“The Disturbing Effect of Sentiment and Prejudice”: Francis Ysidro Edgeworth on Women’s Wages

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“But Equality is not the whole of distributive justice [...] in the minds of many good men among the moderns and the wisest of the ancients, there appears a deeper sentiment in favour of aristocratical privilege - the privilege of man above brute, of civilized above savage, or birth, of talent, and of the male sex. This sentiment of right has a ground of utilitarianism in supposed differences of capacity. Capacity for pleasure is a property of evolution, an essential attribute of civilization. [...] The aristocracy of sex is similarly grounded upon the supposed superior capacity for the man for happiness, for the [power] of action and contemplation; upon the sentiment”

F. Y. Edgeworth, “The Hedonical Calculus”, 1879, 405-406

“Why is women’s wage less than that of a man?” Commenting in 1893 on William Smart’s essay on Women’s Wages, Francis Ysidro Edgeworth seizes upon a question which had been the object of many political debates in Great Britain. And of many debates within the history of economic thought. Jeremy Bentham and John Stuart Mill’s positions on women’s wages were rooted at the core of utilitarian philosophy; according to the ‘greatest happiness for the greatest number’ principle, “each do count for one and none for more than one” – free men and slaves, blacks and whites, aristocrats and indigents, men and women. In late Victorian England, influenced both by neo-utilitarian thought and by Darwin’s work, these principles where challenged within the utilitarian tradition itself. Relying on the idea of differential capacity for happiness, Francis Ysidro Edgeworth developed sophisticated arguments against the “equal pay for equal work” principle and took issue with Millicent Fawcett and other economists in the “comparable worth” controversy.

Edgeworth’s interventions on this theme are divided into two groups: first in a number of reviews of other authors’ writings dated from the mid-1890s, then in two articles published after World War I in the Economic Journal “Equal Pay to Men and Women for Equal Work” (1922) and “Women’s Wages in Relation to Economic Welfare” (1923).

One central feature of Edgeworth’s argumentation is his renewed commitment to free competition as the best possible economic system, while, at the same time, he creates an exception for women, who are to be kept outside this competition, essentially through law and

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3 On Darwin and the woman question, see Vaid (1985).
4 This apparent contradiction appears exactly in the same terms in Jevons (see Le Bouteillec and Charles, 2007, 10-12). Keynes, 1926, 144: “The most important influence, however, on his early economic thought was, I think,
trade unions’ action. This aspect is largely shared by other champions of competition as a benchmark, like Marshall or Jevons. But not all defenders of free competition build exceptions to the rules of competition for specific groups. Unlike liberal economists, such as Henry Fawcett (or Paul Leroy-Beaulieu in France), who referred to economic calculus and to market competition in order to consider women as ordinary economic agents’, Edgeworth relied on an original conception of the utilitarian calculus to argue about the fundamental ethical and economic inequality between men and women. Developing several arguments on differential capacities to work, together with the opposition of “men-having-dependents” vs. “women-being-a-dependent”, he concluded that competition between men and women would lead to “a degradation of labour” and to a “débâcle of industry” (FYE, 1922, 435-436). Hence, Edgeworth differs from other economists in the way that he not merely spreads a prejudiced view on the “woman question”, but he really cares about arguing in an analytical way.

This paper is focused on Edgeworth’s position on women’s wages, a position described by Keynes as his first “great application of mathematics to the Moral Sciences”⁴. In this article we argue that Edgeworth’s position on women’s wages relies entirely on his “exact utilitarianism”, characterized by a fundamental anti-egalitarianism. Throughout his writings, Edgeworth moved from the theme of different “satisfactions” to systematic variations in the individual’s “capacity for pleasure and work” along both racial and gender lines. The first section presents the state of the debate on the economic position of women and the determination of their wages among British economists before Edgeworth’s contribution in the 1920s. The second section reconstructs the arguments developed by Edgeworth on women’s wages and on the position of women in the economic sphere. The last section shows how his position on women’s wages is grounded in the “exact utilitarianism” he developed since his 1879 “Hedonical Calculus”.

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1 Jevons, whom he got to know in London, where his Hampstead lodgings were but a short distance from Jevons’ house”.
2 Differing from men only as a matter of “degree” (of physical strength or productivity) but not in nature.
3 Edgeworth next proceeded to the “second great application of mathematics to the Moral Sciences”, namely, its application ”to Belief, the Calculus of Probabilities” (Keynes, 1926, 147).
Section 1: The Women’s Wage Question in the 1890s and After World War I

The so-called “woman question” was a substantive debate throughout the Victorian era, obsessed with the question of morality in the late 19th British society. Original works by classical economists are based on the “doctrine of separate spheres”: women would be devoted to the domestic sphere and men, to the market place (Vaid, 1985). Even if the sexual division of labor is not entirely natural in Smith’s *Lectures in Jurisprudence* – it may be a result of education, as the differences between the “street porter” and the philosopher (see Dimand *et al.*, 2004; Nyland, 2003) – there is no clear commitment to equality between the sexes in Smith’s thought. Domestic work is essentially seen as unproductive work (Folbre, 1991), lying outside the scope of economic theory. With the important exceptions of Jeremy Bentham and John Stuart Mill’s the woman question seems reduced to an intellectual quest for differences: in physical strength, rationality and morality, family responsibilities, specific “feminine” skills, etc. Debates on the position of women in economic thought first dealt with political rights (essentially suffrage), then moved to the question of labor legislation – should women work? – and eventually at the end of the 19th century focused on the wage question. The First World War played a key role in the emergence of the notion of equality over natural differences.

The “Alleged Differences” Between Two Non-Competing Groups

The woman question was first a debate over legislation concerning the types of occupations opened to women. In the United Kingdom, a series of Acts – *Mines and Collieries Act* (1842), *Factory Act* (1844), *Factory and Workshop Act* (1895) - were the basis of a Welfare State to come, and a central point of opposition between Fabians and Liberals (Webb, 1896) over the role of the legislation concerning the woman question. Along with other interrelated issues such as poverty, unemployment, immigration, “the relationship of women to the labor market fostered a vital and contentious debate about how and how much the government should intervene in labor relations” (Leonard, introduction, forthcoming). The reasons mentioned in favor of such specific legislation were paternalistic in spirit and similar both in the American and British context:

“(1) [P]rotection the biologically weaker sex from the hazards of market work; (2) protect working women from the temptation of prostitution; (3) protect male heads of household from the economic competition of women; and (4) ensure that women could better carry out their eugenic duties as “mothers of the race” (Leonard, 2005, 757).

The third and central argument is the “equal pay for equal work” controversy in economics. The consequences of political intervention are scrutinized throughout the lens of the competition and its impact on wages. What was specific in this debate in economics concerned two questions: whether women’s work should be permanent on the market; and what was to be the level of their wages. Wage determination theories display a wide range of argument,

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1 On Bentham, see Cot, 2003; on Harriett Taylor and Stuart Mill see Pujol, 1992, 23-37, Pujol and Seiz, 2000; on Stuart Mill’s feminism, see Ball, 2001.
3 In the US context, see Cot, 1998 on the wage question in American Labor Economics; and Leonard, 2007, on specific legislation towards women.
essentially deferring from the “law” governing men’s wages determination. Between 1850 and 1914, most of the economists’ positions – arguing for differentiation, equality or protection of women’s work – were neither organized along traditional ideological lines, nor according to methodological oppositions (Charles and Le Bouteillec, 2007). This differentiation of men and women was either normative and legitimized by natural differences, or descriptive and essentially analyzed through the non-competing group hypothesis, showing a double standard of treatment between the sexes.

Sidney Webb’s 1891 paper is one of the starting points of the debate – and a reference for Smart, Fawcett, and Edgeworth. For Webb, women’s wages are determined not only on efficiency grounds, but also in relation to their market opportunities, *i.e.* by the markets opened to them (Seiz and Pujol, 2000, 158). The central question is about the capacity to compete for the same job. Cairnes’ non-competing group hypothesis, being applied to women as a group, was widespread at that time (Cairnes, 1874). In Webb’s analysis, this reflexion is linked to the fact that there is no equal capacity for the same work in some occupations. Women’s inferiority in some occupation then have an impact on the general position of women in economics:

> “Women workers appear almost invariably to earn less than men except in a few instances of exceptional ability, and in few occupations where sexual attraction enters in. Where the inferiority of [women’s] earnings exists, it is almost always coexistent with an inferiority of work. And the general inferiority of women’s work seems to influence their wages in industries in which no such inferiority exists” (Webb, 1891, 657).

If Webb states the problems of organized discrimination against women by male trade unions, he also makes it clear that men are supporting families whereas women are not. This fundamental feature explains why women’s wages are below men’s wages. And it is a major argument of the coming “comparable worth” controversy during the war.

In a conference at the University of Glasgow in 1892, William Smart challenges Webb’s article by offering a conventional explanation to differences in wages. He first asks why, “[i]f a man-worker […] is supposed to get a high wage when he produces much, a low wage when he produces little, […] should a woman’s wage be determined by another principle?” (Smart, 1892, 13). The question of the double standard is a major claim of the early feminist movement – especially during the debate over the *Contagious Diseases Act*. Smart states that men’s and women’s wages are not determined by the same laws: “there is a well-marked relegation of women-workers towards certain ill-paid trades; while, at the same time, there is as well-marked a

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1 Smart points the inconsistency of several arguments: “Putting aside the objections that many married women are not members of a family, and that many married women and widows are the sole bread-winners of the family, it is perhaps sufficient to point out that this answer [having dependents] would not be taken as explaining or justifying a low wage among what we call the “better classes”. If the sex of the author, artist, musician, doctor, intellectual or artistic worker generally, has nothing to do with her remuneration, why should the sex determine the wage of the factory girl?” (Smart, 1892, 11). He states that positions change also regarding the explanation based on “standard of living”: being inferior than men for working women, this standard being superior to men for “upper class ladies” (ibid., 12). In a review of his work, Edgeworth insists on the standard results of the price theory to be in accordance with Smart’s analysis: “Thus, the fact that women are not the sole breadwinners of the family is often confidently stated as a sufficient answer to the question; as if, forsooth, in an open market two similar commodities, two equally efficient agents of production, may be expected to sell at different prices” (Edgeworth, 1893, 38).
movement of men towards the better-paid trades. If this is so, the difference of wages between men and women takes a new and definite aspect. It is not a difference of wage between workers of various degrees of efficiency. It is very much a question of difference of wage between two non-competing groups, and of groups where the levels of wage are determined by a different law.” (ibid., 19-20). He then restates the question: “Why are men and women employed in different groups of employment? And comparing the two groups, why is the wage level of skilled female labour lower than that of unskilled male labour?” (ibid., 20). Two different wages’ determination follow: “[…] while men’s wages, unless in the case of unskilled workers, are determined ultimately by the value of product which is economically “attributable” to their work, women’s wages are determined by the older and harsher law [custom]” (ibid., 26). This law corresponds to an established “customary wage” for women.

In a response to Sidney Webb’s paper, the same year as Smart’s conference, Millicent Garrett Fawcett formulates the crowding hypothesis, explicitly using Cairnes’ notion:

“The existence of non-competing groups of labour is now generally recognized. The equalizing effect of competition in wages only operates within each of these groups. The groups are limited both industrially and geographically. That is to say, there is no effective competition unless the labourer has the power, mental and physical, of transferring his labour from the employment where wages are lower, to that where wages are higher. Within each of these groups there is effective competition, but as between group and group there is hardly any, so that they are described with sufficient accuracy as non-competing groups” (Fawcett, 1892, 173).

This limitation of women’s employment is reinforced by a devaluation of what women do produce when they are working:

 “[T]he most wealth-producing of men’s industries, such as engineering, mining, banking ... are more wealth-producing than the most wealth-producing of women’s industries, such as cotton spinning and weaving, schoolkeeping, etc.” (Fawcett, 1892, 174-5).

Fawcett first opposed the “equal pay for equal work” principle on the ground that the educational gap has to be narrow before ensuring open competition between men and women:

“I have always regarded it as an error, both in principle and in tactics, to advise women under all circumstances to demand the same wages for the same work as men ... The cry ‘the same wages for the same work’ is very plausible, but it is proved impossible of achievement when the economic conditions of the two sexes are so widely different. [...] that women most want is more training, to enable them to pursue more skilled handicrafts, and a larger number of professional occupations” (Fawcett 1892, 176).

She eventually changed her mind because of the evolution of the completion between men and women during the First World War.

The Suffrage and The War: the Changing Components of The Debate

Sixty seven years after the publication of The Enfranchisement of Women (Taylor Mill, 1851), British women gained the right to vote in 1918. Their economic life during World War I changed the Women Movement’s political agenda to focus on a “new” demand. This second

*The link between political rights and socio-economic rights is well emphasized in the literature. “In the United States, where women teachers often alternate with men in the same school, the salaries of women are habitually
round of the debate starts from this new context – both due to the vote and to the war. Thus the papers by Rathbone (1917), Fawcett (1917, 1918), Webb (1919) and Edgeworth (1922, 1923) are representative of the new terms of the debate focused on the question of equal pay, now that women are competing for the same job. The old arguments of the supposed superiority of men’s work and the doctrine of the separate spheres are given a renewed luster and new economic questions appear (such as “the endowment of motherhood”).

Fawcett changed her mind to the favor of the World War I:

“Due to women’s substantial contribution to the war effort, their productive power has at last been “discovered” [... although] the great mass of our countrywomen always have worked for their living; whether as wage-earners or as homekeepers, and sometimes as both” (Fawcett, 1917, 191).

Using Fabian’s statistics⁷, Fawcett rejects the “men-having-dependent hypothesis”⁸:

“The extraordinarily low level of women’s wages before the war cannot therefore be explained either on the “pocket money” theory or by the fiction that they have no one dependent upon them” (Fawcett, 1917, 196).

Fawcett more directly addresses the equal pay for equal work principle in her 1918 paper. Two arguments are developed in favor of the equal pay principle: (1) cutting the disloyal competition to men implied by low wages paid to women¹⁰ and (2) economic justice. What women need is “a free entry into skilled industries and the opportunities of training, the organization of women either in men’s trade unions or in trade unions of their own and political power to support their industrial claims” (Fawcett, 1918, 4).

lower. But in the State of Wyoming, where women have a vote, the salaries are equal” (Smart, 1892, 6). In the United States, the Adkins vs. Children's Hospital act of 1923 enact the consequences of voting rights for women (19th amendments to the Constitution of 1920) explicitly calling that all legislation – including minimum wage – have to comply with this major change in the legal status of women.

“[Rathbone is] assum[ing] too much that women are always industrially less advantageous to their employers than men and that their lower wages to a large extent merely reflect this lower value. [...] The war] has stiffened the conviction of many feminists that a large proportion of supposed feminine disadvantages exist more in imagination than in reality” (Edgeworth, 1918, 2-4).

¹¹ Ellen Smith (1915) “The Fabian Women's Group conducted its own survey of 2,830 working women. Of these, 1,405 or slightly less than 50 per cent were found to partially or wholly support others besides themselves, a further 1,005 (35 per cent) were ‘exactly self-supporting”’ (Pujol, 1992, 92, note 1). For Edgeworth, “[g]rave doubts are thrown upon these figures by the more elaborate investigation which Mr. Seebohm Rowntree has recently conducted. He finds from an extensive observation of samples that ‘only 12-06 per cent. of women have either partially or entirely to support others beside themselves’” (Edgeworth, 1922, 449). For a critique of Rowntree’s figures, see Pujol, 1992, 110, note 9.

¹² Edgeworth’s comments on Fawcett’s paper are laconic: “We do not feel competent to comment on the statements which we have attempted to summarize. We may perhaps assist the reader to test the strength of Mrs. Fawcett’s arguments by referring him to some variant statements upon the points at issue made by other high authorities on the subject. Such id the article in the New Statesman (for August 1st, 1914) in which Mrs. Sidney Webb argues that the principle of equal pay for equal work — that “abstract doctrine of the modern middle-class Feminist” — may lead to the unexpected result of one sex or the other being entirely excluded from a branch of industry. So Miss Rathbone in the Economic Journal (March 1917, 55 et sq.) treats as very serious the argument to which Mrs. Fawcett alludes as “the old story of men having dependents and women none”. We may also refer to professor Taussig’s article on a “Minimum Wage for Women” in the Quarterly Journal of Economics (May 1916, summarized in the Economic Journal, September 1916)”. (Edgeworth, 1917, 232-233).

¹³ “The tunic when braided sells for an equal sum whether the braid has been sewn on by John or Jane, on the supposition naturally that Jane’s sewing is equal to John’s. The paying of Jane at a substantially lower rate [2/3 less] than John is undercutting all the men in the trade and is therefore injurious to their interests” (Fawcett, 1918, 1).
The context of this renewed question also lies in a specific case that the War Cabinet had to face. Because of the fear of women entering in trade and lowering the wages, “the British government made an agreement with the trade unions to maintain the same rate of pay” (Pujol, 1992, 84). A special committee was created to investigate if this agreement was actually applied. Indeed, women had entered occupations previously held by men and had received lower pays - like in the specific cases of the Tramway and Omnibus workers. The Committee had to examine whether to change this situation and explicitly stated “that the claim of women to equal remuneration with men, if adopted and established, must apply not only to women employed on trams and motor omnibuses, but to women employed in many other industries” (Webb 1919, 201). The recommendations should have in view the necessity of output during the war, and the progress and well-being of industry in the future” (Webb, 1919, 202). The disloyal competition by lowering the male wage is the main argument of trade unions, largely endorsed by the Fabians.

Beatrice Webb wrote on women’s wage in a more general context (Webb, 1896) (Webb, 1919). favouring the Factory Act of 1895, she argues against “Mrs. Henry Fawcett” and Ada Heather-Bigg, in favor of the extension of regulation to women’s work. Challenging “laissez faire” views on labour legislation, she also dismisses some of the common specific assumptions on women’s employment. The fact that regulation diminishes the demand for women’s work is, according to her, based on two false assumptions: “[t]he first assumption is, that in British industry to-day, men and women are actively competing for the same employment”; “[t]he second assumption is, that in the few cases in which men and women may be supposed really to compete with each other for employment, the effect of any regulation of women's hours is pure loss to them, and wholly in favour of their assumed competitors who are unrestricted”. The text recalls the main advantages of legislation and fixes a clear objective: “The first necessity is the exclusion of illegitimate competitors. The real enemies of the working woman are not the men, who always insist on higher wages, but the “amateurs” of her own sex” (ibid., 1896, 12). This argument is perfectly symmetric to the one used by Sidney Webb concerning the necessity of discriminating against the “unfits” (Webb, 1910).

As a member of the War Cabinet Committee, Beatrice Webb issued a criticism of its main purpose and results (Webb, 1919). Arguing that the question was one-sided (focusing only on “women’s wages”), she specified ten “principles” on which wages [men’s and women’s] have

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14 Beatrice Webb is one of the most important signatories to the ‘Appeal Against Women’s Suffrage’ (in 1889) and maintained difficult relationships with the Women’s Movement (Caine, 1982). She changed her mind on women’s suffrage in 1906 (Pujol, 1992, 85).

15 “Mrs. Henry Fawcett and Miss Ada Heather-Bigg, for instance, usually speak of legal regulation as something which, whether for men or for women, decreases personal freedom, diminishes productive capacity, and handicaps the worker in the struggle for existence” (Webb, 1896, 4).

16 What Smart and others call the “blackleg”.

17 “These were: the principle of individual bargaining, the principle of the ‘national minimum’ wage, the ‘principle of collective bargaining and of the occupational rate leading ... to a male rate and a female rate’, the principle of adjusting money wages to the cost of living, the principle of determining wages by family obligations, ‘the principle of the vested interest of the male’ (by which she meant the enforcement of the concept of ‘men’s work’ with high wages and ‘women’s work’ with much lower remuneration), ‘the principle of a definite [technical] qualification for employment’, ‘the principle of limiting wages by foreign competition’, the principle of profit-sharing, and finally, ‘the formula of equal pay for equal work’ (ibid., p 8, 9, 11, 13, 15, 17, 20, 24, 25 and 31)” (Henderson, 2000, 467).
hitherto been determined” (Webb, 1919, 8). She also gave precise definitions of alternative meanings of equal pay - clearly borrowed by Edgeworth (1922, 432). Webb thinks that the “equal pay for equal work” formula was irrelevant essentially because men and women do not occupy the same jobs. The main outcome of her Minority Report is a call for an “occupational wage” which is obtained by collective bargaining for each occupation, not taking into account the sex of the worker. She favours increases of working women’s wages and an improvement in their working conditions through a system of “wage Boards” and factory inspections which would enforce a “statutory minimum” (Webb, 1914, 526). She is also in favour of family allowances on a case by case basis: “the community must face the necessity of seeing that adequate provision is made for children, not by statistical averages, but case by case... This cannot be done under any system of wages; nor can the adoption of any conceivable principle as to the relation between men’s and women’s wages achieve this end” (Webb, 1919, 306).

The endowment question is, at the same time, endorsed by Eleanore Rathbone, who succeeded Millicent Garrett Fawcett as President of the National Union of Women’s Suffrage Societies in 1919¹⁸. She gives a new focus on women’s wages in relation to the question of the endowment of motherhood and childhood”: “she denounces an income distribution system which ‘leaves it to “blind economic forces” to bring it about that the wages of men shall be sufficient for the purposes of bringing up families’” (Pujol, 1992, 77). Defining the ‘equal pay for equal work’ principle as ‘vague and ill-defined’, she proposes to calculate wages on the actual measures of the “quality and the quantity of the output” and to incorporate elements such as women’s supposed “disadvantages” to employers – like prohibition on night work, higher incidence of sickness, inability to lift weights, no swearing in women’s presence, and, above all, ‘marriage mortality’ (Rathbone, 1917, 59). But she never denied that women were generally less productive than men. Even if motherhood endowment is meant to facilitate free competition:

“the main reason for the differentiation of wages [having dependents or not] between the two sexes having disappeared, competition between them that was once free and fair would be for the first time possible, and the services of women – not only in industry, but in the house - would be remunerated on their merits” (Rathbone, 1917, 68).

Edgeworth was very articulate concerning these works on women’s wage – as he quoted them or, implicitly or explicitly, referred to them. He nevertheless built his own vision of the question, drawing out his analytical framework from an “exact utilitarianism” perspective. What is explicit in all these works is the reference to competition. It is through this lens that Edgeworth chose to analyze the woman question.

¹⁸ For the debate between Fawcett and Rathbone on the strategies for feminist agenda after the war, see Pujol, 1992, 76-84.
¹⁹ “Pioneered by Eleanor Rathbone, specified in the 1942 Beveridge Report, Family Allowances were introduced in a 1945 Act of Parliament and came into operation in 1946. It was the first time that a family received any payment for children”.
Section 2: Edgeworth’s Case Against Equal Pay

Within the profession, Edgeworth’s position is not linked to the originality of the arguments but to the consistency between mixed theoretical elements of the time and his previous and general works on “exact utilitarianism”.

Contrary to some modern opinions (Arrow, 1971, 6; Arrow, 1976, 234; Bergmann, 1971, 295), Francis Ysidro Edgeworth was not the first to study the crowding of women into some occupations, and he did not pioneer the analysis of trade unions’ discrimination, as Becker wrongly recalls (1957, 62). Nor was he a champion of women’s rights (contrary to what Bonar wrote” quoted by Pujol, 1992, 94).

Edgeworth’s 1922 paper begins with a clarification on the different notions of equal pay: “What is the criterion of that worth which governs distributio, according to which shares are to be distributed? “Pay in proportion to efficient output” the phrase used by the War Cabinet Committee on Industry, expresses the meaning approximately. By “equal efficient output” may be understood by the phrase of Dr. Bowley, “equal utility to the employer”. To the same effect, others speak of equal “productivity” or “productive value”.” (Edgeworth, 1922, 432). This clarification comes directly from Beatrice Webb’s work in the War Cabinet Committee.

The question of equal pay – “which touches not only the pocket but the home” – is framed in terms of competition between men and women:

“In short we must understand with the term “equal work” some clause importing equal freedom in the choice of work. This condition should include equal freedom to prepare for work by acquiring skill. There are thus presented two attributes: equality of the utility to the employer as tested by the pecuniary value of the result, and equality of disutility to the employee as tested by his freedom to choose his employment”. These two attributes will concur in a régime of perfect competition” (ibid., 433).

Hence the question splits into two separate interrogations: “Should there be perfect competition between the sexes?” and “What sort or amount of competition between the sexes is advisable?” (ibid., 433). The existence of the second actually ruins the suspense concerning

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20 Edgeworth was in favor of women suffrage (Bonar, 1926, 650) and, according to Bonar, “no one has described more fully and faithfully than [sic] [him] the economic position of women and [...] [no one, like him,] favoured all their claims” (ibid., 652).

21 It is worth noting that Webb rejects the so-called principle of “equal pay for equal work” precisely because of its intrinsic ambiguity, which is well emphasized by Edgeworth too.

22 “Sentiment exercises a disturbing influence - a disturbance peculiarly to be apprehended in dealing with a question which touches not only the pocket but the home [...]. The disturbing effect of sentiment or prejudice makes itself felt, at the very outset of the discussion, in the definition of the issue to be discussed. In masculine circles the question is often dismissed with the remark that the work of women never, or hardly ever, is equal to that of men” (Edgeworth, 1922, 431).

23 He also proposes alternative meanings and a prejudiced interpretation: “If equal pay work is interpreted as equal disutility, in the sense of fatigue or privation of amenity, then equal pay may be interpreted equal satisfaction obtained from earnings. Equality in this sense is not always predicable of equal external perquisites. It is conceivable, for instance, that a gaudy livery might in general have more attraction for one sex than for the other” (Edgeworth, 1922, 434). This sentence, in a late Victorian context characterized by the “Great male renunciation” (Flügel, 1930), refers to the alleged frivolity of women for shiny clothing. Two centuries earlier, it would have referred to men (see Bourke, 1996).
the answer of the first one... Meanwhile reaffirming his commitment to “the system of natural liberty” and gives three arguments against competition between men and women: (1) the risk of a “degradation of labour”, (3) the differences between men and women and (3) the “men-having-dependents” hypothesis.

Argument 1: A Risk Of “Degradation Of Labour”

The first argument is a general one against competition itself: “So it may happen that the unrestricted play of competition between short-sighted, self-interested employers and desperately poor workers, though securing a temporary maximum of production, may bring about that degradation of labour which the warmest champions of competition have apprehended; notably Francis Walker” (Edgeworth, 1922, 435, his emphasis). Edgeworth borrows this notion from Alfred Marshall and develops an argumentation in favor of intervention (mainly through legislation) on the labour market, to prevent the “debâcle of industry”: “On purely economic grounds, apart from humanitarian sentiment or Socialist bias, it seems that in certain cases the community may with advantage interpose to regulate the labour market. From such regulation female labour could claim no exemption; rather the depression or debâcle of industry that is apprehended would be aggravated by the competition of women” (ibid., 436).

Three arguments are developed to support this idea of “degradation of labour”: (1) “First, the minimum of requirements for efficiency, of actual as distinct from conventional necessaries, is less for a woman than a man (in a ratio of 4:5 according to Rowntree); (2) Secondly, wives and daughters are apt to be subsidized”. (3) “Last, and not least, the woman worker has not acquired by custom and tradition the same unwillingness to work for less than will support a

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24 “To the question, whether competition between the sexes should be restricted, it may seem sufficient to reply that competition between all classes should be unrestricted” (Edgeworth, 1922, 433).

25 This exception to the more efficient rule is analogous to the existence of discrimination in the legal system: “Consider [...] the dictum that ‘our laws taken as a whole are more merciful to women than to men, and are more mercifully administered’. If this discrimination is generally approved, there may be presumed a predisposition to admit a similar discrimination with respect to the laws of political economy. But the tendency is held in check by the supposed rigidity of those laws, by the conception of competition as necessary and beneficent. It is, therefore, not without consequence to point out that some discrimination of the slight yet appreciable degree which is admitted in the sphere of law is possible in the sphere of industry” (Edgeworth, 1923, 491-492).

26 Marshall’s position on women is based on the Victorian credo of biological inferiority of women and on the complementary (and separate) role of the sexes. The maximization of utility requires a sexual division of labour. Marshall develops a notion of differentiated human capital in relation to a renewed conception of the “separate sphere”: altruistic behavior characterized women’s motivation while egotist behavior characterized men’s motivation (see Charles and Le Bouteillec, 2007, 21-24: "Concern for the practice of family duties was the ground of Marshall's opposition to the granting of degrees to women. (...) It was not only in the matter of Education that Marshall deprecated the identical treatment of men and women. In the most intimate of the talks which I have with him he expressed himself as opposed to current ideas which made fro shaping the lives of men and women on the same model. In this connection he expressed strong dissent from some of Mill's utterances. The tenor of his objection was similar to Leslie Stephen's criticisms of Mill's view on the 'rights of women', Mill's treatment of sex as an 'accident'. Some loss of individual liberty, Marshall thought, should be risked for the sake of preserving the family. He regarded the family as a cathedral, something more sacred than the component parts. If I might complete the metaphor in my own words so as to convey the impression which I received; whereas the structure as it stands is not perfectly symmetrical, the attempt to make it so might result in pulling it down'. On the influence of Marshall on Edgeworth, see Keynes, 1926, 144.
family, the same determination to stand out against a reduction of wages below the standard (ibid., 436). This “degradation” implies a degradation of the work itself and a decrease in wages.

It is interesting to remark how, again, Edgeworth reaffirms both the general case of wage determination at its marginal productivity (here, quoting Pigou), and the specific case for women: wage determined conventionally, according to standard of living, resulting from bargaining, etc. Because of this risk of “degradation”, no perfect competition is advocated between men and women. And trade unions’ discrimination is described as a means to prevent this armful competition.

Edgeworth relies on the crowding hypothesis to explain low women’s wages in some occupation by the action of trade unions: “Men, being generally better organized than women, have exercised an asymmetrical pressure on the employer to their own advantage” (ibid., 438), using here Millicent Fawcett on printing trade (Fawcett, 1892). But men’s advantages seem to be identical to the general interest of the nation: “It should be remembered, however, that many of the prohibitions and prejudices here mentioned as contravening free competition were adapted to avert that catastrophic competition which we here conveniently suppose to be excluded” (Edgeworth, 1922, 440). In other words, the argument deals with the dangers of substituting women to men in some branches of the industry: “those barriers against the entrance of women workers into certain occupations which are the main cause of different remuneration for the same effort appear to subserve the purpose of preventing the débâcle, ultimately ruinous alike to wealth and family life, which the hasty substitution of low-paid female operatives for well-paid men threatens to bring about” (Edgeworth, 1923, 494).

To counteract undue pressures, women must organize themselves in trade unions: “The oppressive action of male unions should be counteracted by pressure on the part of women workers acting in concert” (Edgeworth, 1922, 441). The resulting arrangement cannot, however, be equal pay between men and women: “Probably an arrangement that the weekly earnings of women should be the same as those of men, in cases where the actual value of a woman as a worker was about 30 per cent. below that of an average man employed in the same capacity […] could not be maintained without tyranny on a Russian scale” (ibid., 441). He adds that women who enter an occupation and do not have the skills should exit from this occupation.

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27 This last argument is similar to the “low wage races” notion developed in the United States by the Wilcox School concerning the natural predisposition of some groups to accept low wages (see Darity, 1994).

28 “The pressure of male trade unions appears to be largely responsible for that crowding of women into a comparatively few occupations, which is universally recognized as a main factor in the depression of their wages. Such crowding is prima facie a flagrant violation of that free competition which results in maximum production and in distribution of the kind here defined as equal pay for equal work. The exclusion of women from the better-paid branches of industry may be effected less openly than by a direct veto, such as the “No female allowed” in the rules of an archaic society (Industrial Democracy). Withholding facilities for the acquisition of skilled trades comes to much the same as direct prohibition. A striking instance is mentioned by Mrs. Fawcett with reference to the allegation that women are unable to “tune” or “set” the machines on which they work. They were never given the opportunity of learning how to perform these operations (Economic Journal, 1918, 4)” (Edgeworth, 1922, 439).

29 “Exclusion may also be effected by regulating that women entering an industry should conform in every particular to arrangements which are especially suited to male workers. Of such rules Mrs. Fawcett has well written: “to encourage women under all circumstances to claim the same wages for the same work would be to exclude from work altogether all those women who were industrially less efficient than men. A woman who was less capable of prolonged physical toil, who was less adaptive and versatile than average man, would be forbidden to accept wages which recognised these facts of her industrial existence” Fawcett 1894, 366 (Edgeworth, 1922, 439-440).
Argument 2: The Intrinsic Differences Between Men and Women

After carefully specifying “two opposite misconceptions” – “the one exaggerating the comparative efficiency of men, the other that of women” –, Edgeworth develops the reasons against equal pay which relates to intrinsic differences between men and women.

The first set of differences concerns permanent differentials in physical strength. Even if “work can be defined in such precise and neuter terms that it makes no difference to the employer whether a unit of work is performed by a man or a woman”, “I submit it as an inference based on general impressions and ordinary experience that, even if all restriction of the competition between male and female workers were removed, we should still find the average weekly earnings of the former to be considerably higher” (Edgeworth, 1922, 442-443).

The second set of difference concerns the alleged “changeable” character of women toward work:

“But in the present state of things it will often be within the knowledge of the employer that it is more profitable to employ a man than a woman, although the work performed by each is identical so far as it can be defined by the most exact rate. For a woman, unlike a man, is “liable to go off and get married just as she is beginning to be of some use”, as a candid champion of equal pay has observed (Eleanore Rathbone, Economic Journal, 1917, 59)”.

This view is a modern expression of the Victorian (or American “progressives”) argument on “Women’s employment [being] a misfortune or a temporary occupation before marriage” (Gordon 1992, 47, quoted by Leonard, 2005, 770). In consequence of that “changeability”, a reduction of women’s wage in proportion is not in contradiction with the equal pay principle according to Beatrice Webb (1919), but also to Fawcett, and Rathbone. Edgeworth then adopts Webb’s conception of an “occupational wage”:

“Altogether it would seem better to proceed on the lines of Mrs. Sidney Webb’s “occupational rate”, rather than on the plan recommended by the majority of the Committee. Instead of fixing two rates, 

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30 The first exaggeration is countenanced by Plato when, notwithstanding his admission of women to the highest posts in his Republic, he yet holds that they are inferior to men in all the arts. Even in those arts in which they might be expected to excel, such as weaving and cookery, he seems to say that they are beaten by men. In the modern world, however, it appears that women excel in certain branches of the textile art. [...] Superiority is claimed for them, too, in typewriting and in telephoning. As nursery-maids they are certainly more efficient. The opposite exaggeration is committed by feminists when they maintain, in the words of a generally impartial expert that “there is no reason save custom and lack of organization why a nursery-maid should be paid less than a coal-miner.” (Edgeworth, 1922, 442).

31 “If in the course of evolution the female sex became as strong as the male, if in the progress of practical science muscular strength became less and less in demand, the average [weekly earnings of women] might no longer be less than the average of [men]. Again, a conceivable change in desiderata would affect the truth of our representation; for instance, if typewriting, telephoning and the like became more in demand than coal-mining and ironworks. Again, if the vast amount of household work that is now unpaid could only be obtained by paying for it, the demand for woman’s (women’s) labour and its price might be considerably raised. [...] The changes, however, do not appear very imminent.” (Edgeworth, 1922, 444).

32 “Such an adjustment seems to carry out the recommendations of the (majority of the) War Cabinet Committee when they contemplate “a fixed sum to be deducted from the man’s rate” corresponding to the “lower value of the woman’s work”, if proved by the employer (par. 10 (5), p. 4). The adjustment would be in accordance with the definition of equal pay for equal work given by those who are best qualified to interpret the claim: “Any permanent disadvantage that adheres to women workers as such should be allowed for by a pro rata reduction in their standard rates” (Mrs. Fawcett, citing Miss Eleanor Rathbone, Economic Journal, 1918, p. 3)”. (Edgeworth, 1922, 445).
and $i'$, let us fix (for the defined unit of work) a single rate for men and women alike, say $i''$, less than $i$, which would have been the rate in the absence of “secondary” differences. The readjustment will result in a redistribution of male and female work” (Edgeworth, 1922, 445-446).

He adds that women are not “multi-skilled”: “Again, a woman is generally less useful in an emergency. As a witness before the Committee on the Employment of Women put it, “A woman punching a ticket may appear equal to a man, but she is not so useful in case of a breakdown or runaway” (ibid., 444). Intrinsic differences between men and women remain central to explain the non-substitutability of men and women’s work: “If teaching were an art as mechanical as turning a prayer-wheel, then (apart from secondary differences) it would be unreasonable that men should be paid more than women for the same operation. But suppose that the presence and influence of a master, say in dealing with the bigger boys, is something different from that of a mistress, and that it is considered indispensible it is not unreasonable (in a regime of pure economics) that the desired article should be purchased at the market price” (ibid., 446). Different types of work, as different commodities should receive different prices, according to the supply and demand laws. Using comparisons between a “steel knife” and a “silver blade” and between a “cab-horse” and a “high-stepping thoroughbred””, Edgeworth stresses the differences between “the case of the schoolmistress and the case of the Mrs. Jones, whose grievance is recorded by Mrs. Fawcett” (ibid., 447). The case refers to a widow replacing “her own work as his to the firm of outfitters which employed him to braid tunics”: “When, however, it became quite clear, John Jones being dead and buried, that it could not be his work [...] the price paid for it by the firm was immediately reduced to two-thirds of the price paid when it was supposed to be her husband’s” (Fawcett, 1918, 1). In this obvious case, Edgeworth concludes: “Here, in the absence of tertiary (and presumably also secondary) differences, the differentiation of price was certainly contrary to the principle of equal pay for equal work” (Edgeworth, 1922, 447).

**Argument 3: The “Men Having Dependent” Hypothesis**

But a more definitive argument plays against the equal pay principle: “The presumption in favour of free competition and the methods of putting it in practice require[s] to be reconsidered when we restore the abstracted circumstances of family life. We now encounter the dominant fact that men very generally out of their earnings support a wife and family” (Edgeworth, 1922, 448). As Pujol puts it, “as he drops his earlier ‘abstraction’ from the ‘circumstance of family life’ [...] his analytical framework switches abruptly from one based on marginal productivity wages to one based on subsistence wages” (Pujol, 1992, 101). The argumentation switches from discussion on theoretical aspect of competition to inferences based on “general impressions and ordinary experience” (Edgeworth, 1922, 442) and “authoritative expression of belief” (ibid., 448).

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“A steel knife is a more useful implement for general purposes than a silver blade. But if silver is required to preserve the flavour of dessert, the epicure must pay for the metal which has the greater value in exchange. A good cab-horse may, for all that I know, draw a vehicle as well as a high-stepping thoroughbred. But if for purposes of state and show the high-paced animal is required, high prices must be paid for the high paces. The distinction, it will be noticed, turns upon the nature and presence of the horse. If for the carriage of parcels one kind of horse was as efficient as the other, then, indeed, a carrier who charged a higher price for the delivery of parcels because he employed a particular breed of horse could only maintain this differential charge through a, presumably noxious, monopoly” (Edgeworth, 1922, 447).
In his 1923 article, Edgeworth also argues against the equal pay position, here exemplified by the Australian feminist writer Olive Schreiner. “The case for equal pay is not so strong as it has been represented by ardent champions of woman’s rights, Olive Schreiner for example in passages like the following: “The fact that for equal work equally well performed by a man and a woman it is ordained that the woman on the ground of her sex alone shall receive a less recompense is the nearest approach to a wilful and unqualified ‘wrong’ in the whole relations of women to Society to-day. . . . That males of enlightenment and equity can for an hour tolerate the existence of this inequality has seemed to me always incomprehensible.” (Edgeworth, 1923, 493). The argument deals with the compensation of one “wrong” – an “infraction” to *laissez-faire* - by another “wrong” – the compensation of the deductions men suffer from supporting their families. “There is certainly a “wrong” of the kind which consists in the infraction of *laissez-faire*. But it is not ‘unqualified’ in so far as it is calculated to correct another sort of wrong. If with equal pay for equal work one of the parties is to be subject to unequal deductions from his pay; it seems not unreasonable that the said party should have some advantage in the Labour Market.” (ibid., 493).

The “men-having-dependent”-argument is justified by “authoritative expressions of belief” and common sense prejudices.

“It is normal for men to marry and to have to support families. . . . It is not normal for women to have to support dependents” (Seebohm Rowntree, *Human Needs*, p. 115). These words express a very general belief and sentiment. It is a norm accepted throughout the civilised world. It is embodied in the Australian determinations of minimum wage, one of which, by Judge Higgins, has been above cited (12). Another Australian Judge rules: “the man, and not the woman, is typically the breadwinner of the family” (South Australian Industrial Reports, Vol. II. 1918-19). Justice Jethro Brown grounds an award on “the traditional social structure which imposes on men the duty of maintaining the household”. So Professor Taussig, “For a man wages must normally be enough to enable a family to be supported and reared. The great majority of working women are not in this case” (Principles, ch. 47, s. 9, vol. ii. p. 144). It cannot be supposed that these authoritative expressions of belief have no correspondence with reality. Indeed, the wiser and more moderate advocates of equal pay for women admit it to be “unlikely that any large proportion of married women will aim at earning their own living as the norm or standard” (Miss B. L. Hutchins, *Conflicting Ideals*, p. 63). Even Mill admits that “in an otherwise just state of things it is not . . . a desirable custom that the wife should contribute by her labour to the income of the family . . . the actual exercise in a habitual or systematic manner of outdoor occupations, or such as cannot be carried on at home, would . . . be practically interdicted to the greater number of married women” (Subjection of Women, pp. 88-89). Does it not follow that the husband must support the family, so far as he is not assisted by contributions from adult children or the occasional-not “systematic” work of the wife?” (Edgeworth, 1922, 448)

He rejects the counter arguments developed by Fawcett, supported by the Fabian Society statistics: women do not have dependents and when they have, these dependences cannot be

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*See Schreiner, 1911.

*This hypothesis has an old legacy in Greek and Roman thought (Rendall, 1999) and is very clearly described by James Mill: “One thing is pretty clear, that all those individuals whose interests are indisputably included in those of other individuals, may be struck off without inconvenience. In this light may be viewed all children, up to a certain age, whose interests are involved in those of their parents. In this light also, women may be regarded, the interest of almost all of whom is involved, either in that of their fathers or in that of their husbands” (James Mill, 1828, 21).
compared to men’s ones\textsuperscript{36}. The general argument follows: “If the bulk of working men support families, and the bulk of working women do not, it seems not unreasonable that the men should have some advantage in the labour market. Equal pay for equal work, when one party is subject to unequal deductions from his pay, no longer appears quite equitable” (\textit{ibid.}, 449).

The solution proposed to this distortion of competition in the literature at the time is an “endowment of motherhood” or “endowment for children maintenance” (this, quoting Eleanore Rathbone’s 1917 paper on the “remuneration of Women’s services”). The “purpose of the scheme” is summarized by quoting the report of the Family Endowment Committee, formed in 1917 after the suggestion of Miss Rathbone: the objective is to secure “that within each class of income the man with a family should not be in a worse position financially because he has a family than the single man in that class” (Edgeworth, 1922, 450). The main advantage – no more excuse of dependency to lower women’s wages\textsuperscript{37} – “would not suffice to remove the danger” of the “tendency to the degradation of labour” (\textit{ibid.}, 451). Essentially because of the special nature of woman’s work: “The transitory and episodical character of female labour would still threaten male wages” (\textit{ibid.}, 451). The problem of incentives to work for men (“when wives earn, husbands idle”) and the question of the quantity and quality of the population are also considered as consequences to this measure\textsuperscript{38}. Therefore the “endowment of motherhood on a large scale by the State is not included” as a proposition, Edgeworth favors a private fund solution\textsuperscript{39} (\textit{ibid.}, 457).

\textsuperscript{36} “It has been sought to evade this stubborn fact by the contention that the occupied single woman is responsible for the support of as many dependents as the man. On the strength of an investigation conducted by the Fabian Research Committee it is maintained that “two-thirds of the wage-earning women are not only entirely self-supporting, but have others to maintain besides themselves”. But grave doubts are thrown upon these figures by the more elaborate investigation which Mr. Seebohm Rowntree has recently conducted. He finds from an extensive observation of samples that “only 12\textperthousand per cent. of women have either partially or entirely to support others beside themselves” (\textit{Responsibility of Women Workers}, p. 36). [...] For the figure has not the same significance as that which relates to the dependents of the male wage-earners. The sustentation of the old and infirm cannot be compared, as regards at least economic importance, with the support of the young, the cost of which normally falls on the male breadwinner” (Edgeworth, 1922, 449).

\textsuperscript{37} The argument is also exposed in the 1923 paper: “It will be remembered that the presumption in favour of equal pay to men and women encountered the objection that the bulk of men are subject to a charge from which the bulk of women are exempt, the support of families [...] This circumstance much weakens the force of appeals to the justice which is inherent in laissez-faire, the ‘system of natural liberty’” (Edgeworth, 1923, 493).

\textsuperscript{38} “One main advantage is thus stated in the Endowment Report: “When the national endowment of mothers and children becomes an accomplished fact this excuse for the under-payment of women (that men have families to keep) will no longer hold good, and women will be free to claim-and men to concede to them-whatever position in industry their faculties fit them for, at a wage based on the work they do, and not on their supposed necessities” (p. 18)” (Edgeworth, 1922, 450-451)

\textsuperscript{39} “The increase of population might be welcomed if it consisted of the higher types. But in the current proposals one sees no security for the improvement of the race” (Edgeworth, 1922, 454).

\textsuperscript{40} “But if equality of provision for children within each class is sincerely desired - without the arrière pensée of equalising the incomes of different classes - a simpler plan is suggested. It is open to any association of men - a trade union, for example to resolve that each member of the association should contribute a quota of his earnings towards the formation of a fund which is to be distributed among the wives of members in accordance with the size of their families. This plan would be much less open to the objections above enumerated than the endowment of motherhood by the State. It would not disturb the labour market or the financial system. It would not require legislation. Persuasion would suffice. Those who believe that such equalisation is desirable, and that there is a chance of its being accepted, should start a campaign of argument and exhortation. Bachelors and childless husbands should be persuaded to support a fund by which they may hope one day themselves to benefit as future
The proposition had been discussed in the 1922 article. In the 1923 paper, Edgeworth revisits some of the arguments of the discussion. Among them, the question of the impact on the evolution of the quantity and quality of the population: “Consideration for the quantity and quality of population cannot be counted on. Nor, even if it could be, would it secure the wealth and welfare of a people dependent on the State for the support of families. It is a fearfully rash assumption that, because each man now generally works hard for the sake of his own wife and children, all men will work equally hard for all wives and children collectively.” (Edgeworth, 1923, 494) And he continues with a severe criticism of the “idealist” views on the subject. “The Swedish sentimentalist, Ellen Key, for instance, expects that when a ‘profounder culture’ becomes prevalent ‘it will seem as natural for society to maintain its women as it was natural to maintain its army and navy’. They will receive a ‘subsidy from the community for the bringing up of children’, ‘the economic appreciation of her (their) domestic work’. They will thus be free to cultivate a ‘soulful sensuousness or sensuous soulfulness’; in accordance with ‘a new morality’.” (ibid., 495). To sum up, this thought lead him to dismiss the equal pay thesis: “Accordingly the case for unrestricted competition, without any provision for the endowment of families, is not so strong as it has been represented by advocates of equal pay.” (ibid., 494).

A thesis which leads Edgeworth to comment on the fact that “conditions of wealth and economic welfare are not considered by reformers intent upon some object of a higher or at least a different order” (ibid., 495).

Section 3: Economic Welfare and The “Hedonical Calculus”

In the second paper devoted to women’s wages, also published in the Economic Journal, Edgeworth re-examines the question from a different perspective: the prospect of “economic welfare”.

“A PRECEDING inquiry was directed to the question what relation between the wages of men and women is most conducive to production of wealth in the narrower sense of that term. In this sequel there is substituted for wealth a higher aim, economic welfare.” (Edgeworth, 1923, 487, capitals in the original text)

The theoretical background of this address read in 1923 before Section F of the British Association for the Advancement of Science comes directly from his previous theoretical work: New and Old Methods of Ethics, “The Hedonical Calculus “ and Mathematical Psychics. The object of the analytical construction he had exposed forty years earlier was twofold: “Economics” and “Utilitarian Ethics””. Two “distinctive feature[s] of welfare” are re-exposed in the 1923 paper. One regards the assumption of a possible comparison and addition between fathers of families” (Edgeworth, 1922, 457). It is noteworthy to remark that Edgeworth considers that these “subsidies” should be directly handed to “the mother”: “If there could be a doubt whether, in case of a money subsidy being granted, it should be paid into the hands of the mother, the preceding considerations would be decisive in her favour” (Edgeworth, 1923, 494).

“The Economical calculus investigates the equilibrium of a system of hedonic forces each tending to maximum individual utility; the Utilitarian calculus, the equilibrium of a system in which each and all tend to maximum universal utility” (Edgeworth, 1881: 15-16).
personal “satisfactions”; the other regards the assumption that individuals are both characterized by different capacities of enjoyment, and pleasures, and by different capacities of enduring fatigue at work.

The first assumption has become classical42: if every agent - every “sentient” - can perceive a basic unit of pleasure, it would be possible both to sum up all the units of pleasure perceived by the same individual to measure his or her total pleasure, and to sum up the pleasure of different individuals in a given, society:

“Pleasure is measurable, and all pleasure are commensurable; so much of one sort of pleasure felt by one sentient being equateable to so much of other sorts of pleasure felt by other sentients.” (Edgeworth, 1879, 396)

Hence the position held in the 1923 article:

“A distinctive feature of welfare which especially concerns us here is the postulate that the satisfactions felt by different persons admit of comparison. It thus becomes possible to consider the aggregate economic welfare of a community as the sum of satisfactions enjoyed by the individual members. (Edgeworth, 1923, 487)

The nature of this community, both as an ethnic group defined by its position within the evolution of humanity throughout the ages and as a social class, is made precise in New and Old Methods of Ethics:

“With regard to the theory of distribution, there is no indication that, at any rate between classes so nearly in the same order of evolution as the modern Aryan races, a law of distribution other than equality is to be wished. The more highly evolved class is to be privileged when there is a great interval, as there is between man and ape, as there may have been between the ranks and races of the ancient world” (Edgeworth, 1877:78).

The second assumption forms the theoretical core of “The Hedonical Calculus” and hence of the central part of Mathematical Psychics.43 It assumes that neither as “pleasure machines” nor as working bodies are individuals equal: they differ (1) in respect to their global capacity for happiness, (2) in respect to their threshold of sensitivity to pleasure and (3) in respect to their capacity of enduring fatigue. As a consequence, egalitarianism could not be soundly defended from the perspective of aggregate utilities or of social welfare:

“For, if sentients differ in Capacity for happiness - under similar circumstances some classes of sentients experiencing on an average more pleasure (e.g. of imagination and sympathy) and less pain (e.g. of fatigue) than others - there is no presumption that equality of circumstances is the most felicific arrangement [...].” (Edgeworth, 1881, vii, emphasis in the original)

This strong dismissal of egalitarianism44 is depicted as the deductive result of “mathematical reasonings”:

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* And has also become the object of innumerable discussions from the end of the 19th century until the 1950s.
* In the section entitled “The Utilitarian Calculus”: Edgeworth, 1881, 56-82.
* See the demonstration given by Edgeworth in footnote 2, p. 489 of the 1923 article:

  “Let X be the amount of work to be done by the average man, and x the corresponding task of the woman; where X + x is given, the numbers of the sexes being supposed equal. Let F(X) represent the disutility experienced by the average man doing the amount of work denoted by X; where F'(X) and F''(X) are both continually positive. And let f(x) likewise represent the analogous subjective quantity for the woman. Then the sum-total of disutility, F(X) + f(x) is to be a minimum; subject to the condition that X + x = constant. Whence F'(X) = f'(x). Now let it be granted that for any quantity z (of the order of the quantities X and x with which we have to do), f(z) > F(z), and also f(z) - F(z)
“Mathematical reasonings are employed partly to confirm Mr. Sidgwick’s proof that Greatest Happiness is the end of right action; partly to deduce middle axioms, means conducive to that end. This deduction is of a very abstract, perhaps only negative, character; negativing the assumption that Equality is necessarily implied in Utilitarianism. “(ibid., vii, emphasis in the original)

Thus the role attributed by Edgeworth to the method of “hedonimetry”: to measure and prove that individuals - or groups, or couples45 - who are more apt to enjoy higher pleasures (or affection or virtues) tend to have a greater capacity for happiness; whereas individuals who can perform the same amount of labour and suffer less fatigue enjoy a marginal disutility of labour which decreases when the quantity of work increases:

“An individual has greater capacity for happiness than another, when for the same amount whatsoever of means he obtains a greater amount of pleasure, and also for the same increment (to the same amount) whatsoever of means a greater increment of pleasure.” (Edgeworth, 1881, 57)

“An individual has more capacity for work than another, when for the same amount whatsoever of work done he incurs a less amount of fatigue, and also for the same increment (to the same amount) whatsoever of work a less increment of fatigue.” (ibid., 59)

The consequence on the normative definition of social rules of distribution is double folded. On the one hand, if the rate of increase of a pleasure decreases as its means gradually increase, “the distribution of means as between the equally capable of pleasure is equality; and generally is such that the more capable of pleasure shall have more means and more pleasures.” (Edgeworth, 1881, 64, emphasis in the original). On the other hand, “by a parity of reason”, if “the rate of increase of fatigue increases as the work done increases […] who shall do the first increment of work? Of course one of the most capable of work.” Hence, “the distribution of labour as between the equally capable of work is equality, and generally is such that the more capable of work shall do more work - so much more work, as to suffer more fatigue.” (ibid., 61 and 66, emphasis in the original)

Finally, the two postulates mixed together give a simple clue to the maximisation of social welfare:

“In fact, the happiness of some of the lower classes may be sacrificed to that of the higher classes. And […] the happiness of part of the second generation may be sacrificed to that of the succeeding generations.” (ibid., 1881, 74)

These theoretical considerations give Edgeworth new perspectives on the status of women, organized in a twofold advocacy: (1) the consideration of a difference in capacities (for pleasure as well as for work) between men and women; (2) an emphasis put on some of the “privileges” received by women, either linked to “luxuries”, or to “gallantry”.

The Status Of Women 1. The “Aristocracy of Sex”

These differences in capacities - in capacities for happiness or in capacities for work, characterize in the same manner the difference between men and animals, the difference

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\text{continually increasing} \quad f'(z) > F'(z). \text{ Then when } F'(X) = f'(x), X \text{ must be greater than } x.\] (Edgeworth, 1923, 489)

45 Individuals, or groups, or couples : « the unit distributee is often a group (e.g., a married couple, in respect of their common ménage). The conclusions may be affected, in so far as the most capable groups are made up of individuals not most capable as individuals.” (Edgeworth, 1881, 65, emphasis in the original)
between “races”, the difference between old age and youth, and, finally, the difference between men and women:

“First, then, it may be admitted that there is a difference with respect to the capacity for happiness between man and the more lowly evolved animals; and that therefore - among or above other considerations - the interests of the lower creation are neglectible in comparison with humanity, the privilege of man is justified. […] Again, it may be admitted that there are differences of capacity for work, corresponding, for example, to differences of age, of sex, and, as statistics about wages prove, of race.” (Edgeworth, 1881, 130-131)

Moreover, these differences in capacities logically lead, for Edgeworth, to what he names “a deeper sentiment in favour of aristocratical privilege”:

“Equality is not the whole of distributive justice. There may be needed an ἀξία [value] for unequal distribution. […] in the minds of many good men among the moderns and the wisest of the ancients, there appears a deeper sentiment in favour of aristocratical privilege - the privilege of man above brute, of civilised above savage, of birth, of talent, and of the male sex. This sentiment of right has a ground of utilitarianism in supposed differences of capacity.” (ibid., 77, emphasis in the original, our translation of ἀξία, ALC, CCZ)

The argument is repeated in this often-quoted section on the “aristocracy of sex” 46:

“Capacity for pleasure is a property of evolution, an essential attribute of civilisation. The grace of life, the charm of courtesy and courage, which once at least distinguished rank, rank not unreasonably received the means to enjoy and to transmit. To lower classes was assigned the work of which they seemed most capable; the work of the higher classes being different in kind was not to be equated in severity. If we suppose that capacity for pleasure is an attribute of skill and talent; if we consider that production is an unsymmetrical function of manual and scientific labour; we may see a reason deeper than Economics may afford for the larger pay, though often more agreeable work, of the aristocracy of skill and talent. The aristocracy of sex is similarly grounded upon the supposed superior capacity of the man for happiness, for the energeia of action and contemplation; upon the sentiment-

Woman is the lesser man, and her passion unto mine
Are as moonlight unto sunlight and as water unto wine.” 47

(Edgeworth, 1881, 66, italics in the original)

The Status Of Women 2. On Women’s “Privileges”

Although, this “supposed inferior capacity for happiness” and “for the energeia of action and contemplation” of women could be “compensated” by “a special capacity” for “particular emotions”, linked to “certain kinds of beauty or refinement” (ibid., 1881, 78).

Thus, Edgeworth considers that women may receive some means in terms of luxuries which

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46 It is this passage that Keynes chose to quote in his Obituaries, as an illustration of the idea that “the problem of the inequality between men’s and women’s wages interested him all his life”, together with this comment: “but who in space and time but Edgeworth in the ’eighties, whose sly chuckles one can almost hear as one reads, would treat it thus” (Keynes, 1926, 146).

47 From ‘Locksley Hall’, a poem written by Alfred Tennyson in 1835 and published in his 1842 volume of Poems. V.149-152:

“Weakness to be wroth with weakness! woman's pleasure, woman's pain
Nature made them blinder motions bounded in a shallower brain:
Woman is the lesser man, and all thy passions, match'd with mine,
Are as moonlight unto sunlight, and as water unto wine”.

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men do not receive; and may also be exempted from some of the harder tasks of labour:

"Agreeably to such finer sense of beauty the modern lady has received a larger share of certain means, certain luxuries and attentions [...]. But gallantry, that 'mixed sentiment which took its rise in the ancient chivalry,' has many other elements. It is explained by the polite Hume as attention to the weak: and by the passionate Rousseau φυσικότερος (phusikoteros)... Now attention to the weaker sex, and woman's right not only to certain attentions in polite society but to some exemption from the harder work of life, are agreeable to the utilitarian theory: that the stronger should not only do more work, but do so much more work as to suffer more fatigue where fatigue must be suffered. [...] Altogether, account being taken of existing, whether true or false, opinions about the nature of woman, there appears a nice consilience between the deductions from the utilitarian principle and the disabilities and privileges which hedge round modern womanhood." (ibid., 1881, 78-790 the reference of the locution "mixed sentiment" is to Burke)

Three other considerations may be added to Edgeworth's observations on the "existing, whether true or false, opinions about the nature of woman". One concerns the competition within the same sex, one concerns the effect on the future of the "race", the last one concerns the role of the family.

(1). Concerning the competition within the same sex, Edgeworth's position rests upon two arguments: the assumption of "wanting a natural instinct predisposing to the duties of benevolence" and the assumption of "wanting [...] a fixed criterion of strength to fix the associations of duty". Hence his remark on the open character of competition between women - a competition which he also described as "obviously useful to the race".

"It may be objected: consideration should equally be due from the stronger to the weaker members of the same sex. But in the latter case there is wanting a natural instinct predisposing to the duties of benevolence; there has been wanting also a fixed criterion of strength to fix the associations of duty; and, lastly, competition has interfered, while competition between man and woman has been much less open (and much less obviously useful to the race)." (ibid., 74)

(2). This "obviously usefulness" of competition between women to the future of the race is directly related to Edgeworth's position on the correlation between four elements: the capacity for pleasure and the capacity for work, both positively related to the "evolution" of the "race", the quality of the population, and the quantity of means of education.

"[C]apacity for pleasure and capacity for work generally speaking go together; that they both rise with evolution. The quality of the population should be the highest possible evolution [...] To advance the whole population by any the same degree of evolution is then desirable; but it is probably not the most desirable application, given quantity of a of means of education. For it is probable that the highest in the order of evolution are most capable of education and improvement. In the general advance the most advanced should advance most." (ibid., 74, emphasis in the original)

(3). Hence the role of women within the family, as playing a central role in "educational influences" for the "better-born":

"Utilitarian also is the custom of family life, among other reasons, in so far as (contrasted with communistic education) it secures for the better-born better educational influences; in particular a larger share of good society in early life. The universal principle of the struggle for life, as Mr. Barratt may suggest, conduces to Utilitarian selection. This being borne in mind, there appears a general correspondence between the population theory above deduced and the current ethics of marriage, which impose only a precedent condition, success, hereditary or personal, in the struggle for life. Concerning the classification of future society, common sense anticipates no utopia of equality. Physical privations are pitted; the existence of a subordinate and less fortunate class does not seem
to accuse the bounty of Providence. With the silence of common sense accords the uncertain sound of exact Utilitarianism.” (ibid., 75)

This close relation between the lessons from “exact utilitarianism”, “common sense” and radical social Darwinism gives its epistemic status to Edgeworth’s definition of economic welfare as related to a “general consent” about “material prosperity”, wealth and, thus, about “the measuring rod of money”:

“Welfare is related to wealth as inward feeling to outward means. Economic welfare is distinguished from other kinds of happiness in that it depends more on external means, enters easily into relation with the measuring rod of money, as Professor Pigou defines” (Edgeworth, 1923, 487).

As opposed to morals, ethics or politics (including chivalry), economic welfare is thence supposed to be an object general consensus – or an object of “positive science”.

“As a property of this essential difference it seems that propositions respecting economic welfare possess one characteristic of positive science, general consent, in a greater degree than beliefs concerning higher kinds of well-being. There is more agreement about the conditions of material prosperity than about the first principles of ethics and politics. “(ibid., 487)

The argument becomes even stronger when Edgeworth considers that a maximisation of economic welfare could imply a difference both in the quantity of work supplied by men and women and in its remuneration.

“It would seem to follow [the supposition that, if imposts were exacted in the form of work, more would be expected from the more powerful man] that if one class is less capable of work than another, but equally capable of enjoyment, the former class shall do less work, but enjoy equal remuneration.” (ibid., 488)

This general, theoretical and “impracticable” thesis could in principle be applied to the differences between men and women: “of course such an arrangement would be impracticable. The numbers of the less capable class would increase to the detriment of production. The survival of the inefficient would be encouraged. These results would not equally follow if the privileged class consisted of the weaker sex. Prima facie the case would resemble one just now instanced in that first principles spring into action, counteracting considerations being withdrawn.” (ibid., 488)

Conclusion. When Calculus Meets and Replaces Chivalry
Rejecting the solution consisting in distributing the work according to the comparative fatigue between men and women as “socialistic”, Edgeworth would rather rely on “the forces of competition”:

“It is supposed that the forces of competition can only be slightly modified by combination. It is not proposed to defy the ruling of competition. But, as pointed out before [in the 1922 article], the determinations effected by competition are often not minutely graduated. It is as if the integers of economic quantities that are in dispute were determined by the play of competition; while the fractions are left to be settled by collective bargaining and utilitarian considerations [...] Even as regards the integers, if one or two units are changed in the interest of one set of workers, no appreciable economic loss to the community is to be apprehended.” (Edgeworth, 1923, 489-490, italics in the original)

The argument stands on a strict marginalist logic:
“For the economic equilibrium which is determined by competition—may be considered as realising the maximum of advantage (attainable in the existing state of things). So by the theory of maxima a slight modification of the arrangements which secure maximum advantage will be attended with only a very slight diminution of the total advantage [...]. There would not be an appreciable loss in globo, but a transference conducive to economic welfare.” (ibid., 490, emphasis in the original)

Hence Edgeworth’s advocacy in favour of these “slight modifications” and in favour of “increased facilities” for women’s work:

“But the gain to the women-workers would not always involve an equal loss to the men. For many of the concessions demanded would consist of increased facilities for work; and so would result in an increase of the wealth to be distributed [...]. The war has shown that there is much room for improvement in this direction.” (ibid., 490)

In accordance with Francis Amasa Walker’s “eminently sane observations upon women’s wages”, who, “[i]mpressed with the advantages of free competition”, demanded ‘mobility’ for women-workers, free access to the labour market to which they have been driven by the changed conditions of production” (ibid., 490), Edgeworth adds the wish “that women-workers should at least have the benefit of any doubt that may arise with regard to the apportionment of industries between the sexes » (ibid., 490). This claim is grounded, not on the basis of “chivalry” or prejudice”, but on the sole basis of standard economic analysis:

“To secure the validity of our conclusions there is not postulated any particular code of manners and customs. [...] The premises of our argument are more general, containing more of the quod semper, quod ubique; such as the laws of diminishing utility and increasing fatigue, the fact of unequal capacities-differences in the relation between work done and fatigue felt.” (ibid., 491).

Hence, once again, the conclusions of this strict economic reasoning would be in accordance with some of the lessons of a moral of chivalry, extended to the whole society. “Altogether, under the favourable conditions supposed - the action of reason quickened by a predisposing sentiment - the pursuit of economic welfare may avert the reproach conveyed in Burke's tremendous words:

‘The age of chivalry is gone. That of sophists, economists, and calculators has succeeded; and the glory of Europe is extinguished for ever.’ Rather, the economists, if aiming at economic welfare, the sophists and calculators, if so named because, in accordance with the utilitarian philosophy, they seek to calculate the course that is conducive to the greatest quantity of happiness, will cultivate a certain species of chivalry, wanting, it may be, the glory of the older virtue, but still a precious element of civilisation. It might not be so dearly prized as its romantic prototype by those who form its object, in benefiting whom consists its virtue; but the benefit would be more widely diffused, less confined to aristocratic circles.” (ibid., 492)

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* An argument used by Francis Walker on the question of women’s work – as well as by Marshall, whose article on “The Social Possibilities of Economic Chivalry” was published by Edgeworth in 1907 in the Economic Journal.
* See Edgeworth’s lines on Belfort Bax’s book, Frauds of Feminism, ibid., 491-492.
References


