the Vienna Circle that caused logical positivism to fall apart. The philosophers themselves had begun to raise questions about the validity of the sharp distinction between the analytic, on one hand, and the generation of primitive experiential terms and synthetic statements, on the other. Another problem that arose had to do with the impossibility, demonstrated by Gödel, of developing an analytical system entirely provable within itself (Runes, 1961). Still a third difficulty that arose had to do with the unacceptability to some scholars of the untested metaphysical presupposition that there is no reality to be experienced with respect to goodness and badness (Achinstein and Barker, 1969). At any rate, logical positivism has fallen into considerable disrepute in philosophy despite the fact that it has continued to gain a somewhat unthought-out influence in economics and other social sciences as well as in the physical and biological sciences.

There have been many manifestations of logical positivism in economics. The book of John Neville

Keynes, the father of John Maynard, on research methods (1963, orig. 1890) was very logically positivistic in its orientation. In fact, J.N. Keynes advocated combining analytical or theoretical with experiential knowledge to derive descriptive propositions considerably before this aspect of logical positivism reached its high level of formalization in the Vienna Circle in the 1920s. Another logically positivistic research methodologist in economics was Lionel Robbins (1949, orig. 1932). My former professor, Milton Friedman, wrote a book containing three essays in positive economics. At the University of London and at the University of Chicago, the late Harry Johnson (1975, pp. 140-152) heartily endorsed the positivism of John Neville Keynes, Robbins and Friedman.

There are two implicit manifestations of logical positivism in economics to be mentioned. *One* of these is the Pareto-optimal paradigm (or perhaps only a subparadigm) put forth by John R. Hicks. Hicks questioned the cardinality and interpersonal validity of our welfare knowledge or knowledge of utility. Following Pareto, he refused to assume cardinal knowledge of utility and confined his economic analysis to what could be done with ordinal measurements. He also abandoned all claims to interpersonal validity for welfare or utility measures. I doubt very much if Hicks' reformulation of economics would have been accepted by economists had not they been in a society that was not already questioning the empirical validity of knowledge of values under the strong influence of positivism. *A second form of implied positivism* was injected into the thinking of economists by Gunnar Myrdal in Appendix 2 of his book on *The American Dilemma* (1944). Myrdal was positivistic enough to want to avoid research investigate the truth of statements about what "really has" value. This placed him in the difficult position of not being able to present a rigorous definition of the Negro problem in the United States or of solutions to it. Myrdal resolved his difficulty by making *assumptions* concerning racial values premises this made it possible for him to define racial problems and to recommend solutions to them without being responsible for doing objective research on the reality of the values used to define and solve the problems.

There are currently many rumblings against logical positivism in economics and philosophy. In my background remarks I referred to the works of McCloskey (1983), Cooter and Rappoport (1984), Amartya Sen (1984; Sen and Williams, 1982) and Achinstein and Barker (1969) to which I now want to add references to Harsanyi (1982), Rawls (1981), and Nozick (1974).

NORMATIVE ORIENTATIONS

Unlike the logically positivistic orientation, the normative orientation of economics is a conglomerate of orientations rather than being based

on a single well-developed philosophic position. The classical literature on philosophic value theory and the classical literature of economists have many common authors. Adam Smith (1948, orig. 1759) was a moral philosopher as well as an economist. So, too, were Jeremy Bentham (1950, orig. 1863), Henry Sidgwick (1950, p. 191f), John Stuart Mill (1936, orig. 1848) and, for that matter, Karl Marx (abridgement, 1932).

The classical economists were fundamentally concerned with questions of value. They tended to divide into two groups, one of which attempted to explain value on the cost or production side while the other attempted to explain value on the demand or consumption side. An example on the cost side is the labor theory of value expounded by Ricardo, refined by Mill and used by Marx more for political than for scientific purposes. On the demand side, we find the work of the utilitarians including particularly that of Jeremy Bentham. It was Marshall (1946, orig. 1890) who brought the neoclassical period to an end with a paradigmatic change that synthesized attempts to explain value on the cost side with attempts to explain it on the demand side into an equilibrium theory of exchange values, both monetary and nonmonetary. It is important to realize that the equilibrium values of Marshall are exchange or instrumental as contrasted to intrinsic values. Perhaps I should not use the word intrinsic but should use the phrase "more ultimate" or "more intrinsic" than the exchange values themselves.

The neoclassical period in economic thought was divided into two parts with the publication of John R. Hicks' book *Value and Capital* in 1939. From Marshall to Hicks, neoclassical thought presumed that utility or welfare is measurable cardinally as well as ordinally. Further, it presumed that our knowledge of utility (welfare) had a substantial amount of interpersonal validity. It was these presumptions that provided the intellectual underpinning for the introduction of progressive taxation and regressive distribution of benefits to benefit the poor at the expense of the wealthy in the United States and in the western democracies.

Hicks brought the ideas of Pareto forward from an earlier time. He redid welfare theory under the presumptions that utility can be measured ordinally but not cardinally and that utility or welfare measurements do not have interpersonal validity. In doing so, he created a "new" welfare economics that replaced the welfare economics of the earlier neoclassicists. As stated earlier, it is doubtful if Hicks could have won acceptance for Pareto's ideas except in a society so heavily committed to logical positivism that it would react favorably to almost any questioning of ability to measure or know values (utility) in an objective manner.

Thomas Kuhn in his book entitled *The Structure of Scientific Revolutions* (1970) popularized the use of the term "paradigm" in discussions of the philosophy of science and research methodology. Kuhn argues that a scientific discipline has "ways of looking at its phenomena" or "models"

that he calls paradigms. He further argues that once a paradigm is established, the "hewers of wood" in the discipline work with that paradigm until it is fully exploited. As full exploitation is approached, the hewers of wood encounter increasing instances in which the paradigm does not work. Eventually, the paradigm becomes so unsatisfactory it has to be replaced. Replacement is generally by an insightful scholar such as a Marshall or Hicks, in economics, who brings forth a new way of looking at the phenomena thereby inaugurating a new paradigm for the hewers of wood in the discipline to exploit until it is also exhausted thereby creating the need for still another paradigm. I believe it is legitimate to view the Marshallian synthesis as a paradigm in economics and to accord Hicks' Pareto-optimality *at least* the status of a subparadigm of the Marshallian paradigm. I also believe that economists and agricultural economists have now about exhausted the rather meager contributions of the Pareto-optimal paradigm or subparadigm and that that subparadigm is probably dying. I believe its death results from reduced acceptability of the logically positivistic orientation to economists and to agricultural economists.

The recent rumblings noted earlier in this paper against logical positivism are also rumblings against Pareto-optimality. I call attention again to the writing of Cooter and Rappoport on ordinality (1984), McCloskey's criticism of modernism and its positivistic orientations (1983), the current work of Sen (1984; Sen and Williams, 1982) and Harsanyi (1982) on utilitarianism and the research of Rawls (1981) and Nozick (1974) on the values of justice and equality. In addition, I note the concern of agricultural economists with the general subject of agro-ethics. A recent conference held in the United States on the general subject of efficiency and marketing was sponsored by the Economic Research Service of the USDA and the Farm Foundation, the proceedings of which are being edited by Kilmer and Armbruster (forthcoming) for publication this summer. The papers in this set of proceedings address questions about Pareto-optimality, the making of welfare decisions and the inadequacy of our measures of efficiency when considering governmental interventions in the market. The Pareto-optimal subparadigm appears to be dying in a way that will reduce the influence of logical positivism in economics and in agricultural economics, to leave more room for normative and pragmatic orientations.

As part of the discussion of normative orientations, we must consider the writings of the famous English ethicist, G.E. Moore. He published *Principia Ethica* in 1903 (Moore, 1959). John Maynard Keynes, the son of John Neville, wrote "I went up to Cambridge at Michaelmas 1902 and Moore's *Principia Ethica* came out at the end of my first year . . . , its effect on us, and the talk which preceded and followed it, dominated, and perhaps still dominate, everything else" (Moore, 1959, dust cover). In his important book, Moore argued that goodness and badness are always synthetic, never

analytic. Though Moore was not explicit about it, this implies that it is possible to have primitive, undefined value terms. He refused to let goodness and badness be definitional insisting, instead, that they are experiential. If they are experiential, we can perceive of doing what Moore did not do. Following positivistic procedures, primitive (experiential), undefined value terms can be incorporated in analytical statements to generate descriptive synthetic statements about "what really has value". This is about what was done in the neoclassical period prior to Hicks when welfare judgments based on experience and logic were treated as having enough cardinality and interpersonal validity to justify the redistributive reforms and market interventions of the western democracies as they raised and spent public funds. Also, this is about what is often done by current-day practicing politicians, public decision makers, business administrators and, indeed, parents. In fact, Pareto-optimality has been steadfastly ignored by practical decision makers since its injection into the mainstream of economics by Hicks in 1939. Governmental officials almost universally intervene in markets in nonPareto-optimal ways. As Cooter and Rappoport argue, our welfare measurements probably have enough cardinality and interpersonal validity to justify *at least some decisions* to intervene in market operations and to carry out nonPareto-optimal reforms. The Pareto-optimal subparadigm is dying and as it does, normative and pragmatic orientations will become more important in both general and agricultural economics.

THE PRAGMATIC INSTITUTIONALIST ORIENTATION

I have more doubt about discussing this orientation with a non-U.S. audience than I do the other two orientations because pragmatism has been a more important philosophy in the United States than in most other countries except possibly the Soviet Union. Pragmatic institutional economics has been very much a U.S. phenomenon, a close counterpart being the historicism of the German economists. Despite these concerns, I believe pragmatism should be discussed here because there are pragmatic elements in South African agricultural economics, I am sure, and because I am convinced that if there are not, there should be.

I start by discussing the nature of pragmatism. Peirce, who did much to structure pragmatism as a philosophy, viewed the truth of any proposition as depending on its consequences (Runes, 1961, p. 245f). Among the consequences of propositions are the prescription to which they lead when used to solve problems. In solving problems, we interrelate and process value-free and value knowledge through decision rules to determine "what ought to be done" in order to solve a problem. Prescriptive knowledge (about rightness and wrongness) is about "what ought to be done". As such it is distinctively

different from value knowledge about what is good and bad (Lewis, 1955).

When knowledge is imperfect as it always is, power and power covenants (Johnson, 1986, pp. 18-19, 23, 230-233; 1984) are essential components of decision rules. Among the most difficult optima economists (and political scientists, military scientists and students of police administration) try to define are those that redistribute the ownership of market, police, political, military, social, religious and other kinds of power in nonPareto-optimal manners. Such decisions were considered at several earlier points in this paper under the subjects of Pareto and nonPareto-optimality. It is recognized here that nonPareto-optimal decisions on such matters are always complex and never simplistic, generally dangerous and seldom safe, often emotive rather than objective, but nonetheless are at least partially amenable to the objective tests of logic, experience and workability (Johnson, 1986). In the pragmatic view, value and value-free statements are regarded as interrelated and not separably researchable. Thus, a pragmatist such as Kenneth Parsons, probably the dean of institutional agricultural economists of the United States and of the world, takes sharp exception to logically positivistic procedures for studying value-free information independently of value information (Parsons, 1949; 1958). He would probably take equally sharp exception to any tendency of normativists to research value independently of value-free information. The emphasis of pragmatism on consequences in determining truth and its stress on problems and problem solving processes leads to use of the workability test in determining the truth of propositions.

Early manifestations of pragmatism appeared in German historicism. Though I am not entirely clear about the historical relationships, the dialectical materialism of Karl Marx and Lenin is pragmatic and has intellectual roots in German historicism and in Hegel. In the history of U.S. economic thought, Veblen, too, had pragmatic elements in his thinking. The exact intellectual connections between Veblen and Peirce are unknown to me.

It was John R. Commons in the United States, however, who made pragmatism an explicit research orientation of general and agricultural economists. Commons based his institutional economics on Dewey's pragmatism (Commons, 1959, orig. 1934, p. 150). Wisconsinian institutionalism reflects a pragmatic concern with problems and processes and with the interdependence of value and value-free knowledge in the context of solving problems. In reading Dewey (1939) and Commons, one sometimes becomes convinced that not only do pragmatists regard value-free and value information as interdependent but that they sometimes fail to maintain a distinction between the two kinds of knowledge while focusing on prescriptive knowledge.

Georgescu-Roegan, a prominent American econometrician and theorist, became pragmatic in writing his book intitled *The Entropy Law and the Economic Process*. In considering the second law of

thermodynamics, entropy, he developed what can be viewed as an entropic theory of value. He argues that we attach high value to low levels of entropy and that as levels of entropy inevitably rise, our values change. In turn, he argues that as our values change with changes in levels of entropy, so do our perceptions of the variables and categories of phenomena in physics. What is important to note here is that Georgescu-Roegan makes the so-called value-free propositions of physics dependent on value propositions. The result is the interdependence of value and value-free knowledge characteristic of pragmatism; thus physics, the showpiece of the logical positivists became pragmatic in the hands of Georgescu-Roegan!

Pragmatic institutional economics has a number of manifestations in agricultural economics. For instance, land economics which was previously an integral part of agricultural economics has now evolved into resource economics. Many persons who would formerly have been land economists are as interested in the Association of Environmental and Resource Economists (AERE) as in the American Agricultural Economics Association (AAEA). From the end of World War II to date, the AAEA has become less pragmatic and more modernistic (including more logically positivistic) at the expense of pragmatism. The land economists, however, with their strong pragmatic orientation evolved into resource economists.

The pragmatic orientation appears to have gained ground since the late '60s and '70s when the social and political problems of the United States came to the fore in such a way as to call into question the disciplinarianism that goes along with logical positivism and even the normativism of the traditional academic establishment (Johnson, forthcoming-a). In the general area of policy analysis, what is known as public choice analysis has gained ground both in general economics and in agricultural economics. Public choice analysis is considerably more pragmatic than the more econometric agricultural policy analyses carried out by agricultural policy analysts in the post-World War II period. In agricultural marketing, the industrial organization approach evidences an interest in process and in endogeneously changing performance criteria that is rather pragmatic in nature (Johnson, 1986, p. 115). Similarly, the work of the general systems science analysts in developing simulation models of firms, markets and agricultural sectors (Rossmiller, *et al.*, 1978) also evidences pragmatic tendencies particularly when the modeling is done iteratively and interactively with decision makers and concerned persons in such a way that the modeling process uses the interaction as a source of knowledge of interrelated value and value-free propositions (Johnson, 1986, p. 115).

There is another manifestation of pragmatism among U.S. agricultural economists which may or may not be present in South Africa. Dewey's pragmatism is widely adhered to in U.S. colleges of education where it has guided both the teaching and research methods used since the 1920s or so. This is

reflected in a very practical orientation of American primary and secondary education and, indeed, in the earlier practical orientation of U.S. land grant universities. Unlike those in South Africa, U.S. agricultural extension services are in the colleges of agriculture of our land grant universities rather than in government. The philosophy of our agricultural extension service and of many of its agricultural economists is rather closely tied to the pragmatic philosophies of our colleges of education. The same is true of our vocational agricultural training programs and of the training programs for young farmers and agribusiness personnel that are carried out by some U.S. land grant universities. I realize that the agricultural advisory services in South Africa are part of the government and that Dewey's pragmatism most likely plays a less important role in educational philosophy than in the U.S. I suspect, however, that the practical interests of agricultural advisors in South Africa leads them in a pragmatic direction whether or not they receive pragmatic training.

In U.S. agricultural economics, pragmatic Wisconsin institutionalism probably peaked in the first two or three national meetings after World War II. The American Farm (later Agricultural) Economics Association met twice in Wisconsin immediately after World War II with Wisconsinian institutionalists in dominant positions. After that, in both general and agricultural economics, pragmatic institutionalism became less important (Johnson, forthcoming). Pragmatic institutionalism tended to be replaced by the logical positivism of econometricians and others now deplored by McCloskey (1983). It was not until the social unrest in the U.S. political crises in the late '60s and early '70s that dissidents and activists raised enough questions in the minds of academic disciplinarians about the dominance of logical positivism and various forms of normativism that pragmatic institutionalism began to reestablish itself in general economics and in agricultural economics (Johnson, forthcoming). A resurgence of pragmatic institutional economics now seems to be taking place. Whether or not a new general emphasis on research orientations will occur is uncertain. If it does, I believe that pragmatism will be more important in it than it has been in most years since World War II.

AN EXISTENTIALIST (PSYCHOLOGICAL) ORIENTATION

By existentialism in this paper, I am concerned more with existential psychology than with existential philosophy. Titchener (Runes, 1961, p. 103), an American psychologist, conceived that the job of psychology was to describe, analyze and classify the experiences of the individual mind. He considered such experiences to be "existences". His psychology is referred to as existential. This form of existentialism places a heavy emphasis on the individual and on the establishment of individual identity. Existentialist psychology is related to

existential philosophy which, in turn, is related to Peirce's pragmatism and the work of John Dewey discussed above. Existential psychology has more to do with a way of viewing individuals and their roles in society than with research methods. This, however, leaves an important role for existentialist psychology to play in guiding the work of agricultural economists serving as extension workers, advisors, consultants and dealing with the human dimensions of development, both domestically or abroad. Experience indicates that the establishment of greater self identity and self esteem helps overcome social alienation and isolation in a manner important in motivating people to learn and participate in problem solving. Thus an existentialist orientation has important roles to play in the extension, advisory, consulting and administrative work done by agricultural economists. Unfortunately, existentialist psychology is not well understood by many agricultural economists.

NEEDED ACCOMMODATIONS

The conflictual nature of the research orientations discussed above creates difficulties for most of us - both (i) personal ones within ourselves as agricultural economists and (ii) interpersonal ones in our relationships to other members of our profession. I believe we need greater ability to accommodate to the conflicts these orientations create both within and among us.

We can increase our understanding of how to accommodate to these conflicts by examining three broad kinds of research we do as agricultural economists (Johnson, 1986). At one end of the spectrum ranging from the practical to the academic research we do is the problem solving work we do when we research a specific problem faced by a specific decision maker. Such work is almost always multidisciplinary. At the other end of the spectrum is the specialized disciplinary research we do to improve our discipline of economics. Much of this work is sub-disciplinary. In between these two extremes is research on multidisciplinary subjects important to *sets* of decision makers facing *sets* of problems of concern to them.

Problem solving research is multidisciplinary as we just noted. It has as its objective the generation of a prescription to solve the specific problem under consideration. Prescriptive knowledge is based, in turn, on value and value-free knowledge, those two kinds of knowledge being more or less independent of each other depending on the applicability of the pragmatic argument about interdependence summarized earlier. Doing problem solving work, therefore, requires a capacity to generate relatively *value-free* information to which logical positivism has a considerable contribution to make. It also involves generating knowledge of values. Various forms of normativism contribute to our ability to generate knowledge of values. Presuming that the value-free and value knowledge may sometimes be interrelated, pragmatism also has a contribution to

make. In any event, the concern of pragmatists with problems and with the process of solving problems ensures a role for pragmatism whether or not value-free and value information are interdependent.

When we turn to *subject matter research*, we find that it too is multidisciplinary - if it were not it would be applied disciplinary research. Again, we find ourselves involved in research to generate bodies of multidisciplinary knowledge on a subject such as energy or horticulture of importance, in this case to a *group* of decision makers facing a rather well defined *set* of problems. Examples of multidisciplinary subject matter research include research on energy, erosion and community development to mention only three instances. Depending on how we define the subject under investigation, it may consist largely on value-free or value knowledge or both. When value-free and value knowledge are pragmatically interdependent, we cannot concentrate on one to the exclusion of the other. Most administrative units in colleges of agriculture in U.S. land grant universities, in most agricultural institutes and in many of the world's agricultural colleges are more like multidisciplinary subject-matter institutes than the disciplinary departments of traditional universities. An agronomy department, for instance, requires the skills of chemists, physicists, geneticists, bacteriologists, and even economists and sociologists. Agricultural economics by virtue of the adjective "agricultural" involves the technical agricultural and rural social science subjects with their underlying different basic disciplines.

As we swing on across the research spectrum to *disciplinary research* (either applied or pure) in our parent discipline of economics, we find that we can concentrate on value-free knowledge using the orientation of logical positivism or upon value knowledge using various normative orientations provided the two are not interdependent. To the extent the two are conceived to be interdependent, even pure disciplinary research needs to be pragmatic as was perceived by Commons (1959, orig. 1934). However, because disciplinary research is the farthest of the other two kinds of research from problem solving research, the pragmatic interests in problems, problem solving processes and in value/value-free interdependence in the context of problems are less applicable. As we are likely to do problem solving and subject matter research requiring value, value-free and prescriptive knowledge at some times in our lives and disciplinary research at other times, it is important to be aware of the applicability of the different research orientations discussed earlier to these three kinds of research. It is also important to realize that the optima economists try to locate are basically *prescriptive* being based on value and value-free knowledge processed through a decision rule. We should also note that as economists, we use such prescriptive knowledge to *predict the behavioral* responses of producers, resource owners, and consumers to changes in such things as prices and other value perceptions, technology, institutions,

people and resource bases. Of course, the optima we calculate can also be used *prescriptively* as when we advise resource owners, producers, consumers, and government officials.

My past experiences in discussing the multidisciplinary nature of problem solving and subject matter indicate that my readers and listeners often interpret me as downgrading the need of agricultural economists for disciplinary excellence. I do not believe in or want to imply such a downgrading. Hence, I explicitly deny it here. When agricultural economists join multidisciplinary, problem solving and subject matter teams, they are expected to have disciplinary excellence in economics and its ancillary disciplines such as statistics, mathematics, logic and philosophy. However, as agricultural economists they are also expected to acknowledge, have respect for and some knowledge of and tolerance for the other disciplines that may be more important than economics when they, as agricultural economists, work on multidisciplinary problem solving and subject matter teams. Disciplinary excellence requires that one know the strengths and limitations of his discipline in practical multidisciplinary contexts. It also requires one to respect and appreciate the contributions other disciplines can make (Johnson, 1984). Still further, there is an important synergism between practical and disciplinary research that benefits both. As Popper would have anticipated, U.S. agricultural economists made great disciplinary contributions to econometrics and economics after encountering the shortcomings of economics and economic statistics in their practical work of the 1920s and '30s (Leontief, 1966; Johnson, 1986, pp. 121-128) precisely because their practical work made them aware of needed improvements in economics and its ancillary quantitative disciplines. Now the tendency of agricultural economists to apply and illustrate uses of the disciplinary advances of economists and econometricians to the neglect of practical problems tends, I believe, to make modern-day agricultural economists "hewers of wood" - cloners, so to speak - instead of contributors to the advancement of our basic discipline, economics, and its ancillaries.

A major difficulty that arises for agricultural economists is that the three research orientations we have been examining are conflictual. The conflicts arise mainly because of the constraints each of these orientations places on the strengths of the others. All three have important useful contributions to make. Our problem is one of avoiding the constraints each places on using the strengths of each other.

An operational accommodation among these conflicting orientations can be reached by concentrating on the strengths and ignoring the constraints each of these three orientations place on using the strengths of the others. I will briefly sketch out an operational accommodation here as I have developed it and published it in detail elsewhere (Johnson, 1986).

As a first step in reaching such an accommodation, we can stress the techniques and procedures of the logical positivists that have so

much to offer in generating value-free knowledge and in describing values held by persons and groups or in economics. As a second step, we can, as outlined earlier, use logically positivistic techniques and approaches to develop descriptive statements about "what really has value" by accepting Moore's idea of undefined normative primitives. In order to use positivistic techniques to generate knowledge of what really has value, we can reject the empirically untested metaphysical presupposition of logical positivism that there is no normative reality to experience and make a leap of faith that there is something out there in the real world that corresponds to our experiences of the goodness and badness of conditions, situations, things and acts. This makes value knowledge more than subjectively emotive by basing it, like value-free knowledge on logic and experience tested *objectively* with the tests of *coherence* and *correspondence*. We note, parenthetically, that it does not follow except to positivists that all perceptions of what really has value are unobjective. We must also be prepared to soften the logically positivistic insistence upon the sharp distinction between the analytic and the synthetic enough to recognize that some empirical information may be necessary in order to do analytical work and that, conversely, some analytical preconceptions may be necessary in experientially perceiving the nature of both value and value-free reality. In doing so, we help make a place for pragmatism.

When we consider various forms of normativism and their contributions to our knowledge of values, we will find some who deny the possibility of objective value-free knowledge more or less as the converse of denial of objective knowledge of "real" values by the positivists. Such constraints on our ability to use the strengths of logical positivism can often be advantageously ignored. Where such constraints of normativism on positivism cannot be ignored, pragmatism with its emphasis on problem definition and solution will have much to offer, particularly when value and value-free information are highly interdependent. However, the emphasis of pragmatism on consequences as a key to truth in problematic contexts can make a pragmatic approach an extremely cumbersome, complex way of viewing our research. This complexity itself can unnecessarily constrain our use of simpler positivistic and normative approaches to answering value-free and value questions when value and value-free perceptions are relatively independent of each other. In these instances, the pragmatic orientation can be ignored. Despite this, we quickly note that the complex holistic pragmatic way of viewing problematic situations is too valuable to be universally discarded (Johnson, forthcoming-b, Randall 1987, Schmidt 1987). The operational "way out" is to retain the techniques and approach of pragmatism for dealing with such complex situations but to reject them when we can "get by" with the simpler techniques of logical positivism or some form of normativism.

At least one philosopher friend of mine has

been willing to call the above suggestion as to how to accommodate to these conflicting research orientations a "synthesis". I think his suggestion goes too far. I regard my suggestion instead, as merely eclectic - as a way of being operational and of living with the conflicts that arise within ourselves and between us as we get on with the doing of the work we do.

In the above suggested scheme, I did not mention psychological existentialism. I omitted it because I regard it more as a way of viewing life and as having more to do with teaching, advising, extension and consulting than with research. I do, however, believe that the emphasis of existentialist psychology on the importance of the individual and of establishing self identity and a sense of belonging where alienation and isolation exist is appropriate and extremely useful. I, therefore, do not preclude existentialist psychology from the kit of orientations useful to agricultural economists.

It is my firm belief that we as agricultural economists have responsibilities for problem solving and subject matter as well as disciplinary research. Among our problem solving and subject matter research responsibilities are those of evaluating and recommending market interventions and reforms. I also believe that our responsibilities go beyond research to extension and advisory work, consulting and administration in both the public and private sectors. I further believe that the eclectic, accommodative suggestion I have presented here will be helpful in fulfilling this wider range of responsibilities as well as in carrying out our research responsibilities.

BIBLIOGRAPHY

- ACHINSTEIN, P. and BARKER S.F. (Eds) (1969). *The Legacy of Logical Positivism* Baltimore, MD: The John Hopkins Press
- BENTHAM, JEREMY. (1950). An introduction to the principles of morals and legislation. *Ethical Theories* A.I. Melden (Ed.), New York: Prentice-Hall, Inc
- BLAUG, MARK. (1980). *The Methodology of Economics* Cambridge: Cambridge University Press
- CARNAP, RUDOLF. (1953). Formal and factual science. *Readings in the Philosophy of Science* H. Feigl and M. Brodbeck (Eds), New York: Appleton-Century Crofts
- COMMONS, JOHN R. (1959). (orig. 1934). *Institutional Economics: Its Place in Political Economy* (Volume One), Madison: University of Wisconsin Press
- COMSTOCK, GARY. Forthcoming. Is there a moral obligation to save the family farm? Proceedings of Conference held February 20-21, 1986 at Iowa State University
- COOTER, R. and RAPPOPORT, P. (1984). Were the ordinalists wrong about welfare economics? *Journal of Economic Literature* XXII(2): 507-530
- DEWEY, JOHN. (1939). Theory of valuation. *International Encyclopedia of Unified Sciences* II-4, Chicago, IL: University of Chicago Press
- HARSANYI, JOHN C. (1982). Morality and the theory of rational behaviour. *Utilitarianism and Beyond* A. Sen and B. Williams (Eds), Cambridge: Cambridge University Press
- HAUSMAN, D.M. and McPHERSON, M.S. (Eds) (1985 and 1986). *Economics and Philosophy* Vols 1 and 2, Cambridge: Cambridge University Press
- HAYNES, RICHARD and LANIER, RAY (Eds). Undated. *Agriculture, Change and Human Values: Proceedings of a Multidisciplinary Conference* (2 Volumes), Gainesville, Florida, October 18-21, 1982
- JOHNSON, GLENN L. Forthcoming-a. Philosophic foundations of agricultural economics thought. - *A Survey of Agricultural Economics Literature* Vol. IV, Lee R. Martin (Ed.), Minneapolis: University of Minnesota Press
- JOHNSON, GLENN L. Forthcoming-b. Holistic modeling of multidisciplinary subject matter and problematic domains. *Systems Economics* D.G. Miles (Ed.), Ames: Iowa State University Press
- JOHNSON, GLENN L. (1986). *Research Methodology for Economists* New York: Macmillan and Co
- JOHNSON, GLENN L. (1984). Academic needs a new covenant for serving agriculture. Special publication, Mississippi Agricultural & Forestry Experiment Station, Mississippi State University
- JOHNSON, HARRY G. (1975). *On Economics and Society* Chicago, IL: University of Chicago Press
- KEYNES, JOHN NEVILLE. (1963). (orig. 1890). *Scope and Method of Political Economy* London: Macmillan and Co., Ltd
- KILMER, RICHARD L. and ARMBRUSTER, WALTER J. Forthcoming. *Economic Efficiency in Agricultural and Food Marketing* Ames: Iowa State University Press
- KNOWLES, LOUIS L. (Ed.), (1983). *To End Hunger* Washington, DC: National Council of Churches of Christ in the U.S.A.
- KUHN, THOMAS S. (1970). The structure of scientific revolutions. *Foundations of the Unity of Science* Vol. II, No. 2, Second Edition-enlarged, Chicago: The University of Chicago Press
- LEONTIEF, WASSILY. (1966). *Input-Output Economics* Oxford: Oxford University Press, Inc
- LEWIS, C.I. (1955). *The Ground and Nature of the Right* New York: Columbia University Press
- MARSHALL, ALFRED. (1946). (orig. 1890). *Principles of Economics* (eighth edition), London: Macmillan and Co., Ltd
- MARX, KARL. (1932). *Capital* Max Eastman (Ed.), New York: The Modern Library
- McCLOSKEY, DONALD N. (1983). The rhetoric of economics. *Journal of Economic Literature* XXI(2): 481-517
- MILL, JOHN S. (1936). (orig. 1848). *Principles of Political Economy* London: Longmans, Green and Co
- MOORE, G.E. (1959). (orig. 1903). *Principia Ethica* Cambridge: Cambridge University Press
- MYRDAL, GUNNAR. (1944). *The American Dilemma* New York: Harper Brothers
- NOZICK, R. (1974). *Anarchy, State and Utopia* New York: Basic Books
- PARSONS, KENNETH. (1958). The value problem in agricultural policy. *Agricultural Adjustment Problems in a Growing Economy* E. Heady, et al., (Eds), Ames: Iowa State College Press
- PARSONS, KENNETH. (1949). The logical foundations of economic research. *Journal of Farm Economics* XXXI(4): 656-686
- POPPER, KARL. (1959). *The Logic of Scientific Discovery* New York: Harper and Row
- RANDALL, ALAN. (1986). Institutional and neoclassical approaches to environmental policy. *Agriculture and the Environment* T. Phipps, P. Crosson, and K. Price (Eds), Washington, D.C.; Resources for the Future, Inc. pp. 205-224
- RAWLS, JOHN. (1981). *A Theory of Justice* Cambridge, MA: Harvard University Press
- ROBBINS, LIONEL. (1949). (orig. 1932). *An Essay on the Nature & Significance of Economic Science* London: Macmillan and Co., Ltd
- ROSSMILLER, G.E. et al. (1978). *Agricultural Sector Planning - A General System Simulation Approach* East Lansing: Department of Agricultural Economics, Michigan State University
- RUNES, DAGOBERT D. (1961). *Dictionary of Philosophy* Paterson, NJ: Littlefield, Adams & Co
- SCHMIDT, ALLAN. (1986). Comment and discussion. *Agriculture and the Environment* T. Phipps, P. Crosson, and K. Price, (Eds), Washington, D.C.; Resources for the Future, Inc. pp. 225-235
- SEN, AMARTYA. (1984). *Resources, Values and Development* Cambridge, MA: Harvard University Press

SEN, AMARTYA and WILLIAMS BERNARD (Eds), (1982).
Utilitarianism and Beyond Cambridge: Cambridge
University Press
SMITH, ADAM. (1948). (orig. 1759). *The Theory of Moral
Sentiments in Adam Smith's Moral and Political*

Philosophy W. Schneider (Ed.), New York: Hafner
Publishing Co
SIDGWICK, HENRY. (1950). The methods of ethics. *Ethical
Theories* A.I. Melden (Ed.), Englewood, Cliffs, NJ:
Prentice-Hall