

Thoughts On Teaching Fundamental of Economics

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ABSTRACT

As an instructor in economics, what we have to teach or how we have to teach, it is always our concern in the classroom. This paper attempts to address some thoughts associated with: “What to teach?” rather than “How to teach?” in the foundation of Economics. Lack of a precise definition for the discipline and frequent assignment of technical meanings to terms of common discourse can be confusing. Economics instructions, being conducted with scarce means relative to the desirable objectives represent an economic problem although instruction is seldom considered in this light. Explanation typically employs metaphors, but there is no currently satisfactory explanation of how these “work”. Another difficulty is that metaphors illuminate in some ways they conceal in others. The efficiency conditions associated with the perfectly competitive market model are seldom adequately discussed nor is there any guarantee that dynamic processes will establish a new equilibrium if the original one is disturbed. It is useful to highlight the fact that economics is part of the general culture and, therefore, there are analogues in other fields. The circular flow model represents an analogy with the circulation of the blood in human body and can be employed useful in establishing a frame of reference for the discussion of Monetarist and Keynesian approaches to Monetarist and Keynesian stabilization policies.

Keywords: Efficiency, perfectly competitive market, equilibrium, circular flow model, .

1. INTRODUCTION

A. Some General Problems

Most treatise on teaching fundamental of economics emphasizes the questions of “How to teach?” depends on an appropriate answer to “What?” In the discussion that follows, an attempt will be made to examine some aspects of the latter question and to advance a few tentative answers.

Teaching the foundations of economics, if done properly, an instructor is facing the most difficult and demanding task because a great deal of preliminary ground work must be done to establish a frame of reference within which meaningful discussion can take place. It is, therefore, important that the presentation of the material be sharply focused, well organized, and coherent. If contemporary textbooks are any indication, there is a great deal of room in this connection for improvement both in the subject matter and in the way it is presented. Typical economics textbooks present the material in a scattergun fashion and inadequately discuss many of the important ideas. Unfortunately, the incentive system as it presently exists in most universities, place development of teaching materials for the principles course near the bottom of the priority system governing promotion, tenure, and salary decisions.

Some of the problems are terminological. For instance, economists often assign technical meanings to words commonly used in ordinary discourse. This can be confusing to the beginning student and requires some “unlearning” before learning can begin. An example is in the employment of quantities “demanded” and “supplied” in the discussion of individual dispositions to buy and sell as functions of price. Examples are “equilibrium” and “monopoly”. In particular, the latter does

not have the same meaning in its application to anti-trust cases as it does in pure microeconomic theory.

B. An Absence of Satisfactory Definition

A major difficulty lies in the lack of consensus on what constitutes a satisfactory definition of “economics”. As Bronfenbrenner points out:

“We begin with the lamentable fact that there seems to be no satisfactory definition of economics or economic science. A satisfactory definition would set out defensible boundaries between economics on the one hand, and such related disciplines as business, history, politics, law, psychology, sociology, statistics, engineering, geography, etc., on the other.”

The instructor, therefore, begins with a fundamental handicap, for it is difficult to present a clear precise explanation of that which lacks clear precise definition. And subject matter not having precise, clear, and systematic presentation is difficult to learn, and, by implication, difficult to teach successfully. Under this condition it is difficult to determine what economics is.

C. What is Economics?

In the contemporary state of knowledge there is no agreement on what economics is. Whether a particular economic theoretical approach is an objective analytical explanation of real world phenomena, or, a subjective ideological political program depends upon who is making the assessment. There is a long-standing and ongoing debate on the question of whether economics is a science. If it is, what kind of it is? Is the proper model that of the natural sciences, or is it a separate social science outside of the realm postulated by the advocates of a unified science?

To what purpose can the postulated, theorems, and conclusions of the market-oriented economics taught in universities be put? Is their only purpose to facilitate prediction? Only to explain? To both predict and explain?

Does the economics presented in textbooks purport to be a basic explanation of how the fundamental forces in the economics universe operate? Is it a technology that identifies the optimal means of achieving specified policy objectives? Or does it provide the policy maker with the necessary practical skills to implement optimal policies to obtain desirable results?

In economics, there are analogy differences between basic theoretical considerations, the technology of applied economics, and the practical skill to apply given principles to obtain a desired result. Clearly these are different frames of reference, which, in the interest of clear exposition and learning, should be clearly and explicitly identified. Unfortunately for all concerned, they almost never are.

Further, is the traditional distinction between positive and normative economics tenable? Can one sharply distinguish between “*theory*” and “*fact*”? Currently, there is a widespread and well-represented body of opinion (Kuhn’s *The Structure of Scientific Revolutions for instance*) denying that such distinctions can be sharply made, i.e., economic theory contains important subjective elements. Consequently, competent practitioners often may not reach the same conclusions on the basis of the same data, i.e., there may be no objective means of satisfactorily resolving disagreements. And to the extent that the meanings of terms is contextual it may well be that different approaches may be incommensurate, i.e., partisans of different approaches may be speaking different languages although articulating the same words.

Given that the arguments advanced are frequently analogical, what are the limits of the domains of appropriate application, i.e., under what conditions do similarities hold and when not? For instance, to what extent are the conclusions of the timeless static theory typically adumbrated by economics applicable to events that occur in real time? Realizing that final definitive answers have not, and probably cannot be given to these questions, nevertheless the interests of scholarship dictate that some consideration is given to them and some assessment provided as to the current state of knowledge. Surely, a healthy degree of skepticism is indicated and some humility desirable, attitudes not always adequately expressed by instructors. What we have just been saying is largely methodological, a subject to which we now turn.

D. Methodological Considerations

Economics knowledge is a product of human endeavor and, therefore, constructed with a purpose in mind. How adequate is economic knowledge, e.g., to what extent can it be depended upon for adequate guidance in the making of decisions and assessments by practitioners? What is the load-bearing capacity of various economic principles? How well does economic theory serve the purposes for which it was constructed, or other worthwhile ends? To some extent the discussion above anticipated these considerations. Nonetheless, the subject merits further consideration since it involves numerous controversial issues. Clearly, any formulation of the subject matter of economics is inadequate unless some indication of its quality and limitations is included. Quality assessments are seldom incorporated in principles course discussion, and when they are, they are the basis of controversy. In one admittedly instance, disagreement obtains over whether or not economic theory predicts well. Surely, in particular instance, the historical record should indicate whether or not a theory has had a tradition of being the basis of successful predictions, so, in principle, there should be an objective answer to the question. (Of course, whether a particular theory will be the basis of successful predictions in the future is itself a prediction and therefore an unanswerable question.) Resolving the issue on the basis of *ex cathedra* pronouncement, as it occasionally attempted, clearly is unsatisfactory.

Not the least of the unresolved basic issues is that of whether methodology is possible. Some anarchistic writers, Feyerabend among them, assert that it is not.¹ The anarchistic argument against method is a species of skepticism, which, if carried to its logical conclusion, is internally inconsistent (requiring one to be skeptical of skepticism). Theories, however, are constructed by some process, and accepted (or rejected) by making decisions in accordance with some standard of appraisal. Surely, the nature of the process by which a knowledge claim was constructed and the standards applied in giving it credence are indispensable in the development of economic subject matter and deserve some attention. Methodology, therefore, is necessary, and any judgment respecting the validity of a knowledge claim must include an evaluation of the means by which it was constructed and evaluated. One cannot understand economic principles unless one also understands underlying methodology.

Although methodological discussions have considerably increased in the economics literature since the 1980's, methodological questions, though often implicit, have always been important in the history of economic thought. Cartesian

rationalism and Baconian empiricism are two approaches that underlie a great deal of the development of economic theorizing. Although limiting methodological approaches to rationalism and empiricism would be a gross oversimplification, it would be fair to say that a student cannot fully appreciate economics as a subject matter without at least having an elementary comprehension of the nature of and the differences between these two approaches.

E. Ethics and Economics

A major deficiency in contemporary economic thinking is the large, ever-widening, gulf between economics and ethics. Surely, actual behavior is significantly influenced by ethical values, and a primary factor in ethics is the conditioning of human conduct. Consequently, economic welfare considerations have an influence on economic behavior, and therefore must be incorporated into modern theoretical economics. But although theoretical economics has had implications for welfare economics, the reverse is not true, i.e., welfare economics has had no influence on theoretical economics. If theoretical economics is to be empirically based, i.e., to be an explanation of actual human behavior this shortcoming stands in need of remedy.

Economics has dual origins, both of which date back to the ancient Greeks. One origin is rooted in consideration of what man must do “to live well”, and the other in the contemplation of the basic factors underlying the functioning of the economic universe. This duality, though frequently implicit, is important in contemporary economic thought, and instructor needs to emphasize at this point. Is the focus of economics to explain the nature of the economic universe and its operative forces, to provide cogent advice to economic units on how best to function, or some of both? The instructor should clearly distinguish the frame of reference underlying the various discussions undertaken.

Both the ethics and the theoretical approaches have much to contribute. The theoretical approach has greatly facilitated an appreciation of the character of social interdependence and an enhanced understanding of practical problems precisely as the consequences of employing logic.

In its current condition, economics could be improved by directing greater and more explicit emphasis to the ethical factors that condition individual judgment and behavior. Incorporation of such factors requires modification of the standard behavior assumptions. For instance, the theory of perfectly competitive markets assumes that individual action is limited to an adjustment to an existing environment over which the individual exercises no control. These modifications may stem from intrinsic or instrumental valuations of either the individual or group. Adam Smith in his notion of “sympathy” considered the poor, and instructors neglected his emphasis on ethical considerations (especially the influence of behavior norms) as determinants of human behavior. Such behavior may run counter to an individual’s dominant strategy as dictated by a strict self-interest. Moreover, considerations of group rationally many influence individual behavior in the absence of any lack of individual knowledge. Therefore, welfare economics can be improved by an increased emphasis on ethics; descriptive economics, prognosis, and policy can be enhanced by greater incorporation of ethical considerations in the analysis of individual and group behavior, and by introducing such theoretical concepts as trade-offs, opportunity cost, etc., ethics can be improved by incorporation of economics principles. Since many of the problems outstanding have not been satisfactorily resolved by ethicists, the remedy does not consist in simple transplantation of ethical principles into economics, nor by the reverse, since ethical

problems require analysis employing non-economic principles (“rights” and “freedoms”, for example).

The extremely narrow assumption of self-interested behavior made by economists has largely isolated economics from a wealth of ideas to be found in ethics, and, therefore, has largely precluded consideration of important behavior relations. Contemporary economic theory typically discussed “rationality” of individual behavior in terms of consistency, choice, and maximization of self interest results in the best possible approximation of actual behavior, or that its pursuit necessarily results in optimum economic condition (as duty, loyalty, good will, etc. may be significant).

Subject to a highly restricted set of assumptions, welfare economics specifies conditions in which actions motivated entirely by self interest might be ethically justified. But, practically speaking, the significance of such theoretical analysis is highly doubtful, consequently specification of the limitations of the “welfarist” concepts upon which the analysis is predicated is necessary. A distinction must be drawn between the individual as “satisfaction maximizer” and as “agent”. The former refers to the individual’s opportunities and achievements in light of personal advantage, while the latter incorporates broader social and ethical objectives. Adoption of the latter perspective permits extension of the analysis beyond that of individual maximization of satisfaction with productive results. It is appropriate to distinguish between considerations of distributive justice and broader individual and/or group values. So doing permits examination of issues such as “plurality” and “evaluation”, “commensurableness”, “completeness” and “consistency”, and impossibility theorems. Application of recent conclusions of consequentialism to economics can be combined with intrinsic valuation, position relatively, and agent sensitivity to moral assessment. Under plausibly realistic conditions, a general consequential approach can provide robust sensitive framework for perspective analysis of basic issues such as rights and freedom.

Deviations from the usual basic assumption of self-interested maximizing behavior can stem from both intrinsic and instrumental valuations in either an individual or social context. These occur in connection with the typical economic instances of efficiency failure stemming from such phenomena as externalities, extra-market interdependencies, and lack of confidence in governmental economic policies. In analyzing these and similar issues, individual incentives may have to be redefined if deviations from self-interested behavior are to be incorporated into economic analysis. That which an individual can be taken as maximizing is a relative matter depending upon what are viewed as the appropriate control variables, and what valuations are considered as appropriate means of control exercisable by an agent or group. For instance, if the individual is free to choose his own goals, he may choose objectives other than that of maximizing narrowly defined personal welfare.

Furthermore, ambiguity may arise when the instrumental value of certain social rules are adopted in the pursuit of individual goals, as oligopolistic and Prisoner’s Dilemma game situations indicate. Although a good deal more could be said about these matters, enough has been said to indicate that mainstream economic theory is predicted upon narrowly specified suppositions concerning individual motivation and behavior. If ethics influence economic behavior, different ethical systems are likely to generate different economic systems. It is highly desirable that principles students be made aware thereof.

II. TREATMENT OF THE SUBJECT MATTER

Inherent in the course presentation of economics, or any other subject matter, is the scarcity of time and effort relative to the amount of important material available for presentation and learning. Presumably, the objective is (or should be!) to maximize the amount taught/learned given the amount of time and effort available. Therefore, efficiency in the ways in which instructors and students marshal their resources of time and effort is an important consideration. A system of priorities is required to insure the most important topics are presented in appropriate detail and the least important ones omitted in light of the goals established for the course. Though seldom explicitly appreciated, economics is reflexive, i.e., its principles are important to the presentation of its subject matter.

Both the object, the economy, and the subject, economics, are considered to be systems and, therefore, the subject matter should be presented in a systematic fashion so as to be descriptive and to facilitate comprehension. Language and a student's previous history establish an inescapable overall perspective, which necessarily is experienced internally. Together they constitute the tradition in which the individual is situated and which he draws upon and generates through acts of interpretative understanding that meld the past with the present. Consequently understanding is the basic element of all human activity, and constitutes the means by which social life is realized. The pervasive influence of tradition structures the pre-understandings from which interpretation emanates. Because all knowledge and truth are historically founded and mediated linguistically, the interpretation of texts (or lectures) requires a hermeneutic circle of understanding whereby the resulting meaning can never be intrinsic, but must always be a subjective, *for us*, meaning. The hermeneutic circle involves the relation between whole and parts, e.g., without parts the whole is vacuous, and without the whole the parts are meaningless. An ongoing tradition represents a continuing fusion of past and present frames of reference with understanding being achieved through the medium of language. Understanding requires an interpretive act, which results in creative production rather than reproduction of the text. In other words, understanding is achieved not simply by passive reception, but is the result of an active application of the historical past to the interpreter's present. In economics (and in sciences), the open and constructive character of the hermeneutic circle is impaired by an objectivist method since such severs the lineage between understanding and practical application.

Since what is presented in the principles course is always only part of a larger whole, the latter presumably being seen as systematically organized, the explicit should be presented with an eye toward the implicit, and thought, with a view toward the unthought. Given that learning is a tradition-based-ongoing process, the principles courses should be taught with a view both to what is presented and to the larger domain of what is not. In other words, one of the major objectives is to present the subject matter in such a way as to maximize the ease of access to that subject matter not presented. This is an especially challenging task because learning is subjective, i.e., each individual is developing his own ongoing tradition.

III. METAPHORICAL MODELS

Employment of metaphor in economics is so pervasive and long standing that the figurative meanings created have often come to have a literalness that is accepted without reflection. However, the inability to sharply distinguish between natural speech and poetry, and nature and convention, implies that all truth is of

human creation. Employment of metaphor to impart meaning is essential both to literary composition and scientific explanation, permitting us to conceive more than we are capable of expressing. However, the question of how metaphors work, i.e., what constitutes an apt and appropriate metaphor requires theories of meaning well beyond the contemporary compass of human comprehension. Thus, if possible at all, explanation is fundamentally imprecise and unclear.

Being a figure of speech, metaphor expresses a state of affairs in one frame of reference in terms conceived in another, i.e., in saying one thing the speaker means something else. To evolve, a body of scientific knowledge must meet two conditions: (1) Metaphorical terms must be meaningful to the language user without any reference to further experience (terms employed do not have direct empirical reference), and (2) they must constitute a novel way of visualization, i.e., convey new meaning.

Although metaphor illuminates it also conceals, i.e., the opportunity cost associated with conceiving some things clearly is that others are obscured. Metaphorical structuring is selective and practical, for if it were total, one concept would be the other rather than simply being understood in terms of it. There are similarities and differences, with metaphor promoting the former and neglecting the latter.

With these brief remarks, we shall now turn to brief examination of two commonly used basic metaphors, one being mechanical and the other being organic.

A. Competitive Markets

Conceived as a mechanism, the perfectly competitive market is basic to almost every discussion of economic principles. Useful as it is in facilitating conceptualization, the discussion typically is deficient in two respects: (1) It fails to adequately exploit the advantages inherent in its formulation, and (2) it fails to satisfactorily identify its shortcomings and limitations and, therefore, does not provide an adequate specification of its domain of appropriate applicability. To the extent that explanation is inadequate or incomplete, the student is not exposed to proper instruction and, therefore, cannot come to an adequate understanding of the subject matter.

The discussion of competitive markets is static in character, a consideration that is frequently underemphasized. Typically, no explanation is provided as to how or to what extent a timeless static model can usefully represent a world that operates in “real time”. The mistaken impression often conveyed is that hypostatization of the theoretically competitive market model is appropriate, i.e., that the competitive market model is the real world. Another mistake is to speak of the “entrepreneur” as a risk-bearing innovator in the context of static equilibrium theory. Moreover, the question of how competitive markets actually “work” is not taken up, possibly because the static theory provides no answer.

No account of how equilibrium is to be achieved, or even whether it can be achieved is provided. Any explanation of an adjustment process transforming a condition of disequilibria to one of equilibrium requires the introduction of temporal elements. Therefore, static analysis only serves to identify the properties of equilibrium states if such exists. Further, it is impossible to imagine that a discussion of cause and effect relations is compatible with static analysis since there surely must be a time lag, however, short, between cause and effect. And if competitive markets are seen to be “systems”, which they must be in order to identify the properties of equilibrium, the unidirectional logic frequently used in explanation is inapplicable since causal relations between systemic elements are bi-

directional. Unfortunately, the explanations accompanying the technical presentation of competitive market models seldom make these considerations explicit. This must be done if the discussion is to be properly understood. Any discussion of change implies that static models are incomplete since any disturbance impacting equilibrium must originate outside of and transform the models. Being incomplete, by themselves they cannot provide an adequate explanation of real world events.

Moreover, the auction character of the market inherent in static analysis is not adequately emphasized. It is postulated that an equilibrium will be achieved as the result of an auction in which buyers and sellers agree on the amounts they are disposed to exchange and the price which is obtain. In the model there is no possibility that exchanges will take place at other than the equilibrium price as there is in the real world (which is characterized by imperfectly knowledge).

B. Efficiency Considerations

1. Stability Conditions

Efficiency, in its several manifestations, underlies the whole of the subject matter presented in the discussion of economic principles. Unfortunately, the nature and implications of this concept are frequently inadequately defined and discussed. For instance, in microeconomics the importance of the “average” is often ignored with the focus placed on “marginal” considerations (also important). The “average cost” of the firm, which varies with output and scale of plant, is the measure of productive efficiency, a central consideration since one major objective of economic activity is postulated to be maximization of product output under conditions of resource scarcity.

Underemphasized is the idea that the efficiency conclusions of the analysis apply fully only in long-run equilibrium states, i.e., as special properties even in the context of static analysis. The introduction of real-time considerations raises further difficulties. For instance, if disequilibria lead to an adjustment process that moves away from (or no closer to) equilibrium, the efficiency conclusions do not hold and laissez faire economic policies may be neither economically desirably nor politically feasible. The competitive market is conceived to be a conflict resolver because it brings agreement between two groups, buyers and sellers, who have opposing interests. Unstable markets heighten rather than mitigate conflict and, therefore, are destructive. To provide the student with clear understanding, the conditions that must obtain for conclusions relating to efficiency to hold should be precisely described.

2. A Biological Analogy

As long as the analogy is not pushed too far, parallels can be drawn economic theory and biological evolution. The Darwinian approach stipulates that if an animal species is to be successful it must be adequate to its environment, i.e., survival requires that the species must adapt to changes in its environment or become extinct similarly, business firms and individuals operating in competitive markets must be adapt to the economic environment and adjust to changes in market conditions. Neither biology nor economics provides a satisfactory explanatory theory of the adjustment process. Complete adjustment of individual economic units to existing conditions occurs only in long-run equilibrium where only the most efficient adaptors survive as viable entities similarly, Darwin’s idea of the “survival of the fittest” (whose roots lie in Malthus’ population theory) implies that continued survival is assured for only the most efficient animal species, i.e., those best adapted to the environment in which they live.

Evolutionary biologists distinguish between physical and organic environments, the latter being the total existent living species. One economic analogue can be found in Schumpeter's theory of business cycles, which, in reality, is an explanation of a general evolutionary process. Schumpeter sought to transform the Walrasian general economic model from a sterile static conception to a freshly created living system. Genetic mutations play a similar role in biological evolution as "innovation" does in Schumpeter, although mutations play a similar role in biological evolution as "innovation" does in Schumpeter, although mutations involve a blind trial and error process, whereas innovation is governed to some extent by human choices. If human choice is "right" more frequently than random trial and error, economic evolution will be more rapid than biological evolution.

Darwin coined the term "natural selection" to indicate that nature's quality control is similar to that of an animal breeder seeking to develop/or improve the – pedigree of domestic animals. The animal breeder seeks to create and/or enhance desirable or positive traits and to eliminate harmful or negative ones. Natural selection insures that the positive, i.e., the more adaptive, genetic changes survive and the harmful, or maladaptive do not. Selective breeding, however, retains some elements of trial and error, as breeders cannot always predict that characteristics offspring will inherit from their parents. Competitive economic theory postulates a process of economic natural selection occurs which insures that firms with characteristics best adapted to ultimate economic conditions (not always predictable) and eliminates those that are less well or maladapted. In biology, negative selection acts to maintain the status quo by eliminating deviations harmful to the species from the norm. And such is also the case with firms in competitive markets. In both biological and economic spheres evolutionary change occurs when mutations endow individual with positive characteristics that give them a competitive advantage.

When biological species are unable to adapt to changing conditions, they become extinct (a frequent occurrence), and this also is the case with business firms unable to optimally adjust to changing market conditions. Most successful scientific endeavor extends the conclusions of "normal science" rather than resulting in scientific revolutions. Similarly in market economies, a few individuals typically make innovations, but once made, result in rapid change.

In economics, no viable dynamic theory exists which would permit prediction of new principles. Economists are limited, therefore, to a historical narrative of what actually did occur, with no cause and effect explanations possible.

C. Moral Philosophy

The narrow focus on markets and technical matters tends to artificially isolate economic subject matter from related areas. Despite its pretensions to being a science, economics has strong roots in moral philosophy. Laissez faire and competitive-market-oriented economics has an analogue in the religious concept of the priesthood of all believers. St. Thomas Aquinas' concept of the "just price" survives in the long-run equilibrium equality of price and average cost, i.e., buyer can equitably purchase a good for precisely the minimum amount required to compensate the participating factors of production. Although lip service is often paid to the contributions of Adam Smith to market economics, his moral concept of "sympathy" is often excluded from the presentation of economic principles by a narrow and restricted conception of individual self-interest. Sympathy, or the lack

thereof, is a major factor in the difference between Smith's harmonizing "invisible hand" and Thomas Hobbes' "war of all against all".

D. Supply and Demand

Even description of the basic competitive market supply and demand model is inadequate and incomplete. Demand is typically defined as an inverse relation between quantity demanded and price, *ceteris paribus*, implying that buyers bought more at lower than a higher prices. Besides the improper use of the past tense to refer to the buyers' disposition to purchase, there is the problem that the formulation isn't explicit enough in stating what it means. Although frequently there is the tendency to omit it, the *ceteris paribus* stipulation is important. Given everything else unchanged, implicit in a fall in the price of a good is a fall in its relative price, something that badly needs to be made explicit. Letting P_x represent the market price of good 'X', and P_y , the price of 'Y' and 'I' money income, the demand relation should be written:

$$Q_{dx} = Q_{dx}(P_x/P_y, I/\text{Price index}, \text{ceteris paribus})$$

A fall in the relative price of X, e.g., the ratio P_x/P_y , I constant will dispose the buyer to purchase more X. it is not the fall in P_x per se that dispose the buyer to purchase more, but the change in P_x relative to P_y and everything else. Income can be define as money income or as real income, the latter being money income deflated by a price index. If P_x changes, both money income and real income cannot remain unchanged under the *ceteris paribus* restriction. To hold real income constant in the face to of a change in P_x requires increasing or decreasing money income to keep the ratio 'I/price index' constant (holding money income constant when P_x changes would mean changes in real income). Adjusting money income to keep real income constant, one can distinguish between changes in the consumption of X due to a change its relative price, i.e., a change in the ratio P_x/P_y (the substitution effect), and the change due the change in real income (the income effect). Although the discussion is incomplete if left at this point, it does provide a theme, which can be picked up again in connection with the discussion of the theory of consumer behavior. Utility maximization leads the individual to spend his money to equate the marginal utility per dollar's worth of any two goods purchased. This is easily restricted to produce an equality between the ratio of the prices and the ratio of the marginal utilities of any two goods purchased by the consumer, i.e., the individual's relative valuation of the two goods is the same as the market's, implying an efficient distribution of goods (no basis for voluntary exchanged).

Explanation of relations between variables often employs a unidirectional logic. For instance, according to the "law of demand" a change in the (relative) price of a good will lead to a change in the opposite direction in the quantity buyers are disposed to purchase. The validity of the unidirectional logic, however, in context dependent, i.e., such logic is valid only when the demand concept is considered in isolation. An explanation of competitive markets in terms of demand, supply, and an equilibrium condition requires a different, bi-directional, logic. A change in relative price will change the quantity that buyers are disposed to purchase and, in turn, the quantity change will change relative price, i.e., the relation between variables embedded in a system in multi-directional. One must be extremely careful in employing "cause and effect" explanations with their implied unidirectional logic in the discussion of markets as lack of discretion is likely to inculcate students with bad habits.

E. The Circular Flow Model

The discussion of competitive markets outlined above is predicted on a mechanical metaphor, while the circular flow of economic activity, to which we now turn, supposedly, is based on an organic one. There is a long-standing tradition of engineering and biological metaphors as themes in the history of economic thought. The picture, however, is complicated by the sometimes employment of a mechanical metaphor by champions of the organic view (the term “organic” has its roots in a Greek word for “tool”).

The circular flow diagram, typically found in principles books, was developed by Francois Quesnay in his *Tableau Economique* (1958). Being a physician, Quesnay drew in analogy with William Harvey’s discovery of the circulation of the blood in the human body in his efforts to describe the flows of economic activity.² Although biological in inspiration, the concept of the circular flow blood in the human body is, perhaps, an instance in which a mechanical metaphor has an organic application. This accounts, perhaps, for its wide application by those who have an engineering/mechanical approach to economic explanation.

Whatever its origins and character, contemporary discussions do not make as much of the analogy as they might. Seen from a microeconomic perspective, the real and expenditure flows are taken, as constant in volume and the problems is one of determining the composition of the real flows. The analogy, then, in one with the body’s production of red and white blood cells, hemoglobin, platelets, etc. It is through the operation of markets, which link the real and monetary flows, that the composition is determined.

In the macroeconomic application of the circular flow, the concern is with the size of the flow, i.e., growth and stabilization being prominent concerns. From this standpoint an analogy might be properly drawn between the economy and the circulatory system of a child. The appropriate microeconomic analogy, in taking the size of the economy to be fixed, might be with the circulatory system of a mature adult.

Unlike the view typically taken by microeconomics, macroeconomics usually does not see the economy as being self-equilibrating and self-stabilizing. A commonly accepted public policy goal is the regulation of the total volume of expenditures to insure full employment with a stable price level. Generally speaking, the Monetarist position is the money (blood) supply needs to be regulated by additions (transfusions) or subtractions (bleeding) as the velocity of circulation (blood pressure maintained by the heart pump) is satisfactory self-regulating. Supposing flexible prices, proper control of the quantity of money, given the reasonably stable velocity of circulation, would be sufficient to achieve the desired policy objective. The extreme Monetarist position is that this could be done quite easily as money supply changes would be needed only to residual of fiscal policy. The Monetarist policy maker would advocate an appropriate change in the quantity of money to meet policy goal requirements. The increase (decrease) in the quantity of money would have to be injected into (extracted from) the economy by use of the three pairs of fiscal instruments, i.e., fiscal policy would be a residual of monetary policy. In a sense, the essential difference between Monetarists and Keynesians is that they disagree on which alternative fiscal policy is appropriate.

IV. SUMMARY AND CONCLUSIONS

Unlike many treatises on teaching fundamental economics which focus on ‘how to teach?’ this discussion attempts to address some of the issues associated with the prior question ‘What to teach?’ Fundamental courses are especially difficult to teach well since the basis for a new tradition and frame of reference have to be established. Unfortunately, teaching principles course typically is very low on the list of academic priorities in a great many universities and the task is often assigned to inexperienced graduate students (who often do a credible job). To the extent that the quality of learning is reduced thereby, economists undermine both the foundations of their own discipline and render inadequate service the economics non-major.

The best way to teach economics principles- or virtually any subject, for what matter-is to expose students to those repeated applications of a short list of the core ideas of the discipline. If we asked a thousand economists to provide their own versions, we’d get a thousand different lists. Yet to dwell on their differences would be to miss their essential similarities. Indeed, almost all the teaching lists would contain variants of propositions like these no matter what your major is economics or business major or other fields:

- (a) The Scarcity Principles: Having more of one good thing usually means having less of another.
- (b) The Cost-Benefit Principle: Taking no action unless its marginal benefit is at least as great as its marginal cost.
- (c) The Principle of Unequal Costs: Some costs (e.g., opportunity and marginal) matter in making decisions; other costs (e.g., sunk, average) don’t.
- (d) The Principle of Comparative Advantage: Everyone does best when each concentrates on the activity for which he or she is relatively most productive.
- (e) The Principle of Increasing Opportunity Cost: Use the resources with the lowest opportunity cost before turning to those with higher opportunity costs.
- (f) The Equilibrium Principle: A market in equilibrium leaves no unexploited opportunities for individuals, but may not exploit all gains achievable through collective action.
- (g) The Efficiency Principle:

Efficiency is an important social goal, because when the economic pie grows larger, everyone can have a larger slice.

The lack of a precise definition of economics renders vague any discussion of the domain of its appropriate application. The practice of defining terms commonly used in ordinary discourse in a specialized technical sense, and to implicitly define the same term differently, relative to context, impairs proper presentation and effective learning. A frequent unannounced interchanging of static and dynamic frames of reference misleads thereby doing a disservice to students. Failure to specially indicate and emphasize that static analysis serves only to identify the properties of equilibrium states, and to leave the dynamic process by which equilibrium is established unexplained is an instructional shortcoming. Failure to carefully and explicitly mention changes in the frame of reference attending switches from static equilibrium to dynamic adjustment processes generates a false impression along students as to the extent of economic knowledge (all the more so in view of the nonexistence of a satisfactory theory of economic dynamics).

Care is seldom taken to distinguish between theoretical discussions of universal economic principles, the economic technology providing the basis for

action, and the practical skills necessary to accomplish a desired purpose. Unfortunately, there has been and continues to be a great deal of confusion on this issue in the profession literature generally and, specifically in the presentation of principles to students. Also frequently neglected is any specification of the load-bearing capacity, practical applicability, or situational appropriateness of the principles presented. Because economic principles are the outcome of a productive process, some attention should be given to and some description an assessment made of that process, i.e., in order to provide and awareness of the degree of quality control methodology merits closer scrutiny than it is normally afforded.

Historically, there has been a concerted effort to excise ethical considerations from economics with the result being the development of a highly formalistic account of the mechanism by which rational self-interested individuals make decisions. The usual account focuses on “how”, i.e., the procedure by which decisions are made and not specifically on “what” individuals will do. It emphasizes form to the exclusion of content. And, if individual behavior is influenced by social mores and personal ethics, individuals may not act in ways a narrowly defined individual self-interested would dictate. Thus, a strong case can be made for incorporating ethical considerations into economics (and economics considerations into ethics). Moreover, the moral philosophic roots, such as the concept of “sympathy” emphasized by Adam Smith, should be given greater attention because different moral and ethical roots are likely to imply a different economics.

Economics is reflexive in the sense that its production and presentation require employment of scarce resources of time and energy by both the instructor and student. Presumably a constrained maximization problem is involved, i.e., the goal being maximization of student comprehension given the time and energy resources available. The task undertaken in the principles courses is to lay the basis for a tradition, to give substance to the subject matter as a whole and meaning to its parts, and to build bridges between what is taught and that what is left untaught (and what is “taught” and that which is “untaught”).

Metaphors are pervasive in economics, and since no satisfactory account of how they “work” is currently available, explanations inherently are imprecise and unclear. Metaphors, however, do permit us to conceive of more than we are able to express, and although they illuminate in some ways, they conceal in others.

Competitive markets are conceived in terms of a mechanical metaphor, but the domain of appropriate applicability is seldom discussed. For instance, the question of how or to what extent the market model accounts for real world phenomena is often neglected, and important consideration in view of the fact that the postulated similarity is not identity.

The efficiency conditions associated with the perfectly competitive market model are seldom adequately discussed, or when they are, that they are fully effective only in long-run equilibrium states are underemphasized. This ties in with the discussion of the dynamic adjustment process since there is no absolute guarantee that disequilibria conditions will be resolved by generation of a new equilibrium.

Economics is part of the general culture and, to highlight this fact, it is useful to identify analogies between its precepts and those in other fields. For instance, the concept of the perfectly competitive market is analogous to the theological concept of the priesthood of all believers. And Aquinas’ concept of the “just price” survives in the long-run equilibrium equality between price and average cost.

In the context of competitive markets, the explanation of the concept of demand emphasizes the idea that the quality of a good buyers are disposed to purchase depends on its relative price, not simply on its money price. Proper emphasis of this fact would provide a seldom-exploited lead-in to the discussion of income and substitution effects.

The circular-flow model frequently found in textbook stems from an analogy with the circulation of the blood in the human body, and can be employed usefully in establishing an initial frame of reference for the discussion of Monetarist and Keynesian approaches to macroeconomics stabilization policies.

The world is a more competitive place now than it was when we started teaching in the 1970s. In arena after arena, business as usual is no longer good enough. A great deal more could and should be said on these matters. To hold our ground we must become not only more selective in what we teach, but also more effective as advocates for our discipline. We must persuade students that we offer something of value.

A well-conceived and well-executed introductory course in economics can teach our students more about society and human behavior in a single term than virtually any other courses in the university. The above discussion, however, is indicative of a need to give some consideration to the question “what to teach?” prior to consideration of “how to teach?”

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