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WHAT SHOULD ECONOMISTS DO?

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"But it is not the popular movement, but the travelling of the minds of men who sit in the seat of Adam Smith that is really serious and worthy of all attention."

LORD ACTON, *Letters of Lord Acton to Mary Gladstone*, Edited by Herbert Paul (London: George Allen, 1904), p. 212.

I propose to examine the "travelling of the minds of men who sit in the seat of Adam Smith," those who try to remain within the "strict domain of science," and to ask the following questions: What are economists doing? What "should" they be doing? In these efforts to heed the counsel of Lord Acton, I proceed squarely against the advice of a modern economist whose opinions I regard with respect, George Stigler. He tells us that it is folly to become concerned with methodology before the age of sixty-five. As a value statement, Stigler's admonition can hardly be discussed. But, as a hypothesis, it can be refuted, at least by analogy with an ordinary road map. I remain notorious for my failure to look quickly enough at highway-route maps, hoping always that some intuitive directional instinct will keep me along the planned pattern of my journey. I learned many years ago that "optimal" behavior involves stopping soon after one gets "lost," after uncertainty beyond a certain limit is reached, and consulting a properly drawn map. The analogy with scientific methodology seems to be a close one. Unless we can, for some reason, accept the ever-changing activities of economists as being always a part of the necessary evolution of the discipline through time, as being "on the highway," it is essential that we look occasionally at the map or model for scientific progress that each of us surely carries around, consciously or unconsciously, in his head.

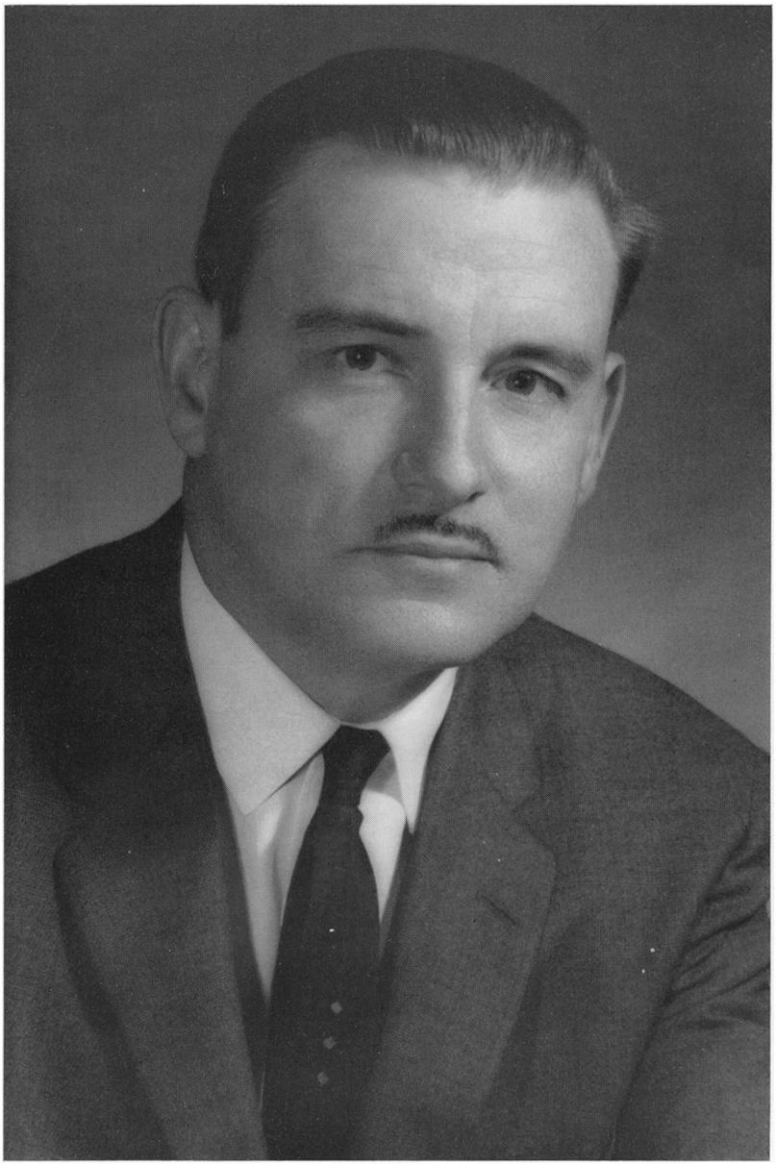
By proposing to examine critically what economists do you will note that I am also rejecting the familiar proposition advanced by Jacob Viner that "economics is what economists do," a proposition that Frank Knight converted into full circle when he added "and economists are those who do economics." This functional definition of our discipline begs the very question that I want to raise, if not to answer here. Economists should, I think, face up to their basic responsibility; they should at least try to know their subject matter.

Let me call your attention to a much-neglected principle enunciated by Adam Smith. In Chapter II of *The Wealth of Nations* he states that the principle which gives rise to the division of labor, from which so many advantages are derived,

> is not originally the effects of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual, consequence of a certain propensity in human nature which has in view no such extensive utility; the propensity to truck, barter, and exchange one thing for another.

Somewhat surprisingly, it seems to me, the relevance and the significance of this "propensity to truck, barter, and exchange" has been overlooked in most of the exegetical treatments of Smith's work. But surely here is his answer to what economics or political economy is all about.

Economists "should" concentrate their attention on a particular form of human



activity, and upon the various institutional arrangements that arise as a result of this form of activity. Man's behavior in the market relationship, reflecting the propensity to truck and to barter, and the manifold variations in structure that this relationship can take; these are the proper subjects for the economist's study. In saying this, I am, of course, making a value statement that you may or may not support. Consider this paper, if you will, as an "essay in persuasion."

The elementary and basic approach that I suggest places "the theory of markets" and not the "theory of resource allocation" at center stage. My plea is really for the adoption of a sophisticated "catallactics," an approach to our discipline that has been advanced earlier, much earlier, by Archbishop Whately and the Dublin School, by H. D. Macleod, by the American, Arthur Latham Perry, by Alfred Ammon and still others.[1] It is not my purpose here, and it is not within my competence, to review the reasons for the failures of these men to convince their colleagues and their descendants. I note only that the view that they advanced, and one which has never been wholly absent from the main stream of thinking,[2] is perhaps more in need of stress now than it was during the times in which they worked.

In a brief treatment it is helpful to make bold charges against ideas or positions taken by leading figures. In this respect I propose to take on Lord Robbins as an adversary and to state, categorically, that his all-too-persuasive delineation of our subject field has served to retard, rather than to advance, scientific progress. You are, of course, all familiar with the Robbins statement of the definition of the economic problem, the one that has found its way into almost all of our textbooks. The economic problem involves the allocation of scarce means among alternative or competing ends. The problem is one of *allocation*, made necessary by the fact of *scarcity*, the necessity to *choose*. Only since *The Nature and Significance of Economic Science*[3] have economists so exclusively devoted their energies to the problems raised by scarcity, broadly considered, and to the necessity for the making of allocative decisions.

In Robbins vision, our subject field is a problem or set of problems, not a characteristic form of human activity. We were better off, methodologically speaking, in the less definitive Marshallian world when economists did, in fact, study man in his ordinary business of making a living. In his attempt to remain wholly neutral as to ends, Robbins left economics "open-ended," so to speak. Search him as you will, and you will not find an explicit statement as to *whose* ends are alternatives. His neutrality extends to the point of remaining wholly silent on the identity of the choosing agent, and few economists seem to have bothered with the difficult issue of identifying properly the entity for whom the defined economic problem exists. It is thus by quite natural or normal extension that the economic problem moves from that one which is confronted by the individual person to that facing the larger family group, the business firm, the trade union, the trade association, the church, the local community, the regional or state government, the national government, and, finally, the world.[4]

[1] For a review of this approach in terms of the doctrinal history, see, Israel Kirzner, *The Economic Point of View* (New York: D. Van Nostrand, 1960), Ch. 4. This book provides a good summary of the various approaches to the "economic point of view."

[2] For a recent paper in which the exchange basis for economic analysis is plainly accepted, see, Kenneth E. Boulding, "Towards a Pure Theory of Threat Systems," *American Economic Review*, May 1963, pp. 424–434, especially pp. 424–426.

[3] (London: Macmillan, 1932).

[4] In his presidential address to the American Economic Association delivered in 1949, Howard S. Ellis criticized the arbitrariness with which ends may be selected under the Robbins' definition. Ellis' whole approach has much in common with that taken in this paper. In my view, however, Ellis, through his overemphasis on the

To illustrate the confusion that this lack of identification introduces, let me mention my most respected of all professors, Frank Knight, who has taught us all to think in terms of the five functions of "an economic system," presumably, "any economic system." In the Knightian introduction to our subject we talk about the "social organization" that performs these five familiar "social" functions. For whom? This is the question to which I return. Presumably, the answer is for the whole of the relevant collective group, for society. To be somewhat more explicit, let me cite Milton Friedman who says, if I remember his classroom introduction correctly, "economics is the study of how a particular society solves its economic problem."

Knight and Friedman are good examples for my purposes, since both of these men, despite their own differences on many particulars of economic policy, are men with whom, broadly and generally, I agree on principles of political-philosophical order. In their introductions to economics, both of these men seem to identify "society" as the entity that confronts the economic problem about which we, as professional economists, should be concerned, the entity, presumably, whose ends are to count in the appropriate calculus of margins. If they should be explicitly questioned, I am sure that both Knight and Friedman, and Robbins as well, would say that "society," as such, must always be conceived in terms of its individual members. Hence, when reference is made to a particular society solving its economic problem, this is really only shorthand for saying "a particular group of individuals who have organized themselves socially solving their economic problem."

The important point is, however, that we do, in ordinary and everyday usage, require a supplementary or an additional step in our basic definitional process before we break down the societal language into its meaningful individual components. This amounts to locking the barn door without being sure that we have ever had or will have a horse inside. Somewhat more technically, this procedure assumes that there is meaningful content in economics for "social welfare"; it prejudges the central issue that has been debated in theoretical welfare economics, and comes down squarely with the utilitarians. This seems to be a clear case where the basic conceptual apparatus has not yet been brought into line with modern developments. But this conceptual apparatus is extremely important, especially when most practitioners are too busy to bother with methodology. The definition of our subject makes it all too easy to slip across the bridge between personal or individual units of decision and "social" aggregates. In principle, this bridge is most difficult to cross, as most economists fully recognize when put to it. And, in one sense, my whole plea here is summarized by saying to economists, "get back or stay on the side of the bridge where you belong."

The utilitarians tried to cross the bridge by summing utilities. Robbins quite properly told them to cease and desist. But in remaining what I have called "open ended," in emphasizing the universality of the allocation problem without at the same time defining the identity of the choosing agent, Robbins' contribution to method has tended to promote a proliferation of the very confusion that he had hoped to prevent. Economists, paying heed to Robbins, now know when they cross the bridge; they explicitly state their own value judgments in the form of "social welfare functions." Once having done this, they feel free to maximize to their own heart's content. And they do so within the bounds of methodological propriety, à la Robbins. They have, of course, abandoned his neutrality-of-ends position, but they have been straightforward about this. And,

"choice" aspects of economics, failed to make his critique of Robbins as effective as it might have been. See, Howard S. Ellis, " The Economic Way of Thinking," *American Economic Review*, March 1950, pp. 1–12.

by the very fact of this neutrality, their explicitly stated personal version of "social" value is as acceptable as any other. They continue to work on an *economic* problem, as such, and this problem appears superficially to be the one that is generally referred to in the definitional introduction to our subject. These "social" economists are wholly concerned with the allocation of scarce resources among competing ends or uses.

I submit that theirs is not legitimate activity for practitioners in economics, as I want to define the discipline. In hastening to explain my heresy, I should emphasize that my argument is not centered on whether or not economists explicitly introduce value judgments into their work. This important issue is a wholly different one from that which I am trying to advance here. I want economists to quit concerning themselves with allocation problems, *per se*, with *the problem*, as it has been traditionally defined. The vocabulary of science is important here, and as T. D. Weldon once suggested, the very word "problem" in and of itself implies the presence of "solution." Once the format has been established in allocation terms, some solution is more or less automatically suggested. Our whole study becomes one of applied maximization of a relatively simple computational sort. Once the ends to be maximized are provided by the social welfare function, everything becomes computational, as my colleague, Rutledge Vining, has properly noted. If there is really nothing more to economics than this, we had as well turn it all over to the applied mathematicians. This does, in fact, seem to be the direction in which we are moving, professionally, and developments of note, or notoriety, during the past two decades consist largely in improvements in what are essentially computing techniques, in the mathematics of social engineering. What I am saying is that we should keep these contributions in perspective; I am urging that they be recognized for what they are, contributions to applied mathematics, to managerial science if you will, but not to our chosen subject field which we, for better or for worse, call "economics."

Let me illustrate with reference to the familiar distinction, or presumed distinction, between an economic and a technological problem. What is the sophomore, who has completed his "principles," expected to reply to the question: What is the difference between an economic and a technological problem? He might respond something like the following: "An economic problem arises when mutually conflicting ends are present, when choices must be made among them. A technological problem, by comparison, is characterized by the fact that there is only one end to be maximized. There is a single best or optimal solution." We conclude that the sophomore has read the standard textbooks. We then proceed to ask that he give us practical examples. He might then say: "The consumer finds that she has only $10 to spend in the supermarket; she confronts an economic problem in choosing among the many competing products that are available for meeting diverse ends and objectives. By contrast, the construction engineer has $1,000,000 allotted to build a dam to certain specifications. There is only one best way to do this; locating this way constitutes the technological problem." Most of us would, I suspect, be inclined to give this student good grades for such answers until another, erratic and eccentric, student on the back row says: "But there is really no difference."

I need not continue the illustration in detail. In the context of my earlier remarks, it seems clear that the second student has the proper answer, and that the orthodox textbook reply is wrong. Surely any difference between what we normally call the economic problem and what we call the technological problem is one of degree only, of the degree to which the function to be maximized is specified in advance of the choices to be made.

In one sense, the theory of choice presents

a paradox. If the utility function of the choosing agent is fully defined in advance, choice becomes purely mechanical. No "decision," as such, is required; there is no weighing of alternatives. On the other hand, if the utility function is not wholly defined, choice becomes real, and decisions become unpredictable mental events. If I know what I want, a computer can make all of my choices for me. If I do not know what I want, no possible computer can derive my utility function since it does not really exist. But the distinction to be drawn here is surely that about the knowledge of the utility function. The difference is analogous to driving on a clear and a foggy highway. It is not that between economics and technology. Neither the consumer in the supermarket nor the construction engineer faces an economic problem; both face essentially technological problems.

The theory of choice must be removed from its position of eminence in the economist's thought processes. The theory of choice, of resource allocation, call it what you will, assumes no special role for the economist, as opposed to any other scientist who examines human behavior. Lest you get overly concerned, however, let me hasten to say that most, if not all, of what now passes muster in the theory of choice will remain even in my ideal manual of instructions. I should emphasize that what I am suggesting is not so much a change in the basic content of what we study, but rather a change in the way we approach our material. I want economists to modify their thought processes, to look at the same phenomena through "another window," to use Nietzsche's appropriate metaphor. I want them to concentrate on "exchange" rather than on "choice."

The very word "economics," in and of itself, is partially responsible for some of the intellectual confusion. The "economizing" process leads us to think directly in terms of the theory of choice. I think it was Irving Babbit who said that revolutions begin in dictionaries. Should I have my say, I should propose that we cease, forthwith, to talk about "economics" or "political economy," although the latter is the much superior term. Were it possible to wipe the slate clean, I should recommend that we take up a wholly different term such as "catallactics," or "symbiotics." The second of these would, on balance, be preferred. Symbiotics is defined as the study of the association between dissimilar organisms, and the connotation of the term is that the association is mutually beneficial to all parties. This conveys, more or less precisely, the idea that should be central to our discipline. It draws attention to a unique sort of relationship, that which involves the cooperative association of individuals, one with another, even when individual interests are different. It concentrates on Adam Smith's "invisible hand," which so few noneconomists properly understand. As suggested above, important elements of the theory of choice remain in symbiotics. On the other hand, certain choice situations that are confronted by human beings remain wholly outside the symbiotic frame of reference. Robinson Crusoe, on his island before Friday arrives, makes decisions; his is the economic problem in the sense traditionally defined. This choice situation is not, however, an appropriate starting point for our discipline, even at the broadest conceptual level, as Whately correctly noted more than a century ago.[5] Crusoe's problem is, as I have said, essentially a computational one, and all that he need do to solve it is to program the built-in computer that he has in his mind. The uniquely symbiotic aspects of behavior, of human choice, arise only when Friday steps on the island, and Crusoe is forced into *association* with another human being. The fact of association

[5] Richard Whately, *Introductory Lectures on Political Economy* (London: B. Fellowes, 1831), p. 7; the same point is made by Perry. See, Arthur Latham Perry, *Elements of Political Economy* (New York: Charles Scribner & Company, 1868), p. 27.

requires that a wholly different, and wholly new, sort of behavior take place, that of "exchange," "trade," or "agreement." Crusoe may, of course, fail to recognize this new fact. He may treat Friday simply as a means to his own ends, as a part of "nature," so to speak. If he does so, a "fight" ensues, and to the victor go the spoils. Symbiotics does not include the strategic choices that are present in such situations of pure conflict. On the other extreme, it does not include the choices that are involved in purely "integrative" systems, where the separate individual participants desire identical results.[6]

Crusoe, if he chooses to avoid pure conflict, and if he realizes that Friday's interests are likely to be different from his own, will recognize that mutual gains can be secured through cooperative endeavor, that is, through exchange or trade. This mutuality of advantage that may be secured by different organisms as a result of cooperative arrangements, be these simple or complex, is the one important truth in our discipline. There is no comparable principle, and the important place that has been traditionally assigned to the maximization norm that is called the "economic principle" reflects misguided emphasis.

Almost at the other extreme from the Crusoe models, the refinements in the theoretical model of perfectly competitive general equilibrium have been equally, if not more, productive of intellectual muddle. By imposing the condition that no participant in the economic process can independently influence the outcome of this process, all "social" content is squeezed out of individual behavior in market organization. The individual responds to a set of externally-determined, exogenous variables, and his choice problem again becomes purely mechanical. The basic flaw in this model of perfect competition is not its lack of correspondence with observed reality; no model of predictive value exhibits this. Its flaw lies in its conversion of individual choice behavior from a social-institutional context to a physical-computational one. Given the "rules of the market," the perfectly competitive model yields a unique "optimum" or "equilibrium," a single point on the Paretian welfare surface. But surely this is nonsensical social science, and the institutionalist critics have been broadly on target in some of their attacks. Frank Knight has consistently stressed that, in perfect competition, there is no competition. He is, of course, correct, but, and for the same reason, there is no "trade," as such.

A market is not competitive by assumption or by construction. A market *becomes* competitive, and competitive rules *come to be* established as institutions emerge to place limits on individual behavior patterns. It is this *becoming* process, brought about by the continuous pressure of human behavior in exchange, that is the central part of our discipline, if we have one, not the dry-rot of postulated perfection. A solution to a general-equilibrium set of equations is not predetermined by exogenously-determined rules. A general solution, if there is one, *emerges* as a result of a whole network of evolving exchanges, bargains, trades, side payments, agreements, contracts which, finally at some point, ceases to renew itself. At each stage in this evolution towards solution, there are *gains* to be made, there are exchanges possible, and this being true, the direction of movement is modified.

It is for these reasons that the model of perfect competition is of such limited explanatory value except when changes in variables exogenous to the system are introduced. There is no place in the structure of the model for internal change, change that is brought about by the men who continue to be haunted by the Smithean propensity. But surely the dynamic element in the economic system is precisely this con-

[6] Boulding distinguishes threat systems, exchange systems, and integrative systems of social order. Cf. Kenneth E. Boulding, "Towards a Pure Theory of Threat Systems," *op. cit.*

tinual evolution of the exchange process, as Schumpeter recognized in his treatment of entrepreneurial function.

How should the economist conceive the market organization? This is a central question, and the relevance of the difference in approach that I am emphasizing is directly shown by the two sharply conflicting answers. If the classical and currently renewed emphasis on the "wealth of nations" remains paramount, and if the logic of choice or allocation constitutes the "problem" element, the economist will look on market order as a *means* of accomplishing the basic economic functions that must be carried out in any society. The "market" becomes an engineered construction, a "mechanism," an "analogue calculating machine,"[7] a "computational device,"[8] one that processes information, accepts inputs, and transforms these into outputs which it then distributes. In this conception, the "market," as a mechanism, is appropriately compared with "government," as an alternative mechanism for accomplishing similar tasks. The second answer to the question is wholly different, although subtly so, and it is this second conception that I am trying to stress in this paper. The "market" or market organization is not a *means* toward the accomplishment of anything. It is, instead, the institutional embodiment of the voluntary exchange processes that are entered into by individuals in their several capacities. This is all that there is to it. Individuals are observed to cooperate with one another, to reach agreements, to trade. The network of relationships that emerges or evolves out of this trading process, the institutional framework, is called "the market." It is a setting, an arena, in which we, as economists, as theorists (as "onlookers"), observe men attempting to accomplish their own purposes, whatever these may be. And it is about these attempts that our basic theory is exclusively concerned if we would only recognize it as such. The boundaries are set by the limits of such cooperative endeavor; unilateral action is not part of the behavior pattern within our purview. In this conception, there is no explicit meaning of the term "efficiency" as applied to aggregative or composite results. It is contradictory to talk of the market as achieving "national goals," efficiently or inefficiently.

This does not imply that efficiency considerations are wholly eliminated in the conception that I am proposing. In fact, the opposite is true. The motivation for individuals to engage in trade, the source of the propensity, is surely that of "efficiency," defined in the personal sense of moving from less preferred to more preferred positions, and doing so under mutually acceptable terms. An "inefficient" institution, one that produces largely "inefficient" results, cannot, by the nature of man, survive until and unless coercion is introduced to prevent the emergence of alternative arrangements.

Let me illustrate this point and, at the same time, indicate the extension of the approach I am suggesting by referring to a familiar and simple example. Suppose that the local swamp requires draining to eliminate or reduce mosquito breeding. Let us postulate that no single citizen in the community has sufficient incentive to finance the full costs of this essentially indivisible operation. Defined in the orthodox, narrow way, the "market" fails; bilateral behavior of buyers and sellers does not remove the nuisance. "Inefficiency" presumably results. This is, however, surely an overly restricted conception of market behavior. If the market institutions, defined so narrowly, will not work, they will not meet individual objectives. Individual citizens will be led, because of the same propensity, to search voluntarily for more inclusive trading or exchange arrangements. A more complex

[7] Paul A. Samuelson, "The Pure Theory of Public Expenditure," *Review of Economics and Statistics*, November 1954, p. 388.

[8] Takashi Negishi, "The Stability of a Competitive Economy: A Survey Article," *Econometrica*, October 1962, p. 639.

institution may emerge to drain the swamp. The task of the economist includes the study of all such cooperative trading arrangements which become merely extensions of markets as more restrictively defined.

I have not got out of all the difficulties yet, however. You may ask: Will it really be to the interest of any single citizen to contribute to the voluntary program of mosquito control? How is the "free rider" problem to be handled? This spectre of the "free rider," found in many shapes and forms in the literature of modern public finance theory, must be carefully examined. In the first place, there has been some confusion between total and marginal effects here. If a pretty woman strolls through the hotel lobby many tired convention delegates may get some external benefits, but, presumably, she finds it to her own advantage to stroll, and few delegates would pay her to stroll more than she already does. Nevertheless, to return to the swamp, there may be cases where the expected benefits from draining are not sufficiently high to warrant the emergence of some voluntary cooperative arrangement. And, in addition, the known or predicted presence of free riders may inhibit the cooperation of individuals who would otherwise contribute. In such situations, voluntary cooperation may never produce an "efficient" outcome, for the individual members of the group. Hence, the "market," even in its most extended sense, may be said to "fail." What recourse is left to the individual in this case? It is surely that of transferring, again voluntarily, at least at some ultimate constitutional level, activities of the swamp-clearing sort to the community as a collective unit, with decisions delegated to specifically designated rules for making choices, and these decisions coercively enforced once they are made. Therefore, in the most general sense (perhaps too general for most of you to accept), the approach to economics that I am advancing extends to cover the emergence of a political constitution. At the conceptual level, this can be brought under the framework of a voluntaristic exchange process. The contract theory of the state, and most of the writing in that tradition, represents the sort of approach to human activity that I think modern economics should be taking.[9]

I propose to extend the system of human relationships brought within the economist's scope widely enough to include collective as well as private organization. This being so, you may ask, how are "politics" and "economics" to be distinguished? This is a proper question, and it helps me to illustrate the central point of the paper in yet another way. The distinction to be drawn between economics and politics, as disciplines, lies in the nature of the social relationships among individuals that is examined in each. In so far as individuals exchange, trade, as freely-contracting units, the predominant characteristic of their behavior is "economic." And this, of course, extends our range far beyond the ordinary price-money nexus. In so far as individuals meet one another in a relationship of superior-inferior, leader to follower, principal to agent, the predominant characteristic in their behavior is "political,"[10] stemming, of course, from our everyday usage of the word "politician." Economics is the study of the whole system of exchange relationships. Politics is the study of the whole system of coercive or potentially coercive relationships. In almost any particular social institution, there are elements of both types of behavior, and it is appropriate that both the economist and the political scientist study such institutions. What I should stress is the potentiality of exchange in those socio-political institutions that we

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[9] In our recent book, *The Calculus of Consent* (Ann Arbor: University of Michigan Press, 1962), Gordon Tullock and I develop the theory of the political constitution in the manner sketched out here.

[10] This distinction has been developed at some length by Gordon Tullock. See, his, *Politics in Bureaucracy: A General Theory of Administrative Hierarchies* (to be published).

normally consider to embody primarily coercive or quasi-coercive elements. To the extent that man has available to him alternatives of action, he meets his associates as, in some sense, an "equal," in other words, in a trading relationship. Only in those situations where pure rent is the sole element in return is the economic relationship wholly replaced by the political.

As I have noted, almost all of the institutions and relationships that economists currently study will remain subject to examination in the disciplinary frame that I propose to draw around "economics." The same basic data are central to the allocation approach and the exchange approach. But the interpretation of these data, and even the very questions that we ask of them, will depend critically on the reference system within which we operate. What will the shift in reference system produce? The most important single result will be the making of a sharp and categorical distinction between the discipline to which our theory of markets applies and that which we may call "social engineering," for want of any better term. Note that I am not here saying that social engineering is not legitimate endeavor. I am suggesting only that the implications concerning the uses of individuals as means to non-individual ends be explicitly recognized. My criticism of the orthodox approach to economics is based, at least in part, on its failure to allow such implications to be appropriately made. If the economic problem is viewed as the general means-ends problem, the social engineer is a working economist in the full sense of the term. Thus it is that we now observe him developing more and more complicated schemata designed to maximize more and more complex functions, under more and more specifically-defined constraints. We applaud all of this as "scientific" advance, and consider the aids that we may provide to the practicing social engineer in these respects as our "social" purpose. There is, I submit, something wholly confused about all of this. I, too, applaud and admire the ingenuity of the applied mathematicians who have helped, and are helping, choosers to solve more complex computational problems. But I shall continue to insist that our "purpose," if you will, is no more that of providing the social engineer with these tools than it is of providing the monopolist with tools to make more profits, or Wicksteed's housewife with instructions how better to divide out the mashed potatoes among her children. The proper role of the economist is not providing the means of making "better" choices, and to imply this, as the resource allocation-choice approach does, tends to confuse most of us at the very outset of our training.

I want to note especially here that I am not, through rejecting the allocation approach, decrying the desirability, indeed the the necessity, for mathematical competence. In fact, advances in our understanding of symbiotic relationships may well require considerably more sophisticated mathematical tools than those required in what I have called social engineering. For example, we need to learn much more about the theory of n-person cooperative games. It seems but natural that the mathematics finally required to systematize a set of relationships involving voluntary behavior on the part of many persons will be more complicated than that required to solve even the most complex computational problem where the ends are ordered in a single function.

Although this will, of course, be challenged, the position that I advance is neutral with respect to ideological or normative content. I am simply proposing, in various ways, that economists concentrate attention on the institutions, the relationships, among individuals as they participate in voluntarily organized activity, in trade or exchange, broadly considered. People may, as in my swamp-clearing example, decide to do things collectively. Or they may not. The analysis,

as such, is neutral in respect to the proper private sector-public sector mix. I am stating that economists should be "market economists," but only because I think they should concentrate on market or exchange institutions, again recalling that these are to be conceived in the widest possible sense. This need not bias or prejudice them for or against any particular form of social order. Learning more about how markets work means learning more about how markets work. They may work better or worse, in terms of whatever criteria that might be imposed, than uninformed opinion leads one to expect.

To an extent, of course, we must all follow along the road that is functionally determined by the behavior of our disciplinary colleagues. The growth and development of a discipline is somewhat like language and, despite the fact that we may think that the current direction of change is misleading and productive of intellectual confusions, we must try to continue communicating one with another. It would be naive in the extreme for me to think that I could, through individual persuasion such as this, or in concert with a few others who might agree broadly with me on such matters, change the drift of a whole social science. Economics, as a well-defined subject of scholarship, seems to be disintegrating, and for the reasons I have outlined, and realistic appraisal suggests that this inexorable process will not be stopped. Nevertheless, it is useful, or so it seems to me, to stop occasionally and look at the road map.

I may conclude by recalling a little adage that Frank Ward, of the University of Tennessee, had clipped on his office door when I first met him in 1940, when I was a very green, beginning graduate student. The adage said: "The study of economics won't keep you out of the breadline; but at least you'll know why you're there." I can paraphrase this to apply to methodology: "Concentration on methodology won't solve any of the problems for you, but at least you should know what the problems are."