

DISENTANGLING UTILITY
THE MARGINALIST CONTRIBUTION

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0. INTRODUCTION

Utility is a central concept in modern economic science. However, when looking for a clear definition, we find an array of different and sometimes contradictory notions. Is utility simply a measure of individual pleasures and pains, associated to consumption and labour? Is utility a value of a function that gives a complete ordering of choice alternatives without any motivational content? Does rationality, viewed as utility maximization, imply self-interested motivations?

This essay is part of a research effort aimed at clarifying the meaning of the core concepts of economics pertaining to individual behaviour and action, through the study of the historical evolution of notions and ideas. The topic addressed is utility as conceived by the marginalist thinkers of the nineteenth century, namely Jevons, Walras, Edgeworth, Marshall and Pareto and its consistency (or inconsistency) with the modern notion of rational choice. The discussion of utility by the marginalist authors is revealing of their three major concerns: (a) to identify a field for Economics separate from Ethics, or Morals; (b) to develop a specific concept of economic action; (c) to adopt notions amenable to mathematical formulation and analysis.

For marginalist authors there was no ambiguity between moral and “economic” motivations, and this is exactly where the economics of the marginalists diverges from modern neoclassical economics. The discussion in the following pages aims to show that for these economists, moral values are separate and incommensurable with other self-centred related dimensions of evaluation; in contrast to the widespread modern notions, they believed that moral values could not be included and dissolved into a single-valued utility function.

The analysed authors clearly separate two different domains: the first concerns the relationship between the agent and things, and the second the relationship between the agent and others. This differentiation of domains guided the interpretation and organizes the text that follows.

Section one and two will be devoted to the first domain of analysis – the agent and things. In section one, it is argued that the concept of utility, as a measure of individual

satisfaction and choice criterion, necessarily involves a clear delimitation of the decision domain. Section two suggests that the separation of the domain of action provided the marginalists with a criterion splitting Economics from the other Moral Sciences. Section three, dealing with the relationship between the agent and others, concludes that the social outcomes included in the economic domain are those that can be interpreted in terms of equilibrium. The adopted criteria of evaluation of social states are axiological neutral. The domain of Economics has its borders where the real social interaction begins with its moral dilemmas for the individuals.

1. THE AGENT AND THINGS

Utility for the marginalists is defined in terms of the relationship between an individual and a thing, or a commodity. For utility to have a meaning there must be an individual and an object. Things, commodities, do not contain utility in themselves; it is human beings that ascribe it to objects. On the other hand, as a criterion of choice, utility implies the separation of the choice domain. In fact, for the marginalists, the maximization of individual utility as a decision procedure only makes sense if decisions do not involve consequences for others.

1.1. The motivations for individual action

Jevons's introduction to *The Theory of Political Economy* (1871) provides a good opening to the discussion of utility. At one point in this chapter when he refers to the relationship between Economics and Ethics, he clearly states:

«The feelings of which a man is capable are of various grades. He is always subject to mere physical pleasures or pains, necessarily arising from his bodily wants and susceptibilities. He is capable also of mental and moral feelings of several degrees of elevation. A higher motive may rightly overbalance all considerations belonging even to the next lower range of feelings; but so long as the higher motive does not intervene, it is surely both desirable and right that the lower motives should be balanced against each other. Starting with the lowest stage – it is a men's duty,

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as it is his natural inclination, to earn sufficient food and whatever else may best satisfy his proper and moderate desires. If the claims of a family or of friends fall upon him, it may become desirable that he should deny his own desires and even his physical needs their full customary gratification. But the claims of a family are only a step to a higher grade of duties. The safety of a nation, the welfare of great populations, may happen to depend upon his exertions, if he be a soldier or a statesman: claims of a very strong kind may now be overbalanced by claims of a still stronger kind.» (Jevons, 1871: 24-25)

Motivations for Jevons are not only different in kind, but possibly incommensurable. In face of conflict between motives of a different type, Jevons suggests a hierarchical ordering where “higher” motives may overbalance all other considerations. He also implicitly questions Bentham’s utilitarianism when he states:

«The statesman may discover a conflict between motives; a measure may promise, as it would seem the greatest good to the great numbers, and yet there may be motives of uprightness and honour that may hinder his promoting the measure.» (Jevons, 1871: 25-26)

Motives for Jevons are complex – not only different but possibly contradictory and incommensurable. However, he neither intends, nor needs, to inquire into those complexities:

«My present purpose is accomplished in pointing out this hierarchy of feelings, and assigning a proper place to the pleasures and pains with which the economist deals. It is the lowest range of feelings which we here treat. The calculus of utility aims at supplying the ordinary wants of man at the least cost of labour. Each labourer in the absence of other motives, is supposed to devote his energy to the accumulation of wealth. A higher calculus of right and wrong would be needed to show how he may best employ that wealth for the good of others as well as himself. But when that higher calculus gives no prohibition we need the lower calculus to gain us the utmost good in matters of moral indifference.» (Jevons, 1871: 26-27, emphasis added)

Jevons therefore provides us with a clear-cut definition of utility. Utility, as a guide for choice, was made sense of, within a specific domain – the territory of moral indifference - where actions only involve an individual and objects, with consequences that are only relevant for the agent, never increasing or decreasing the “good of others”.

Apart from identifying what he took as economic motivations, Jevons devoted considerable effort to discussing the problem of measuring utility. Both problems –

motivations and measurement – are associated, even though implicitly. On the possibility of hedonimetry Jevons hesitates:

«A unit of pleasure or of pain is difficult even to conceive; but it is the amount of these feelings which is continually prompting us to buying and selling, borrowing and lending, labouring and resting, producing and consuming; and *it is from the quantitative effects of the feelings that we must estimate their comparative amounts.*» (Jevons, 1871: 11)

Pleasure and pain are hardly measurable in direct terms. However their relative intensity might be indirectly perceived. The necessary assumptions are: (a) the effects of the feelings can be measured in quantitative terms; (b) the different kinds of pleasure and pain can be compared and added together. The link between motivation and measurement becomes apparent when it is understood that the above stated conditions are only met when the feelings are located at the “lowest range”, where the motives of wealth accumulation and work aversion reside. In fact, it makes sense to assume that the intensity of the motive of wealth accumulation may be indirectly measured by the money value of a number of hours of overtime, as it makes sense to assume that the increase in pleasure provided by a consumption bundle may be measured by the price a consumer is willing to pay for it. To measure the pleasure of a social encounter by the wideness of a smile would be much harder to accept. On the other hand, assuming that consumption and labour are matters of moral indifference, when there is “no interdiction” from a “higher” level, there would be no objection to comparing and adding up those different types of utility.

Jevons’ work was followed in Britain by other relevant contributions from Edgeworth. Real man for Edgeworth is somewhere between two extreme and opposite types – the Pure Universalistic and the Pure Egoistic. The egoistic is the economic type. Like Jevons, utility for this egoistic type only includes individual pleasures and pains, arising from consumption and labour.

The measurement of utility in “economical calculus” involves two dimensions: intensity and time. The major difficulties would arise from the intensity dimension. However, Edgeworth solves the problem stating that while an agent might have trouble in quantifying absolute sentiments he would easily perceive an increase as different from a decrease, and he would even be able to measure the variations. The unit of measurement would be the derivative, “the just perceivable increment” (Edgeworth, 1881: 7). For him this would be enough to justify the possibility of measurement. An agent would perceive,

by introspection not experience, the positive and negative variations that would arise from the choice of different alternatives – he would be able to compare alternatives. Indecision would mean equal utility. Thanks to integration, the time dimension posed no problem to Edgeworth’s calculus.

In contrast to Jevons, Edgeworth did not give up on the possibility of a “higher calculus of right and wrong”. His benthamite persuasion led him to the proposal of a Calculus of Pleasure and Pain subdivided into an Economical Calculus and a Utilitarian Calculus:

«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)

The problem of the coincidence of these two equilibrium, the coexistence between the hedonistic agent and general happiness, is one of the main topics developed by Edgeworth, as will be shown in section three below.

Edgeworth’s real man, between the universalistic type (that maximizes total utility), and the egoistic type (that maximizes individual utility) is someone who in face of a bilateral bargain would maximize a linear combination $P + \lambda \pi$, where P is his individual utility, π the other contractor’s utility, and λ a coefficient of effective sympathy. This can be taken as a general model of choice. While the egoistic agent in a bilateral situation would have nil effective sympathy, the utilitaristic would have sympathy equal to one. And the real individual would have λ as a fraction dependent on sympathy towards the other or even social distance.

This model of mixed motives contrasts sharply with Jevons’ view of the hierarchy of motives. In fact, on this point Edgeworth is a forerunner of modern models where motivations of different types, moral values and desires, are added up and dissolved into a single dimension utility.

In Marshall’s work we find a tension between: a multidimensional concept of human action also in the “ordinary business of life” on the one hand, and the ambition of contributing to the development of a mathematical science on the other (Marshall, 1920: 12). This tension may contribute to some ambivalence in his theorizing on utility and individual economic choice.

In connection to Marshall’s concept of action, it is remarkable that the features of economic behaviour are not set *a priori* as natural laws of human motion, but as

dependent on the historical evolution of society and institutional development. Marshall surely denies Edgeworth's definition of economic man as egoistic, even in an economic domain:

«No doubt men, even now, are capable of much more unselfish service than they generally render ...» (Marshall, 1920: 8)

«... it is the ties of neighbourhood alone that have been relaxed: the ties of family are in many ways stronger than before, family affection leads to much more self-sacrifice and devotion than it used to do; and sympathy with those who are strangers to us is a growing source of a kind of deliberate unselfishness, that never existed before the modern age. (...) On the contrary, modern methods of trade imply habits of trustfulness on the one side and a power of resisting temptation to dishonesty on the other, which do not exist among a backward people.» (Marshall, 1920: 5 - 6)

“Modern industrial life” would favour individual deliberation, whereas in the past economic behaviour would be ruled by custom. Deliberative behaviour is not necessarily egoistic or opportunistic. Motivations for Marshall are complex even in the economic sphere:

«There is no one term that will express these characteristics [of modern industrial life] adequately. ... [the characteristics of modern industrial life are related with] a deliberation and yet a promptness of choice and judgment, and a habit of forecasting the future and of shaping one's course with reference to distant aims. They may and often do cause people to compete with one another; but on the other hand they may tend, and just now indeed they are tending, in the direction of cooperation and combination of all kinds good and evil. But these tendencies towards collective ownership and collective action are quite different from those of earlier times, because they are the result not of custom, not of any passive drifting into association with one's neighbours, but of free choice by each individual of that line of conduct which after careful deliberation seems to him the best suited for attaining his ends, whether they are selfish or unselfish. » (Marshall, 1920: 4 – 5)

He even states that:

«...the supreme aim of the economist is to discover how this latent social asset [unselfish motives] can be developed most quickly, and turned to account most wisely.» (Marshall, 1920:8)

However, Marshall, like his predecessors, dreamed of an Economics with the rigor of a mathematical science. He thought the economist were fortunate that their subject matter offered,

«... larger opportunities for exact methods than any other branch [of social science]. It concerns itself chiefly with those desires, aspirations, and other affections of human nature, the outward manifestations of which appeared as incentives to action in such a form that the force or quantity of the incentives can be estimated and measured with some approach to accuracy; and which therefore are in some degree amenable to treatment by scientific machinery.» (Marshall, 1920: 12 –13)

Even if for Marshall there is no room for a concept of specific economic motivations, Economics emphasizes the motives that seem to be not only the most pervasive in the “ordinary business of life”, but also amenable to measurement and mathematical treatment.

«Everyone who is worth anything carries his higher nature with him into business; and, there as elsewhere, he is influenced by his personal affections, by his conceptions of duty and his reverence for high ideals ... But, for all that, the steadiest motives to ordinary business work is the desire for the pay which is the material reward of work.» (Marshall, 1920: 12)

Like Jevons, the discussion for Marshall on the nature of individual motivations and the possibility of indirect measurement is also based on the concept of utility as a measure of the satisfaction of individual desires and as a criterion of individual choice. The price that an individual is willing to pay for the satisfaction of his desires is taken as the measure of the intensity of his desires. Marshall himself underlines that his work concerns mostly the questions related to “the variety of motives, the difficulty of measurement them, and the manner of overcome those difficulties” (Marshall, 1920: 21). Economics does not study motivations as such, but rather their effects as incentives to action. The motivations retained by economics are those that can be represented by a price, or anything measurable, and therefore they are comparable and weighed against each other. However Marshall warns against the confusion between the need to measure the economic motivations by a price, and a single-minded desire of wealth accumulation. The sufficient condition for the measurement of the motives behind individual economic behaviour is that each motive may have as a counterpart, or equivalent, something “definite and transferable”, that is something that is exchangeable or can be substituted by other “goods” (not necessarily money). It is thus possible to conclude that this condition implies the possibility of comparison and substitution, that is, their commensurability.

It would be wrong to interpret Marshall as meaning that all motives can be weighted against each other. In fact, he clearly states that the economist:

«... does not attempt to weigh the real value of the higher affections of our nature against those of our lower: he does not balance the love for virtue against the desire for agreeable food.» (Marshall, 1920: 14)

Marshall's ambivalence extends beyond his concept of action; it even involves his view on the nature and purpose of economic science and the future of industrial society:

«Perhaps the earlier English economists confined their attention too much to the motives of individual action. But in fact economists, like all other students of social science, are concerned with individuals chiefly as members of the social organism. As a cathedral is something more than the stones of which it is made, as a person is something more than a series of thoughts and feelings, so the life of society is something more than the sum of the lives of its individual members. (...) but it is also true, as German writers have well urged, that economics has a great and an increasing concern in motives connected with the collective ownership of property, and the collective pursuit of important aims. (...) and these changes, together with the spread of the co-operative movement, and other kinds of voluntary association are growing up under the influence of various motives besides that of pecuniary gain: they are ever opening to the economist new opportunities of measuring motives whose action it had seemed impossible to reduce to any sort of law. » (Marshall, 1920: 20-21)

1.2. The erasure of the motivational content of economic choice

The main feature of the discussion of Lausanne School authors on utility is that the concept is deprived of any motivational content. The distinction between higher and lower motives is totally absent. What is at stake within Pure Economics is the relation between the agent and things. Morals are called upon in a different field of inquiry - Social Economics (Walras) or Sociology (Pareto) – that deals with interpersonal relations.

Utility for Walras is the capacity that material or immaterial things have of satisfying wants of any kind, no matter what the moral judgement might be on the particular want or drive. Marginal utility or *rareté* is a fact derived from the limited quantity in which useful things exist. It is a natural fact, as the facts that Pure Science studies:

«The derivative of effective utility in respect to the possessed amount, exactly as velocity, is defined as: the derivative of distance covered in respect to the time used in covering it» (Walras, 1874: 145)

Utility is subjective. It can only be defined in relation to an individual. However, when the marginal utilities for consumers are expressed in response to prices in the marketplace and the value-in-exchange of goods thus set, value is objectified.

Thus viewed, the marketplace is a space of confrontation between different commodities, not individual wills. Exchange rates depend objectively on utility and availability of commodities. It depends on natural facts. Taking utility and quantity as natural facts gives rise to the replacement of the subjective relation between agent and things, which originally defined the concept of utility as a relation between things. Markets are the meeting place of commodities, not people.

«Between all things, a relationship is established consisting on that, independently of their own direct utility, each acquires a special property – the faculty of exchanging itself with each of the others, in this or that determinate proportion.» (Walras, 1874: 48)

Pareto's definition of utility (*ophélimité*) and marginal utility (*ophélimité élémentaire*) is inconsistent with that of Walras. However, while Walras dispensed with the discussion of the possibility measuring utility since he was focusing on value-in-exchange, Pareto paid considerable attention to this problem. He denied not only that utility but also that marginal variations might be measured.

«We have been admitting that this thing called pleasure, value-in-use, economical utility, *ophélimité*, was a quantity; but the proof has not been given. Let us suppose that this proof was available, how could we measure such a quantity?» (Pareto, 1909: 159)³

Later in the book, possibly bearing in mind Edgeworth's argument on the measurability of marginal utility, Pareto ironically states:

«A man may know that a third glass of wine gives him less pleasure than the second; but he has no possible way of knowing what is the amount of wine he must drink in order to have a pleasure equal to that given him by the second glass.» (Pareto, 1909: 264)

³ The problem for Pareto would be both mathematical and empirical. Mathematically, utility would be undetermined; empirically, it could not be measured.

It is well known that rather than viewing utility as a measurable entity, Pareto argues in favour of utility indexes. Two commodity bundles to which the consumer is indifferent will have the same index; a commodity bundle that is preferred by a consumer to another will have a higher index than the last.

Pareto's approach has deeper implications than it may seem at first sight. Excluding the possibility of measurement, he no longer had to worry about choosing which motivations can be considered as economic and which cannot. This step completes the erasure of the motivational content of utility initiated by Walras. In this sense Pareto is the real forerunner of revealed preferences and modern rational choice theory. However in Pareto we can find a clearly specified territory of economics – a space where goods meet goods - separated from the space where agents interact. Another implication of the impossibility of measurement is the interdiction of inter-individual comparisons of utilities; as discussed in section three, this would lead him to a criterion of evaluation of social states that represents a definite break with benthamite utilitarianism.

1.3. Motivation, measure and action: marginalist agreements and disagreements

Marginalists agree that utility is subjective, necessarily involving the relationship between an agent and a thing that is useful to him. Utility is not an inherent property of things. Choice guided by utility is morally neutral. The decision to demand, to have, or to acquire is not to be judged on moral grounds, no question is posed on what is desired and what is worth desiring. On the other hand, the possible effects of individual choice on other individuals are ignored. In the formulation of the individual decision problem, each agent is independent in that he ignores the others. In fact, as stated by Pareto, the economic analysis of individual choice is only interested in the comparison of different states of satisfaction for a single individual.

For Jevons, Edgeworth and Marshall, the definition of utility as a measure of satisfaction of individual desires leads to a discussion of the motivations open to analysis by economic theory. Motivations are thus at the core of the English marginalist's theory of action.

In contrast, the Lausanne school excluded motivations from the economic analysis of individual choice. The individuals, their wills and purposes, almost disappear from the theoretical scene, replaced as Pareto suggests by representations like the indifference curve. While the ratio of marginal utility and price of two different commodities defined for Jevons and Edgeworth the informational basis for inter-individual contractual relations, the exchange in the marketplace for Walras and Pareto was objectified as a natural fact. In the Walrasian market, commodities are exchanged with other commodities with no intervention of individual wills and motivations. Pareto stated clearly that economic theory should be based solely on observable, objective facts, considering that explanations based on motivational elements would lead the analysis of individual choice to the domain of metaphysics⁴. The target of his criticism is Edgeworth's introspective measurement of variations in pleasure and pain.

It should be stressed that for all these authors there is no question about the concept of the real individual as a moral being. Their point is that the economic analysis requires choice in the economic domain to be based on morally neutral criteria. For them self-interest, therefore, is deprived of any moral content. The dissonant voice in this point, however, is Edgeworth who systematically uses egoism, a word with a negative moral connotation, instead of self-interest.

2. THE BORDERS OF ECONOMICS

The marginalist concept of utility is clearly connected with the separation of the domain of economic choice and action. This domain would define the subject matter of Economics and the borders of the discipline. Jevons defined the object of economic science as the research of the conditions in which individuals maximize pleasure at the lowest cost of labour. Political Economy, or Economics, as he prefers to say, was "the Calculus of Pleasure and Pain" (Jevons, 1871: 23), dealing with the lower range of sentiments. Sentiments are "incomparable in power and authority", economics deals with

⁴ Decreasing marginal utility was often interpreted in psychological terms (the Fechner law). Pareto finds it troubling that Economics would draw implications from non-economic, non-observable factors. In the *History of Economic Analysis* Schumpeter considered Pareto's view as a relevant element that should be taken into account in a discussion about utility.

the “lower calculus” when the “higher calculus gives no prohibition”; it searches “the utmost good in matters of moral indifference”. Individual choice is devoid of any normative consideration, and made in isolation by each individual.

For Edgeworth the economy is simply the domain of egoistic individual action. In the domain of Economical Calculus the individual only computes his own utility. When the real individual takes into account not only his utility but also the utility of others, the economic borders are crossed, and Edgeworth is transported to the domain of Moral or Utilitarian Calculus. The analogy between human and physical phenomena, between the complexity of society and the complexity of nature, whose laws were so successfully uncovered by Physics and Mechanics, is always present in Edgeworth’s mind and argument. Pleasure is energy. As the maximization of energy is the goal in Statics, the maximization of net pleasure is the goal for Rational Action. Just as Dynamics deals with the problem of interaction of material bodies, Ethics studies the problem of interaction of human beings.

In Marshall, the economic analysis of individual choice is delimited within the domain of the commensurable. The motivations retained for analysis are those that are most pervasive in everyday economic life, and that may be quantified by a concrete measure, like for example, though not necessarily, the price that an individual is willing to pay for the satisfaction of his desires. The key aspect is that the dimensions for the evaluation of any object or action can be weighed against each other, that is, they can be compared and substituted. Under this condition, formal mathematical modelling and differential calculus can easily be used as tools. As Marshall recognizes, other motivations related with different types of action, such as collective action, pose difficult problems for this type of economic analysis – group commitment can hardly be expressed in terms of a price or other goods. The specific feature of economic action in industrial society lies in its deliberative nature. In principle, economic action is not defined by narrow motivational content.

Walras’ Pure Political Economy researches into the formation of value-in-exchange, and its variation. Value-in-exchange is a natural fact because it is explained by two natural phenomena: utility and the limited amount of useful goods. Value-in-exchange, as a natural fact, is within the domain of Pure Science. But since Walras believes that useful and scarce things are multipliable by industry, and industry is a human fact, the theory of the production of social wealth falls within the domain of Applied Science. Further,

useful and scarce things can be appropriated, and property is a moral fact since it involves the relationship between individuals. Social Economy deals not only with the distribution of property and wealth, but also more generally with the problem of the existence of society, given that those individual objectives can be conflicting.

Pareto considers Pure Economics as the domain of logical action⁵, that is, those actions that correspond to the best means to achieve ends that are given by individual tastes and preferences. The ability to select the best means to the given ends is based on logical reasoning. The evaluation of consequences is based on experience, not introspection. Once the best means are selected, any given consumer or producer will act in the same manner when confronted with the same situation. Preferences are stable. For Pareto therefore the economic concept of action is defined only by logical reasoning, not by the nature of the ends, pursued by the agent.

With Pareto the *homo oeconomicus* acquired most of its modern features:

«Rational mechanics, in reducing bodies to simple material points, pure economics, in reducing real man to *homo oeconomicus* are using perfectly similar abstractions, which are imposed by similar needs.» (Pareto, 1909: 17)

«Real man carries actions that are economic, moral, religious, aesthetic, and so forth. The same idea is stated when we say: “I study economic actions, and I abstract from the others”, or. “I study *homo oeconomicus* who only carries economic actions”» (Pareto, 1909: 17 - 18)

However, Pareto underlines:

«In separating the study of political economy from that of morals we are by no means stating that the former should prevail over the second.» (Pareto, 1909: 19)

At this point it is clear how the marginalist concept of Economics was influenced by their concept of science. Science is Physics, or rather Mechanics. The difficulty for them is that, contrary to Physics, Economics deals with the activity of men. The solution for them was the separation of the economic from the moral, of Economics from Morals. In fact, economic action is not different from any other type of social action, involving therefore a moral dimension. However, the problem might be solved if the domain of the

⁵ Pareto considers two abstract types of human action: logical actions and non-logical actions. Non-logical actions, like logical, may also correspond to the best means to given ends; they are triggered by habit, custom or morals. Logical actions are always oriented towards results; only non-logical actions can have unpleasant consequences for the agent – behind them there may be a categorical imperative or a self-imposed rule. For Pareto, non-logical actions cannot be reduced to logical actions.

relationship between separate individual wills is excluded from economical analysis, only retaining the relationship between agent and things. In this sense utility provided a morally neutral criteria for individual choice; a criteria solely based on the satisfaction of individual desires.

3. THE AGENT AND OTHERS

In discussing choice and action the marginalists avoided the problems of the effect that individual action can have on others, of the judgment of others on individual choice and of inter-individual comparison of utility. They avoided the problems of the relationship between the agent and others. However, when it comes to explaining how action based on the sole satisfaction of self-interest can generate a desirable social outcome, or how different social outcomes can be evaluated and compared, this problem can no longer be avoided.

As we have noted before, one of Edgeworth's main themes is the composition of different and possibly conflicting individual wills into a desirable social outcome. This discussion pertains not to the Economical Calculus but to the Utilitarian Calculus. His central question is the possibility of a contract that would grant the maximization of self-interest at the same time as the maximization of total utility. He is looking for a "principle of arbitration" that, in the absence of perfect competition, would preside over the distribution of wealth. This principle of arbitration is to establish the terms of the contract, namely: the individual contributions to the collective effort, the dimension of their sacrifices, and the individual rewards. The utilitarian calculus would provide this principle:

« Where, then, would a world weary of strife seek a principle of arbitration? In *justice*, replies the moralist and the long line of philosophers, from Plato to Herbert Spencer, are ready to expound the principle. But their exposition, however elevating in the moral tone, and of great hortative value for those who already know their duty are not here of much avail, where the thing sought is a definite, even quantitative, criterion of what is to be done. *Equity* and 'fairness of division' are charming in the pages of Herbert Spencer and delighted Dugald Stewart with the appearance of mathematical certainty; but how would they be applicable to the distribution of a joint product

between cooperators? Nor is the equity so often invoked by a high authority on cooperation much more available;

(...)

Justice requires to be informed by some more definite principle as Mill and Mr. Sidgwick reason well. The star of justice affords no certain guide – for those who have loosed from the moorings of custom – and least it reflects the rays of a superior luminary – utilitarianism.» (Edgeworth, 1881: 51 –52)

The principle provided by the utilitarian calculus establishes that the distribution of rewards should be proportional to the sacrifice made by each contractor. The basis of the principle of arbitration and the outcome of a contract between self-interest agents on the terms of that principle would be “the greatest possible sum-total utility”. Such a contract would replace the hobbesian state of nature – the war of all against all – by a maximum of general happiness.

Even though Edgeworth clearly separated the Economic from the Moral, identifying an irreducible tension between egoistic and universalistic motives, by his principle of arbitration and contract he would find a social solution where self-interest and collective happiness may coexist. In the end, as he tells us, the utilitarian calculus is founded on the economic:

«...competition requires to be supplemented by arbitration, and the basis of arbitration between self-interest contractors is the greatest possible sum total utility.»

«Thus the economical leads up to the utilitarian calculus; ...» (Edgeworth, 1881: 56)

The axiological neutral utilitarian calculus provided a rule to mediate the relation between the subject and others. This calculus implies a concept of utility with room for measure and inter-individual comparisons.

Jevons had given up on the task of developing a “higher calculus of right and wrong”. He suggested the possibility of generalizing an equilibrium of welfare from a situation of bilateral bargaining and contract. Starting from an undisputed allocation of goods, the two contractors would find a basis for agreement when the marginal utility-price ratios of both agents would equal each other. Once the bargain was concluded the contract would be self-enforcing, as in a perfect competition situation.

Trying to escape from any metaphysical and moral contamination, Pareto defined his criterion of unanimity that dispenses both with measurable utility and inter-individual comparisons.

«We shall say that the members of a collectivity enjoy at a certain position the maximum of ophélimité when it is impossible to find a way of moving slightly from that position, in such a way that the ophélimité that each of the individuals in this collectivity enjoy neither increases nor decreases. That is to say: any small displacement from this position could necessarily result in an increase of ophélimité enjoy by certain individuals, and the decrease in the level enjoyed by others...» (Pareto, 1909: 354)

Therefore, when it comes to the evaluation of social states Pareto also tries to find an axiological and neutral concept of good. With the prohibition of inter-personal comparisons Pareto's efficient criteria goes one step further from Edgeworth's maximization of the sum-total utility. While Edgeworth assumed a self-enforced contract that would impose itself on individuals, Pareto assumed inter-individual relationships away.

Pareto's efficient criteria explicitly left out the problem of distribution. For him those issues involved normative considerations, falling therefore out of the domain of Pure Economics. In this he was following Walras to whom property and distribution are topics of his Moral Science.

At this point it is clear that Walras and Jevons belong to a moral tradition that is alien to benthamite influences – natural law. Distribution and property is to be discussed in the light of a principle of justice that is previous to any consequentialist considerations – the right to individual freedom. No one should be subject to goals that are imposed on him by others; rights and duties are to be reciprocated. From their natural law point of view, those rights and duties are the cement of a society where the private and collective interests are in agreement.

Marshall brings a richer, even though dissonant, contribution to this marginalist discussion. First of all, because he is interested in the analysis of various forms of collective action – cooperatives, mutualistic associations, trading unions – thus referring economic relations that transcend the market and the utilitarian contract. Marshall is well aware that the integration of individual interests with collective interest, the coincidence of the particular goals with the public good, may be both theoretical and factually problematic.

For Marshall, law and market would be insufficient to ensure the agreement between private and public good. They would, nor should, replace the autonomy of the political powers, or the “moral sentiment of community”, not the old community based on custom and authority, but the modern community where deliberative individuals might choose to freely associate in pursuing their common goals. Marshall clearly saw that axiological neutrality is impossible in respect to a criterion of arbitration of the relationship between individuals.

«It has been left for our own generation to perceive all the evils which arose from the suddenness of this increase of freedom. Now first are we getting to understand the extent to which the capitalist employer, untrained to his new duties, was tempted to subordinate the well-being of his workpeople to his own desire for gain; now first are we learning the importance of insisting that the rich have duties as well rights in their individual and in their collective capacity; now first is the economic problem of the new age showing itself to us as it really is.

(...)

In particular this increased prosperity has made us rich and strong enough to impose new restraints on free enterprise; some temporary material loss being submitted to for the sake of a higher and ultimate greater gain. But these new restraints are different from the old. They are imposed not as a means of class domination; but with the purpose of defending the weak, and especially children and the mothers of children, in matters in which they are not able to use the forces of competition in their own defence. The aim is to devise, deliberately and promptly, remedies adapted to the quickly changing circumstances of modern industry; and thus to obtain the good, without the evil, of the old defence of the weak that in other ages was gradually evolved by custom.» (Marshall, 1920: 621 – 622)

4. CONCLUDING REMARKS

The history of the separation between Economics and Morals has various episodes (Castro Caldas, 2002). This text explored the marginalist chapter.

In spite of their differences, the marginalists coincide on a view of real man as a complex being, endowed with a moral individuality. Their concept of utility is clear. Utility is

related to the satisfaction of the individual desires; it is a criterion for individual choice when the agents play their games against nature (Favereau, 1997: 2802), not other agents.

In the subsequent steps of that history, the individual choice criteria, based on private utility maximization, was *transposed* to contexts of interdependence between agents. The territory of Economics (or Pure Economics) was expanded. However, the concept of action was left unchanged.

Later on, the erasure of motivations initiated by Pareto was concluded, when utility became the value of a function that gives an ordering of alternative actions. With rational choice theory, the individual is seen as comparing alternatives that he evaluates on the basis of calculations over a multi-dimensional space of consequences. The dimensions of that space of consequences may include everything that the individual values – from consumption goods to justice. The calculations that give rise to the complete and transitive ordering of preferences that makes the single-valued utility function possible, presuppose that the dimensions of evaluation are commensurable, and this corresponds to a *dissolution* of moral values in utility.

In fact, the marginalist strategy of separation of Economics from Morals involved the delimitation of a territory for Economics (the domain of the relationship between the agent and things) where sense might be made of a morally neutral concept of action . It neither involved the assumption that individuals only value their own well-being when taking decisions that have consequences for others, nor that they weigh a sense of duty against commodities and other objects of desire.

The discovery that this economic territory was too narrow, leaving out not only distribution, but also crucial features of economic life, such as external effects, collective action and team production, led subsequent economists to broaden it. The fact that they did so, leaving the self-centred concept of economic action untouched, is what seems to be problematic. Marshall's rich though ambivalent writing pointed to a more interesting alternative – a broadening of the domain of Economics to be made hand in hand with a richer concept of action.

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