Unequal Equilibrium: The Historical Foundations of Gender Inequality in Neoclassical Economics

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Abstract

Women are underrepresented in economics both professionally and in terms of content. This phenomenon has persisted throughout history and can, to a large extent, be traced back to the shift that took place within economics as an academic subject in the late nineteenth century under the influence of Alfred Marshall.¹ This three-dimensional change, theoretical, methodological and institutional, crystallised professional economics in a way that excluded women. However, women have historically and currently responded to these barriers, either by pursuing careers in other academic disciplines or in other fields entirely.²

I. Introduction

The question of female representation in economics and other professions is often debated. By addressing the question historically, Hammond and Coats & Coats were able to trace the position of women in the economic profession from the late nineteenth century, while feminist scholars such as Ferber and Nelson and Pujol offer a gender and class-critical approach to economic dogma.³

¹ Michele Pujol, Feminism and Anti-Feminism in Early Economic Thought (1992).
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The emergence of neoclassical economics as we know it today is often seen as a turning point for economics as an academic discipline, and indeed as a profession. While many of the developments associated with Alfred Marshall and the advent of neoclassical economics are regarded as positive, such as the concept of the margin and the development of a common economics curriculum, questions remain about the effect of professionalisation on women and indeed other minority groups. On the one hand, the requirement of formal qualifications for entry into academic positions made the discipline more meritocratic and transparent, but on the other hand, this requirement could also be regarded as the raising of entry barriers given access to academic education was already skewed in favour of a certain group.

Economics in Marshall’s day was a microcosm of late Victorian society, with most economists at the time (and indeed today) being white, middle class men. This homogeneity was not coincidental: women were defined solely by their capacities as mothers and homemakers, but this unpaid labour which brought about social reproduction and the creation of the future workforce was classified as leisure at the time.4 Although unpaid domestic work remains uncounted in GDP statistics, feminist economists such as Ferber and Nelson have brought the value of such labour into the public consciousness.5

The late nineteenth century also saw many thinkers consider the standing of political economy as an academic discipline. On the centenary of Smith’s Wealth of Nations, for instance, Bagehot remarked that the discipline lay dead in public opinion. Sidgwick’s forecasts for political economy were similarly pessimistic in his Principles of Political Economy and there was good reason for this negativity.6 At Cambridge, lectures delivered by professors of political economy were considered purely ornamental and uncontributive to the core educational system, with a similar atmosphere of nonchalance existent at Oxford. Thus, the pressure for reform came from Manchester, with Jevons calling for “professionalisation through specialisation.”7 Debates emerged concerning the most appropriate methodology and theoretical approach for the discipline, and it was in this era of flux that Marshall became one of the most prominent economists of the day. Undoubtedly, Marshall believed that the future of economics lay in its adoption of “natural scientific methods

4 Pujol, Feminism and Anti-Feminism.
5 Ferber and Nelson, Beyond Economic Man.
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and politically dispassionate evaluation,” and in 1890, he published his *Principles*, an influential statement setting out his conception of the discipline.\(^8\)

Marshall’s actions, including his theoretical publications, involvement with the Royal Economic Society and links with the reorientation of political economy away from qualitative and towards quantitative methods had a lasting exclusionary impact on women in economics. This can be seen by tracing the theoretical, institutional and methodological developments which characterised the early neoclassical period in economics. This paper will also engage with feminist critiques of these developments. Lastly, it is important to consider women’s responses to this exclusionary environment, in order to understand the full extent of Marshall’s influence on their opportunities.

**II. Discrimination in History**

In accordance with the standard sociological criteria of professionalisation laid down in the introduction to this essay, the publishing of Marshall’s *Principles* represents the consolidation of a specialist body of theory.\(^9\) Spanning six volumes, the texts popularized the use of supply and demand curves (the Marshallian cross) in price determination. Many of Marshall’s ideas centred on the concept of marginal utility: price elasticity of demand and producer or consumer surplus are attributed to Marshall and still central in microeconomics today.

Although Marshall’s discussion of wage inequality and female employment in *Principles* is perhaps the most well-known of his ideas on the topic, Marshall had previously discussed the issue of wage inequality in ‘The Economics of Industry,’ co-authored with Mary Paley and published in 1879.\(^10\) Here, they argued that the low wages paid to women were attributable not to any deficiency in capability or human capital, but instead due to a consensus or “employers taking it for granted” that women’s wages should be lower than men’s. However, these sentiments seem to have originated with Paley, given that in the (subsequent) first edition of his *Principles*, Marshall argues that equal pay for women would bring about the degradation of the socially desirable sexual division of labour.\(^11\)

The theoretical underpinning of Marshall’s opposition to women working outside the home is found in Human Capital Theory in Book IV of his *Principles*. Arguing that labour has superior characteristics to the other factors of production

\[^8\] Ibid, 26.
\[^9\] Ibid, 3.
\[^11\] Pujol, *Feminism and Anti-Feminism*.
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given its role in the production of capital, Marshall makes several suggestions with the aim of shaping the labour force to the maximum benefit of an industrial society. He makes a clear distinction between personal and material capital, arguing that the former is accrued primarily from the investments which parents make in their children’s education and development. As such, Marshall proposes that women would manage and care for the household while men engaged in paid work. In order to enhance the productive capacity of male workers, it is argued, working class women are required to create ‘a true home’ in which capacity, character and health are fostered. While the intention of the theory is ostensibly to improve welfare among the working classes, Marshall inadvertently advocates traditional and perhaps oppressive gender roles.

Feminist scholars emphasise both the exclusionary and essentially androcentric nature of neoclassical economic theory, with specific reference to the inability to compare utilities across economic agents, the supposed selfishness of individuals, and that tastes are unchanging and exogenous. Arguing that many of the assumptions underpinning neoclassical theory are also those which underpin the subjugation of women in the economy, the authors demonstrate that the notion of the ‘separate self’ which affords men and women different forms of appropriate behaviour in different situations (namely the home and the market), ultimately reinforced gender stereotypes to the detriment of both genders. Regarding the standing of women in economics, the link between Marshall’s opposition to women in the profession and his theory of human capital is certainly clear. Not only does the theory provide the basis for his exclusion of women from the workforce, in that domestic work was regarded as essential to the production of the human capital of tomorrow, but he also succeeds in cementing gender-essentialist views in the minds of his readers. There are countless examples of gender stereotyping in his work. Given that Marshall’s Principles were the pre-eminent economics textbook for decades, the effect that his views had on the young minds reading them should not be underestimated. The very existence of Principle’s or any body of work envisaged as a ‘core curriculum’ is somewhat problematic. Other academic disciplines know no such textbooks and still manage to produce critical, well rounded graduates.

Marshall’s human capital theory was inherently discriminatory towards women through an essentialist view of human capital. Reflective of gender norms of the time, Marshall lent an economic argument to the entrenched gender differences

13 Ibid, 167
14 Ferber and Nelson, Beyond Economic Man.
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in Victorian society.\textsuperscript{15} He opposed the employment of married women and advocated the payment of a family wage, while also applying Victorian gender norms to working class women, who were expected to contribute to the productive capacity of men while receiving no direct gain in the form of money or status.\textsuperscript{16} For those women who choose or are forced to work, Marshall implicitly advocates for a lower wage than that paid to men, in order to prevent the further injurious rise of women’s wages and diminution of their household duties.\textsuperscript{17}

The interplay of gender and class in Marshall’s work is worthy of discussion. Although contemporary scholars regard the unpaid caring and domestic work carried out mostly by women as being vital for economic output and deserving of recognition in the national income accounts,\textsuperscript{18} Marshall was of the view that such work was not productive and therefore should not be included in any account of the national dividend. On the other hand, the wages earned by domestic workers should be considered, according to Marshall.\textsuperscript{19} This differentiation between labour carried out for free in a household that arguably cannot afford to hire staff, and the same labour carried out for a wage in a middle- or upper-class household, reveals a stark class bias in that the activity only becomes valuable when it is recognised as such by bourgeois households, not by virtue of the activity carried out by the woman.

Further class bias is visible in Marshall’s discussion of social norms and values, and the assertion that the habits and practices associated with middle class women should be adopted by working class women.\textsuperscript{20} For example, the most appropriate method of childrearing is discussed with blind preference being given to the more middle-class approach to parenting – individual attention and concerted cultivation as it is known today.\textsuperscript{21} This veneration of middle-class practices with regard to housekeeping, cleanliness and childcare without questioning their economic feasibility for working class women represents in my mind a deviation from the empirical, scientific approach which Marshall claimed to advocate.

\textsuperscript{15} Pujol, Feminism and Anti-Feminism.
\textsuperscript{16} Ibid, 123.
\textsuperscript{17} Ibid, 127.
\textsuperscript{18} Folbre, “Measuring Care.”
\textsuperscript{20} Pujol, Feminism and Anti-Feminism, 182.
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III. Discrimination in Access: The Royal Economic Association and Economic Journal

The late-19th century was a period of significant change and development for economics with the period from 1890 to 1915 regarded as a “watershed dividing the amateur tradition of the 18th and 19th centuries from World War I, when the professionalisation of economics began to gather momentum.”22 In the 1880s and earlier, political economy at Oxbridge was regarded as part of the general educational curriculum for the governing classes, alongside topics such as history and philosophy and was taught by professors with no specialism in the subject, and according to subject matter rather than method.23

Marshall was intimately involved in the establishment of the Royal Economic Society in 1890 in a response to increasing demand for economics to be demarcated as an academic subject in its own right. This was reflective of broader trends in the late 1800s that saw several journals established, and in turn these came to represent the hallmarks of an established and respected discipline. Given the breadth of theoretical approaches and critiques of accepted wisdom emergent in economics in the 1800s, it is no surprise that there was demand for such institutions, and indeed it is no surprise that Marshall involved himself in their establishment. Although Marshall was initially hesitant about involving himself in the establishment of the Society, he eventually agreed to be involved, and expressed opinions on who should be granted fellowship of the society: “I don’t want to include mere business men. But I don’t want to exclude Bank Directors and others of the class who are for me at least the most interesting members of the Political Economy Club... It is the men of affairs from whom I learn.”24

Subsequently, the Economic Journal was established, with Francis Ysidro Edgeworth taking up the position of Editor. It was envisaged that the Journal would facilitate economic discourse in Britain through the characteristically “British love of fair play and free speech, but also Economic in the character ... which the term suggests of specialist knowledge and scientific accuracy.”25 Although Edgeworth in these opening remarks states that voices from all schools of thought and political

24 Hey, John, and David Winch, A Century of Economics, 29.
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persuasions would be considered, the mention of specialist knowledge and scientific accuracy demonstrates the newfound demand for formal academic qualifications.

The admission of women into the newly founded Royal Economic Society was vehemently opposed by Marshall, as was the publishing of women’s writing in the Economic Journal.\textsuperscript{26} This served to compound existing inequalities, barring qualified women from attaining academic positions given that publishing was becoming a hallmark of academic achievement and a requirement for teaching positions in universities.

Of course, Marshall’s opposition to women entering the Royal Economic Society and from being published in the Journal have clear economic explanations. Competition for a relatively small number of positions was already stiff, and those already ‘in’ the discipline had an interest in maintaining the relative bargaining power of labour and consequent wages. Introducing higher competition in the form of female applicants could only spell fewer opportunities and lower wages for men.

IV. Discrimination in Method: Reshaping Economics as a Science

Marshall’s endeavours to establish economics (a departure from political economy) as an empirically driven discipline was the third element of his overarching aim of separating economics from moral science. Marshall argued that if economic analysis was to adequately represent the phenomena it examined, it should adopt scientific methods grounded in empiricism and inductive reasoning and that there was “no room in economics for long trains of deductive reasoning.”\textsuperscript{27} Eventually his aim was brought to fruition when in 1903 a Tripos in Economics and associated branches of Political Science was established at Cambridge.\textsuperscript{28}

The reconfiguration and redirection of economics towards mathematical and scientific methods of investigation deserves consideration from a gender equality perspective, not because men or women possess essential characteristics by virtue of their sex or gender, but because social norms in 1800 dictated that men enjoyed better access to higher education in advanced mathematical methods, that would need to happen through education or on-the-job training, in the case of accountants for example, neither of which were in ample supply for Victorian women.\textsuperscript{29} Furthermore, femininity in Victorian times was associated with gentleness, passiveness and

\textsuperscript{26} Pujol, Feminism and Anti-Feminism.
\textsuperscript{27} Marshall, Principles of Economics, 781.
emotion, while bravery, hardness and rationality were deemed masculine, a
definition that is also well aligned with the stereotypical description of science at the
time.\footnote{Ibid, 160}

Against this backdrop, Marshall sought to associate economics with rationality
and objective scientific facts; a respected profession teeming with experts. He viewed
the empirical approach as the best way to achieve this end. If expert, professional
status was to be achieved for economics, it certainly could not be associated with
femininity, and thus women were automatically deemed unsuitable and
inappropriate for the profession.

\section*{V. Female Economists’ Responses to these Barriers}

Marshall’s three-dimensional action had a clear impact on the presence of
women in economics in Britain, and other barriers also existed for women seeking a
university education. Although women were admitted to the University of London in
1868 and to Cambridge in 1869, it would be decades, 1947 in the case of Cambridge,
until they could fully graduate, rather than only receive a university certificate.
However, the career of British economist Joan Robinson is often heralded as a major
success story given the breadth of her contributions to economic theory, most
it is Robinson’s successes which highlight the discrimination she faced, in that she
failed to receive a Nobel prize despite being an eligible candidate and was only

A similar story is reflected in the USA, where the defeminisation of universities
through gender segregation was prominent, and only three women had been
conferred with PhDs in economics by the turn of the twentieth century, namely
Hannah Robie Sewall, Sarah Scoville Whittlesey and Helen Bates.\footnote{Hammond, “American Women,” 347.} None of the three
female PhDs was able to secure a permanent position in academia, let alone in
economics. While Robie Sewall’s \textit{Theory of Value Before Adam Smith} was sufficiently
highly regarded to be published by the American Economic Association, she failed to
obtain a permanent professorial position and instead worked as an Assistant in
Political Science, a role created specifically for her, and office assistant at the
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University of Minnesota. Similarly, Sarah Scoville Whittlesey successfully defended her PhD at Yale at the age of 26, and although she taught several undergraduate courses on a temporary basis, she never secured a permanent position. Furthermore, the topics studied by female economists tended towards education, labour markets and related topics in sociology. This underperformance is attributable to discrimination in a broad sense, but also to its manifestation in the marriage bar applied by many institutions. According to Rossiter women were expected to “vacate their positions once they married, and those already married were not shown equal opportunities.” Even in female-only colleges, this bar was in place, while male staff in such institutions were “expected to be married.”

In contrast, the third female economist to secure her PhD in the 19th century, Helen Bates, joined the settlement house movement, a significant outlet for educated women. The first houses were established in 1889 by a group of Smith College Graduates in New York. The movement emerged in response to rapid industrialisation and the consequent increase in immigration and poor standards of living and offered a broad range of services from childcare to education.

VI. Women in Economics in the 21st Century

The current position of women in economics would suggest that the influence of Victorian gender norms and Marshall’s actions are still present. The 2018 report from Committee on the Status of Women in the Economics Profession finds that women remain a minority in academia, from PhD candidates to professors, and the higher up the tenure track, the lower the representation of women. The Committee also found that women appear to drop from the career ladder around the time of promotion to tenured associate, which appears to be unique to economics. In the United States, the fraction of women choosing to major in economics at undergraduate level is decreasing and the share of women entering economics PhD

34 Ibid, 348.
37 Margaret Rossiter, Women Scientists in America (Baltimore: Johns Hopkins University Press, 1982):12.
38 Ibid, 15.
39 Ibid, 16.
programmes in economics has not increased in the last 20 years, neither of which bode well for the future of gender equality in the discipline.\textsuperscript{42}

As mentioned in the previous section, the topics under investigation by women economists in the 19\textsuperscript{th} and twentieth centuries generally reflected the social norms of the time – women studied topics in education, regulation and labour while men studied the macroeconomy, banking and so on. The same trend is visible today in economics, with topics in health and infrastructure seeing the most female authorship, while others such as management and finance were more popular among male economists.\textsuperscript{43}

\textbf{VII. Conclusion}

Alfred Marshall’s three-dimensional actions had a compounding effect on women in economics. Firstly, the gender biases in \textit{Principles} provided an authoritative theoretical basis for oppressive gender norms in theories which are still employed today. It was on this basis, and in the interest of self-preservation, that Marshall opposed the admission of women to the Royal Economic Society. Finally, his redirection of economics towards mathematical methods ensured that femininity was deemed naturally uncharacteristic of a typical economist. These stringent conditions and the political climate considered; it is plain to see how many barriers were in the way of women wanting to pursue a career in economics. While the weight of responsibility for this gender gap should not rest solely at Marshall’s feet, it is only by casting our minds back to the origins of the ideas we take for granted that we can understand the biases within them. While Marshall’s \textit{Principle’s} contained examples of prejudice, it is my estimation that Marshall’s redirection of economics towards the mathematical and scientific approach rather than accepting a broad spectrum of research methods has perhaps had the longest-lasting effect on the economics profession, given that the archaic norms reflected in \textit{Principles} are broadly dismissed today.

But bias aside, does it really matter if men produce the bulk of the work in the economic canon, once the work is done? Disregarding the inherent importance of equal opportunity and representation, yes – studies have shown that women make different policy decisions to men. In a 2018 large scale study of academic economists, women were found less likely to agree with measures related to austerity, and more

\textsuperscript{42} Ibid.

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likely to favour environmental protection than men. Intuitively, men and women are bound to have different lived experience to bring to the table, and surely any increase in the diversity of opinion can only enhance debates. With this diversity in mind, there is significant scope for future research taking an intersectional approach to this question, considering not only gender but also its intersection with class, ethnicity, sexuality and ability.

Fundamentally, if economics claims to be a social science, it should include voices from all of society, not less than half of it.

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