

ALFRED MARSHALL AND AUSTRALIAN ECONOMICS*

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As La Nauze (1949, p. 98) has pointed out, there were only two Australian economists of the nineteenth century whose writings were widely known outside of their country of adoption. This refers to Hearn's Plutology (1863), and Syme's Outlines of an Industrial Science (1876). In the chapters he devoted to an examination of the work of these economists, La Nauze also noted that both books were known to Marshall, who cited them in the pages of his Principles as well as in other work. In the case of Hearn, considerable influence on Marshall has been mentioned (Copland, 1935, p. 19, n.5; Mary Paley Marshall, 1947, p. 20) though La Nauze himself regards this as rather exaggerated (1949, especially pp. 88-90). La Nauze does not appear to have realised that Marshall owned copies of both Hearn and Syme, now preserved in the Marshall Library and that, as is so often the case with Marshall's own books, these books had been extensively annotated. As one would expect, Plutology contains a great many of these annotations. Syme's Outlines of an Industrial Science is only annotated in the first, methodological part in which Marshall appears to have been especially interested. This note provides a brief commentary on these annotations and in an appendix gives a detailed listing of them.

I MARSHALL'S ANNOTATIONS ON HEARN

Before commenting on some of the specific annotations Marshall made in Plutology, it is useful to look at the use he made of them as revealed by Marshall's citation of Hearn's work in his writings. As La Nauze (1949, p. 51n) noted, Marshall first cited Hearn publicly in his paper on "Mill's Theory of Value" published in the April 1876 issue of the Fortnightly Review (in Pigou, 1925, p. 122, n.1) in which he remarks that both Hearn and Jevons had extended Mill's analysis on cost of production. Subsequently, in the work written with his wife (1879, 1881, p. 205) Marshall referred to Hearn with Jevons, Cliffe Leslie, Francis Walker, and some others, as having adopted "the general idea that wages are the share of the produce which the laws of supply and demand enable the labourer to secure", but the only specific reference given is to the second edition of Jevons's Theory of Political Economy (cf. Whitaker, 1975, p. 69). Other references to Hearn in the early writings are scarce, if not non-existent.¹

Marshall made two further references to Hearn in the Principles, of which only one survived all eight editions. At the end of Book II, Chapter II, "Wants in Relation to Activities", Marshall (1961, I, p.91n), lists the "Australian Hearn" as an English writer who together with Bentham, Senior and Banfield, had prepared the way for Jevons's treatment of wants in economics. Marshall added that "Hearn's Plutology or Theory of the Efforts to Satisfy Human Wants is at once simple and profound: it affords an admirable example of the way in which detailed analysis may be applied to afford a training of a very high order for the young, and to give them an intelligent acquaintance with the economic conditions of life, without forcing upon them any particular solution of those more difficult problems on which they are not yet able to form an independent judgement".² Up to the sixth edition, in a note to the second paragraph of Book IV, Chapter VIII, "Industrial Organisation", Marshall had included among the references there given, one to Hearn's Plutology as well as to "the Writings of Herbert Spencer" and Bagehot's Physics and Politics (Marshall, 1961, I, p.241, n.1; II, p. 323). In view of the very substantial number of annotations Marshall had made in Hearn's chapter, "Of the Industrial Organisation of Society", this seems a rather inappropriate deletion and not easily explained. None of the subsequently published works of Marshall contained references to Hearn, nor did his Official Papers as edited by Keynes.

Marshall's annotations to Plutology may now be examined. These were made most frequently by pencil underlining of part of the text, or a vertical line in the text marking longer passages Marshall wanted identified as being of interest. Marshall on only one occasion in the case of Hearn's book gave a written observation on the text in the margin. There are well over forty annotations altogether (see Appendix) of which a few, however, only draw attention to citations Hearn made of the work of others. The marked passages are concentrated in particular chapters: most specifically Chapter 1, "Of Human Wants" (four annotations); Chapter 5, "Of the Circumstances on which the Efficiency of Natural Agents Depends" (five annotations); Chapters 8 and 9 on capital (twelve annotations); Chapters 12 and 13 on cooperation (six annotations); Chapter 17 on industrial organisation (twelve annotations); Chapter 19, "Of Competition" (three annotations), and particularly significant in the light of La Nauze's remark that Hearn was the first "to apply to political economy the biological theories of Spencer and Darwin" (1949, p. 92), pencil marks to the greater part of S.1 of Chapter 21,

entitled "Phenomena of Organic Evolution".

It is not difficult to see why Marshall marked passages on pp. 7, 13-14, 17, 18 and 21 of Hearn's work. They draw attention to what was to become the scheme for construction of the first two major books of Marshall's Principles: Book III, "On Wants and their Satisfaction" (called "Demand or Consumption" up to the fourth edition), and Book IV, "Production or Supply" retitled from the fourth edition, "The Agents of Production: Land, Labour, Capital and Organisation". In fact, "Marshall's plot", as McGregor (1942, p. 116) came to call it, was in some respects very similar to Hearn's structure. Marshall first discussed things are wanted (Bk. 3), so they are produced (Bk. 4), and are then exchanged (Bk. 5), and the price is divided (Bk. 6). Hearn (1863) starts with wants and their satisfaction (Chapters 1-2). This is followed by a lengthy discussion of production in terms of agents of production and their efficiency (Chapters 3-13), exchange (Chapter 14-15), the mutual dependence of production and exchange (Chapters 16-17) and the distribution of the product as a theory of remuneration of the agents of production in terms of supply and demand (Chapter 18, esp. p. 318). Although Hearn derived important parts of this structure from Bastiat (1850, esp. Chapter 2, "Wants, Efforts, Satisfaction"), a work studied by Marshall at an early stage in his economic career, the more specific features of Hearn's organisation of the material are his own and not derived from the structure of Bastiat's book. In this way Hearn's structure, which Marshall found so suitable for beginners, could easily be adapted for the more serious use by Cambridge and other university students as well as businessmen.

Likewise, and not surprisingly, Marshall appears to have drawn considerable comfort if not inspiration from the feature of Hearn's book which La Nauze (1949, p. 61) described as its most original--the application of Darwinian biology to questions of economics. Marshall not only appreciated Hearn's broad thrust on the matter (by marking the opening passage of Hearn's Chapter 21 on industrial evolution), but also its more specific applications to competition, bankruptcies and unsuccessful undertakings (Hearn, 1863, p. 347). In some respects, Marshall may have seen his first vision of that biological mecca of economics in the pages of Plutology.

Marshall's major indebtedness to Hearn seems to be associated with questions of economic organisation, the division of labour, the location of industry, and even the

technical matters of production which continued to fascinate both Hearn and himself for much of their lives. As already indicated, the vast bulk of Marshall's annotations are in this area. The chapters on industrial organisation which Marshall penned for Book IV (Chapters 8-12, esp. 10) bear Hearn's marks if the passages he underlined or marked otherwise in his copy of Plutology can be taken as an accurate guide (esp. those on pp. 305-14 in which Hearn linked locational specialisation to the division of labour). In fact, Hearn's rather unusual stress on organisation may have been one of the influences which made Marshall elevate that factor into a separate agent of production in the later title of his Book IV, although of course much earlier in the substance of that book.

A number of other Hearn passages may have influenced some of Marshall's own major contributions to economic analysis. A sentence marked on p. 340 contains the embryo of the notion of producer's surplus: "If one man then can reduce that quantity of labour [required for the production], while with other men the amount of labour remains unchanged, he will gain the entire difference between his reduced cost of production and the ordinary cost". Marshall however, did not mark other passages in Hearn's book which may be said to anticipate his notion of producer's surplus (e.g. Hearn, 1863, p. 240), where such extra profit in this case is identified with "rent". This was the name Marshall originally gave to his surpluses. Marshall likewise did not mark passages suggestive of the notion of consumer surplus (Hearn, 1863, pp. 333, 338) where the consumer is said to gain "the whole difference between the price that he actually pays and the price that in extremity he would be prepared to pay". This reflects precisely the type of thought experiment Marshall conducted with tea in Book III, Chapter 6 (Marshall, 1961, pp. 124-7).

Hearn was of course only one of many influences on Marshall's economics as it developed over two decades during his long road to the Principles. Other passages which Marshall marked betray what became Marshall's own later preoccupations and even style of language or choice of phrase. A great deal of this may be explained by the fact that Hearn's major mentors: John Stuart Mill, Adam Smith and Frédéric Bastiat, were also major teachers of, and influences on Marshall. However, the annotations Marshall made in his copy of Hearn (the handwriting of which suggests that this was a relatively early purchase at the end of the 1860s) makes it likely that Hearn was a more important influence than now tends to be acknowledged. It can in fact be said that Hearn

should be included with some of the more important second rank influences on Marshall in that he may have suggested important features of Marshall's peculiar and original ordering of the material, may have inspired or consolidated Marshall's liking for biology in economics, and, with respect to elements of Marshall's analytical apparatus, may have assisted in bringing to the forefront those notions of consumer and producer rent or surplus, and the emphasis on economic organisation, specialisation, invention and communication which are so characteristic of Marshall's Book IV. The general reference which Marshall provided to Hearn at the start of that last discussion until the sixth edition of 1910, and which then disappeared, may possibly be simply explained by the fact that Hearn's work would by then have already become so scarce that a general reference to readers was no longer appropriate. For those interested, the appendix now provides an opportunity to investigate Hearn's influence on Marshall on the basis of these annotations to an extent greater than hitherto possible.

II MARSHALL'S ANNOTATIONS OF SYME

Marshall refers only once in print to Syme's Outlines of an Industrial Science (1961, I, p. 783), when it is mentioned as a useful book for English readers to correct Mill's rather simplistic account of economic motives in terms of "acquiring and consuming wealth", a point which Syme raised not only in his Outlines (Syme, 1876, pp. 15-19) but also previously in his article on methodology published anonymously in the Westminster Review (Syme, 1871, pp. 204-7). La Nauze (1949, p. 105, n.16) has drawn attention to one further, indirect reference to Syme in Marshall's Principles (1961, p. 548) where he commented on the views of "Cliffe Leslie and some other writers [who] have naively laid stress on local variations of wages as tending to prove that there is very little mobility among working-classes...". That Syme is one of the other writers is clear from the fact that Marshall marked a relevant passage in the Outlines (Syme, 1876, pp. 20-21) dealing with labour mobility in Australia and New Zealand and that subsequently, he marked another passage on the subject of wages (Syme, 1876, p. 22).

Marshall annotated a number of other passages in Syme's book, far fewer in total than the passages he marked in Hearn. Apart from the passage on labour mobility to which reference has already been made, he marked a number of passages critical of laissez faire and competition (pp. 40, 47, 48, 65) as well as a number of those dealing with

protection. These include some on the British strategy of destroying potential competition from colonial dependence such as Ireland and India (pp. 69, 70, 73, 80, 85). The more interesting of the passages marked (pp. 52-3) deals with the income effect of a price change of a staple commodity on the prices of other commodities. The passage in question is worth quoting since it is related to Marshall's famous "Giffen paradox" (Marshall, 1961, p. 132), the source of which is still disputed.

It is a well-ascertained fact that when any commodity in general demand rises in price (money alone excepted, in regard to which the opposite effect takes place), the price of other commodities falls in proportion, owing to the fact that the income of consumers does not increase with the increase in prices. The consequence is, that when the price of a commodity of this description, say bread, is high, consumers economize in other directions, in order to make good the deficiency in their income caused by the additional expenditure on this particular article. There is, therefore, less demand for those other commodities, as well as for labour, which is a commodity in general demand, and the price of them consequently falls. The wealthy man, however, is scarcely affected by the high price of bread, as this forms only a small proportion of his expenditure, and the increase in price is, to a great extent, compensated by the fall in the price of the other commodities, labour included, which he purchases. But with the poor man the case is different. Bread being with him the chief article of expenditure, when the price is high it bears heavily on his income, while his labour, at the same time, shares in the general depreciation. Thus the poor suffer in two ways; first, in the increased price of the necessaries of life, and, secondly, in the decrease in the value of their labour. (Syme, 1876, p. 52)

There are also some passages in Syme's book on which it is surprising that Marshall did not comment. Syme (1876, pp. 124-8) comments on Mill's problem (Mill, 1865, p. 270, Book III, Chapter 2, 3) in speaking of a ratio of supply to demand when one of these is a "quantity" and the other a "desire" or "subjective feeling": "The word, Demand, as we have said, signifies desire, but the term, Supply signifies a stock, provision, or quantity provided. The word Supply is therefore not the correlative of Demand; the latter indicates a mental process, while the former has no such meaning" (Syme, 1876,

p. 127). Marshall had likewise raised this problem in the annotations he made on his own copy of Mill (now in Cambridge University Library) noting in this context; "This is distinctly the point of Ricardo. See Ch. XXX on Value (Ricardo)", presumably a reference to Ricardo's remark (1951, p. 382) that expressing supply and demand as a proportion was "the source of much error in that science". It can only be guessed whether Syme's emphasis on this problem in Mill's treatment of supply and demand encouraged Marshall to pursue the solution in terms of real costs and benefits which he ultimately posited in the Principles in order to make supply and demand commensurate.

As in the case with Hearn, Marshall's annotations of Syme's work may be found to have had a minor influence on Marshall's economics. Apart from the passages identified as such in the opening paragraphs, including that on the income effects on prices and demand for other goods from a rise in price of a staple commodity such as bread, that influence would have been small. However, as in the case of Hearn as well, Marshall may have been encouraged to pursue certain avenues and approaches in economics more fully, from having seen them expounded by Syme in this book, which after all drew on, and was to some extent supported by, a doyen of that small English segment of an historical school, Cliffe Leslie.

III CONCLUSIONS

This discussion can only be seen as a minor footnote in the general history of economic thought in the context of the many influences on and sources of Marshallian economics. For the history of Australian economics, it is a slightly more important episode. The fact that a young, and later prominent economist, was willing to use and cite economic writings from the Antipodes marks the beginnings of official recognition of the development of the science in that newest of new worlds. It is not surprising that the works which Marshall owned by Australian economists were those of Hearn and Syme; after all, they were among the few which were noted by non-Australian writers during the nineteenth century. To some extent, this episode points to the coming of age of Australian economics as well as to the rich array of sources from which Marshall developed his Principles.³

FOOTNOTES

- * Research for this paper was carried out in the Marshall Library, Cambridge University, in February 1988. I am indebted for assistance to the library staff of this important library for Marshall scholars and to the Faculty of Economics and Politics and the Marshall Librarian for permission to quote from the manuscript material in their possession.
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1. My studies of the manuscript material in the Marshall Library have not turned up any other references to Hearn's work, hence supporting Whitaker's (1975) omission of Hearn from his index apart from two references to Hearn in his introduction, which mention Marshall's Hearn citations in 1876 and 1879 referred to in the paragraph above.
 2. Hence Mary Paley's (1947, p. 20) remark that "Hearn's Plutology was thought well of for beginners" in the context of her reminiscences of Marshall's lectures on political economy she took in the early 1870s. However, as I have noted elsewhere (1985, Appendix 2), on the evidence available Hearn appears to have been no longer read by Marshall's students after he became Professor at Cambridge in 1885. However, Copland (1935, p. 19, n.5) noted Mrs. Marshall's 1933 remark in conversation that "Hearn's book had considerable influence on Marshall" and that "some years ago a well-known British economist (asked him) to obtain a second-hand copy of Plutology [referring] to the great influence Hearn had on Marshall." Unfortunately, Copland did not identify the economist in question.
 3. This development of Australian economics is currently being examined by the author, together with Bruce McFarlane, for the purpose of writing an outline History of Political Economy in Australia for the series of national histories of economics projected by Croom Helm.

APPENDIX: A DETAILED LISTING OF MARSHALL'S ANNOTATIONS ON
HEARN AND SYME

W.E. HEARN - Plutology

Marshall owned the English edition published by Macmillan in 1864, identical in pagination and text to the Melbourne edition published by George Robertson the year before. This listing will allow identification of the passages marked by Marshall in either of these two editions.

- p.7 Second line, middle paragraph from: "Like all other human affairs..." to "the subject of this inquiry".
- pp.13-14 Passage marked: "Man alone, of all known animals, ...with the mere satisfaction".
- p.17 Last paragraph of 5 starting: "These wants,..."
- p.18 Second last sentence of 6, "Were it otherwise, with the present predominance..."
- p.21 10, first paragraph from beginning: "So far from our wants being unworthy of our higher nature,..." to third bottom line: "...becomes a new principle of action".
- p.74 3, last sentence of first paragraph: "The soil, including indeed climatal influences...that labour".
- p.77 5, second and fourth sentences: "They do not themselves satisfy human wants:..." and "Some of them are universally diffused..."
- p.79 From first sentence new paragraph: "But the great agent...", to end of fourth sentence, "...that its progress has been most retarded."
- p.80 7, second sentence: "He [Adam Smith] points out that the rivers..."
- p.136 Middle of page: "How then did capital begin?" to "... the presence of accumulation".
- p.140 First complete sentence: "A man, when aided by capital...", then middle of page from, "Again, it

is to capital..." to "...essential to health and longevity".

- p.143 Final part of 6, starting from: "It is not the repression of our wants..."
- p.145 Middle of page: "Apart from those other instances to which reference has already been made..." to "...further means of beneficence".
- p.150 Top two-thirds of page up to and including sentence ending: "...the most important results of education".
- p.151 Whole of page from sentence starting: "The North American Indians...", a substantial part of which is a quotation of Rae (1834).
- p.152 Whole of 5.
- p.155 Full paragraph beginning with: "A very remarkable contrast...", part of which quotes Henry Mayhew (1851).
- p.161 First sentence: "I have already observed..."; seventh sentence, "It has also been remarked..."; ninth sentence, "The charge of profusion..."
- p.162 Middle of page. Quotation from W.R. Greg (1842).
- p.164 Second sentence from Malthus (1820), quote at start of 9, beginning: "The two extremes..."
- p.170 First half of page up to: "...6,657 subjects of Montezuma".
- p.203 In Marshall's handwriting letters (a) are inserted in second line after "Billy", (b), (c), in fourth line after "loom"; and in the margin he wrote:
- "(a) they are drawn out through rollers and twisted as to make a long thin continuous yarn
 - (b) as to make a form of thread
 - (c) consists of a series of parallel threads close together running with the length of the cloth. This is put into the loom or weaving machine which alternatively raises and

depresses the various threads. Meanwhile, the [continued bottom p. 204] shuttle is thrown by an arm of the machine backwards and forwards through the warp, that is the thread that is [wound?] so passing above some and below others of the threads of the warp. This is weaving."

[This is the only written comment of Marshall in Hearn.]

- p.210 Quote from Say, second sentence new paragraph, starting: "To have never done anything..."
- p.211 5, third sentence starting: "If a man can in one day..."
- p.213 Last paragraph of 6 starting: "Another advantage..."
- pp.216-17 Whole of 2.
- pp.236-37 From first complete sentence on p. 236 starting: "Nor must we omit..." to end of 1 on p. 237.
- pp.278-80 Whole of 8.
- p.294 Fifth sentence, starting: "A man acquires..."
- p.296 First five lines which approvingly quote Adam Smith.
- p.297 Last three sentences of first paragraph from "The same telegraph..."
- p.298 Second complete sentence: "However rich" to "... make public roads". Olmsted (1861) quote (from seventh last line p. 298) to seventh line page 299.
- p.306 Middle of page, "Coachmakers in St. Pancras... to Clerkenwell"; second paragraph, from "Middelburg..." to "Herring fishery", an opinion Hearn attributes to Blanqui (1837).
- p.307 To the remark in the second last sentence of 6 that in some Russian villages: "the whole population consists of beggars" Marshall placed a question mark. Hearn attributed this observation to Haxthausen (1856).

- p.308 Middle of page, last sentence of first paragraph "But there are many other..." and the reference to the Journal of Statistical Society, Vol. XX, p. 132, to which Hearn attributed this remark.
- p.309 Quote in complete paragraph starting "There is hardly a factory..." from William Cooke Taylor in the Dublin Statistical Society Transactions, Volume I, p. 6 (as cited by Hearn).
- p.310 All complete sentences in 7 from "Such was the origin of Glasgow potteries..."
- p.313 Sentence on middle of page starting: "A man who earns 10 a day..."
- p.340 Second sentence, second paragraph starting: "If one man then can reduce that quantity of labour..."; second last sentence on page starting: "Through these three stages...", a remark Hearn attributes to Bastiat (1850).
- p.342 Bottom half of page, three sentences starting from: "It spread over a large surface...", up to and including sentence ending "...in the form of higher prices."
- p.347 Darwin's opinion from The Origin of Species from sentence (top of the page) starting: "What death does in nature..." to "...and inorganic conditions of life."
- p.383 1, first two paragraphs, that is, from "each differentiated part..."

DAVID SYME - Outlines of an Industrial Science

Marshall owned the so-called first edition of this work, which was published in London by Henry S. King and Co.--this is exactly the same as the so-called "second edition", an identical reprint of the first edition, published by Kegan Paul, who, as La Nauze assumed (1949, p. 135) obviously took over King's stocks. The Australian National University Library has a copy of the second edition, published

by King. The following are the passages marked by Marshall--passages, it must be indicated, surprisingly confined to Part I of the Outlines.

- pp.20-1 Passage about mobility of labour starting "In the Australian colonies..." up to "...with perfect impunity".
- p.22 Passage on wages, from "the object of the employer" to "...services to an employer".
- p.40 Near the footnote (continued from p. 39), Marshall wrote: "There is evidence that the policy they were proposing w^d have cost many more millions of lives: though it does not follow that they might not have managed it better than they did."
- p.47 Footnote on the poor law.
- p.48 Footnote.
- p.50 Quoted by Syme from Milne's 1814 evidence to the Select Committee of the House of Lords on the Corn Laws.
- pp.52-53 Two complete paragraphs starting "One more illustration..." and ending "...of a man's needs."
- p. 59 Middle of page from "It will thus become the object..." to "...to create a monopoly."
- p. 63 Paragraph on London monopolies from "this is the kind of relationship..." to "...of the brewers."
- p. 65 Quote from Herbert Spencer at top of the page. "Political economists generally..."
- p. 69 Quotation in a House of Commons Report by Hugh Seymour Tremenheere (1854), starting "The labouring classes generally..." and ending "...of foreign markets". Part of this passage was also quoted by Sidgwick (1885, p. 80 and n.).
- p. 70 Reference to Froude's remark on England's destruction of the Irish woollen industry.
- p. 73 Protection of Indian cotton.

- p. 80 Footnote 1.
- p. 85 Last sentence of footnote 1 starting "There is a large demand for such cloth..."
- p. 91 Last sentences from "Economists insist..." to "...is more just".

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