

# MARSHALL: JUST HOW INTERESTED IN DOING GOOD WAS HE?

BY  
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## I. INTRODUCTION

This paper critiques the way Alfred Marshall is presented in many histories of economic thought, in particular, the typical neglect of the relation of his economic theory and method to his public policy proposals and views on economic evolution. A good example is the textbook of Stanley L. Brue, *The Evolution of Economic Thought*, which is specifically policy oriented. He notes in his remarks on Marshall's life and method: "Marshall's thinking left room for cautious reform, that is, modest departures from laissez-faire" (2000, p. 295). But the only illustration of this is Marshall's discussion of the welfare effects of industry taxes and subsidies. However, even here Brue concludes (2000, p. 316) with a quote from Marshall: "These conclusions, it will be observed, do not by themselves afford a valid ground for government interference."

The approach is virtually the same in the textbooks of Harry Landreth and David C. Colander (2002, pp. 272–304) and Henry Spiegel (1991, pp. 563–71). Spiegel suggests that Marshall approached his task with "pragmatic urgency" so that the study of economics would be of immediate help in improving the lot of humanity. But no illustrations are provided. Evidently any help in improving the lot of humanity had to await A. C. Pigou's welfare economics, which "opened up a wide range of opportunities for public policy" (1991, p. 574). The student reading these textbooks is left, in all likelihood, with the belief that Marshall said little about policy and there is little relation between theory, method, and policy in his work.<sup>1</sup>

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<sup>1</sup>Mark Blaug's reference work, *Economic Theory in Retrospect* (1997) illustrates the point. Blaug's main focus is on theory and method. Yet enough is said about Marshall's policy interests to leave a confusing picture. He suggests (p. 404) that Marshall pointed out time after time that static microeconomic analysis fails to come to grips with the vital issues of economic policy, yet there is no indication as to what Marshall thought were the vital issues. He notes (p. 380) that chapter 4, section 3 of Marshall's *Principles* contains an interesting list of the chief practical questions to which economists ought to address themselves, including the organization of industry and trade, the money market, and foreign trade. But he makes no mention of the next section of the chapter which contains, in Marshall's words, "practical [policy] issues which stimulate the inquiries of the English economist at the present time" and which are of "special urgency now in our own country." He provides a discussion of the five peculiarities of labor identified by Marshall (p. 400) but without being explicit about the policy conclusions that Marshall drew from them. In reference to the Malthusian theory,

ISSN 1042-7716 print; ISSN 1469-9656 online/04/040493-26 © 2004 The History of Economics Society  
DOI: 10.1080/1042771042000298724

The neglect of Marshall's views on policy and economic evolution in history of economics textbooks is ironic given many of the reviews that greeted the *Principles of Economics*:

Newspaper reviews saw the book as more than the economic treatise for the coming generation. Marshall's *Principles* had recast political economy "as the science of social perfectibility"; it presented a "study of industrial history unusually thorough"; its contents included "pieces of thoroughly artistic literary workmanship" comparable to Mill's famous chapter on the futurity of the working classes; its publication ensured that "Political Economy has ceased to be a dismal science—dismal in its subject matter, dismal in its methods, dismal in its conclusions". It was seen as exceedingly even-handed ... [it] placed Marshall's views, such as those on the state, in between those of Spencer and of the socialists (Groenewegen 1995, p. 399).<sup>2</sup>

Textbooks on the history of economics seem to reflect the attitude that Marshall's engine of analysis was lacking for the higher purposes that led him into economics. According to Theodore Leavitt: "Marshall's impatience, in the name of humanity, to alleviate, if not to solve, the poverty problem took him 'outside' the economics he so rigorously presented." Marshall's rigorous economics "set economic analysis on a largely sterile course ... devoid of realism, relevance, or practicality" (1976, pp. 432, 441). If this is true it is clearly a damning judgment of the economics profession today. As Landreth and Colander note: "Building on the work of Smith, Ricardo, and J. S. Mill, Marshall developed an analytical framework that still serves today as the structural basis of current undergraduate economic theory and most economic policy" (2002, p. 285). Having said this, however, they pay little attention to the policy aspects of Marshall's work.<sup>3</sup>

It will be argued below that Marshall developed or emphasized certain analytic tools to explain not only pricing and allocation but to illuminate economic

footnote 1 continued he cites evidence (p. 385) that "its essential validity is boldly proclaimed" by Marshall; the reader is left to wonder if Marshall was therefore in accord with classical policies on population. He states that the Marshallian tradition culminated in Pigou's *Wealth and Welfare* and that Pigou's central policy message was that attempts to raise income levels of the poor need not be eroded by automatic economic forces (pp. 286–87, 583). But though unremarked by Blaug, this was surely Marshall's central message, as well. Finally, the reader is informed (p. 693) that Marshall thought economic growth would take care of itself provided that "free" competition prevailed and was supported by minimum state controls. This may mislead the student reader in that it implies that Marshall clearly advocated a non-intervention policy.

<sup>2</sup>A few reviewers were less than enthusiastic. For example, *The Nation* concluded: "We do not consider this treatise, regarded as a whole ... to possess great scientific value" (quoted in Reisman 1990, p. 86). Reisman notes that some reviewers were able to find a message of material and moral betterment but one that "served in some measure to justify self-seeking individualism and the never-ending process of maximization" (1990, p. 85).

<sup>3</sup>Canterbery offers a perspective in support of the sterility charge but the blame is placed on Marshall's followers: "Marshall's *Principles* is an impressive sociology of nineteenth century English capitalism, permeated with a broad historical sense of the evolution of economic institutions, for all of its analytic apparatus. His followers chose to develop only Marshall's analytic footnotes and not his idea of historical evolution. An overly simplified Marshallism that disregarded history pervaded the college teaching of economics" (1995, pp. 106–107). This same oversimplified "Marshallism" pervades the treatment of Marshall in the history of economics textbooks today. Even Canterbery treats Marshall's analytic apparatus as having no bearing on his historical analysis.

evolution and indicate policy directions that would facilitate progress. His economics had many particular “lines of intersection with the social scene” (Rogin 1956, p. 555). Specifically, the question of how Marshall’s engine of analysis bears on the central policy issues posed in Book I, chapters 1 and 4 of *Principles* is the principal concern of this paper. In chapter 1, he lays out the main concern of the book: “Now at last we are setting ourselves seriously to inquire whether it is necessary that there should be any so-called ‘lower classes’ at all.” After remarking on the steady progress against poverty and ignorance in the nineteenth century, he suggests that this type of question cannot be fully answered by economics: “But the answer depends in a great measure upon facts and inferences, which are within the province of economics; and this it is which gives to economic studies their chief and their highest interest” (1920, pp. 3–4).

Marshall also establishes in chapter 1 the yardstick against which all individual behavior, economic institutions and their evolution, and public policy are judged throughout the work. It encompasses several aspects of human behavior deemed to be the most desirable in a hierarchy of motives, including “a certain independence and habit of choosing one’s own course for oneself, a self-reliance; a deliberation and yet a promptness of choice and judgment, and a habit of forecasting the future and of shaping one’s course with reference to distant aims” (1920, p. 5). These qualities essentially describe the Victorian concept of character from which good preferences and choices flow (see Collini 1991).<sup>4</sup> They are a natural outgrowth of economic and social evolution, according to Marshall, but they are also subject to cultivation through wise policy: “Marshall’s innumerable references to higher or nobler satisfactions make it abundantly clear that he was not a utilitarian, in the Benthamite sense of seeking to maximise the satisfaction of human preferences as they stand” (Mathews 1990, p. 26). Marshall observed that “the human will, guided by careful thought, can so modify circumstances as largely to modify character; and thus to bring about new conditions of life still more favourable to character; and therefore to the economic, as well as the moral, wellbeing of the masses of the people” (1920, p. 48).

Book I, chapter 4 provides an extensive list of policy issues, including problems of “special urgency” to Britain. The long concluding chapter of *Principles*, “Progress in Relation to Standards of Life,” provides a summary of the “facts and inferences” which bear on the leading question posed in the first chapter regarding the elevation of the lower classes. The answer is favorable but qualified: the proportion of workers fit for only unskilled work has diminished significantly; social and economic forces already at work have changed the distribution of wealth for the better; but inequalities remain a serious flaw to be set right. The chapter ends with some broad guidelines for policy.

Given the content of the introductory and concluding chapters in *Principles*, one would expect Marshall to provide a framework of theory and method in the treatise by which the “inferences” he alludes to could be made. He notes that

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<sup>4</sup>Marshall did not espouse a formal ethical doctrine, suggesting that he preferred to rely on ethical instincts and common sense: “Given his reluctance to explicate his ethical beliefs, it is hardly surprising that so many commentators have concluded that Marshall simply took for granted the conventional moral ideas and standards of his social and intellectual group” (Coats 1990, p. 156).

“facts by themselves teach nothing” (1920, p. 38). Economics is an “engine for the discovery of concrete truth” and for solving practical, social problems: “The dominant aim of economics in the present generation is to contribute to a solution of social problems” (1920, p. 42). In *Industry and Trade* (1923, p. 7), he expressed the idea this way: “A chief purpose of every study of human action should be to suggest the probable outcome of present tendencies; and thus to indicate, tacitly if not expressly, such modifications of those tendencies as might further the well-being of mankind.” In a letter to H. S. Foxwell (May 1878) he wrote: “My own opinion is that it is a very great evil for students to go through a P.E. Course & and to know nothing of the order of evolution of the economic phenomena of modern times” (Whitaker 1996, Vol. 1, pp. 96–97). It is fair to say that Marshall would be utterly confounded by the sterility charge and the minimal attention given in current textbooks to his views on policy and economic evolution.

## II. MARSHALL’S POLICY PROGRAM

The relation of theory and method to policy and economic evolution in Marshall’s work can be probed by beginning with a review of his policy proposals. John Maynard Keynes suggested that Marshall was “too anxious to do good” with the result that he undervalued theoretical work that was not directly connected with human welfare or the condition of the working classes (Keynes 1951, p. 175). T. W. Hutchison, in a review of Marshall’s policy proposals, found that it was “not very apparent that the good was very extensive that Marshall was too anxious to do” (1969, p. 255). According to Hutchison, Marshall preached a great deal and urged other people to be good but this was quite distinct from oneself doing good or even being anxious to do good. Of course, if we take Marshall at his word we would likely agree that the good was quite extensive that he was anxious to do: “It was my desire to know what was practicable in social reform by State and other agencies which led me to read Adam Smith and Mill, Marx and Lassalle, forty years ago. I have since then been steadily growing a more convinced Socialist in this sense of the word [a desire to promote social amelioration].” And: “I have devoted myself for the last 25 years to the problem of poverty, and . . . very little of my work has been devoted to any enquiry which does not bear on that.” It will be useful to consider Hutchison’s overview of Marshall’s policy program. He lumped Marshall’s proposals under several headings:

(1) Inadequacies of Individual Choice: Marshall was an advocate of increased public spending on education, town planning, state inspection of milk and other commodities, and enforcement of sanitary regulations.

(2) Poverty, Distribution, and Redistribution: Marshall favored progressive taxation as early as 1889, subsequently moving more explicitly, though still cautiously, towards progression. In 1909 he wrote that for fifteen years he “somewhat eagerly” opposed death duties, because he believed they checked the growth of capital, but now considered them “a good method of raising a large part of the national revenue.”

(3) Monopolies and Restrictive Practices: Marshall believed that combinations and partial monopolies would play a great part in future economic history but had little to suggest in the way of remedies and countermeasures and was opposed to nationalization of the means of production.

(4) Macroeconomic Policy: Marshall, unlike H. S. Foxwell and other contemporaries, did not consider that the problem of unemployment was growing more serious. He recommended nine remedies, all connected in some way or other with the want of knowledge, for the problem of unemployment. His main suggestions were in the monetary field though they did not go far, principally that of raising the normal limit of the cash reserve of the nation (Bank of England). Generally legislators should do little with regard to the currency.

(5) External Commercial Policy: He was against the senile industries argument for protection and his influence, Hutchison suggests, probably helped to retain Britain's mainly free-trade policy for another two or three decades.

Hutchison concludes that Marshall's most definite proposals for extending state action fall under the headings of "Poverty and Redistribution" and "Inadequacies of Individual Choice." However, "though Marshall's interests extended across the whole range of feasible extensions of government intervention in the economy, for the most part he had no far-reaching proposals to make" (1969, p. 255). In response to comments by McWilliams-Tullberg (1975, p. 376), Hutchison remarked in a later work that his emphasis on the subject had changed somewhat. The relevant comparison should be with Marshall's immediate predecessors. His policy proposals "represent the insertion of the thin end of a massive wedge, or a vital first step" (1978, p. 115). Presumably this means a platform for later theoretical developments (e.g., Pigou's welfare economics) as well as support for a policy process aimed at expanding public sector responsibilities.<sup>5</sup>

It may be concluded with Hutchison (though his survey is rather cropped, as will become evident below) that Marshall's policy interests were wide-ranging and a wedge for later developments. The next step is to examine the specific relation of his theory and method to his policy proposals and view of institutional change. Whitaker suggests that by the early 1870s Marshall had determined to transform the "old political economy into a new science of economics, open to the progressive intellectual and social movements of the day" and put behind sterile doctrinal controversy as well as the pessimistic pronouncements of the old political economy (Whitaker 1996, vol. 1, pp. xvii, xx). Thus Marshall argued: "Though economic analysis and general reasoning are of wide application, yet every age and every country has its own problems; and every change in social

<sup>5</sup>Nahid Aslanbeigui (1987, pp. 191-201) rejects the view that Pigou's writings were "natural extensions of Marshall's theories" and argues that Pigou's policy proposals were "non- or at times even anti-Marshallian," at least on matters of unemployment, socialism, and inequality. The argument is much overstated and even contradictory. For example, regarding the first claim, a few pages earlier he suggested that Pigou was "armed with the Marshallian tools" and that in his analysis of unemployment "the theoretical model remained Marshallian as did the specific factors causing unemployment." He also states that "contrary to Marshall, Pigou was quite sympathetic to socialism" but then admits that Pigou "dismissed socialism as a viable alternative" in favor of redistribution of income. In fact, both Pigou and Marshall upheld capitalism as a system that accomplished socially desirable goals but both wanted to chronicle grounds for state intervention.

conditions is likely to require a new development of economic doctrine” (1920, p. 37). Few of the practical conclusions of Smith, Ricardo, and Malthus were “applicable to the modern age of steam, electricity and education of the masses” (Whitaker 1996, vol. 3, p. 270).

A letter to Marshall from Benjamin Jowett (July 1890) would seem to capture Marshall’s purpose well: “It [*Principles*] seems to me to be just what was wanted to mediate between the old political economy & the new, or rather between the old state of industrial Society & the new” (Whitaker 1996, vol. 1, p. 332). Institutional change accompanying the shift from old to new included the establishment of a strong labor movement, the enfranchisement of the working classes, public education for the masses, an increase in the scale, complexity and efficiency of business, and the growth of cities. A political expression of the shift was the “new economic movement,” a reformist movement with which Marshall wished to align himself (Coats 1990, p. 158). The challenge for Marshall was to develop a sound theoretical structure of economics which supplied the methodology and analytical tools for addressing the problems and opportunities associated with institutional change and which pointed towards effective policy. The structure, method, and tools must not only be communicated to present and future academic specialists but must be useful to the thinking and activities of the parties most actively involved in the process of social improvement and progress: “The elimination of mathematics from the text of *Principles* and other works was symbolic of Marshall’s strategy to increase the audience and influence of his system of economics” (Groenewegen 1995, p. 784). The following section considers elements of Marshall’s scope and method in relation to this challenge.

### III. MARSHALL’S SCOPE AND METHOD

Marshall’s study of history convinced him that the economy was developing in ways favorable to the working classes, including an increase in the share of society’s work done by skilled and efficient labor and a decrease in the proportion of workers belonging to the “lower classes.” A corresponding development of worker faculties such as self-reliance and forethought meant that workers were increasingly able to benefit from income and leisure: “Leisure is used less and less as an opportunity for mere stagnation.” In Marshall’s thought, the worker’s moral progress and total welfare were directly linked to his material prosperity. Small and poorly supplied homes, for example, “tend to stunt the faculties, and limit peoples’ higher activities” (1920, pp. 88–89). Major progress could be accomplished only in periods of time sufficiently long to incorporate new methods of production, to substitute skilled for unskilled labor across the economy, and to develop new wants and activities. The use of deliberate policy could facilitate and speed the process. Marshall’s concept of the scope and method of economics and several of his most important analytical tools accommodate and give practical effect to this view of economic development and public policy. His methodology is typically given considerable coverage in the textbooks but with inadequate attention to its bearing on the question of social and economic progress and the role of policy. The following elements of scope and method seem important in this regard.



*Wants and Activities*

He rejected the view held by Jevons and others regarding fixed wants and the primary role of consumption theory in economics. For Marshall, “wants” change and grow with the growth of “activities”:

It is not true therefore that “the Theory of Consumption is the scientific basis of economics.” For much that is of chief interest in the science of wants, is borrowed from the science of efforts and activities. These two supplement one another; either is incomplete without the other. But if either, more than the other, may claim to be the interpreter of the history of man, whether on the economic side or any other, it is the science of activities and not that of wants (1920, p. 90).

The growth of wants and activities, so essential to Marshall’s conception of progress, was thereby placed within the scope of the science. Human nature itself was changing for the better: “[Whereas] earlier economists argued as though man’s character and efficiency were to be regarded as a fixed quantity, modern economists keep constantly in mind the fact that it is a product of the circumstances under which he has lived.” Changes in human nature, he argued, had been particularly rapid over the past fifty years (1920, p. 764; 1923, pp. viii, 650–51).

*Time Periods of Analysis*

In a letter to a reviewer of his *Principles* who suggested that the book had no one leading idea, Marshall wrote that there indeed was one, the element of time: “[T]o this one idea almost every paragraph in the book is subordinate; it is the main product of my life’s work, & the *raison d’être* of my appearing as a writer” (Whitaker 1996, vol. 2, p. 29). Marshall’s treatment of time served the need of economic theory to account for market phenomena and time constraints on economic decision-making and activity. It also served to implement his critique of Jevons’s static concept of the economic problem and provide a time dimension to the idea of economic and social progress and the effects of policy. Jevons’s conception of fixed wants and given stocks of commodities to be exchanged received limited attention in *Principles*, essentially just one chapter (chapter II, Book V). Short period analysis, with existing stocks of capital and specialized ability, received little attention as well.

In chapter III of Book V, Marshall pronounced that the remainder of the volume would be “chiefly occupied with interpreting and limiting this doctrine that the value of a thing tends in the long run to correspond to its cost of production” (1920, p. 348).<sup>6</sup> Accordingly much of the *Principles* is concerned with “long periods” during which new plant, organization, trade knowledge, and specialized ability “have time to be adjusted to the incomes which are expected to be earned by them.” It was also in long periods of time that significant social

<sup>6</sup>Marshall intended to give important attention to short-period analysis in volume 2 of the *Principles* (Whitaker 1990, p. 202). Short-period analysis would have little bearing on the question of progress. It is plausible that this reduced Marshall’s motivation to bring a second volume to fruition.

and economic progress could occur and policy could have beneficial effects in facilitating it. Methodologically, therefore, Marshall's treatment of time placed both economic analysis and policy analysis on a par in terms of the time periods of greatest interest and relevance to the question of evolutionary progress. For long periods of "several years," the theory of stable equilibrium of demand and supply gave:

a fairly trustworthy picture of the chief methods of action of the strongest and most persistent group of economic forces. But when pushed to its more remote and intricate logical consequences, it slips away from the conditions of real life. In fact we are here verging on the high theme of economic progress; and here therefore it is especially needful to remember that economic problems are imperfectly presented when they are treated as problems of statical equilibrium, and not of organic growth (1920, p. 461).

The conditions of real life alluded to included changes in technology, scale of industry, wants and activities, education and skill levels, etc. It cannot be assumed that these would remain constant for the length of time required for long-period equilibrium to be relevant. In fact, the transition always applies "in the real world"; long-run equilibrium never comes (1920, p. 368). In Marshall's system, therefore, the analysis of secular change was required as illustrated in the two concluding chapters of *Principles* and in the volume *Industry and Trade*.<sup>7</sup>

### *Imprecise But Competent Science and Policy*

Economic institutions change over time and, in Marshall's view, human behavior was enormously complex and subject to fundamental change. He therefore articulated a conception of imprecise but competent science: "The attempt to make [theories] precise over-reaches our strength. If we include in our account nearly all the conditions of real life, the problem is too heavy to be handled; if we select a few, then long-drawn-out and subtle reasonings with regard to them become scientific toys rather than engines for practical work" (1920, p. 460).

Marshall believed that a degree of imprecision in economic analysis was consistent with the standards of science and with effective policy analysis and application. An applied welfare economics was therefore possible through "a creative confrontation between theory and fact" (Middleton 1998, pp. 106–107).<sup>8</sup> From this perspective, the Marshallian methodology has several components:

<sup>7</sup>Maloney observes: "Marshall the static theorist and Marshall the economic biologist—whatever we think of the latter—are triumphantly integrated." Static reallocations of resources would potentially maximize the quality of output demanded and activities pursued tomorrow, raising future expectations without making them more difficult to satisfy as efficiency levels rose as well as the number of "non-purchasable" pleasures: "Marshall has steered round the neoclassical problem" (1985, pp. 198–99).

<sup>8</sup>Pigou's attempts to make Marshall's theory unambiguous and precise by simplification annoyed Marshall on several recorded occasions:

Keynes's emphasis in his introduction for the Cambridge Handbooks on the virtue of economics' relative imprecision [reflecting Marshall's view], contrasts sharply with the formal mathematization in which Pigou liked to indulge when writing theory . . . Pigou lost part of Marshall's message on method, conceptualization, the nature of abstraction, style and vision (Groenewegen 1995, p. 757).



(1) *Inductive and deductive reasoning and historical analysis* are complementary aspects of scientific method: “[C]ontemporaries revered Marshall as the great reconciler of the deductive and historical methods” (Maloney 1985, p. 50). In the reconciliation, deductive reasoning was not to be carried too far: “The function . . . of analysis and deduction in economics is not to forge a few long chains of reasoning, but to forge rightly many short chains and single connecting links.” Facts needed to be selected and grouped carefully to “make them serviceable for suggestions in thought and guidance in practice” (1920, p. 773). Marshall’s emphasis on the need to combine inductive and deductive reasoning is illustrated in *Industry and Trade*. The motto of the volume expresses the deductive-inductive equipoise: “*The many in the one, the one in the many*” (1923, p. v). Keynes suggested that the work was descriptive for the most part. Groenewegen (1995, p. 710) interprets it in a way that is more consistent with Marshall’s policy interests, as a research program aimed at supporting policy decisions (discussed below).

(2) *Mathematical reasoning* can provide insights but implies greater precision than is warranted, particularly in the hands of a mathematician who “takes no technical responsibility for the material, and is often unaware how inadequate the material is to bear the strains of his powerful machinery” (1920, p. 781).

(3) *Real, social people* are the subject of economics, “man as he is: not with an abstract or ‘economic’ man; but a man of flesh and blood” and a man “in relation to social rather than individual life.” Thus, the behavior of “a whole class of people” may be observed and with the aid of statistics determine on average how the group reacts to economic factors such as price changes (1920, pp. 25–27). The “laws of economics,” however, will always be inexact: “For the actions of men are so various and uncertain, that the best statement of tendencies, which we can make in a science of human conduct, must needs be inexact and faulty” (1920, p. 32).

(4) *Deliberate behavior* is tracked by economics: “Now the side of life with which economics is specially concerned is that in which man’s conduct is most deliberate, and in which he most often reckons up the advantages and disadvantages of any particular action before he enters on it” (1920, pp. 6, 20–21). Marshall allowed for a variety of motives, including vanity, recklessness, delight in doing work for its own sake, habit and custom, and generosity, but it was deliberate behavior that established predictability and a scientific basis for economics. It provided, as well, the motive basis for successful policy to elevate the lower classes. Marshall’s testimony before the Royal Commission on the Aged Poor (1893) illustrates the point. Behavior increasingly characterized by judgment and foresight regarding family size had lifted the Malthusian difficulty and opened the door to new policy initiatives. A redistribution of income from the rich to the working classes would not automatically lead to excessive population increase and lowered wages in the next generation, a view which “separates the economics of this generation from the economics of the past” (from a quote in Hutchison 1969, p. 247).<sup>9</sup>

<sup>9</sup>Maloney makes the point that “the *Principles* exerted—and was meant to exert—a radical reforming influence insofar as it destroyed much self-justification among the apathetic. By making the question of poverty central and diagnosing it as avoidable, it barred the way to economics as a court of appeal for the complacent” (1985, p. 38).

(5) *Common sense* interpretation is required because the generalizations reached by economists are neither universal nor permanent: “[T]hose methods of production, distribution and consumption [and the behavior of deliberateness], with which modern economic science is concerned, are themselves only of recent date.” Accordingly: “A man is likely to be a better economist if he trusts to his common sense, and practical instincts, than if he professes to study the theory of value and is resolved to find it easy” (1920, pp. 5, 38, 368). And if common sense provided valid results in economic theory, the same standard was suitable in applied economics and policy analysis. Robert B. Ekelund and Robert F. Hèbert write: “Marshall, of course, was always ready to point out the gaps and deficiencies in his analytical constructs. But suggested *applications*, making allowance for the analytical deficiencies, were also part and parcel of his conception of the nature of economics” (1997, p. 375).<sup>10</sup>

Precise quantitative measures and forecasts of the effects of policy were impossible, from Marshall’s standpoint, just as were measures and forecasts of market phenomena. Consequently, the most important question to be asked was whether or not the policy was qualitatively right in terms of its general content and direction. For example, with regard to the improvement of labor quality and skills, he suggested: “To that end we need to move in the same direction as in recent years, but more strenuously. Education must be made more thorough . . . to educate character, faculties and activities” (1920, p. 718). Careful applied research could provide some quantitative approximations of the need: “Marshall’s conception of welfare economics was highly quantitative. The improvement of statistical data and statistical techniques as a basis for welfare calculations was a life-long concern of his” (Maloney 1985, p. 167).

(6) *Normative/positive economics*, as part of a positivist agenda, was foreign to Marshall’s thought:

His research agenda in the opening Book of his *Principles of Economics* very explicitly covered both explanation and prescription . . . The high hopes Marshall had placed on consumer surplus in this context, dashed though they were by his growing realisation of its practical problems and difficulties, illustrate the dialectical relationship in Marshall between explanation and engineering for change (Groenewegen 1995, p. 761).

Matthews suggests that Marshall’s theme of the non-constancy of human nature provided an important intellectual justification for joining analysis with prescription:

[T]he systematic tendency for people’s utility functions to shift over time is a fatal objection to relying exclusively on revealed preferences as a criterion of the social optimum . . . Since revealed preferences are no guide, the policy-maker has no choice but to seize the bull by the horns and apply his own view of what constitutes progress” (1990, p. 21).

Thus Marshall was comfortable in making such statements as these: “Taking it for granted that a more equal distribution of wealth is to be desired . . .” and

<sup>10</sup>The Ekelund and Hèbert text is the most satisfactory of the textbooks on the history of economic thought from the perspective of this paper. The authors give relatively generous attention to the relationship between theory, method, and policy in Marshall’s work.

“the happiness which an additional shilling brings to a poor man is much greater than that which it brings to a rich one” (1920, pp. 41, 474). Marshall was skeptical regarding interpersonal comparisons of utility: “[B]ut he was a skeptic who saw that such skepticism was to condemn his science to radical impotence—and who therefore opted for the second-best solution of rough approximation” (Reisman 1986, pp. 16–17). In response to possible doubts as to what social good really was, Marshall wrote: “[T]here has always been a substratum of agreement that social good lies mainly in that healthful exercise and development of faculties which yields happiness without pall, because it sustains self-respect and is sustained by hope” (1923, p. 664).<sup>11</sup>

To conclude this section, Marshall’s formulation of the scope and method of the science in terms of the treatment of time, the changefulness of wants and activities, and the focus on deliberate behavior of social man with modest expectations of exactness and predictability, placed economic theory and policy analysis on comparable grounds in terms of successful explanation and practical application. The various gaps and deficiencies in the analytical constructs did not stand in the way of developing either successful science or successful policy because they were grounded in the deliberateness of the age and common sense interpretations of it. Exactness and predictability would improve over time with regard to both economic and policy analysis. With economic advance and good policy initiatives, deliberate behavior, in Marshall’s view, would increasingly supplant behavior that was sometimes reckless and impulsive. The current generation of economists had “learnt to take a larger and more hopeful view of the possibilities of human progress” (1920, p. 48).

#### IV. KEY ANALYTICAL CONSTRUCTS

The *Principles* is filled with analytical constructs, but some are more important than others for understanding long-period economic processes and public policy. These include consumer’s surplus, the principle of substitution, personal capital, marginal productivity, division of labor and increasing returns, and market failure. All are familiar concepts to the students of economics who read the history of economics textbooks. But the way in which Marshall applied them to the analysis of policy and economic development is doubtless less familiar. Of the many analytical tools in Marshall’s arsenal, consumer’s surplus, the “great principle of substitution,” and “personal capital” have perhaps the greatest policy reach and integrative power. The chapter entitled “Value and Utility” (Book III, chapter VI) is a case in point of Whitaker’s suggestion that Marshall’s economics was open to the progressive intellectual and social movements of the day.

The elements of this chapter bear directly or indirectly on all aspects of the institutional change noted above associated with the new state of industrial

<sup>11</sup> Maloney observes: “Neoclassical economics flourished at a time when the combined influence of Darwin, Spencer and Huxley had made it temporarily reputable to regard ethics as a qualitative science of human development. Thus, economists, provided they cast their ethics in an evolutionary mould, did not necessarily see moral judgments as incompatible with the scientific spirit” (1985, pp. 31, 195).

society (strong labor movement, enfranchisement of workers, public education of masses, increase in scale and efficiency of business, growth of cities). Marshall affirmed the principles of diminishing marginal utility of income and inter-personal comparisons of utility. Graduated taxation was the preferred mode of taxation: a pound's worth of satisfaction to the poor was worth much more than to the rich. This principal, he suggested, was typically ignored in earlier generations when constructing schemes of taxation, to the disadvantage of those of low income (but could no longer be ignored in an era of enfranchised, organized, and educated workers). Increases of working class wealth were used chiefly in the satisfaction of "real wants" that add to the fullness of life. Collective wealth had become increasingly important in civilized countries, though apt to be overlooked. It had "superior nobility" over the private use of wealth: public buildings, public parks, public collections of the fine arts, and public games and amusements could be enjoyed absent the unwholesome desire for wealth as a means of display that was common among the well-to-do classes. The world would be a better place if people would buy a few things made well by highly paid (skilled, organized) labor rather than many things made badly by low paid labor.

A key analytical tool developed in the chapter is *consumer's surplus*. Like many of the Marshallian tools, it provides a basis for explaining progress, and in this case a measure of it, a basis for critiquing the social and economic environment to open the door to reform, and a basis for an applied research program. It is a tool of analysis with the potential to give practical effect to the utilitarian idea of promotion of the general good without compromising scientific standards. Marshall observed that the notion of consumer's surplus could be applied "as an aid in estimating roughly some of the benefits which a person derives from his environment" and that the measurement of consumers' surplus in markets "has already much theoretical interest and may become of high practical importance" (1920, pp. 125, 131). This potential practical interest was explored in Book V, chapter XIII, "Theory of Changes of Normal Demand and Supply in Relation to the Doctrine of Maximum Satisfaction," and chapter XIV, "The Theory of Monopolies." In chapter XIII he found two important exceptions to the doctrine that "every position of equilibrium of demand and supply may fairly be regarded as a position of maximum satisfaction." First, "aggregate satisfaction can *primâ facie* be increased by the distribution, whether voluntarily or compulsorily, of some of the property of the rich among the poor." Second, with regard to goods to which the law of increasing returns acts sharply, a bounty would mean that "aggregate satisfaction can therefore *primâ facie* be increased beyond the level attained by the free play of demand and supply" (1920, pp. 471–72).<sup>12</sup>

Authors of history of economics textbooks are fond of quoting Marshall that

<sup>12</sup>The practical application of consumer's surplus is explored on a variety of occasions. In two letters to the *London Times*, March 1891, Marshall applied it to an analysis of the Post Office (see Albon 1989). Major contributions include the measurement of the dead-weight welfare loss from an indirect tax and the analysis of a monopolistic public enterprise in a situation where taxation involves an excess burden: "[U]tilitarian welfare economics was for Marshall only a proximate step towards a more evolutionary analysis of modes of improving the physical quality and the values and activities of mankind" (Whitaker 1987, p. 359).

his bounty analysis conclusions “do not by themselves afford a valid ground for government interference,” with the implication that he himself doubted the efficacy of his engine of analysis for supporting policy advocacy. But they typically fail to emphasize that the analysis was important in terms of his refutation of *laissez-faire* and in establishing a theoretical basis for a research program of practical, policy analysis. His next sentence reads:

But they show that much remains to be done, by a careful collection of the statistics of demand and supply, and a scientific interpretation of their results, in order to discover what are the limits of the work that society can with advantage do towards turning the economic actions of individuals into those channels in which they will add the most to the sum total of happiness (1920, p. 475).

And the authors invariably fail to note Marshall’s remarks in the summary chapter on supply and demand (Book V, chapter XV):

But even without taking account of the evils arising from the unequal distribution of wealth, there is *primâ facie* reason for believing that the aggregate satisfaction, so far from being already a maximum, could be much increased by collective action in promoting the production and consumption of things in regard to which the law of increasing return acts with special force. This position is confirmed by the study of the theory of monopolies (1920, p. 502).<sup>13</sup>

The *principle of substitution* is the second of the three most important analytical tools in Marshall’s work, in my view. It was central to his analysis of markets and business decision-making and served as a bridge to his views on economic evolution and a vehicle for advocating policy. It was a principle which “never ceases to act, and it permeates all the economic adjustments of the modern world” (1920, p. 405). In the chapter, “General View of Distribution,” he described factor substitution in action:

The efficiency of human agents of production on the one hand, and that of material agents on the other, are weighed against one another and compared with their money costs; and each tends to be applied as far as it is more efficient than the other in proportion to its money cost. A chief function of business enterprise is to facilitate the free action of this great principle of substitution (1920, p. 662).

In the short-run, factor substitution was limited because some factors were fixed, including supplies of skilled labor. In long periods of time, investment and complete substitutability were possible. The efficiency of work was elevated, but more importantly for Marshall, the size and form of business organization itself

<sup>13</sup>As Marshall makes clear in *Industry and Trade*, “[T]here is no general economic principle which supports the notion that industry will necessarily flourish best, or that life will be happiest and healthiest, when each man is allowed to manage his own concerns as he thinks best” (1923, p. 736). Product-differentiation, want-creation, ignorance, custom, size, power, collusion, collective bargaining, concern for fairness are among the real-world phenomena explicated in various of Marshall’s writings to support this contention. Keynes made the point: “Marshall’s proof that *laissez-faire* breaks down in certain conditions *theoretically*, and not merely practically, regarded as a principle of maximum social advantage, was of great philosophical importance” and *Industry and Trade* was “partly devoted to illustrating it” (1963, p. 44).

underwent change, including a relative increase in the use of skilled labor via investment in *personal capital*. This is the third key analytical concept in Marshall's system. It was essential to his analysis of economic growth and the elevation of the working classes:

The older economists took too little account of the fact that human faculties are as important a means of production as any other kind of capital; and we may conclude, in opposition to them, that any change in the distribution of wealth which gives more to the wage receivers and less to the capitalists is likely, other things being equal, to hasten the increase of material production (1920, p. 229).

Investment in personal capital included formal education, on-the-job training, health expenditures, and “proper” home environment, the economic effect of which was to elevate labor skills and productivity. Labor that had become more efficient could then be substituted into production processes at permanently higher rates of pay. For Marshall, this result was of profound importance: “[H]ighly paid labour is generally efficient and therefore not dear labour; a fact which . . . is more full of hope for the future of the human race than any that is known to us” (1920, p. 510).<sup>14</sup> His argument for state support of education and other policy derived from this result and other steps in the analysis, described below. Marshall's view of technical change and its effect on work is discussed in the following section.

## V. MARSHALL'S VIEW OF TECHNICAL CHANGE AND DIVISION OF LABOR

According to Marshall, business decision-making had fundamentally altered the direction of technological change and the nature of work, a change that had become fully manifest by the mid-nineteenth century. A historic shift to higher-level work for the laboring classes had occurred via the law of substitution: “[A]s a general rule the law of substitution—which is nothing more than a special and limited application of the law of survival of the fittest—tends to make one method of industrial organization supplant another when it offers a direct and immediate service at a lower price” (1920, p. 597). Marshall here extends the reach of the principle of substitution from business decision-making in the short and long run to encompass secular, institutional change and patterns of economic development: “We are thus led to a general rule . . . that any manufacturing operation that can be reduced to uniformity . . . is sure to be taken over sooner or later by machinery . . . if the work to be done by it is on a sufficient scale” (1920, p. 255).

<sup>14</sup>The economy-of-high-wages argument is prominent in Marshall from his earliest writings on (Matthews 1990, p. 20). The principle was stated by earlier writers but not built on, according to Marshall: “[I]t was only in the last generation that a careful study was begun to be made of the effects that high wages have in increasing the efficiency not only of those who receive them, but also of their children and grandchildren.” The argument takes analytical form in the concept of *efficiency-wages* or more broadly *efficiency-earnings* (1920, pp. 507–10, 546–50). According to F. Y. Edgeworth, Marshall's theory of the cumulative effect of high wages on efficiency “seemed almost a revelation” to the economists of the day (Marshall 1925, p. 70).



The results of this process were far-reaching. The scale of manufactures was increased and made more complex. The demand for workers capable of doing “intelligent work” was increased and manual skill of the type emphasized by Adam Smith was supplanted. Marshall illustrated the process by reference to the watch and printing trades. Here new mechanical and scientific appliances “persistently take over work that used to require manual skill and dexterity, but not much judgment; while they leave for man’s hand all those parts which do require the use of judgment, and open all sorts of new occupations in which there is a great demand for it.” As a result, workers received more training and greater income from their work (1920, p. 261). Marshall provided some “roughly estimated” numbers (consistent with his method of imprecision) to show that the effects of this process had dramatically changed the skill structure of the working classes: unskilled labor constituted about a fourth of the population; lower kinds of skilled work, a fourth; and highly skilled or responsible work, one half. Similar estimates a century ago would have shown, he suggests, more than half unfit for any skilled labor, beyond the ordinary routine of agriculture, and less than a sixth fit for highly skilled or responsible work (1920, p. 716).

Marshall’s analysis of division of labor and technical change is, arguably, a watershed on the subject. It provides a basis for optimism not found in earlier writers. Most tended to follow Adam Smith’s view that in the “progress of the division of labour” the work of the masses was becoming increasingly simple and repetitive, producing workers who were “as stupid and ignorant as it is possible for a human creature to become . . . not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous, noble, or tender sentiment” (1776, pp. 734–35). Marshall negates this concern with his view that technological change had increased the demand for higher faculties and also by invoking Wilhelm Roscher’s result that “monotony of work is an evil of the first order only when it involves monotony of life.” The reduction in working hours, factory noise, and severe manual labor had left the modern worker with sufficient “nervous force” to nurture his mental and social faculties (1920, p. 263). The task was to reduce monotonous work to narrow limits: “Ought we to rest content with the existing forms of division of labour? Is it necessary that large numbers of the people should be exclusively occupied with work that has no elevating character? Is it possible to educate gradually among the great mass of workers a new capacity for the higher kinds of work?” (1920, p. 41). These are questions and prospects that are entirely alien to the thought of Adam Smith and most writers down to Marshall.<sup>15</sup>

## VI. THE LABOR MARKET AND PERSONAL CAPITAL

The evolution of industry, under the action of the principle of substitution, was tending in favorable directions, according to Marshall. But obviously, from the

<sup>15</sup>John Stuart Mill briefly explored the notion that education was industrially productive but his case for state-supported education essentially revolved around moral-restraint and market-failure arguments (Bowman 1990, p. 251). W. Stanley Jevons, however, went a good distance towards linking education to productivity and providing the basis for a yes answer to the last question posed above by Marshall (see Bowman 1997).

questions and prospects above, it was not proceeding as readily as it might. Marshall's analysis of the labor market and distribution provided a theoretical basis for this line of thought and for understanding the kinds of policy that would expedite change. Broad trends in both goods markets and labor markets were determined by long-period forces of supply and demand, but there were important differences which must be taken into account: "[F]ree human beings are not brought up to their work on the same principles as a machine, a horse, or a slave. If they were, there would be very little difference between the distribution and the exchange side of value" (1920, p. 504). Marshall identified several "peculiarities of labor" which were of a "vital character . . . they affect not merely the form, but also the substance of the action of the forces of demand and supply" in the labor market (1920, p. 559). His analysis provided a strong case for market failure in education and training and established directions for education, taxation, and other policy.

Marshall argued that the growth of general enlightenment and responsibility towards the young had "turned a great deal of the increasing wealth of the nation from investment as material capital to investment as personal capital. There has resulted a largely increased supply of trained abilities, which has much increased the national dividend, and raised the average income of the whole people" (1920, p. 681). Nevertheless, he was eager to demonstrate that there was systematic under-investment in personal capital because of the several peculiarities of labor. The most important was of the nature of an externality: "[T]hose who bear the expenses of rearing and educating [a child] receive but very little of the price that is paid for his services in later years" (1920, p. 560). In "The Future of the Working Classes" (1873), he expressed it thus:

The difference between the value of the labour of the educated man and that of the uneducated is, as a rule, many times greater than the difference between the costs of their education . . . But no individual reaps the full gains derived from educating a child, from taking a step towards supplanting the race of uneducated labourers by a race of educated labourers (1966, p. 118).<sup>16</sup>

The same problem existed regarding technical training of adults. Employers had little incentive to provide training, unlike under the old apprenticeship system (1920, pp. 210, 565–66). In addition, a lag effect was operative because of the great length of time required for education and training. The supply of labor in each grade was dependent on the resources of parents and consequently was determined by the earnings of the last generation. Skill development therefore lagged by a generation what was warranted by technical change and the growing demand for higher-level abilities (1920, pp. 570–72). Generally, investment in personal capital was "limited by the resources of parents in the various grades of society, by their power of forecasting the future, and by their willingness to sacrifice themselves for the sake of their children" a problem of little consequence for the professional classes and the higher industrial grades, who "distinctly

<sup>16</sup>Marshall believed that too much should not be expected from parents brought up under poor circumstances: "Men who have been brought up, to use their own phrase, 'anyhow,' are contented that their children should be brought up 'anyhow.' Thus there is kept up a constant supply of unskilled labourers" (Marshall 1925, p. 117).

realize the future, and ‘discount it at a low rate of interest’.” But among the lower ranks, “the evil is great” (1920, pp. 561–62).

To correct the evil, Marshall called for public expenditures on education and training. The “lower ranks” presumably included the unskilled and the lower kinds of skilled labor, representing together about fifty percent of the working classes according to Marshall’s estimates noted above. However, he tended to generalize the argument to most categories of workers: “The children of unskilled workers need to be made capable of earning the wages of skilled work: and the children of skilled workers need by similar means to be made capable of doing still more responsible work” (1920, p. 717). Persistent under-investment in personal capital made possible high social rates of return on public education expenditures. It would be “profitable as a mere investment” and “no change would conduce so much to a rapid increase of material wealth as improvement in our schools” (1920, pp. 212, 216). Further, the expenditures would be self-financing. The fiscal dividend from increased growth would be sufficient to repay monies borrowed to support education (1881, p. 113).

The concept of personal capital provided Marshall with considerable reach in the policy realm, particularly because of the broad meaning that he gave to it: “The most valuable of all capital is that invested in human beings; and of that capital the most precious part is the result of the care and influence of the mother” (1920, p. 564). Any activity, public or private, that improved the physical, mental, and moral health and strength of people counted as investment in personal capital and therefore had a direct bearing on policy related to education, taxation and inheritance, housing and town planning, medical and sanitary factors, and even the working hours of parents:

We have to strive to keep mechanical progress in full swing: and to diminish the supply of labour, incapable of any but unskilled work . . . Education must be made more thorough . . . to educate character, faculties and activities . . . To this end public money must flow freely. And it must flow freely to provide fresh air and space for wholesome play for children in all working class quarters . . . The compulsory standard of cubic feet of air per head needs to be raised steadily . . . public aid and control in medical and sanitary will work in another direction to lessen the weight that has hitherto pressed on the children of the poorer classes . . . able workers and good citizens are not likely to come from homes, from which the mother is absent during a great part of the day; nor from homes, to which the father seldom returns till his children are asleep (1920, pp. 717–18).<sup>17</sup>

Marshall would “diminish” the supply of unskilled labor through education, training, and other policy related to health and welfare. To add conviction to

<sup>17</sup>Whitaker (1977, p. 466) observes:

Marshall’s general position appears to have been reliance on the state for universal minima, to be supplemented by private action attuning itself more closely to the needs and merits of the individual case. This position cannot be fully understood if viewed as the expression of a solely utilitarian desire to assist the deprived or correct economic distortions. More important, perhaps predominantly so in Marshall’s eyes, was the need to consider the effects, not in helping, but in *changing* the beneficiaries.

the argument, he suggested that much higher-level work was available in both private and public sectors: "There is plenty of room in the upper ranks of the artisans; and there is abundant room for new comers in the upper ranks of the middle class," the latter resulting from the growth of large firms with extensive subdivision of management functions (1920, pp. 283–313, 719). In addition, parliamentary reform and the spread of education had enlarged the scope for the beneficial intervention of government (1966, pp. 335–36): "[T]he State can now look to the main body of workers as the source of much of that higher administrative work, which used to belong almost exclusively to the well-to-do" (1923, p. 661).

Marshall's position on education, urban improvement, health, etc. rested on an efficiency argument related to the concept of personal capital and the factors accounting for it in the next generation of workers. Middleton observes:

The diagnosis that Britain's economic difficulties derived in part from productive inefficiencies created by social inequalities of education, health, housing and income was to find its fullest exposition in the national efficiency movement. The quest for national efficiency . . . provided an organising theme for a variety of intellectual movements and, in the field of public policy, drove the agenda for reform (1998, p. 116).

He suggests that Marshall's contemporary significance lay in the fact that he lent authority "to the burgeoning critique of the market that characterised prewar public debate: that markets were neither self-equilibrating nor producing distributional results which were supportable on grounds of social justice or economic efficiency" (1998, p. 117).

Marshall lent authority to tax policy as well by arguing that it must be cognizant of efficiency needs: "For there is a certain consumption which is strictly necessary for each grade of work in this sense, that if any of it is curtailed the work cannot be done efficiently" (1920, pp. 529). He distinguished several types of consumption goods: those necessary for physical subsistence, necessities for efficiency, conventional necessities, and habitual comforts. Consumption of goods encompassing the first three categories was necessary for efficiency from generation to generation. Anything less and "the adults might indeed take good care of themselves at the expense of their children, but that would only defer the decay of efficiency for one generation." The minimum level of income for efficiency would vary: "[E]very estimate of necessities must be relative to a given place and time." Working class incomes, consumption levels, and behavior (including tastes, preferences, and investment in personal capital) therefore become important elements in a Marshallian research program: "Some detailed study of the necessities for efficiency of different classes of workers will have to be made, when we come to inquire into the causes that determine the supply of efficient labour" (1920, p. 69).

Later in the volume he suggested: "Consumption of the earnings that are got by efficient labour are not much above the lowest that are needed to cover the expenses of rearing and training efficient workers, and of sustaining and bringing into activity their full energies" (1920, p. 532). Such expenses and the consequent levels of efficiency were rising. Any short-run surplus element in the income of

workers was converted to a cost in the long-run. Taxation on the working classes should therefore be light. Income and property taxes should be the primary sources of revenue and the rates should be sharply progressive (1966, pp. 229, 282, 349; 1920, p. 802).<sup>18</sup>

## VII. THE LABOR MARKET AND TRADE UNIONS

Middleton's comment noted above about the poor distributional results of markets applies importantly to Marshall's view of wage setting. The fact that workers do not spend enough on the personal capital of their children was partly attributable to wage levels that reflect a weak bargaining position, particularly among unskilled workers. A part of the gains enjoyed by a business, in Marshall's analysis, derive from continuity of association between employer and employees. Valuable goodwill, business organization ability and connection, and specialized skill and ability develop over time. The gains from continuity of association, which in some cases include nearly the entire income of a firm, may be regarded as a "*composite quasi-rent* divisible among the different persons in the business by bargaining, supplemented by custom and by notions of fairness" (1920, p. 626).

Where employers in a trade acted together in wage negotiations, as well as the employed, wages were indeterminate. Lower limits were set by the need to keep skilled workers and attract new ones, upper limits by the need to attract capital and management: "But what point between these limits should be taken at any time can be decided only by higgling and bargaining; which are however likely to be tempered somewhat by ethico-prudential considerations, especially if there be a good court of conciliation in the trade" (1920, p. 627). Workers, however, were frequently at a disadvantage in the bargaining process. Unskilled workers in particular commonly had no reserve fund and could not easily withhold labor services from the market. Further, trade unions, which might establish something like equal terms in bargaining with employers, were difficult to form among unskilled workers. The resulting bargaining disadvantages were cumulative in their effects. They lowered wages, investment in personal capital and efficiency, and therefore the future wage that employers would be willing to pay. They diminished the worker's efficiency as a bargainer as well (1920, pp. 567–68).

Marshall's analysis of the labor market was typical of his analytical approach in that he drew from it both a policy agenda and a research agenda by taking a common sense, realistic approach to the subject and laying aside the arid assumption of perfect competition:

<sup>18</sup>Maloney writes that Marshall had a low opinion of consumption which merely gave temporary pleasure without contributing to the person's creative and productive powers:

In Marshall's work, therefore, the idea of diminishing marginal utility of income derived its main force from the figure of a consumer who first satisfied his "real" and intense needs (those wants whose basic rationality was guaranteed by their contribution to his working life), then turned to less important wants and, if rich enough, derived very low or even negative satisfaction from the last part of his income. In other words, Marshall forged a powerful logical and emotional link between the marginal-utility argument and the efficiency argument for greater equality (1985, p. 171).

[I]t may be well to insist again that we do not assume that competition is perfect. Perfect competition requires a perfect knowledge of the state of the market; and though no great departure from the actual facts of life is involved in assuming this knowledge on the part of dealers when we are considering the course of business in Lombard Street, the Stock Exchange, or in a wholesale Produce Market; it would be [regarding the labor market] an altogether unreasonable assumption to make (1920, p. 540).

Policy results regarding trade unions and labor markets included the following (Matthews 1990, pp. 30–33): trade unions had merit in providing countervailing power against the bargaining advantage that employers would otherwise typically have; as friendly societies they fostered independence and self-respect and encouraged unselfishness; the principal of the Common Rule, a minimum wage for an occupation in a district, helped prevent opportunism by bad employers who abused their bargaining strength.

On the negative side of trade unions were monopolistic practices and obstruction of technological progress. The research agenda was largely driven by the negative side and the fact that the proportion of workers who were trade union members and whose wages were settled by collective bargaining was rising rapidly. The strength of unions and their specific purposes needed to be determined before earning policy support. And increased collective bargaining implied an increase in the formal settlement of wage disputes and the need for analysis regarding such factors as wage and productivity levels (*efficiency-wages*), costs and profits, and industry competitive conditions: “[I]n conciliation and arbitration, the central difficulty is to discover what is that normal level from which the decisions of the court must not depart far under penalty of destroying their own authority” (1920, p. 628).

### VIII. APPLIED RESEARCH AND THE POLICY PROCESS

In a letter to John Neville Keynes (September 1890), Marshall laid out his vision of economic education:

- i Begin with Analysis, which is an essential introduction to all study of facts whether of past or present time; with perhaps a very short historical introduction.
- ii Go on to call to mind the students knowledge of the economic conditions in wh[ich] he lives. Show the relations in wh[ich] they severally stand to one another & carry analysis further, making it more real & concrete.
- iii Build up a general theory or process of reasoning applicable to Value Money Foreign trade &c, with special reference to the conditions in wh[ich] the student lives, & pointing out how far & in what ways, it can be made to bear on other conditions.
- iv Give a general course of economic history.
- v Return to economic theory & carry it further.) [Marshall notes that this may come anywhere or be omitted for some students]
- vi Consider economical conditions in relation to other aspects of social life.
- vii Treat of the economic aspects of practical questions in general & social reform in particular (Whitaker 1996, Vol. I, p. 339).



These steps incorporate the deductive, the inductive, and the historical treatment of the subject and place a sharp focus on practical issues and policy analysis. They capture well the organization, content, and Marshall's stated purposes of his *Principles* and belie any insinuation that his theory and method were only tangentially related to his views on policy and economic evolution. In item *vii*, he was implying the need for a vast research effort in which his box of economics tools would enable researchers to classify and analyze relevant factors and to adapt explanatory models to the problem at hand. Marshall's caution or reluctance to move from theoretical principles to practice is frequently noted (Groenewegen 1990, p. 108). But this reluctance to go directly from theory to practice seems to have been strategic in part, to establish the case for a research effort to validate the policy directions towards which the theory was pointing. An example of this approach is his call at the conclusion of the tax/bounty analysis for a "careful collection of the statistics of demand and supply" to identify industries subject to sharply increasing returns.

Some insight into Marshall's attitude towards research is gained by considering his approach to taxation: "Marshall's tax preferences reflected the bias of his times. Over his lifetime, he revealed increasing support for the use of steeply graduated taxes on income and property (especially estate duties) in line with the actual developments which were taking place in the British tax system" (Groenewegen 1990, p. 103). The bias of the times had a basis in Mill's distinction between the laws of distribution, which vary according to time and place, and those of production which do not. The policy result was that redistribution could occur to a point with limited effects on production. In this regard, a leading principle in Marshall's thinking over his career was articulated in the *Principles*:

The inequalities of wealth . . . are a serious flaw in our economic organization. Any diminution of them which can be attained by means that would not sap the springs of free initiative and strength of character, and would not therefore materially check the growth of the national dividend, would seem to be a clear social gain" (1920, p. 714).<sup>19</sup>

The question of the most appropriate types and levels of taxation in view of this principle was therefore another subject for the Marshall research program. His changing view on death duties illustrates the point. For fifteen years or more he believed they were undesirable because they would check the growth of capital. But experience and analysis allayed that fear: "Now I think they are on the whole a good method of raising a rather large part of the national revenue;

<sup>19</sup>Marshall's objection to socialism revolved around the issue of initiative and character: "[T]he chief dangers of Socialism lie not in its tendency towards a more equal distribution of incomes, for I can see no harm in that, but in its sterilizing influence" on mental activities (Whitaker 1996, vol. 2, pp. 19–25). Although Marshall classified himself as a "convinced socialist," it was socialism of the small "s" variety in the tradition of Millian liberalism: "This covered support for some state enterprises and municipal socialism; tax and social welfare policy for redressing social inequality and poverty; profit sharing and cooperation, as more satisfactory forms of working-class organization than the new trade unionism." The presumption, with exceptions, was in favor of private enterprise because state bureaucracies were risk averse and prone to corruption (Groenewegen 1995, p. 592). In contrast to "the private enterprise economy, with all its admitted imperfections," Marshall avers that "There is no principle of progressive improvement in socialism" (Marshall 1925, p. 16).

because they do not check accumulation as much as had been expected, and a small check does not seem to me now as great an evil as it did then” (1966, p. 463). Policy in Marshall’s applied economics must be adapted to changing circumstances as experience, study, and common sense may suggest or as the effects of policy were better understood.

Marshall once suggested that “in a sense the whole of economics is an applied science” (Tullberg 1990, p. 160). Austin Robinson described the experience of learning under Pigou:

He gave us Alfred Marshall in what I think was his sincere belief that Alfred Marshall had worked through the problems involved with his powerful critical mind and had reached an unassailable conclusion . . . It was his job to train us to tackle the detailed practical problems of economic life . . . I still regard the training of active applied economists as the first duty of a university faculty of economics” (1990, pp. 2–3).<sup>20</sup>

In the volume *Industry and Trade*, Marshall intended to demonstrate his concept of economics as an applied science: “[I]t will be directed mainly to a study of the causes which have brought about the present methods and organization of business; to the influences, which they exert on the quality of life; and to the ever widening problems to which they give rise” (quoted in Groenewegen 1995, p. 702). The volume covers such topics as the evolution of industry and trade in various countries, contemporary problems of business organization including the advantages as well as the disadvantages of monopoly, monopoly taxation and the control of the market power of trusts and cartels in the U.S. and combinations and trade associations in the U.K.:

It is a research programme of continuing value to economists interested in the ‘realistic’ side of things. Accepting the need for such a research programme is essential for making reasonable policy decisions, the reason why Marshall from the outset of his labours so very deliberately placed ‘application to current issues’ at the end . . . The contemporary relevance of aspects of *Industry and Trade* has been pleaded persuasively and with authority by experts in the field of industrial organisation (Groenewegen 1995, pp. 710, 732).

Marshall’s emphasis on policy led him to consider the most effective ways in which the economist’s applied research might be felt. He wrote that the professional economist “desires to influence the public. The public will not [take] subtle distinctions or complex reasoning. A full discussion of the economic basis of the problem will repel them and be ineffective” (quoted in Tullberg 1990, p. 126). And the need to influence public opinion was growing: “Public opinion, based on sound economics and just morality” will be “ever more and more the arbiter of the conditions of industry” (Marshall 1881, p. 403). The public included the businessman, a personage who played an important role in Marshall’s thinking about technical change and economic evolution and a being who was capable of “sacrificing himself for the good of his family, his neighbours, or his country”

<sup>20</sup>The early period of the century to the late 1920s in Cambridge was one of “normal” (Kuhnian) science. The majority of articles in the *Economic Journal* were in the nature of applied economics. Some individuals became involved in journalism and public service (Collard 1990, pp. 164–92).

(1920, p. 27). As part of an education/policy process, he recommended that future businessmen receive the same undergraduate education as future economists (Maloney 1990, p. 187). Then, as businessmen, they would be receptive to the thinking of economists and be more effective in accomplishing social goals through their management of private as well as public enterprises. They would also better understand and respond to the complaints of workers. In a letter (August 1910), Marshall wrote: “[T]he studies which are tested in the [Economics] Tripos . . . give him that broad outlook & those habits of patient thought before coming to a conclusion which are every year more required from those who have the charge of large undertakings in private & in joint stock businesses; or in the conduct of the State or of a Municipality.” These studies would also be beneficial to potential government workers, enabling “the intervention of State & Municipal institutions to increase their activity for good” (Whitaker 1996, vol. 3, p. 261).<sup>21</sup>

Marshall was active as a participant in government enquiries and commissions, as a joiner and supporter of various causes and an observer of how people lived and worked. Pigou wrote: “What he aimed at in all this was to get, as it were, the *direct feel* of the economic world, something more intimate than can be obtained from merely reading descriptions, something that should enable one, with sure instinct, to set things in their true scale of importance” (Marshall 1966, p. 85). He provided expert opinion to a variety of royal commissions over the period 1886–1908 (Groenewegen 1995, pp. 343–89). Regarding causes, “Marshall was a principled, and occasionally unscrupulous controversialist, a strident advocate and earnest if not active joiner and supporter of causes of which he heartily approved” (Groenewegen 1995, p. 443). Marshall’s multi-faceted activities implemented his conception of the nature of policy. Matthews explains:

“Policy” in present-day economics is usually taken to mean government policy. We are accustomed to draw a sharp distinction between governments, supposedly amenable to the advice of economists, and private economic agents, whose preference functions and behaviour patterns are taken as given. Marshall did not think in this way. Since human nature is variable, both in its cognitive aspects and in preference functions, there is no reason why the behaviour of private economic agents should not be influenced by what economists can tell them . . . Consequently, Marshall’s policy recommendations are fired off in all directions—to employers and workers and consumers, as much as to governments (1990, p. 30).

The economist, in Marshall’s view, should supply expertise, not exhortation: “But he should not wait to be consulted. He should give his advice gratuitously, even surreptitiously, by exploiting the fact that moral issues are perceived more clearly by disinterested bystanders than protagonists” (Whitaker 1977, pp. 473–74).

<sup>21</sup> Marshall believed with Mill that the State’s sphere of competence had grown: “Mill had seen a vast increase in the probity, the strength, the unselfishness, and the resources of Government during his life; and it seems that each succeeding decade had enlarged the scope of those interventions of Government for the promotion of general well-being which he thought likely to work well” (Marshall 1966, p. 335). Whitaker suggests that Marshall took a middle ground regarding the question of “disinterested governmental enlightenment” (1977, p. 460).

## IX. CONCLUSION

Marshall's policy interests encompassed virtually all of the principal issues of his time. My purpose has been to demonstrate that Marshall's theoretical, historical, and policy views were more integrated than is often allowed. His system of analysis provided an explanation of household and business decision-making and the resulting consequences for prices, allocation of resources, and efficiency. Key analytical tools included consumer's surplus, the principle of substitution, personal capital, marginal productivity, division of labor and increasing returns, and market failure. But these tools were developed to encompass not only allocation and efficiency but economic development, institutional change and policy questions as well. They were formulated and expounded, primarily within a long-run conceptual framework, in ways that provided empirical referents and revealed solutions to social problems. Maloney suggests that the late-Victorian economist's situation was one of dissatisfaction: "that the public were coming to take from economics much less than it would like to give, but still more than it reliably could. To remedy the first problem, economics had to apply itself to more practical matters; for the second, it must put itself on a sounder theoretical and methodological basis" (1985, pp. 52–3). Marshall saw these objectives as inseparable. Specifically, the Marshallian Organon, encompassing scope and method, analytical apparatus, and research orientation and method of propagation, accomplished the following:

*It negated the chief impediments to progress found in classical thought*, including the subsistence wage doctrine, static view of human nature, Smith's view of division of labor, and emphasis on investment in physical capital and the minimalist state.

*It provided a basis for explaining and measuring progress and institutional change*, including consumer's surplus, the principle of substitution, increasing returns, investment in personal capital and shift to higher-level work, growth of wants and activities and shift in demand to higher quality goods and collective wealth (with these concepts Marshall built evolutionary change into the analytical apparatus of economics; *natura non facit saltum* applies to both his theory and conception of desirable and feasible social improvement).

*It provided the basis for a critique of the social and economic environment and the doctrine of maximum satisfaction*, including industry tax and bounty analysis, market failure analysis of labor markets and personal capital investment, and urban growth and externalities analysis.

*It identified the elements of a broadly based applied research program*, including consumption patterns and efficiency wage levels by place and occupation, evidence of sharply increasing returns in firms, facts and analysis bearing on the bargaining and conciliation process, urban needs and collective wealth needed for efficiency, analysis of government inspection and regulatory needs, study of taxation in relation to redistribution goals and incentives, and examination of information deficiencies and monetary factors in business fluctuations.

*It established guidelines for an education and policy process*, including an emphasis on historical and institutional change, practical issues, and expert advice for government enquiries and causes.

*It established an urgency to act*, as cost and trade analysis indicated that Britain's economic position lagged behind other nations and time was running out: "There is an urgent duty upon us to make even more rapid advance during this age of economic grace." Therefore, "let the Government arouse itself to do that work which is vital, and which none but Government can do efficiently." The appropriate direction of much policy was extracted unambiguously from the engine of analysis, e.g. spending on education, urban improvement, and inspection and arbitration. Consequently, "Let the State be up and doing" (Marshall 1966, pp. 326, 336–37).

All of this illustrates George Shackle's remark that Marshall saw before him "a landscape inexhaustibly rich in suggestions and materials" with useful work for all (quoted in Reisman 1986, p. 1). We can conclude, then, that Marshall's system was carefully structured throughout to serve the higher purposes that led him into the study of economics. His focus on deliberate behavior and factor substitutability were the keys in establishing the scientific basis of economics as well as the basis for successful policy. In Marshall's system, policies that would most effectively promote efficiency and growth would also facilitate the historic shift to higher-level work for the laboring classes, at permanently higher rates of pay, and promote the Victorian objective of character development. There were few redistribution and efficiency trade-offs, although the relationships were complex and variable in an economy and institutional framework that had undergone profound change over recent decades with accompanying changes in human nature and wants and activities. An ongoing, continuously renewed research program would help ensure that both theory and policy were relevant to changing circumstances, including the State's sphere of competence. Marshall "was the one credible prophet . . . A theory of economic policy based on advanced analysis, the application of evolutionary ideas, an independent economics syllabus in universities and colleges, were aims which many economists wished to achieve" (Maloney 1985, p. 236).

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