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Valuation as an Issue in National Accounting and Policy Analysis

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Valuation in Theory and Practice

Recent debates over how to capture the value of various forms of social activity and common environmental resources call for a thorough examination of the concept of value itself. Of late, advocates for various social and environmental causes have remonstrated that since the value of productive work outside the market or of environmental resources is incompletely or inadequately gauged through systems of national accounting, policy-making, which use these as an input, is setback. This is seen to result in harmful real consequences. Groups that claim to represent the interests of the world's women, for example, assert that "women's work," which is typically performed at home or exchanged in venues other than money mediated markets, is not adequately valued in traditional measures of national statistics. Similarly, groups that seek to represent environmental concerns have posited that the degradation of forests, air and water represents a net loss to our collective wealth and that aggregate measures of the same should be revised downwards to reflect this loss. The issues raised by these advocates revolve extensively on the issue of valuation. Accordingly, a thorough examination of the concept of value is indispensable to an informed debate on statistical possibilities and policy alternatives.

While the economic concept of value is relatively straightforward, the political economy of valuation is more complex; this paper will inform the reader of both of these facets. The task accordingly paper is divided into two parts: The first deals with the theory of value, its history in economic thought and of how value systems develop and evolve. The second deals with valuation as a issue in policy analysis. This section will be illustrated with reference to developments surrounding the push to value women's work.

Value today, through the benefit of thinkers within the so-called Austrian tradition, is a well understood theoretical construct. It may be most easily grasped by considering the simple case of two individuals who engage in an exchange. *Each is willing to engage in the trade because each appraises what will be given up to be valued less than that which is to be received.* The process which goes into each person's valuation of the good or service in question in turn depends on his or her perceived uses for it within his or her knowledge base, the institutions (social, political, economic) within which he or she operates and available or relevant physical capital available at the present or forecast at some future time. Since each person's base of knowledge and his or her institutional and physical circumstance is unique, the foundations which guide each individual's value framework differs; *value is inherently subjective.*

As such, and strictly speaking, there is no exact measure of the value of commodities, the popular belief that money provides this function notwithstanding. Money only appears as an intermediary in any transaction - a good that is acquired not for use in consumption or in production in of itself, but so that it may be given away in a further act of exchange. Given that we exchange something we value less for something we value more, the market price at which this transaction is made only crudely reflects the value placed on the items exchanged by the parties to the transaction.

Further, the value we place on some good or service depends on its perceived use within our framework of plans. Thus, the value of a piece of specialized machinery or human skill is meaningful only within the context of such a set of plans. In a market however, there are a host of such conflicting plans, often with the success of one resting on the failure of another; markets are characterized by rivalrous competition and, with the exception of an equilibrium situation which never exits in the real world, the future value of some purveyor's particular good or service is often dependent on the loss of value of an other's. Because of this, adding up the value of capital used by rivalrous firms or operators in an economy diminishes the significance of any aggregate figures of value generated. Thus adding up all prices consequent to market transactions in a particular economy to obtain an overall measure of value erodes the meaningfulness of such aggregates.

Policy-making and planning nevertheless proceed on the myth that aggregate measures of the value of goods and services can be measured. More, it is held that better planning and more enlightened policy-making is possible if only more comprehensive statistical information is made available.

Arguments for improved collection of data on the paid and unpaid work that women do, for example, rest on this assumption ¹. While it is true that public policy is being conducted in abysmal ignorance of its likely consequences and the lack of complete information does largely explain the policy ineffectiveness and failures that we observe, improving the coverage of statistical data through aggregation of value cannot improve the scope for planning and policy-making since this data would not be able to capture the subjective or tacit nature of information that individuals possess about their time and place.

Even more, the theory linking better policy and planning with improved statistical data makes the assumption that policy-makers are entirely benevolent, selfless and public-spirited. Amending this hypothesis to consider that policy-makers are no less self-seeking than the rest of the population provides new insight as to the scope and nature for policy development and execution in relation to those values that individuals hold or those values that particular groups seek to spread. Indeed, as this paper later explores, relating valuation to policy rests more in developing institutional constraints wherein policy-makers reflect more closely on the interests and values of their constituency. It also depends on designing such institutions to remain attentive to changing values and mores.

Part I: The Economic Theory of Value

In the previous section we briefly previewed the modern concept of value for particular goods or services within the context of the exchange process. Although the notion of value is critical and central to understanding economics, it was not clearly grasped until the inception of marginal analysis in the late 19th century. One reflection of this confusion, the Labour Theory of Value, sadly, still manages to misinform many who seek to understand "value." Although the modern subjectivist concept of value precludes the measurement of the value of goods and services aggregated over the entire economy as an input to policy analysis, it, in recognizing that market exchange takes place within particular institutions, encourages reflection on how those institutions - social and political - may be structured so that they reflect evolving community standards by mediating the competition among norms and values.

A. The **Development of Value Theory**

We start by taking a quick walk through the history of economic thought on the subject of value. We begin with Adam Smith and David Ricardo in the Classical Period, examine the legacy of these thinkers on Karl Marx, and finally move on to the implications of the Marginal Revolution and the contributions of the Austrian School in establishing the modern and currently accepted concept of value in economics. This will then prepare us to reflect in part B of this section on some of the current thinking among Austrian economists about the social-institutional aspects of and the evolution of value systems.

The Classical Period:

Adam Smith:

Smith dealt with several aspects of the concept of value: He attempted to address the problem of value in *use* versus value in *exchange*, to distinguish between the notion of an *underlying* value against *fluctuations* around this basis, as well as to contrast between the *cause* of value with the *measure* of value. While Smith contributed significantly to economic analysis, particularly in the understanding of competition, he was not successful in resolving a notion of value that could accommodate all its aspects as he saw them. The result has been a legacy of confusion on the issue. It was not until the revolution in marginal analysis and, in particular, the contribution of Menger and his intellectual descendants that a understanding of value has emerged that is coherent with the remainder of his programme of classical liberalism.

In his *Wealth of Nations*², Smith identified the use versus exchange problem of value in the following terms:

The word value...has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called "value in use"; the other, "value in exchange." The things that have the greatest value in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have little or no value in use³.

Smith illustrated this paradox by showing that while water had much value in use, it was priced low while diamonds which are of relatively little practical use are dearly priced. This *diamond-water paradox* remained unresolved in Classical economics; its explanation had to wait about a hundred years for the marginal revolution in economics.

Smith also saw a dichotomy between the natural and market price of commodities. Market prices were seen as determined by the interaction of supply and demand in the short run. The natural price, on the other hand, was seen as driven by the long-run costs of production. Smith recognized that demand is a crucial determinant of value because what people are willing to pay for something is reflective of the intensity of their desire for it. Still, to Smith's mind, the market price had to cover the costs of production over the long haul and so value had to be a function of the resources used in production.. In discussing the determinants of value in a *primitive* economy where labor is the only factor of production, Smith noted that the relative values of deer and beaver would be determined by the relative quantities of labor required

to obtain them⁴. In this respect, Smith saw labor as the common denominator underlying the supply-oriented elements of value

This is perhaps why Smith's discussion of labor as the *measure* of value has often been confused with an identification of its *cause*. Smith, however, deals with these as separate issues in his *Wealth of Nations*. As to measurement of value, Smith notes:

The value of any commodity ...to the person who possesses it, and who means not to use or consume it himself, but to exchange it for other commodities, is equal to the quantity labor which it enables him to purchase or command. Labor, therefore, is the real measure of exchangeable value of all commodities⁵.

The idea expressed here is that in contemplating an exchange, the individual weighs how much of his own labor he is willing to put in as an exchange for some other good. Smith clearly distinguished this issue from the problems of measuring value based on the inputted labor:

It is often difficult to ascertain the proportion between two different quantities of labor. The time spent in two different sorts of work will not always determine this proportion. The different degrees of hardship endured, the ingenuity exercised, must likewise be taken into account. There may be more labor in an hour's hard work than in two hours of easy business; or in an hour's application to trade which it cost ten years labor to learn, than in a month's industry at an ordinary and obvious employment. But it is not easy to find any accurate measure either of hardship or ingenuity⁶.

Smith recognized that value emerges on the demand side when one gauges how much, in terms of one's own effort, one is willing to offer in order to get the proposed exchange. He also understood the problems inherent in interpersonal comparisons of value based on expended labor hours. However, by not abandoning the notion of an inherent or long-term value, he left unresolved a clear understanding of the concept of value - a legacy which persists to the present.

David Ricardo:

Ricardo felt that a labor theory of value, with several qualifications, provided the best general explanation of relative prices and that Smith's restriction of the labor theory to a "primitive economy" was unnecessary⁷. Value and labor time expended in production had a straightforward relationship for Ricardo: "Every increase of the quantity of labor must augment the value of that commodity on which it is exercised, as every diminution must lower it."⁸ His first qualification to this theory of value was for cases of rare or non-reproducible objects; "there are some commodities, the value of which is determined by scarcity alone. No labor can increase the quantity of such goods, and therefore their value cannot be lowered by an increased supply." Such things as rare paintings or bottles of wine were to Ricardo "wholly independent of the quantity of labor originally necessary to produce them, and varies with the varying wealth of those who are desirous to possess them."⁹

A more significant exception to the labor theory of value was made regarding the role of capital. Capital, as indirect or embodied labor, could be separated, he held, into its fixed, or slow consumption, and circulating, or rapidly perishable, forms. Ricardo based value on the real costs of labor as well as capital. However, from an empirical standpoint, he maintained that the relative quantities of labor used in production was the major determinant of relative values: "I shall consider all the great variations which take place in the relative value of commodities to be produced by the greater or less quantity of labor which may be required from time to time to produce them."¹⁰

In short-hand, we might say that Ricardo's labor theory of value means that $V_h/V_s = L_h/L_s$. That is, the market value of some item, say a hat (h), expressed in terms of a standard commodity (s), equals the quantity of labor required to produce the hat relative to the quantity of labor required to produce a unit of the standard commodity. However, also inherent in Ricardo's model is that the value of a hat in the two industries is equal to the relative amounts of capital necessary to production in the two industries [$V_h/V_s = C_h/C_s$]. This means that Ricardo's theory is as much a labor theory of value as a capital theory of value. Given the assumption of labor-capital uniformity, the relative values of the two commodities can be *measured by* counting either the labor or capital inputs but neither can be regarded as *determining* their relative value". Since labor and capital are joint inputs in production, the addition of more labor will not by itself create more value. Nevertheless, this labor theory of value has been used to argue that the

quantity of value created in an economic process is determined by the quantity of labor employed in it and that more value is produced if more labor is used.

In addition to the theoretical problems this generates, the assumption of labor-capital uniformity is empirically incorrect. Although Ricardo was aware of this, he argued that they could be considered as a satisfactory *working approximation*. Once this assumption was made however, it was subsequently lost sight of and this labor theory of value became the core proposition of pre-marginalist nineteenth century social science and social philosophy.

Although the Classical theorists made significant contributions to analyzing the nature of competition, their explanations of value came up short. Even if the role of other inputs to production are granted greater weight than Ricardo allowed, classical value theory still suffers in that it focuses upon sellers rather than on buyers in market transactions.

Nineteenth Century Economics

John Stuart Mill:

In his *Principles of Political, Economy*, Mill asserts the centrality of the theory of value in the activities of individuals in an industrial society. He notes, however, that "happily, there is nothing in the laws of value which remains for the present or any future writer to clear up; the theory of the subject is complete ..." ¹². Mill here is referring to the Ricardian theory of value which he accepted uncritically. As Gordon puts it, Mill's estimate of the merits of Ricardian value theory "qualifies as one of the biggest howlers in the history of the social sciences. Far from being complete and needing no revision, the explanation of market values by Ricardo was the most serious flaw in the classical economic model."¹³ However, it continued to be used until it was replaced by developments in marginal analysis.

Karl Marx:

In the first volume of *Capital*¹⁴, Marx developed his analysis along Ricardian lines. He rejected the notion that the usefulness of commodities were central to determining their values other than in day-to-day fluctuations about some core. He held that the long-run fundamental values were determined by the conditions of production. In turn, the determinative conditions of production were held to consist solely of the relative quantities of labor that were required in the production of commodities. "A commodity has value", notes Marx

because it is a *crystallization of social labor*. The *greatness* of its value, or its *relative* value, depends upon the greater or less amount of that social substance contained in it; that is to say, on the relative mass of labor necessary for its production. ¹⁵

Marx noted the problem of the heterogeneity of labor and labor productivity but swept it under the rug in an early passage in the first volume of *Capital*. Here he makes an elliptical allusion to a reduction from concrete labor to abstract labor by a social process that goes on behind the backs of producers. He goes on to say that henceforth he will refer only to unskilled labor to "save ourselves the trouble of making the reduction." More, Marxian theory of value does not include all human effort as labor. To count as value-creating it must be devoted to the production of "useful" goods and must not occupy more time than strictly necessary ¹⁶.

Marx also downplayed the role of Land and Capital as value-generators:

If a factor of production is not the product of human labor, it transfers no value to the product. It helps create use-value without contributing to the formation of exchange-value. In this class are included all means of production supplied by Nature without human assistance, such as land, wind, water, metals *in situ*, and timber in virgin forests¹⁷.

Capital such as buildings and machinery are seen to transfer to the finished commodity the embodied crystallized labor but make no additional contribution to value. Marx's notion of machines as congealed labor and thus equal in value to the cost of the labor that produced them denies the fact that machines can be productive in themselves and thus valuable in amounts that are in excess of the labor involved in their own manufacture. Modern economists refuse to accept Marx's view on this point.

While Ricardo can be understood to have proffered that labor is the best *measure* of value, Marx went further in seeing labor as also the *cause* of value. As such, labor could be divided into that which is

'socially necessary' and that which is over and above this. While the former determines the wage rate, the latter was seen as the basis for capitalism. This 'surplus value' did not arise in exchange but in production; the aim of the capitalist was to expropriate the extra value created by labor - this, then, was the basis for exploitation. Marx's conclusions, and the basis for much socialist rhetoric, were based on a misunderstanding of the concept of value - a legacy of classical economics. The Marginal Revolution in economics and the explanation of the subjective nature of value that followed did much to clear up the confusion created. Indeed, Karl Marx himself completely abandoned further work on *Capital* after grasping the works of the marginalists - Jevons and Menger¹⁸.

The Marginal Revolution

It is a curious multiple in the history of science that the concept of what is now called marginal utility was put forward more or less simultaneously by three economists in England, Switzerland, and Austria. William Stanley Jevons, Léon Walras and Carl Menger each independently came up with the solution to Adam Smith's Diamond-Water Paradox. Their analysis showed that the high utility of water and the low utility of diamonds were consistent with a low price for water and a high price of diamonds. This was because transaction in the market takes place in small unit quantities of commodities. Thus, for a particular consumer, the question at hand is not whether water is more valuable for sustaining life than diamonds but what the marginal utility of an additional litre (or other unit) of water is. If he or she were at the point of dehydration, the extra bit of water would be valued very highly. If the same person were watering the lawn, it would likely not be worth that much to him or her. It is misleading therefore to talk of the overall quantity of water that is consumed; rather, attention should be paid to how much the consumer values an additional unit of the liquid.

The classical theory of value and its theoretical heirs were unable to explain how consumer preferences can affect the value of what is offered for sale. They also had not developed a coherent account for how market price mechanisms could relay to producers this information. The development of subjective theory of value had to await the revolution in marginal analysis and, in turn, the contributions of Menger and his intellectual heirs that make up the Austrian school of economics.

Austrian Economics

Carl Menger:

As noted immediately above, Carl Menger was the Austrian among the trio who had simultaneously but independently come upon the insight of marginal analysis. Menger's analysis also emphasized the interconnectedness of production. To illustrate this notion, he noted that if the taste for tobacco disappeared, this would lead to a causal sequence of effects whereby tobacco stocks, capital specialized to the manufacture of tobacco products, and labor employed in the farming of the leaf, etc. would all lose their "goods-character"¹⁹. By emphasizing the complementarity and interdependence of goods from lower order to final consumer goods, Menger demonstrated that a shift in consumer tastes could alter the value of all the intermediate products and inputs. Significantly, this means that there is nothing inherent in these goods that makes them economic or non-economic; their character changes with changes in supply or consumer requirements. Value is also context dependent with the value placed on a particular capital equipment reliant on where it fits into the productive process. According to Menger, a good is said to have value if economizing individuals perceive that the relative satisfaction of their needs depends on their command over the good.

Menger also was the first to clearly articulate that different things provide different levels of satisfaction to individuals²⁰. He emphasized that within the same class of goods, some may be considered more valuable than others. As such, people could be expected to satisfy urgent needs before attending to less pressing ones. Menger established the proposition (*equimarginal principle*) that given scarce means, individuals will arrange their various consumptions so that at the margin the satisfaction gained from each are all equal. Hence it is the least urgent satisfaction obtainable from a given stock of goods that give it its value²¹. What does this mean? In terms of our water example, this states that though water can be put to many uses, a person can be considered to not value it much if he or she can water the lawn without

adverse repercussions for its alternative uses. One of Menger's most important contributions to economics is thus the notion of *opportunity cost*. As Menger put it, the value of a particular good is equal "to the importance he attaches to the satisfactions he would have to forego if he did not have command of it."

Finally, Menger is credited with elaborating the standard economics conjectural history of the development and use of money in exchange. Menger in *Principles*¹², holds that money evolved from a barter economy when innovating individuals used a third, more salable substance as a temporary stand-in or intermediary when presentation or search of the actual good to be bartered was cumbersome or otherwise problematic. When other individuals saw the usefulness of this, this activity was imitated. When there was a general agreement on the intermediate good (beads, shells, gold, paper currency etc.) money was born.

Friedrich von Weiser

Weiser, who is credited with inventing the term 'marginal utility' made important additional contributions to value theory. While Menger had argued that it is the use to which the last unit of a stock of goods is put that represents the value of any unit of a homogenous stock, Weiser held that this is taken at the point when the total value of the stock increases by less than the price paid for additional units of the good. He also noted that exchange value depends not only on utility but on purchasing power as well. Thus luxury items will be produced for those who can afford their fancies while the needs of the poor may be ignored²³. Real world prices therefore do not ordinarily reflect marginal utility valuations that would exist if purchasing power were equal for all consumers.

Eugen von Böhm-Bawerk

Along with his colleague Weiser, Böhm-Bawerk was early to adopt Menger's approach to value theory. He clarified the work of Menger and Weiser by showing how the different subjective valuations affect buyers and sellers in the determination of price and objective value²⁴. Böhm-Bawerk emphasized the discrete and discontinuous nature of supply and demand functions in the real world in contrast with the smooth curves of Marshallian analysis. Buyer and seller may each have an idea of the range of prices for which they are willing to make the exchange and the actual price arrived at depends on how much each thinks the other will bear or accept. In a practical exchange situation, the evaluations of the buyer and seller come into play; it is these pairs of buyers and sellers who determine the price. The value of a good or service is thus only realized through the process of exchange²⁵

Ludwig von Mises

Mises also pointed out that that the concept of value of a good or service cannot be divorced from its circumstance of exchange. In an exchange, he noted, an individual abandons one thing in order to obtain another. That which is abandoned is the cost or price paid for attaining the other; the value of the price paid at the point of transaction is the cost. In relating the concept of value to the process of exchange, Mises added that

the basis of modern economics is the cognition that it is precisely the disparity in the value attached to the objects exchanged that results in their being exchanged. People buy and sell only because they appraise the things given up less than those received. Thus the notion of a measurement of value is in vain. An act of exchange is neither preceded nor accompanied by any process which could be called a measuring of value. An individual may attach the same value to two things; but then no exchange can result. But if there is a diversity in valuation, all that can be asserted with regard to it is that one *a* is valued higher, that it is preferred to one *b*. Values and valuations are intensive quantities. They are not susceptible to mental grasp by the application of cardinal numbers.²⁶

Friedrich von Hayek

Hayek is probably the best known of Menger's intellectual descendants. The concept of value is difficult to grasp, noted Hayek, because it suggests a violation the laws of conservation in seeming to create something from nothing²⁷. While the creation of some object by physical or muscular activity is tangible, he observed, individuals have through history been suspicious of merchants and traders who

engaged in the transformation of the non-material in altering the value of goods. As Hayek put it in *The Fatal Conceit*,

An increase of value - crucial in exchange and trade - is indeed different from increases in quantity observable by our senses. Increase in value is something for which the laws governing physical events, at least as understood within materialist and mechanistic models, do not account. Value indicates the potential capacities of an object or an action to satisfy human needs, and can be ascertained only by the mutual adjustment through exchange of the respective (marginal) rates of substitution (or equivalence) which different goods or services have for various individuals. Value is not an attribute or physical property possessed by things themselves, irrespective of their relations to men, but solely an aspect of these relations that enables men to take account in their decisions about the use of such things, of the better opportunities others might have for their use²⁸.

Value is therefore inherently subjective. Valuation is expressed through the process of economic exchange and the entrepreneurial function rests on conjecturing how useful the things that they or others possess or command would be as resources to themselves or others in satisfying the wants and needs of each; things can be valued either as an end in themselves or as a means to some end. In turn such valuations will change with the development of an individual's knowledge framework and the gain of information within such structures. As Hayek concludes,

That the utility of an object or action, usually defined as its capacity to satisfy human wants, is not of the same magnitude to different individuals, now seems so obvious that it is difficult to understand how serious scientists should ever have treated utility as an objective, general and even measurable attribute of physical objects. That the relative utilities of different objects to different persons can be distinguished does not provide the least basis for comparisons of their absolute magnitude²⁹.

Closing the circle

The subjective approach to value, developed within the Austrian school, emphasizing the satisfaction of wants of individuals within particular market structures, is closely related to the central enterprise of Classical Political Economy. As any keen reader of *the Wealth of Nations* will recognize, the characteristic behavioral element in a market order — Adam Smith's central endowment to economic thought — is that in seeking to satisfy others through producing something of marketable value, and as an indirect means of seeking things that one values, participants can select from among a set of pre-existing goods but can also innovate, creating new goods of potential exchangeable value.

In other words, according to the classical scheme, the individual's task rests in creative activity through the exercise of imagination — that is, individuals may be thought to picture what it is that others might value. Market participants thus enter a competition to offer goods and services ~ on a conjectural basis — grounded on what they think may be of adaptive value to others so that they can in turn procure things that they value and thus improve their own well-being. In this respect, Classical Political Economy emphasizes the importance of market activity within commonly understood *rules* or *conditioning constraints* - what Smith called "the laws of Justice." When classical notions of competition theory is combined with a subjectivist theory of value, classical liberalism becomes theoretically whole and unified enterprise.

B. Structure and Change in Value Systems

Within economics, scholars devoted to modern institutional analysis and continuing thought in the Austrian tradition study the rule structures within which subjective evaluations are formed, the frameworks within which formal and informal exchange occurs, as well as the interrelationships between the two. As such, their insights can provide a base on which to understand how values that shape initiatives in personal behavior and attitudes, as well as values that condition social exchange are formed and selected. While an adequate survey of the relevant literature would lie beyond the scope and purposes of this paper, the brief summary attempted below may give the reader some flavor of current investigations in these areas.

What are the basis on which we value the things that we do value and on how we might manipulate those conditions to reflect changing norms and standards. In this, what role do social, moral, and legal restrictions have in influencing each individual's values? Given that an individual's entire value scale is not determined anew at the point of each new market or social interaction, what is the structure of value reappraisal? A fleeting analysis of this issue may be broken down into three steps: The first step involves a look at the institutional function of shared values. The second step develops a model of the structure of core and derived values. This leads to the final step which affords a glimpse at how such value structures evolve.

The literature in New Institutional Economics points to the importance, variously, of cultural and legal systems as fostering a spectrum of informal to formal common understandings of rules and values that serve as loci of coordination and cooperation among interacting individuals. Langlois³⁰ suggests that by constraining the range of possible actions, institutions foster the possibility of forming reasonable conjectures of others' actions and thereby heighten the possibility of coordination. Institutions also structure human interchange so as to provide incentives such that individuals cooperate rather than cheat in certain types of interactions. Just as a prominent physical landmark can serve as a spontaneous meeting point for individuals, a core or commonly shared perceptions of value or norms³¹ can act as a nucleus of coordination and cooperation. Such core values may be inculcated at an early age through socialization. Religion, family traditions and participation in civic activities, etc., play an important role in the development of a common core of standards, outlooks and expectations of behavior. In turn, this promotes the ability of each to engage the other cooperatively; this is the cement of society³².

Beyond this closely shared set of core values, one may consider secondary and tertiary set of values that are derived from the core. These can be thought of, as in Lakatoš' terminology, in terms of a core and surrounding protective belts of value appreciations³³. In making a value judgment, individuals may treat core values as being intrinsic, natural or God-given. That is to say, in order to be able to make interpretations about our surroundings that are meaningful, we provisionally accept certain things as given and build our knowledge upon them.³⁴ Or in other words, our day-to-day value judgments can be thought to rest on more fundamental value conceptualizations whose basis we may take for granted.

Core beliefs which constitute the framework for action can thus be thought to serve as the context within which each individual, or (if shared) groups thereof, may extend more day-to-day value judgments and conjectures as to how others may value objects, concepts, relationships, and so forth. In turn, these derived value conjectures may be revised based on the perceived success or failures of these extensions. And if the value guidelines that are generated from a set of beliefs continually provide poor guidance, then this constituting core which generates such beliefs may itself undergo a reevaluation³⁵. This may happen when the values derived from such more implicit fundamental value systems are at some point themselves found by any subset of the population, based on their own shared developed value judgments, to be of limited use in market exchange or social relationships or if new innovations are held to be superior to standards in existence. In such cases, such individuals or groups may begin to question and seek to revise commonly held values. The nature of such reappraisals - whether continuous or discrete - however depend on how the modalities of reevaluation are themselves structured. It follows therefore that in order to be perceived as legitimate and to gain acceptance, advocacy for such changes must take place within the commonly understood terms of constitutional reevaluation.

In review, therefore, we have noted that value systems are being thought of by modern social scientists as being structured in tiers of deeply held values and beliefs that are generated from these relative givens. This structure of value and value derivation can be thought to exist within individual minds and shape how individuals perceive, innovate and modify their valuation of objects and relationships. Similarly, a shared core of rules and institutions, formal or informal, religious or social, form the basis for social coordination through shared values. Changes in these core values are based on mechanisms of selection which seek to reflect on their usefulness³⁶. These changes - the comparison between what exists and the proposed innovation - are however conditioned by the existing framework of values. In the case of social values, such innovations in and reappraisals of existing value systems may be spurred by groups in society that seek to introduce new ways of thinking to replace certain elements of shared beliefs. As such, new social virtues, such as being environmentally minded or valuing certain types of labour, are placed in comparison with older belief systems. In such a competition, the rules under which alternative value systems are compared gain significance. We may draw then that if particular

groups seek to change elements of society's value framework, they must do so within these rules of competition or risk a loss of credibility.

Part II: Value and Statistics in Policy

Having come to grips with the notion of value both in terms of the possibility of its measurement and in its aggregation on one hand, and the notion of the institutional role that shared value systems play, we next turn our attention to how this distinction pertains current policy debates. We illustrate this distinction with reference to the call by some feminists and others to more fully value women's work in policy making through use of more comprehensive national statistical data. We proceed as follows: First we consider an overview the arguments and political and theoretical efforts put forward by those who seek to have policy-makers recognize the value of the economic contributions that women make and which is not currently sought to be captured in national statistical data. We then critically examine these political and theoretical and statistical underpinnings of these arguments. Following this, we suggest how an appreciation of the institutional nature of value can enable a movement towards the eventual aim of those who currently advocate more interventionist policies to value women's work.

A. Valuing **Women's Work: The Radical Feminist** Approach

A central theme pervading the current feminist literature on valuing women's work is that current policy-making suffers from a serious deficiency of detailed knowledge of what is really going on in those parts of formal and informal the economy that women disproportionately participate in. It is therefore their contention that policies are being implemented in ignorance of their consequences to women. More, it has been argued that goals in a variety of policy-making initiatives are not being fully met since they ignore how such policies work through these feminized parts of the economy³⁷. It is held then that, properly informed, policy-makers will appropriately revise their policies. In making these arguments feminist scholars implicitly make the assumption that national economic planning based on detailed collected information, and mediated by concerned policy-makers, is possible.

Following this line of reasoning, the international feminist movement have been pressing various national statistical agencies and the United Nations system to foster the development of more detailed information on paid and unpaid work that women perform. In this regard, the Fourth World Conference on Women in Beijing(1995) called for the development of "suitable statistical means to recognize and make visible the full extent of the work of women and all their contributions to the national economy, including their contribution in the unremunerated and domestic sectors, and to examine the relationship of women's unremunerated work to the incidence of their vulnerability to poverty." One major response to the call of this Beijing conference has been to estimate, by monetary imputation, the value of productive non-market work that is contributed by women. This approach hopes to portray in vivid terms the substantial but unrecognized contributions that women make to the economy. As such, this data would have, among other uses, a significant rhetorical function; it is hoped that policy-makers will, impressed of the magnitude of the contributions of women, be more sensitive to issues of interest to women.

What is women's work?

What constitutes the unremunerated and domestic sectors of the economy in which women's contributions are so concentrated? Below is a list of activities, associated with the household economy, that have commonly been identified as falling into this category:

- Motherhood - child-rearing and nursing
- Education - socialization of children
- Food production - fanning, subsistence agriculture, shopping
- Food preparation - cooking, winnowing, sifting
- Sanitation - fetching water, house-cleaning

- Clothing - weaving, stitching, laundry
- Fuel gathering - collecting wood
- Health care - nursing of the sick and elderly

Typically, many of these activities are juggled simultaneously.

Goldschmidt-Clermont and Pagnossin-Aligisakis³⁸ divide non-economic activity into that which is personal and that which is productive. Productive household activities are held to be distinguished by the use of the *third person criterion*. This says that an activity is productive if it can be done by someone other than the person who gains the final benefit from it. That is, if it is possible to hire someone to perform a certain activity for you, that activity is deemed production. In this way, such things as preparing meals, cleaning, laundry, and so forth are to be considered productive. On the other hand, sleeping and participation in sports or entertainment would not be considered to be productive enterprises³⁹.

'Women's work' is thus gender-stereotyped, usually domestic, activity that is considered to be productive.

Gender and Work in 'Socialist-Feminist economics'⁴⁰

Socialist-Feminist economists have sought to establish their arguments around the concept of gender as a separate analytical category in macroeconomics. As Cagatay, Elson and Grown put it, "Feminist analysis emphasizes gender in addition to class and race. It aims at presenting alternative visions of economic processes and using these visions to transform economic and social life so as to reduce gender, race, and class inequalities and promote the expansion of people's capabilities to lead satisfying lives". This feminist paradigm seeks to center economics around the concept of "the provisioning of human life"⁴¹ emphasizing those things considered as required for a 'meaningful' life. In as much, feminist economics seeks to look beyond what it sees as the traditional male-dominated purview of economics to activities such as unremunerated labor at home and social and community work.

In this task, the concept of gender is seen as the premier tool of analysis. Social and economic activity are filtered through the lens of sex-based differentiation; gender is seen as the basis for a fundamental division of labor. As such, a distinction is made in the literature between productive and *reproductive* activities⁴². Whereas the former relates to income generating activities that are largely linked to the market, the latter is defined to include "unpaid responsibility for the care and development of people, including children, the elderly, the sick, and able-bodied adults"⁴³. Reproductive labor includes the sorts of household and nurturing activities listed at the beginning of this section. Feminists note that these activities have, through history, been borne disproportionately by women.

Policy implications of better measurement of women's work

As we have just noted, socialist-feminist economists refer to productive non-income producing activity of women as the *reproductive economy*. They have argued that the invisibility of women's work, together with traditional biases regarding the proper work roles of men and women in society, has led to an under-appreciation of women's economic contributions. Feminists note that as *reproductive* services are not a part of the formal or price-based market exchange of goods and services, the value they add to the economy is not represented in aggregate indicators.

In particular, since unremunerated work is not included in national income statistics, women's issues do not get as much attention at the policy-making levels as they deserve, it is contended. Socialist-feminists reason that this is because policy-makers are not sufficiently impressed by size of the contribution of this segment of labor. As a result, it is claimed, issues of importance to women are not given the weight due them at state and national levels of decision-making⁴⁴. Socialist-feminists further argue that women and those sympathetic to the concerns of women are poorly represented in policy-making⁴⁵. Because of these factors, it is held, women are denied comparable access to credit and other economic resources. More, it is held that to the extent that development policies are driven by statistical information, they fail to adequately address issues of particular relevance to women⁴⁶.

It is therefore core to the socialist-feminist argument that the development of statistical techniques and the resultant valuations of the contributions of women in the informal sectors of the

economy will enlighten policy-makers to be more sensitive to their needs. Additionally, it is posed that women's concerns will be better served if more women, along with sensitized men, held positions in policy-making as women inherently understand the problems of women better. Both these elements are in turn premised on the model of a policy-maker who is interested in improving the welfare of his or her public and that he or she would act in an enlightened way if he or she were properly informed of the facts. Many socialist-feminists see the monetary imputation of the value of women's informal work as an important rhetorical tool towards the realization of these interim goals.

Feminist Policy Recommendations

Socialist-Feminists have used the idea of engendered economics to motivate certain policy conclusions and to pursue certain agendas. In analyzing gender discrimination in labor market they have promoted comparable worth and pay equity schemes, and in pointing out the differential impact on women of trade and structural adjustment policies they have argued for social programs and income and property redistribution schemes⁴⁷. However, in pointing out that women's work remains undervalued, feminists have not spelt out any particular policy' prescription other than to seek to better inform policy-makers. Rather, they have claimed to seek to parlay the rhetorical impact of statistics on the monetary imputations on the value of women's non-remunerated activities into a higher profile for women's issues in policy-making. It is felt that in these ways, development policies and social institutions can, through policy coercion, be made to reflect better the social and developmental concerns that they believe to be of relevance to women.

Thus although placing a monetary value on women's unremunerated but productive work will in itself only act to enhance the rhetorical arsenal of those who argue for causes they believe to be of relevance to women, the expected impact of this statistical undertaking is to boost prospects for the sorts of policy prescriptions that feminists have long advocated. Radical feminists seek to use data on the value of women's work to push for social objectives that they value. What sorts of plans are mooted in this respect? The 1995 Human Development Report identifies several implications of adequately valuing women's work. The first deals with a redistribution of assets based on the contribution in labor; "The inescapable implication is that the fruits of society's total labor should be more equitably shared."⁴⁸ Second, a radical reconfiguration of legal and property rights is envisaged, and finally, social programming is called for in such areas as child care, elder care and community affairs. As the report concludes, "such restructuring is unavoidable to liberate both men and women from artificial and restrictive social roles."

In terms of its rhetoric - the exploitation of women, its form of analysis - gender as a class, and its policy prescriptions - coercive redistribution and planning, this variety of feminist economics is largely inspired by socialist economics⁴⁹. It is perhaps therefore not surprising therefore that it seeks to measure the contributions of women using Ricardian-Marxian notions of value. Whereas Marxian economics sees the exploitation of labor's surplus value by capitalists, Feminist economics sees the exploitation of the value of 'reproductive services' by the male dominated institutions of society.

The United Nations in the push for value measurement

The push by some Feminists to include measurements of women's work in national accounts statistics can be traced back to 1975 which was designated by the UN as the International Women's Year. This was followed by the United Nations decade for women (1976-85). The World Plan of Action for the Implementation of the Objectives of the International Women's Year, adopted in Mexico City, 1975, highlighted the importance of employment and gave priority to the collection of adequate data and information. Through this period, various local studies were attempted at assessing the economic value of unpaid work. Significant among these were contributions by the International Labor Organization⁵⁰. However, the UN expressed in its 1985 agenda for the World Conference to Review and Appraise the Decade for Women, that domestic work cannot accurately be measured⁵¹.

Pressure from the delegates to the World Conference held in Nairobi (1985) to commemorate the end of the Women's Decade overturned this stance. The UN Economic and Social Council had to accept

guidelines for valuing women's work as set out in the document - *Forward Looking Strategies*⁵² - which noted that

[t]he remunerated and in particular the unremunerated contributions of women to all aspects and sectors of development, should be made to measure and reflect these contributions in national accounts and economic statistics and in the GNP. Concrete steps should be taken to quantify the unremunerated contribution of women to agriculture, food production, reproduction and household activities.

In 1989, the United Nations' *World Survey on the Role of Women in Development*⁵³ acknowledged that non-monetary production had to be recognized and "valued in monetary terms prevailing in the market." However, in recognition of the problems inherent in making such valuations, the UN Expert Group on Measurement of Women's Income and their Participation and Production in the Informal (uncounted) Sector proposed that such commitments could be made good in satellite accounts, separate from statistics compiled under the System of National Accounts. The Expert Group concluded that "value added by home-makers ... should be covered in separate supplementary estimates and that research on the calculation of Gross Domestic Product by sex should be left to individual countries." The practical application of the principle was left to the individual member states.

In succeeding years, workshops on collecting statistics on women's economic and social contributions were held under UN auspices in Africa, Latin America and Asia. In 1991, UNIFEM participated in the publicity campaign behind the Indian census which was amended to ask probing questions regarding the work done by women. Statistical agencies in Canada and various countries in Scandinavia, among others had also begun to use various techniques to estimate unremunerated domestic work.

In 1995, the Beijing conference on women again raised the valuation issue, calling for "suitable statistical means" to "recognize and make visible"⁵⁴ the full extent of women's contribution to their national economies. Under this mandate, UN agencies have been asked to evaluate the various techniques used by member countries in attempting to set up a world standard for measuring and valuing women's work. Timely completion of this task, it is hoped, will assist countries in preparing for their next round of census taking so as to enable a statistical 'photograph' of the contributions of women world-wide. Coinciding with the Beijing conference, the United Nations Development Programme's (UNDP) Human Development Report for 1995 estimated, using the Labour Theory of Value based monetary imputations of time use studies, that the unreported value of women's work world wide is US \$11 trillion a year.

Although recognizing that women contribute much that is greatly valued by others and appreciating that much of what is transacted in this respect falls outside the money economy, our earlier review of the economic theory of value and now of the methodology used by the UNDP and promoted by various socialist- feminists below, shows that this particular valuation is utterly meaningless even as it reflects a complete misunderstanding of the concept of value. The figure developed by the UNDP though has since been touted widely in feminist rhetoric.

Imputing the value of women's work

The imputation of monetary value of women's contribution to the informal economy for inclusion in satellite accounts to the formal System of National Accounts all rely on the Labour Theory of Value. Such imputations have been proposed along three tracks: These have been called the *net*, *input* and *output* methods⁵⁵.

Net and Input methods:

The Net and Input methods are grouped together in consideration since they both seek to impute value in monetary terms based on time-use data. Whereas the Net approach takes account only of the working time and its value, the Input method considers other inputs into household production such as consumption, capital costs and wages. Again, in both cases, time-use statistics are used to measure the value of labor input with labor seen as a source of value. A monetary value of time spent is derived from one of two techniques:

In the first technique, the number of hours spent in household activities is used to derive the associated value. This is done by comparing the total time spent on household work with that which a *generalist*, such as a professional house-keeper, would charge for the full array of duties performed. In the second procedure, the tasks associated with household work are disaggregated and the matching charges of *specialists* in each field are applied. For example, for hours spent on child care, the rates of a professional nanny might be used and for time spent cooking, the charges of a chef might be inserted⁵⁶. The third approach is the *opportunity cost* method where value is imputed based on what the person might otherwise earn in the marketplace in the time spent on carrying out domestic work⁵⁷.

Even among those who accept the logic of the time-use methodology, there is dispute as to how these can be consistently applied. For example, Beneria⁵⁸ finds that the generalist method will give a low estimate (since domestic workers are held to be poorly paid), the specialist method will give a high estimate (though this requires the disaggregation of simultaneously performed work) and the opportunity cost method will give a widely variable estimate (since the value imputed is based on what the woman's earning power in the market would be.) Another feminist economist, Lewenhak finds time use as a "patently inadequate" method of measuring unpaid work. She notes that this methodology omits the skill of the worker, the energy used, and the hazards encountered⁵⁹. Finally, Acharya has sought to use an ad hoc combination of techniques to determine the value of women's work in Nepal although it is unclear how this can be expressed in terms of consistent principles.⁶⁰

Another point to consider is the manner in which time use surveys are conducted. As Anker and others⁶¹ have noted, the way in which questions about economic activities are posed to respondents shape the answers provided, and hence the statistical outcomes. One may also consider that in some cultures, women and men may provide answers that they think will please their questioners. In still, others, detailed questioning of household activities may be viewed with suspicion and hostility; accurate answers may not be forthcoming.

Output based methods:

This method seeks to gauge the value in money terms of work done in the household by comparing the value of the what is produced at home to market counterparts. This is seen as problematical by those who have attempted to do this due to the difficulty of gathering appropriate data⁶². While such things as meals cooked can be linked to a market based counterpart, how does one value things that are not? For example, how does one determine to value to society of raising a properly conditioned and well-adjusted child?

Also, there are difficulties in this approach in controlling for the variation in quality and in the capital inputs used in the production of outputs. Is the badly cooked meal to be valued on par with a gourmet feast if the output category is "meal"? And is the monetary value of clothes washed by hand on the river bank on par with the value of clothes washed by a machine if the output in question 'clean clothes'. More, production technologies and outputs and the use and value placed on them vary from culture to culture making data collection difficult and its analysis and comparison problematic at best. The same article may have different applications in different societies. For such reasons, those who wish to estimate an imputed dollar value of women's work have themselves not pursued this path. Rather, in seeking a monetary measure of women's productive non-market activity, Feminists and others have concentrated on time-use methods.

Beyond these operational problems, the product method, at a more fundamental level, again displays an ignorance of the concept of value as something realized through the exchange process.

Conclusion:

Modern economic theory does not support the of *time-use* analysis as a basis for imputing the monetary value of work done outside the market. The Labor theory of Value on which this type of analysis is based has roots in Ricardian-Marxian theory of value that is no longer recognized as valid in economics. This implies that all the data collected, statistical work done and numbers generated along these lines are theoretically baseless insofar as they are used to generate estimates of the money value of work done in the productive unremunerated sector. Different statistical studies have employed time-use surveys and translated them into value correspondents variously using the charged time of specialists per

task or of a generalist for all tasks. There is no ground for choosing between these as the very basis for this choice is unsound.

B. Agency and Knowledge problems

Although one may share sympathies with the ultimate objectives of those in the women's movement on the issue of increased responsiveness of policy-makers to certain issues pertaining to gender, there are basic practical reasons why the aggregation of value as promulgated by radical feminist scholars (even if somehow accomplished) will not advance these aims. These can be referred to as the *agency problem* and the *knowledge problem*. We deal with them in turn.

The Agency problem

Standard Neo-classical economic theory as well as the Feminist literature is premised on the notion of a benevolent government whose agents want to and are capable of executing policy to the benefit of the public. In this scenario, it is the role of the analyst to formulate policy taking in to account the best and most comprehensive information available. Standard development theory is thus formulated as advice to a benevolent government. It is held that growth with equity, and other passenger considerations could proceed if only policy-makers had fuller knowledge and accepted the relevant policy frameworks. In contrast, Public Choice economists assume that policy-makers - political entrepreneurs and bureaucrats - are no less self-seeking than the rest of the population.⁶³ Unless appropriately constrained, actions taken by governments is seen to reflect on the conscious will of their own personnel or of wealthy or powerful special interests more than the will of society as a whole. Given that the government has a monopoly on coercive power, groups in society struggle to gain control over the instruments of power in pursuit of their own agendas. If we stray away from the model of the perfect government agent, we must consider that policy-makers will not be fully persuaded by statistical data in themselves. Indeed, policy-makers may seek to manipulate how data is collected and analyzed so as to use the resulting numbers to argue for policies that might suit particular constituents.

In deviating from the model of the perfect government agent, we must also consider that policy-makers engage in an exchange process like everyone else. Policy-makers gain real and psychic income from the pay, perks, and privileges given to office holders. In return, it is traditionally assumed that in exchange, citizens will expect that their concerns will be given due attention and appropriate policies developed and implemented. Yet there is increasing awareness of the unequal access that special interests - influential trade unions, business leaders and so on - have with policy-makers and of how this affects the direction of policy-making. These groups are influential because they are able to overcome problems of collective action.⁶⁴ Smaller groups with clearly identified interests face lower costs of mutual identification and organization than large dispersed groups and can thus more clearly articulate their needs and concerns to policy-makers. In contrast, there are those such as home-workers, numerous and isolated, who are not able to surmount these costs of organization.

What it comes down to is this: policy-makers respond to those with whom they most engage with. They place value on concerns brought before them as a result of this exchange. In exchange for the financial and political support they receive, they respond with policy initiatives to help these constituents. In pursuit of this, policy-makers may demand statistics to aid them in forming and enacting such special interest policy. The development of the scope and character of statistical data in various polities is therefore reflective of the demand placed by policy-makers who participate in this political exchange. If this is accepted, then it follows that believing that supplying statistical information on the welfare of women will in of itself enlighten and spur appropriate policy is somewhat naive.

Aggregation and the Knowledge problem

Proponents of planning often misconstrue the difficulty encountered in policy development as a mere shortage of statistical data instead of the more fundamental knowledge problem. Any planning agency could, given an adequate budget, collect mountains of data. However, the question is whether the data that is feasible to collect corresponds to the knowledge of value assessments that would need to go

into making economic decisions. Knowledge relevant to economic decision-making, the process by which individuals judge value in the items they transact and of how this judgment of value undergoes reappraisal, exists dispersed among the minds of the millions of individuals who make them. This knowledge is affected by an individual's life experiences, the institutional constraints he or she faces and perceptions on the availability and structure of capital present or forecast. Knowledge is not the same as data and this knowledge cannot be articulated. Thus the type of information that would be needed to make policy can never be captured.⁶⁵

We had noted earlier that money value corresponds roughly with subjective value assessments. Indeed, the money value of all the capital goods owned by an individual firm could be added to give a meaningful number since these are a part of a single plan. In aggregating these numbers across an economy however leaves the combined total to lose significance since the plans of rival firms may include mutually incompatible plans. The widespread use of money prices as the common denominator by which such aggregation is performed could only be legitimate in an equilibrium context where all plans are perfectly coordinated with each other. In the real world, the value of one firm's capital may be dependent on the loss of value of that of a rival — and this is the situation that exists in the real world. Determining the total value of capital in an economy based on money value has as much meaning as adding the value of a bridge to the value of the bomb that is being built to blow it up. The very process of aggregation necessarily involves a loss of information.

When such aggregated data is then inputted into macroeconomic models, the results are potentially harmful. Armed with such aggregate models of the economy, it is not surprising that government policy has been at best impotent in handling the problems it purports to solve.

Indeed, the only numbers that are of relevance to individuals who are actually engaged in the economy are the money prices and accounting exercises which are based on each entrepreneur's understanding of the present and future conditions of the market. Concrete economic decisions made by actors in the economy are rarely made in terms of the overall value of, say electrical machinery. Rather they are made in terms of specific pieces of machinery at particular times destined for particular uses within particular structures of capital. Changes in such aggregates as the Gross National Product are by-products of myriad human activities each of which is undertaken with respect to the particularities of time and place. Each transaction can only be interpreted in the context of related transactions to be meaningful.

The economy is the outcome of millions of individual plans whose complete consistency can never be achieved. No complete map of all this can ever be drawn. Thus, even if we were able to somehow overcome the agency problems surveyed above, aggregated data carries little information of relevance to the development of sage policy advice.

C. Valuation in the absence of a theory guide

We have noted that economic theory does not provide a guide in the choice of a valuation technique and that the political process provides a default selection mechanism. While frustrating what some regard as a *means* of achieving sustainable and gender conscious development, economic theory, however need not abandon us in our *aim*. Indeed, the theoretical dead-end of monetary value imputation points us instead to this question: How can we construct political institutions such that they reflect values and recognize the contributions of women and other citizens? Alternatively we may ask, can we, instead of convincing policy-makers of the wisdom of particular forms of action, constrain them so that they act in ways that might be conjectured to reflect on sustainable development. Given that political interests choose among policy initiatives based on self interest, how can this selection process itself be conditioned and constrained at a more fundamental level? Framing the problem in this way acknowledges the politics inherent in the discussion and seeks policy solutions at this level.

Before we try to answer these questions, let us look at attempts at valuation in other contexts.

Selection mechanisms for policy in the absence of defining criteria

Imputation of non-market activities or commodities, such as for use in litigation and in environmental accounting, reveal not only the limitations of the valuation methodologies but also expose

more starkly how such approaches have come to be chosen. This (dis-)connection between theory and chosen practice is perhaps best brought to light in its application in divorce settlements and in wrongful injury or death litigation. Fischer, in examining how forensic economists determine compensation in such cases from among the replacement and opportunity costs methodologies surveyed above, finds that they choose that strategy which is most persuasive with juries and judges rather than that which is theoretically well grounded. As to the future of valuation techniques, he notes, "ideally, change in forensic economics would be guided by sound research. However if the past can be taken as a guide to the future, changes in forensic economics may be more reflective of the interplay between opposing councils, jurors and judges in determining the outcome in open court."⁶⁶

Another forum where monetary value imputation is encountered is in environmental accounting. Parallel to the arguments of some feminists regarding valuing women's work, certain environmentalists pose that current national accounting systems do not capture adequately the value of natural resources and that as a result development strategists are deprived of critical data that would result in policies favorable to environmental conservation; as Lutz and Munasinghe note, "improved measurement of economic performance should in turn lead to better economic decision-making."⁶⁷ Environmentalists hope that by showing environmental loss as an economic cost, policy-making behavior will change.

The issue of how to translate environmental loss into economic cost that can be reflected in the satellite accounts to a national system of income accounts is far from settled. Environmentalists (a) contend that systems of national accounting are deficient in that they do not count as national wealth such things as clean air or forests, (b) note that national accounting counts the depreciation of man-made capital but not the exhaustion of natural capital, and (c) maintain that while clean-up of environmental damage adds to the national product, environmental loss is not subtracted from the same account. The issue in the environmental case, as in the gender context, is how to objectify the value of something that is inherently subjective - the pleasure that a virgin patch of woodlands provide, for example. As El Serafy acknowledges, aspects of the environment that lie outside the market place cannot be properly valued in money terms. More, he notes that "the medium of national accounts, powerful as it may be, is not a suitable one for providing a comprehensive picture of the state of the environment or its change over time."⁶⁸

With no theoretical guideline on how to choose among alternative ways of conducting the valuation,⁶⁹ the selection among alternate ways of imputation in environmental accounting then comes to reflect on the relative strengths of competing political interests in the different outcomes that various procedures are conjectured to produce. While in the legal case, the choice of valuation methodologies is made by attorneys based on how well it sells to judge and jury, in the environmental case, selection is by default made through the political process⁷⁰. As we have reviewed, there is no basis in economics for choosing among the various methodologies in considering how to value aspects of our environmental heritage or women's useful non-market work. While it would be nice if theory could select a means of value imputation that will directly inform the actions of responsive politicians, this analysis suggests that in the absence of a theoretical guideline and given the self-interest assumption, it is the particular constellation of political interests that will pick which valuation methodology best suits its present needs.

In responding to political pressures, policy-makers frequently rely on social statistics to provide the public interest justification for private interest initiatives. The manipulation of the size and nature of statistical measures are therefore often critical in political decision-making. Given that statistics can be strongly influenced by the assumptions underlying them, competition among groups in promulgating alternate policies often filter down to a rivalry in selecting among alternative methodologies.⁷¹ As a result, it is often difficult to pin credibility to statistical aggregates, even as those who seek to influence policy try to exploit the numbers for their seeming objectivity. The superior resolution to addressing the welfare of women, as the case may be, rests in changing the constraints within which public policy is made rather than engaging in this dubious game of statistical football.

Judging value constraints

We had earlier raised the question of how we can frame the way in which policy is carried out so that it evolves while reflecting the struggle among competing values. How are we as a society to judge which value claims are superior? In beginning to answer such a question, we have to be guided by

certain meta-normative principles. These are in themselves certain core values which we all might share. In this regard we might consider that we should value the principle that the goodness of social and economic situations have to be judged in terms of the evaluations of the relevant individuals. This principle, called *Normative Individualism*, holds that we consider that individuals are sovereign in matters of choice and is the foundation of a liberal social order. If one can agree that individuals are sovereigns, we can attempt to work out a comparison of types of social arrangements. What, however, may the analyst take as an indication of the individuals' evaluation of social conditions? In the case of a *market* transaction, the goodness is established by virtue of the individual's voluntary participation in the exchange. In order to qualify as voluntary, such participation must be within the bounds of mutually accepted rules, be marked by an absence of force or fraud, and should refrain from imposing undesirable externalities on third parties.

A second type of relation subject to individual level evaluation in the on-going relationship inherent in a *corporate* structure. This order is characterized by an inclusive multilateral exchange such as that within a family, club, firm, or political unit. In these situations, individuals choose (explicitly or implicitly) to submit to certain conditions in exchange for the benefits, which they could not otherwise realize. Particular individuals may hold that such benefits may be fulfilled only over the long run. Coercive action in this context might reflect mutually agreed upon, self-inflicted constraint, enforced by establishing contingencies of reinforcement. While the terms by which evaluation of goodness in the market situation is expressed are relatively easy to monitor, it can be less clear in the corporate case. The challenge then is to consider social arrangements within which such evaluations can be more easily made and acted upon and which in turn make such arrangements more responsive.

Just as *consumer sovereignty*, the idea that producers compete through the sole channel of being responsive to consumers, can serve as a guide to policy when discussing how to constrain markets, the concept of *citizen sovereignty* can be invoked to encompass the notion that political entrepreneurs should compete by being responsive to citizen interests². One form of such competition is where residents choose among packages of institutional features proffered by alternate jurisdictions. Here the competing jurisdictions can be based on various combinations of temporal (concurrent, overlapping, or sequential,) geographical and legal elements. The Swiss constitution which allows parts of cantons to join others (internal secession) and the American system of checks and balances are two examples of such constraining mechanisms.

Thus, going beyond the level of particular policies, current investigations in public policy consider how one might structure the political framework such that it remains responsive to shifting values, concerns and attitudes of all its citizens. As such, it is an integrated approach that includes learning and adjustment in the evaluation of various levels of governing institutions: at the personal level with respect to policy constraints, at the policy-making level with respect to institutional constraints, and at the institutional level with respect to structured competition among alternative jurisdictions. We have to acknowledge that the policy-maker may not be swayed so much by the brilliance of the analyst's data but by the political exigencies set up by the extant institutional structures. Truly sustainable human development involves more than impressing, with the appropriate rhetoric, the odd bureaucrat or policy-maker of the wisdom of one's perspective. It goes to making responsiveness systemic.

Thus rather than embarking on the futile task of measuring value, those interested in changing social policy should concentrate on changing the value framework within which policy is made. Rather than trying to create statistics which then impress benign policy-makers to act in an enlightened manner, consideration should be given, particularly in recognition of the impossibility of such a calculation and the imperfectness of policy-makers, as to how social institutions might be structured such that they reflect changing attitudes and values. In turn, the design of these institutions should be anchored such that they reflect on basic shared meta-values of human rights, democracy and equality and should reflect a strategy to more actively engage political agents in considering the interests of all segments of the population when formulating and implementing policy.

Summary and Conclusion

Efforts undertaken to measure value (such as of women's work) reflect a fundamental misunderstanding of the concept of value. This may partly be excused because the concept of value has had a tortured history in economic thought. Classical economists, without the benefit of the tools of marginal analysis, were confounded between the use value of a good versus its exchange value. This is illustrated in the diamond-water paradox where it was wondered why water, which is so much more precious for life, is priced so much less than diamonds. The other misconception harbored by the classicists involved the concept of underlying value. While fluctuations in value was considered to occur due to the forces of supply and demand, it was felt that its long-run value was based on some inherent factors.

Adam Smith considered that in a *primitive* economy where labor was the only productive input, value would be *determined*, i.e. *caused* by its labor content. However, as interpreted by David Ricardo, the primitive economy caveat was ignored and determination was mistaken as *measurement*. Marx, in particular picked up on Ricardo's argument and held that the labor inputted was the source of all value. This then served as the basis for his theory of capitalist exploitation. The classical theory of value and its immediate successors were unable to explain how consumer preferences affected the value of goods, nor could they account for how market price mechanisms could relay this information to producers. Despite such fundamental advances in economic science such as the Marginalist Revolution and the development of a robust theory of value, many policy activists continue to seek to use Labour Theory of Value arguments to make their case. For example, feminist economists have used such grounds in posing that women's work has been undervalued.

The Marginalist revolution in economics and, in particular the tradition fostered by Carl Menger set the stage for the modern concept of value. Value today is understood to be inherently subjective. Valuation is expressed through the process of economic exchange - either through particular markets or through informal forums of exchange such as households. Such an exchange process involves individual(s) conjecturing as to what others will covet so that they may in exchange obtain something that they value. This may be mediated by money in formal market exchange situations. Exchange may be manifested either in a visible transaction or in a stream of services over a period of time. Particularly in informal exchange situations, an account of who has transferred what to whom in the exchange relationship is extremely difficult to determine.

This paper has pointed out that value cannot be successfully aggregated due to the idiosyncratic nature of knowledge and valuation. Even if this were somehow possible, we have shown that relaxing the assumption of benign policy-makers and introducing special interest groups into the model casts doubt as to whether policy-makers will respond adequately to issues which various advocacy groups seek to highlight. The paper points out further that rather than trying to create aggregate measures of value, advocacy groups which seek to change our social values should focus on realigning the social, political and constitutional constraints within which policy-makers and others operate such that they reflect more on such concerns. At the same time, it should be realized that if such a processes is to conserve certain principles of a liberal order, the evaluation among competing value judgments should proceed within established rules that reflect higher principles or frameworks of shared meta-values.

Endnotes

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¹ This was the underlying assumption behind the recent UNDP "Workshop on Integrating Paid and Unpaid Work into National Policies," held in Seoul, ROK, May 28 - 30, 1997.

² Smith, A. (1981) *An inquiry into the nature and causes of the wealth of nations*. Indianapolis: Liberty Press. (Original work published 1776.)

³ *ibid.*, p.28

⁴ *ibid.*, Book I, Chapter VII

⁵ *ibid.*, p. 30

⁶ *ibid.*, p. 31

⁷ Ricardo, D. (1886) *The works of David Ricardo I*. London: J. Murray

⁸ *ibid.*, p. 13

⁹ *ibid.*, p. 12

¹⁰ *ibid.*, p. 36-37

¹¹ For example, the number of oxygen molecules in a beaker of water provides a measure of the number of water molecules. However adding more oxygen will not add more water as hydrogen atoms are also required; the presence of oxygen atoms by itself is not therefore a determinant.

¹² Mill, J.S. (1987) *Principles of political economy: with some applications to social philosophy III*. Fairfield NJ: A.M. Kelly. (First published in 1909.) 1,2.

¹³ Gordon, S. (1993) *The history and philosophy of social science*. London: Routledge. p. 176

¹⁴ Marx, K. (1932) *Capital, the Communist Manifesto and other writings*. New York: Modern Library.

¹⁵ Value, Price and Profit, 1865.

¹⁶ *Capital*, I, Ch. 7

¹⁷ *Capital*, I, Ch. 8

¹⁸ Hayek notes that this is pointed out in the Introduction of Joachim Reig's translation into Spanish of Böhm-Bawerk's essay on Marx's theory of exploitation. Marx's wisdom in abandoning this line of argument is not yet reflected in the considerations of today's socialist-feminists, as we shall see in part IV.

¹⁹ Menger, C. (1976) *Principles of economics*. New York: New York University Press. p. 65

²⁰ *ibid.*, p. 123

²¹ *ibid.*, p. 132

²² *op cit.* p. 259

²³ Weiser, F. von (1971) *Natural Value*. New York: Augustus M. Kelly. p. 58.

²⁴ Böhm-Bawerk, E. Von. (1960) Value and price. In *Positive theory of Capital, Capital and Interest Vol. III*. South Holland IL: Libertarian Press.

²⁵ See also in this respect, J.M. Buchanan's (1969) classic *Cost and choice: An inquiry in Economic Theory*. Chicago: University of Chicago Press.

Buchanan notes that "cost is that which the decision-taker sacrifices or gives up when he makes a choice. It consists of his own evaluation of the enjoyment or utility that he anticipates having to forego as a result of selection among alternate courses of action"(43) He further notes that "cost is subjective; it exists in the mind of the decision-taker and no where else" and that "cost cannot be measured by someone other than the decision-taker because there is no way that subjective experience can be directly observed"(44).

²⁶ Mises, Human Action pp. 204

²⁷ Also see: Mirowski, P. (1990) "Learning the Meaning of a Dollar: Conservation Principles and the Social Theory of Value in Economic Theory." *Social Research*, Vol. 57, No. 3.

Mirowski notes that "the success of classical political economy was bound up with its image of value as an embodied substance, shuttled hither and yon by the market. This substance was conserved in exchange, allowing the increase of value to be quantified in production and its decrease to be likewise quantified in consumption.... [T]he notion of value was transformed in the 1870s. ... Value was no longer conserved in the older classical sense, particularly because neoclassical wished to argue that trade increased people's utility and thus their realized value; but that did not mean that conservation principles had been relinquished altogether" (698).

²⁸ Hayek, F.A. von (1988) *The fatal conceit: The errors of socialism*. Collected works of F. A. Hayek (W. Bartley, Ed.) London: Routledge. p. 32

²⁹ *ibid.*, p. 97

³⁰ A survey by Richard Langlois (1986): "The New Institutional Economics: An Introductory Essay," as well as other essays in New Institutional Economics can be found in *Economics as a process, Essays in New Institutional Economics*, Cambridge, Cambridge University Press.. Also see Uskali Mäki's (1993) essay, "Economics with Institutions: Agenda for Methodological Inquiry" in Mäki, Gustaffson and Knudsen (Eds.) *Rationality, Institutions and Economic Methodology*. London: Routledge. In . Here Mäki provides a useful summary of the various flavors of New Institutional Economics.

³¹ See: Coleman, J.S. (1987) Norms as social capital. In G. Radnitzky and P. Bemholtz (Eds.) *Economic Imperialism - the economic approach applied outside the field of economics*. New York: Paragon House Publishers.

³² See: Elster, Jon. (1989) *The cement of society, A study of social order*. Cambridge: Cambridge University Press.

³³ Lakatos, I. (1970) *The methodology of scientific research programmes*. Cambridge: Cambridge University Press.

³⁴ For example, the Cartesian view of the world, which many take for granted, has been a useful tool in the development of civilization. It is however based on a perception which has not always been universally shared. Eskimos, for example, before interaction with Europeans, did not have the concept of a straight line. Similarly, before Arab traders introduced the Indian concept of the zero, it did not form a part of European thought.

³⁵ The architecture of thought and its evolution, considered in terms of competition among mental models while conditioned by more fundamental levels of mental representations, has been advanced by the psychologist Holland and others. See for example: Holland, J.H., Holyoak, K.J. Nisbitt, R.W. & Thagard, P.R. (1986) *Induction - Processes of inference, learning and discovery*. Cambridge MA: The MIT press.

³⁶ Evaluation of the social usefulness of certain norms is complicated by the public goods problem and by the unequal access to public forums for expression of such evaluations.

³⁷ See: Background papers for the recently held UNDP "Workshop on Integrating Paid and Unpaid Work into National Policies." In, particular note papers by Dr. Isabella Bakker and Dr. Maria S. Floro.

³⁸ UNDP Occasional Papers No. 20, HDR Reports Office.

³⁹ The use of the third-person criteria is limited by the extent to which complex exchange relationships exist in the particular society. In a relatively simple economy where exchange is less specialized and complex, finding a corresponding market equivalent or substitute to perform the work for you may not be feasible. The fact that certain types of activities *are* carried out within particular market settings implies that individuals who offer such services conjecture that others find this to be of value. How productive or efficient they are in provisioning these can be gauged in comparison with other competitors. Similar comparisons are difficult to make in an economy characterized by more rudimentary exchange where it is not possible to find others who, in rivalry, carry out similar activity. However, this does not mean that such work is not valuable or productive; it is just difficult to gauge. Comparisons of productivity between individuals who toil in economies characterized by a wide variance in the integration of exchange relationships also cannot be meaningfully made.

⁴⁰ We distinguish between 'liberal-feminism' and 'socialist-feminism': Liberal-feminists analyze the status of women on the assumption that society should accommodate women on an equal basis with men. For example, according to Boserup [(1970) *Women's role in economic development*. New York: St. Martin's Press], economic development will lead to increased specialization of labor, and alongside, increasing opportunities for women to participate in the market economy. Socialist-feminists, on the other hand, hold that gender inequality is deeply rooted in the male-dominated institutions of society. More, some who subscribe to this school see capitalistic development as exacerbating pre-capitalistic gender inequalities. As such, they advocate radical reform in social institutions, advocating, among other things, set asides for participation in political fora.

⁴¹ *op. cit*, 1827.

⁴² See: Cagatay, N., Elson, D., and Grown, C. (1995) Introduction. *World development*, 23(11): 1827-1836.

⁴³ *ibid*.

⁴⁴ See: Beneria, L. (1992) Accounting for women's work: The progress of two decades. *World development* 20(11): 1547-1560.

⁴⁵ The 1995 Human Development Report notes that the extent of participation by women in political institutions and their contribution to the advancement of women is a subject of extensive research.

Although it acknowledges that no relationship has been established in this respect, it calls for a 30% female membership in political institutions to provide enough leverage to exert policies considered to be of import to women. (pp. 31, 41, 49)

⁴⁶ See Beneria, L. (1995) Towards a greater integration of gender in economics. *World development* 23 (11): 1842

⁴⁷ *ibid.*, pp. 1846-1848.

⁴⁸ UNDP: New York. p. 98.

⁴⁹ As Beneria (1995, 1841) notes, "In particular, the Marxian focus on exploitation, inequality and the market's systemic tendency to generate social hierarchies seemed to be more conducive than the neoclassical framework to answer the questions raised by feminists." Alternatively we might consider that Marxian economics provided the most convenient justification for the Feminist policy initiatives

⁵⁰ The ILO has presented an entire series of publications on women, work, and development.

⁵¹ See: United Nations (1995) *Methods of measuring women's economic activity* for a review of the involvement of the UN and its agencies in valuing women's work.

⁵² United Nations. (1986) *The Nairobi forward-looking strategies for the advancement of women*. Adopted by the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development, Peace. Nairobi: 15-26 July, 1985. New York.

⁵³ United Nations (1989) United Nations Office at Vienna, *World survey on the role of women in development*. New York.

⁵⁴ Platform for Action, Fourth World Conference on Women - Beijing (1995). New York: United Nations

⁵⁵ For a review of literature on the valuation of women's work through output and input methods, see: INSTRAW (1995) *Measurement and valuation of unpaid contribution; Accounting through time and output*. Chs. 4, 5.

Although there have been wide ranging attempts at valuing women's work, none of these regrettably reflect an understanding of the concept of value

⁵⁶ See. Vihavainen, M. (1995) "Calculating the value of household production in Finland in 1990." Statistics Finland Working Papers No. 6.

Using this technique, estimates of the value of household work range from 40 to 50% of GNP.

⁵⁷ Beneria, 1992, 1554

⁵⁸ *ibid.*

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⁵⁹ Lewenhak, S. (1988) *The reevaluation of women's work*. London: Earthscan Publications Ltd. p. 11.

⁶⁰ Acharya, Meena (1997) "Time budget studies for measurement of human welfare." Paper prepared for presentation at the UNDP Workshop on Integrating Paid and Unpaid Work into National Policies May 28 -30.

⁶¹ Anker, R. and Ruth Dixon-Muller (1989) "Assessing women's economic contributions to development." *World employment programme: Paper No. 6*. Geneva: ILO. Also see Anker, R., Khan, M.E. and Gupta, R.B. (1988) Women's participation in the labour force: A methods test in India for improving measurement. *ILO Series on Women, Work and Development, 16*. Geneva. The volume

provides an useful discussion of practical problems associated with soliciting information on the activities of women in the last Indian census.

⁵² Beneria (1992, 1554) notes: "The problem again is to decide which market goods and services are equivalent to those produced in the household, and what price to impute to inputs such as labour and raw materials produced at the household level..."

⁶³ See: Mueller, Dennis C, (1989) *Public Choice II*. Cambridge: Cambridge University Press.

⁶⁴ See: Olson, Mancur. (1971) *The Logi of Collective Action*. Cambridge MA: Harvard University Press.

⁶⁵ See: Hayek, Friedrich (1948) *Individualism and Economic Order*. Chicago: University of Chicago Press. The volume contains a collection of Hayek's most important and influential essays on knowledge and economics.

⁶⁶ Fischer, C.C. The valuation of household production: Divorce, wrongful injury and death litigation. *American journal of economics and sociology*, 53 (2). p. 220.

⁶⁷ Lutz, E. and Munasinghe, M. (1991) Accounting for the environment. *Finance & Development*.

⁶⁸ El Serafy, S. (1995) Measuring development: the role of environmental accounting. *International social science journal*, 47, p. 65

⁶⁹ Even those, such as Hartwick, who try to come up with a formula to account for environmental degradation, realize that the "move from our abstract ideal valuations to actual evaluations is very difficult." While one may come up with some formula to translate the subjective to the objective, the crucial issue of how weigh the coefficients remains unresolved.

Hartwick, J.M. (1991) Degradation of environmental capital and national accounting procedures.

⁷⁰ For example, environmental issues — depletion of tropical forests — have been seized on by politicians in the US and elsewhere to justify protection of domestic industry against imports from poor countries

⁷¹ An example of this phenomenon can be seen in the debate over recent recommendations on the revision of the Consumer Price Index in the United States. The battle over methodology in this case reflects competing political interests in forestalling the expected cuts in welfare entitlements that reducing the CPI by about one percentage point would entail and in balancing the budget by means of this legerdemain.

⁷² See: Vanberg, V. and Kerber, W. (1994) Institutional competition among jurisdictions. *Constitutional Political Economy*, 5(2), 193-219.

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