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Abstract

The issue of interpersonal comparisons of utility is about the possibility (or not) of comparing the utility or welfare or the mental states in general, of different individuals. Embedded in the conceptual framework of utilitarianism, interpersonal comparisons were admissible in economics as part of the theoretical justification of welfare policies until the first decades of the twentieth century. Under the strong influence of the scientific philosophy of positivism as reflected in the works of early neoclassical economists and as epitomized by Lionel Robbins, utility comparisons were subsequently rejected as a value judgement. Robbins' methodological stance is still prevalent among mainstream economists. Despite the explicit rejection of comparability by the majority of economists, interpersonal comparisons are necessary for many key policy issues, such as progressive taxation, social welfare policies, GDP based welfare comparisons, cost-benefit analysis, and public goods provision. In this paper, the case of interpersonal utility comparisons is discussed as an illustrative example of the usefulness of the study of the role of value judgements, and generally of the interrelationship between ethics and economics. It is also argued that the current tension between theory and policy practice might be resolved through the efforts of prominent economists and philosophers to challenge positivism, and especially its problematic treatment of value judgements and of ethical assumptions in general.

Key words: Value Judgements, Utility Comparisons, Positivism and Economics, Ethics and Economic Policy.

JEL codes: B00; A12; B4; D6

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Introduction

It is hard to find another more debated methodological issue in the history of economics than the role of value judgements, and more generally the role of ethics in economics discourse.¹ Although the roots of this ongoing debate can be traced back to classical political economy, its main dimensions are still discernable today. The reason for this long-lasting theme is the vital link between ethics and the scientific nature of economics as a discipline. For most economists, the origins of this topic are to be found in the relevant work of David Hume. In particular, subsequent interpretations by economists consider Hume to be the first who made a clear separation between positive and normative by distinguishing “ought” from “is”. The well-known concept of “Hume’s guillotine” is taken to distinguish descriptive statements from norms or ethical pronouncements (Blaug,1980,p.130; Hume, 1739). In its pursuit of becoming an established field of study, most economists adhered to the notion of value-free economics, in the sense of not relying on any particular set of value judgments or to any philosophical or ethical or psychological framework. In the words of Bernard Hodgson:

The prevailing "orthodoxy" amongst economists concerned with methodological issues is that economic science is consistent with a canon of ethical neutrality, that its explanatory hypotheses are "value-free" (Hodgson, 1988, p.321).

However, the debate has not been settled yet. One can still find a significant number of methodological works which have contributed to this old controversy (e.g. Coddington,

¹ The term *value judgments* is used by most economists as equivalent to ethical statements (see for instance the seminal paper by Robbins, 1939, p.637, 641). Similarly, *ethical neutrality* and *value free* are also used interchangeably (e.g. Hodgson, 1988). Value judgements are often – but not always – of an ethical nature (Beckerman, 2017, p.24). *Ethics* primarily connotes more narrowly a theory of right conduct at the level of personal conduct (Goodin, 1995). Many philosophers use ethics in a more general manner, usually referring to an ethical system which includes value judgements. (Putman and Walsh, 2014). For instance, the relationship between ethics and economics refers to the question of how to articulate positive and normative aspects in economics (i.e. Wight, 2015). The term *ethical values* usually corresponds to individual value system or to society’s values.

1972; Gordon, 1977; Sugden, 1981; Hausman and McPherson, 1993; Colander, 1994; Hodgson, 1983; 2001; Mäki 2003; Mongin 2006; Holdsworth, 2012; Wight, 2015; Hausman, McPherson and Satz, 2017; Racko, 2019). The role and significance of ethics has crucially influenced important branches of economics such as the theory of choice, the theory of the firm, the microfoundations of macroeconomics, welfare economics and also the ensuing economic policies based on the corresponding theories. Further, understanding the values of economics has been a fundamental concern of research on economic ethics (Racko, 2019, p.35).

The old problem of interpersonal comparisons of utility or welfare is an indicative case of the debate regarding the role of value judgements or ethical statements in economics. The issue of interpersonal comparisons of utility is about the possibility (or not) of comparing the utility or welfare or the mental states in general, of different individuals. It has been a crucial part of welfare economics and the related social welfare policies. Its importance can be realized from the fact that almost every major economist in the history of economics has devoted some space to the discussion of this topic. The case of interpersonal comparisons of utility is also representative because it is characterized by the serious inconsistency between theoretical formulations and economic policy. In particular, Lionel Robbins' approach to interpersonal comparisons of utility set the basis for the subsequent treatment by mainstream economists. Robbins' argument against comparability was that it was branded a value judgement and thus scientifically meaningless (Robbins, 1938). Following Robbins and since the post WWII period and due to the influence of positivism, the majority of economists declare that interpersonal comparisons are not accepted in the scientific domain of economics. Hence, comparability is still rejected by most economists on the basis that it is a value judgement. (Hausman, McPherson and Satz, 2017). However, this

positivism-inspired methodological stance towards value judgements has resulted in major difficulties relating to its implications for economic and social policies and also for policy decision-making.

For instance, some form of interpersonal comparability is assumed in the widely used welfare concept of real national income, and also for international comparisons among countries based on welfare measures (Sen, 1979; Usher, 1980; Kakwani, 1981).² Further, the national insurance or social security systems of many countries which by design are aimed to improve the wellbeing of certain groups of people, are also based on interpersonal comparisons of welfare (Hausman, McPherson and Satz, 2017).³ More important in the sense of policy, is the case of progressive taxation given its widespread use as part of fiscal policy in most countries.⁴ The theoretical justification of the system of progressive income taxation rests on the assumption that comparability is possible (Stiglitz, 1987; Mandler, 2000). Further, allowing comparability as a theoretical basis, would facilitate and assist the policy decision making and policy evaluation in many current applied policy issues such as: the justification and the level of minimum wages, environmental protection policies, desirability of provision of public goods, and the social impact of large-scale projects.

All the above clearly imply that there are some key methodological problems pertaining to the positivist approach to value judgments and its effects on standard economic policy measures. The paper starts with a brief historical outline of the notion of value-free economics and proceeds to a discussion of utilitarianism in economic thought. The

² Income per capita in constant prices is widely considered as an indicator of social welfare levels in judging the position of an economy of a country over time or relative to that of other countries. Usually, the concept of social welfare is identified with the aggregate utility of a society. The same holds true for the concept of overall wellbeing (e.g. Mandler, 2000; Frey and Stutzer, 2002).

³ Policies aimed to provide certain state benefits for workers and their families.

⁴ In a system of progressive taxation, the tax rate increases as taxable income increases.

following section focuses on logical positivism and the transformation of the meaning of utility. The rejection of comparability as a value judgement and the emergence of new welfare economics are discussed next. The necessity of interpersonal utility comparisons for important economic policies and their evaluation, is the subject of the following section. There is also a general methodological discussion, also referring to the modern challenges to positivism and its treatment of value judgements. A concluding section closes the paper.

The Making of Value-Free Economics

The demarcation line between positive and normative by distinguishing “ought” from “is” is usually attributed to David Hume (e.g. Blaug, 1980, p.130; Mongin, 2006, p.268). Influenced by this tradition, the classical economist Nassau Senior is considered to be one of the first thinkers who brought the distinction between positive and normative in economics (Gray, 1931, p.273). In the context of classical political economy, John Stuart Mill suggested the distinction between “art” and the “science” of economics. He conceived “art” as containing ethical premises (Hutchison, 1964, pp. 29-31). Mill was one of the first economists to explicitly state that positive sciences (for example, Geometry) should be the ideal model for economics (Mill, 1874, p. 144; see also Hutchison, 1964). In the same vein, the classical economist John Cairnes argued in the spirit of Senior and Mill that “Political Economy stands apart from all particular systems of social or industrial existence.” (Cairnes, 1875, p.20).

In the second half of the nineteenth century, positivism gradually emerged as the dominant scientific philosophy. Positivism had a direct influence on classical economists, including Bentham and Mill. In particular, positivism originated in the beginning of the nineteenth century with the work of A. Comte, and continued with R.

Congreve and G. Lewes in Britain, and E. Littré and P. Laffitte in France (Brehier, 1971). The starting point of positivism was the enormous success of physics as a science and the adoption of the methodology of physics as scientific ideal. One of the main features of classical physics methodology was the rejection of metaphysical elements as non-scientific.⁵ Positivism exerted a marked influence on the subsequent Marginalist school of economic thought.

The emergence of the Marginalist school in the 1870's signified a conceptual shift towards the subjective theory of value, the emphasis on demand-based analysis rather than on supply-based, the systematic use of mathematics, and the central role of the model of Homo Economicus. Further and due to the influence of positivism, classical physics was openly seen as the ideal model of scientific inquiry for economics (Mirowski, 1989; Screpanti, and Zamagni, 2005). In this framework, leading marginalists such as William Jevons and Leon Walras viewed economics as basically a mathematical pursuit, its scope narrowly defined to the mechanics of self-interest and utility (Jevons, 1871, p.6, p.25; Walras, 1874, pp.47-48; see also Winch, 1972, p.328). This clearly meant that normative or subjective elements should be expelled from the discipline of economics.

By the end of 19th century, Jevons' marginalism and mathematical economics had taken a firm hold in Britain, and the second marginalist generation of economists emerged (Schabas, 1990; Weintraub, 2002). At the same time, the influence of positivism as the dominant scientific philosophy became more apparent. The positivist methodology started to be embraced by most economists of the second marginalist generation and by the early neoclassical school of economics (Morgan, 2012). Based

⁵ Comte's approach of the three stages of historical development (theological, metaphysical, positive) had also a considerable impact on the emerging scientific culture of the time.

on the enormous success of physical sciences, positivism promoted methodological monism with the eventual aim of the unification of all sciences under a common scientific methodology. The scientific methodology of the physical sciences was deemed as the ideal for the rest of the disciplines. The rejection of all normative, ethical or metaphysical elements was a key characteristic of the physical sciences methodology (for an extensive discussion see Mirowski, 1989). In this conceptual framework, the idea of a value-free economics became more prevalent in the writings of the second marginalist generation. The methodological ideal of value-free economics must also be viewed in connection to the increasing use of mathematics in economic theory (see also Mirowski, 1991; Lawson, 1997; Turk, 2012). There was also a major development in the sense that psychological elements started to be considered as value-laden and therefore unacceptable in the corpus of economic theory. As a consequence, there was a marked decline of exchange of ideas between economics and psychology, a tendency that can also be found in subsequent mainstream economists (for a discussion of anti-psychologism among economists, see Bruni and Sugden, 2007; Goodwin, 2016).

The work of philosopher and economist Henry Sidgwick expressed the dominant current of thought of early 20th century concerning the role of values in economics. Influenced by Mill and Jevons and also by the positivist tradition, he re-emphasized the distinction between “what is” and “what ought to be”. The science of economics corresponds to the “what is” part (Sidgwick, 1883). Sidgwick’s contemporary, Philip Wicksteed was aware of the role of normative or philosophical concepts in marginalism and particularly in Jevons’ work. Realizing that hedonism with its central idea of pleasure maximization and pain minimization, has had a crucial influence on the marginalist approach, he attempted to disassociate economics from a “a hedonistic theory of ethics” (Wicksteed, 1910, p.434; see also Drakopoulos, 2011).

Vilfredo Pareto's thought represents the peak of the influence of positivism in the second marginalist generation and early neoclassical economics. He held that social sciences (including economics) should follow the same scientific method of the physical sciences (methodological monism). Pareto parallels economics with "rational mechanics" which in methodological terms implies that "it deduces its results from experience without bringing in any metaphysical entity" (Pareto, 1906, p.113). In the pursue of expelling all metaphysical concepts from economic theory, he attempted to reconstruct marginal utility theory without using the concept of utility. Utility is replaced by the supposedly value-free term of *ophelimity* (Pareto, 1896, p.3). Pareto was extremely influenced by the prevailing positivist scientific philosophy, a basic characteristic of which was the exclusion of all "metaphysical" and "non-scientific" elements from economics. In the same manner as Jevons and Walras, his methodological ideal for the discipline of economics was that it should be a mathematical science, part of the natural sciences such as physiology and chemistry (Pareto, 1896, p. 21). This clearly implied that economics should be freed from any philosophical or psychological notions that hamper the application of the positivist methodology (for an extensive discussion, see Seligman, 1969; Caldwell, 2013).

The early neoclassical economist Irvin Fisher was the first very influential American economist to introduce neoclassical economics in the US. For Fisher, positive economics should be free from any ethical assumptions. As he writes:

"But the economist need not envelop his own science in the hazes of ethics, psychology, biology and metaphysics (Fisher, 1892, p.23).

Similarly to Pareto, Fisher believes that the term utility is not neutral, because it is rooted in the heritage of Bentham and his theory of pleasure and pains (Fisher, 1892, p.23). For Fisher, the utilitarian bias of economics needs to be abandoned. The central

point here is that concepts (such as utility), which the previous marginalists thought of as positive or value-free, gradually started to be seen as inappropriate for a positive science of economics.

John Neville Keynes' work was the epitome of positivism in the economic orthodoxy at the beginning of the 20th century.⁶ Keynes distinguished three categories: a) positive science, which is defined as a body of a systematized knowledge concerning what is. The object of positive science is the establishment of uniformities, b) normative science, which is a body of systematized knowledge relating to criteria of what ought to be, the object of which is the determination of ideals and c) art, which is the formulation of precepts (Keynes, 1904, p.34). Concerning the notion of positive science, he writes: "We ought at least to recognize as fundamental a positive science of political economy which is concerned purely with what is and which seeks to determine economic laws" (Keynes, 1904, p.36).

Utilitarianism in Economics

Jeremy Bentham is considered to be the founding father of Utilitarianism. Bentham's philosophical system was based on the "Greatest Happiness Principle". This principle sets the moral standard for both the individual and for society as a whole:

"It is the greatest happiness of the greatest number that is the measure of right and wrong" (Bentham, 1969, p. 45).

The Greatest Happiness Principle requires two essential characteristics in relation to the concept of utility: a) its cardinal measurability and b) that interpersonal comparisons of

⁶ During the same period, Max Weber provided a more general discussion about the role of value-judgments in social sciences, although his thought was less influential in economics. Weber believed in the possibility of a value-free social science but unlike many of his contemporaries he was suspicious of methodological monism (Weber, 1949).

utility are possible and valid.⁷ Bentham attempted to measure utility according to its duration, intensity, certainty, etc. (Bentham, 1969, pp. 96-7). The sum of individual utilities sets the community's total utility. The final aim of Bentham's utilitarianism is the collective maximisation of happiness which clearly implies that interpersonal utility comparisons are admissible. The acceptance of comparability of utility is obvious in his other major work, *Theory of Legislation*, where he states two propositions:

“...(a) of two individuals with unequal fortunes, he who has the more wealth has the more happiness; (b) the excess happiness of the richer will not be so great as the excess of his wealth” (Bentham, 1882, p. 103).

Proposition (a) compares utilities among individuals or as Bentham writes: "a king's happiness would be greater than the average happiness of a thousand farmers" (Bentham, 1882, pp. 104-5). Proposition (b) implies both diminishing marginal utility and similar capacities for satisfaction (Author, XXXX, p.37; reference removed for blind review). Interpersonal comparability and measurability of utility are generally accepted by subsequent economists who belong to the utilitarian tradition (see also Riley, 2018).

The philosopher and economist John Stuart Mill introduced Bentham's utilitarianism into economics. Bentham's Greatest Happiness Principle is set as a universal moral standard, but Mill also stressed that the principle refers to the maximisation of happiness of the society not of the individual (Author, XXXX, reference removed for blind review). In Mill's words: "[It] is not the agent's own greatest happiness, but the greatest amount of happiness altogether" (Mill, 1979, p. 262). The notion of the collective maximisation of happiness implies that the community's total utility is the

⁷ Cardinal utility implies that the satisfaction derived by consuming a product can be expressed numerically.

sum of individual utilities, which in turn requires interpersonal utility comparisons. Similarly to Bentham, he was convinced of the measurability of pleasure or utility and admits explicitly the possibility of interpersonal comparisons in his discussion of the Greatest Happiness Principle (Mill, 1979, pp. 262-4, 319). Mill accepts comparability and equal capacity for satisfaction for every individual. The central role of the notions of collective maximisation of happiness and of the equality of all individuals in Mill's thought, are due to his liberal utilitarianism. Thus, Bentham and Mill put the foundations of the utilitarian tradition in economics (Schumpeter, 1954). With the idea of collective maximisation of happiness which requires utility comparability, utilitarianism brought attention to social questions and a way to answer these questions.

Utilitarianism became very influential in marginalism and early neoclassical economics (see for instance Sigot, 2002 for Bentham's influence on Jevons).⁸ In the manner of Bentham and Mill, utility is conceived as a cardinal concept in Alfred Marshall's *Principles of Economics* (Marshall, 1961, pp. 93, 838). This cardinality facilitates the acceptance of comparability which Marshall was eager to endorse in the first editions of his *Principles* (Author, XXXX, p.38, reference removed for blind review)⁹. Moreover, Marshall provides the theoretical justification of progressive taxation when he writes that "a pound has a greater utility (or gives more satisfaction) to the poor man than it gives to the rich man." (Marshall, 1961, p.130). Marshall's endorsement of utility cardinality and comparability was also in accordance to his disposition to tackle social issues through economic analysis (see also Raffaelli, et al, 2006).

⁸ As an indication of the influence of utilitarianism, the core notion of self-interested profit-maximization cost-benefit analysis found in business economics and ethics is often labeled as "utilitarianism" (Gustafson, 2013).

⁹ In the subsequent editions (especially in the ninth) he was less eager but still convinced.

The core of economic analysis of Francis Ysidro Edgeworth is the calculus of pleasure and pain and in this sense, he is closer to Benthamite utilitarianism than Marshall. He makes a distinction between economical and utilitarian or moral calculus (Edgeworth, 1881, p. 15). His next step is to invent a unit for economical calculus which measures pleasure and which has two dimensions: time and intensity. Further:

“For moral calculus a further dimension is required; to compare the happiness of one person with the happiness of another, and generally the happiness of groups of different members and different average happiness” (Edgeworth, 1881, p. 7).

By pointing out the need for comparability, Edgeworth's utilitarian or moral calculus are firmly in the utilitarian tradition (Edgeworth, 1881, p. 8). However, and contrary to Bentham and Mill, Edgeworth does not accept equal capacities for satisfaction, arguing that “some people have greater capacity for happiness than others” (Edgeworth, 1881, p. 57; see also Creedy, 1981, pp. 89-91). He changed his mind in his later work, *Papers Relating to Political Economy*, where utility comparability is thought as essential for building a theory of taxation. (Edgeworth, 1925, p. 235). In general, Edgeworth adhered to the utilitarian idea that problems of social welfare (including taxation), require utility comparisons.

The Emergence of Pigovian Welfare Economics

The theory and policy of social welfare started to receive increased attention during the first decades of the 20th century. Legislation for progressive taxation by UK and USA governments and the National Insurance Act of 1911 in UK, were the prime examples of this trend (Blum and Kalven, 1953, p. 12). Due to this increased interest in questions of social welfare, welfare economics emerged as a separate field of study with the publication of A. C. Pigou's book, *Wealth and Welfare* (1911). Apart from his influence

from Marshall and in the spirit of utilitarianism, Pigou endorsed interpersonal comparisons of utility:

“Nevertheless it is evident that any transference of income from a relatively rich man to a relatively poor man of similar temperament, since it enables more intense wants to be satisfied at the expense of less intense wants, must increase the aggregate sum of satisfaction” (Pigou, 1932, p. 87).

There are some clear implications originating from Pigou's argument that equal distribution increases total welfare: measurability of utility, utility comparisons, diminishing marginal utility and equal capacities for satisfaction. In accordance with previous utilitarians, Pigou thought of the above as factual assumptions (Pigou, 1932, p. 87). In the same conceptual framework as Bentham, Pigou conceives of social welfare as the sum of individual welfares and therefore accepts interpersonal utility comparability.

Roy Harrod continued the construction of Pigouvian welfare economics. Following Pigou, Harrod accepted utility comparability, the diminishing marginal utility of income and the equality of capacities for satisfaction. For Harrod, comparability of utilities is absolutely necessary for issues of social welfare and generally for welfare economics (Harrod, 1938, pp. 396-397). The theoretical scheme of welfare economics based on Pigou's and Harrod's work became established in the first decades of the 20th century. The acceptance of comparability in utilitarian welfare economics was matched with the widespread adoption of policies such as progressive taxation and national insurance, policies that were based on this notion.

Logical Positivism and the New Approach to Utility

Major economists of the second marginalist generation and of early Neoclassical economics started to become much more aware of the methodological discussion

concerning value-judgments. The influence of logical positivism was a major factor for this tendency (Redman, 1993; Drakopoulos, 1991; 1997; Dow, 2002). Logical positivism flourished in the 1930s and although its roots were in 19th century positivism, it was differentiated from Comte's positivism. It stressed that that scientific knowledge is the only kind of factual knowledge and that all traditional metaphysical doctrines are to be rejected as meaningless. The origin of logical positivism is to be found in the famous Vienna Circle, the most important members of which, were: R. Carnap, O. Neurath, M. Schlick and F. Waismann. Moreover, the theories of logic of B. Russell and A. Whitehead, which are to be found in their *Principia Mathematica*, were the principal source of the methodology of logical positivism. L. Wittgenstein's early ideas were also regarded by the members of the Circle as very much related to their philosophy. Similarly, the Englishman A. J. Ayer, although not a member of the Circle, popularized the ideas of the movement (for a discussion, see Ayer, 1946). One of the core ideas of logical positivism was the verification principle. The basic function of the verification principle is to categorize all kinds of statements into a) meaningful, b) meaningless, and c) tautological. Usually, the statements made by the physical sciences are regarded by logical positivists as being meaningful statements. Value judgements and ethical statements are branded meaningless. As one of the most influential logical positivists emphasizes:

"Value Judgements have no theoretical sense. Therefore, we assign them to the realm of metaphysics" (Carnap, 1981, p. 150)

It is also worth mentioning that Circle members sought to counter their era's dogmatic ideologies and propaganda (viz. the rise of Hitler and the National Socialists), even in science, by articulating and communicating scientific standards. Exact thinking was

seen as a tool for fighting theological and political dogmas and social prejudice. (Sigmund, 2017).

The impact of logical positivism was manifested in Lionel Robbins' seminal work on the methodology of economics (1932). Robbins' ultimate aim was the construction, through the application of the scientific philosophy of logical positivism, of a positive economic science. An indicative example of this stance was his view that the psychological elements that were commonplace in the work of the first marginalists, did not belong to a value-free positive economics (Robbins, 1932, pp.83-86). Consequently, mental states and motivations were thought to be somehow unscientific. As will be seen, Robbins' very influential position towards the status of interpersonal comparisons of utility, is in the same spirit.

For most economists in the tradition of Bentham and Mill, the concept of utility corresponds to a distinct mental state such as a feeling of well-being or satisfaction or happiness. Thus, maximizing aggregate utility, was the same as increasing the happiness of as many people as possible. The reflection of positivist methodology on economic theory can be discerned in the strive to construct the theory of rational choice without utilitarian-psychological underpinnings. Originating in the works of Hicks, Allen, Samuelson, von Neumann and Morgenstern, the new conception of utility referred to the degree that a person satisfies her (unrestricted) preferences. A utility function ranks states of the worlds according to the extent to which a person satisfies these preferences. In this sense, utility is ordinal rather than cardinal and just a tool to describe choice behavior (Van Praag, 1991; Adler and Posner, 1999).¹⁰ In particular, the

¹⁰ Ordinal Utility implies that satisfaction derived by consuming a product can be ranked in order of preference but cannot be evaluated numerically. Ordinal utility is most commonly used as a representation of preference, in the following sense: $U_i(x) > U_i(y)$ means 'Individual i prefers (alternative/situation/bundle of goods) x to y .

work of John Hicks and Roy Allen (1934) was the first attempt (intensified a few years later with Hicks' *Value and Capital*, 1946), aiming at the "purification" of the basic marginalist concepts of their utilitarian-psychological connotations. In this framework, Hicks constructs indifference curves which show combination of goods for which the consumer is indifferent and the marginalist utility space is replaced by a commodity space, and marginal utility by the marginal rate of substitution. Further, he rejects interpersonal utility comparisons as a value judgement. (Hicks, 1939, p.697). The general purpose of Hick's theoretical reconstruction is "the right to an economics free from utilitarian assumptions." (Hicks,1946, p.18).

Based on the works of Hicks and Allen, Paul Samuelson focused on the construction of a solid value-free theory of consumer behaviour. In an early article, Samuelson expressed his doubts about Hicks' and Allen's reconstruction of utility theory in terms of marginal rate of substitution:

"It is clear that even the most modern analysis shows vestigial traces of the utility concept. The introduction and meaning of the marginal rate of substitution as an entity independent of any psychological, introspective implications would be, to say the least, ambiguous" (Samuelson, 1938, p.61).

Samuelson aimed to get away from psychological concepts by accepting observed behaviour only. Samuelson's revealed preference theory is based on a few basic postulates which describe "rational" economic agents. Following a behavioral framework analogous to the one developed by Samuelson, John von Neumann and Oskar Morgenstern suggested a decision theory when the probabilities of the possible outcomes are objectively known. Based on a set of axioms over people's preferences, they constructed an expected utility function. Consequently, rational agents conforming to the axioms maximize their expected utility function (Von Neumann and

Morgenstern, 1944). Given the above developments, the concept of utility has a completely different meaning than the one used by most marginalists. Utility has no intrinsic meaning other than the information it supplies concerning preference ordering. In other words, “the utility concept degenerated into just a handsome tool to describe choice behavior.” (Van Praag, 1991, p.70).¹¹ Consequently, the new concept of utility in terms of preference satisfaction does not require a commitment to utilitarianism as was the case with Edgeworth, Pigou and Harrod. Expected utility theory and revealed preference theory are the foundations of the modern theory of choice in economics (Varian, 2010; Crawford and De Rock, 2014; Hands, 2016).

The positivist influence to mainstream economics continues until the present day. The enormous impact of Milton Friedman’s essay entitled *The Methodology of Positive Economics*, is a strong indication of the prevalence of positivism in contemporary orthodox economics (Friedman, 1953; see also Boland, 1982; Dow, 2002; Mäki, 2009).¹² Friedman’s positivism is also the foundation of the methodological approach of the extremely influential Chicago School economics. For instance, George Stigler and Gary Becker in their work on the theory of choice, are not interested in the psychological bases of individual agents but instead offer analyses of the objective (positive) cost situations facing the individual decision makers (Stigler and Becker, 1977; see also Boland, 2003).

The mathematical-deductivist modelling which went in tandem with the positivistic turn, is a key feature of current economic orthodoxy (Lawson, 1997). For instance, the theory of choice is expressed in formal terms and excludes alternatives such as

¹¹ There has been substantial criticism of the expected utility theory, including empirical evidence that individuals do not conform to the axioms of the theory, see for instance Kahneman, Slovic, and Tversky, 1982.

¹² The influence of positivism is very strong even in very popular contemporary economic texts, see for instance, Mankiw, 2009, pp.34-35.

interdependent preferences. Interdependent preferences (or social preferences) express the social aspects of individual choice, and have serious theoretical and policy implications if they are included in the model of choice (Bianchi and Sanfilippo, 2015). The cases of social preferences along with utility comparability can be seen as additional examples of the effective neglect of social ontology imposed by the constraints of positivist methodology to mainstream economics (Lawson, 2003).

Utility Comparisons as a Value Judgement and the New Welfare Economics

The increasing influence of positivism, and especially of logical positivism in economics in the first decades of the 20th century, started to undermine the status of Pigovian welfare economics and its utilitarian basis. Lionel Robbins expressed this strong current with respect to the issue of interpersonal comparisons of utility:

“I still cannot believe that it is helpful to speak as if interpersonal comparisons of utility rest upon scientific foundations — that is, upon observation and introspection” (Robbins, 1938, p. 640).

Robbins' methodological stance became extremely influential among mainstream economists. In addition, he rejected the idea of equal capacities for satisfaction on the same grounds (Drakopoulos, 1991). Although Robbins rejected comparability in principle, he was willing to allow it in matters of economic policy “so long as its normative character was stated explicitly” (see Robbins, 1938, pp. 640-1). Robbins was also against the conception of cardinal utility, embracing the theoretical developments of the ordinal approach. He considered the cardinal approach to utility as associated with hedonism (through its basic notions of pleasures and pains), and thus belonging to an ethical system. Therefore, the move to ordinal utility theory was also viewed as a rejection of hedonism (Robbins 1932: 56; see also Hands 2010). As was discussed

before, all the previous economists (with the exception of Pareto) conceived utility as cardinally measurable.

The impact of logical positivism was again present in the new theory of ordinal utility (see Hicks and Allen, 1934). Hicks for instance, rejects the idea of interpersonal comparisons of utility on the grounds that it would involve a value judgment (Hicks, 1939, p.697). Given that cardinal utility facilitates interpersonal comparisons, the adoption of ordinal utility clearly undermines the theoretical justification of comparability. In the following decades, the rejection of interpersonal comparison of utility as a value judgement became part of the established corpus of mainstream economics (see also Walsh, 2008). In Sen's words: "The use of interpersonal comparisons is widely thought to be arbitrary, and many people view these comparisons as meaningless" (Sen, 1970, p. 4). The current dominant view is that economists typically doubt whether interpersonal utility comparisons are possible, and they do not want policy conclusions to depend on them (Hausman, McPherson and Satz, 2017, pp.117, 146; Walsh, 2008).

The rejection of interpersonal utility comparisons greatly diminished the theoretical status of Pigovian welfare economics. The proponents of a "new" or Paretian welfare economics, (initially by Hicks, 1939) abandoned the idea of making social welfare judgments on the basis of interpersonal comparisons of utility. The only principle on which to ground welfare judgments was the Pareto principle, according to which a situation is a global improvement if it makes at least one person better off, without making any other person worse off. However, and without comparability, the ability of Paretian welfare economics to provide prescriptions concerning policy issues was very limited. A possible way out was through the idea of social welfare functions (Mishan, 1960). Social welfare functions represented the theoretical effort to construct

"meaningful" (in the logical positivist context) welfare theory which will be able to overcome the problem of welfare policy. The first social welfare function was proposed by Abraham Bergson who was convinced that his formulation can overcome the problem of comparability (Bergson, 1938). Bergson defines social welfare as "a function of the welfare of each member of the community, or of the quantities of goods and services consumed by each member." (Bergson, 1938, p. 310). A few years later, Samuelson proposed a similar social welfare function of a more general form which has to be maximized subject to an aggregate production constraint (Samuelson, 1947). Samuelson acknowledges that the "exclusion of comparability from the assumptions of the welfare function limits the range of welfare economics" (Samuelson, 1947, pp. 203-53). Nicholas Kaldor, John Hicks and Oscar Lange attempted to construct a welfare theory without making interpersonal comparisons by establishing a new welfare criterion. This criterion (Kaldor-Hicks criterion) states that the economist can say that a certain policy increases the aggregate real income when "it is quite sufficient for him to show that, even if all those who suffer as a result are fully compensated for their loss, the rest of the community will still be better off than before" (Kaldor, 1939, p.550). The concept of social welfare seemed to provide the necessary theoretical basis to the field of welfare economics. Operating in a positivist framework, the Kaldor-Hicks criterion and the Bergson-Samuelson social welfare functions supplied the foundations for the new welfare economics.¹³

The serious problems for policy prescriptions without utility comparisons were exposed with Kenneth Arrow's seminal publication entitled *Social Choice and Individual Values* (1951). Arrow's well-known impossibility theorem showed that the concept of

¹³ There were many problems with the Kaldor-Hicks criterion. Apart from its internal inconsistencies, it still assumes implicit comparability (see, for instance, Scitovsky, 1951; Blackorby and Donaldson, 1990).

social welfare function is seriously undermined without interpersonal utility comparisons. In Arrow's words:

"If we exclude the possibility of interpersonal comparisons of utility, then the only methods of passing from individual tastes to social preferences which will be satisfactory and which will be defined for a wide range of sets of individual orderings are either imposed or dictatorial" (Arrow, 1951, p. 59).

The clear implication of the theorem was the impossibility of deriving a nondictatorial social welfare function. Thus, the Bergson-Samuelson types of social welfare functions are subject to Arrows' impossibility results (see also Davis, 1992). Arrow's work undermined the theoretical efforts to build welfare economics according to positivist principles. In Sen's words: "From the perspective of welfare economics, once the neutrality result is established in Arrow's framework (in addition to the eschewal of interpersonal comparisons of utility), there are really no interesting social choice procedures left." (Sen, 2002, p. 334). Arrow's results also deeply affected applied research pertaining to policy decisions (see also Buccola, 1988; Hausman and McPherson, 1993; Walsh, 2008).

The positivist-inspired rejection of comparability which was initiated with Pareto, continued with Robbins and became generally accepted in economics, had serious implications for the theoretical integrity of positive welfare economics and the ensuing policy suggestions concerning social welfare (see also Mishan, 1960; Stiglitz, 1987; Author, XXXX, reference removed for blind review).

The positivist influence was not confined to welfare economics. Other economic concepts were also subjected to the same treatment. Corporate social responsibility (CSR) is another indicative example. The initial outline of the topic was specified by

welfare economist Howard Bowen (1953), and soon gained wide interest among business studies specialists (Acquier et al, 2011). However, it is virtually ignored by contemporary orthodox economists mainly because of Friedman's negative stance that is partly based on his positivism (Friedman, 1970). The social welfare aspect of CSR involves social costs and benefits and individual judgements necessary for its subjective valuation (Elhauge, 2005). As Jim Wishloff observes: "Milton Friedman's position on the social responsibilities of business must be understood in the light of the worldview that insists on the extension of positive science to social facts." (Wishloff, 2009, p.149).

Economic Policies and the Necessity of Interpersonal Utility Comparisons

In the Post-War II decades, a huge increase of the state sector took place in many major western countries. The extensive use of fiscal policy meant the increasing role of state expenditure, and especially of direct and indirect taxation. In addition, the system of progressive taxation became more widespread as the main direct taxation regime. Government involvement was supplemented with a variety of welfare policies like national insurance, in the principal western countries. For instance, and following the Beveridge report of 1942, the National Health Service and National Insurance Acts were introduced in the UK in 1946 (Beveridge, 1942). Analogous policies were taken by other national governments in the US and Europe. The theoretical basis of most of these, mostly successful, measures was the framework of utilitarian welfare economics (Berend, 2016). Consequently, the implicit assumption that interpersonal comparisons of utility are possible was crucial. Thus, there was a serious discrepancy between the established policy practice and the theoretical dismissal of comparability by mainstream economics. The following are very important policy issues which require assumptions deemed to be unscientific in the positivist sense.

Progressive Taxation

The broad argument for progressive income taxation is that transferring income from higher income to lower income individuals increases total welfare or utility in the society. The same argument is used for income subsidies to poor individuals through government welfare policy. The reason such transfers increase welfare is based on the assumption of the declining marginal utility of income, or in other words, that money provides more utility to a poor person than a rich person.¹⁴ The notion of the declining marginal utility of income is assumed to hold for every individual in society. In the words of Walter Blum: “The argument can only proceed on the assumption that the money utility curve for yourself, which you derive from introspection, also holds true for other men in the society.” (Blum, 1952, p.477). Assuming diminishing marginal utility of income for all members of society, the equal marginal sacrifice principle (corresponding to the utilitarian approach of a minimum aggregate sacrifice) calls for a progressive income tax policy (Sadka, 1976, p. 931; see also Griffith, 2004; Kuehn, 2022).

However, the core assumption for the above standard arguments concerning progressive taxation is the possibility of interpersonal utility comparisons. The inconsistency between theory and practice in the case of utility comparisons had started to be highlighted at the time when progressive taxation became widespread in most western countries. In the early fifties, Blum stressed:

“Of course if one holds the Robbins' position about interpersonal comparisons, one is not merely rejecting the notion that money has declining utility for all men. Rather one

¹⁴ An extra 50\$ would increase more the well-being of someone with an annual income of 10.000\$ than it would increase the wellbeing of someone with an income of 100.000\$. Most people consider this argument common sense, but relies on the capacity of making interpersonal comparisons of the contribution of 50 dollars to the well-being of different people.

is rejecting once and for all the possibility of using sacrifice analysis as a guide to tax policy” (Blum, 1952, p.478).

The importance of interpersonal comparisons of utility and also of the diminishing marginal utility of income for tax policy is also emphasized by Mark Stein (Stein, 1992, p.390).

Contemporary optimal tax theorists openly admit the role of ethics in their analysis. The presence of ethical questions is to be found in the general choice of social welfare functions and extends to more particular issues such as the weights on earnings, and the degree of inequality aversion of individuals. In the words of Marc Fleurbaey and François Maniquet:

“It is indeed worth emphasizing that ethical principles may be relevant not only to the design of the income tax, but also to the selection of the tax base” (Fleurbaey and Maniquet, 2018, p.1032)

Thus, and despite the positivism-inspired effort to expel value judgements from economics, taxation policy and especially progressive taxation has a very strong and unavoidable ethical component (see also Stiglitz, 1987).

GDP comparisons and social welfare policies

The very common method of using real income per capita as a basis for international welfare comparisons also involves the assumption of interpersonal utility comparisons. One of the first authors to point this out was Dan Usher who argued that the welfare-based concept of real income which is widely used involves interpersonal comparisons of utility (Usher, 1980, pp. 57-61). The same holds true for economic growth comparisons among countries based on welfare measures, given the similarity between international comparisons of dynamic welfare and interpersonal comparisons of well-being (see also Asheim, 2011). For instance, comparisons of welfare or living standards

can make sense only across societies with identical preferences (which is a heroic assumption), in the same way that interpersonal comparisons can only make sense across individuals with identical preferences (for a discussion see Fleurbaey and Tadenuma, 2014). The extensive usage of these concepts among economists and policy-makers, has led a number of theorists to search for a more theoretically sound basis for international welfare comparisons among different countries (see for instance the pioneering works of Sen, 1979; Usher, 1980; Kakwani, 1981). Given the many difficulties of standard GDP-based methods, research on subjective well-being has been suggested as a possible alternative of measuring and comparing national and international social welfare (e.g. Van den Bergh, 2009). However, the well-being method requires cardinality and comparability of utility or well-being. Its wider acceptance will be advanced if those two concepts are explicitly admitted in the theoretical corpus of GDP-based welfare (Frey and Stutger, 2002; Usher, 2016).

In a similar conceptual framework, the rejection of interpersonal utility comparisons seriously undermines income inequality analysis and social welfare policies (Sen, 1997; Fleurbaey and Tadenuma, 2014). For instance, policy measures which alleviate extreme poverty may be highly desirable, but will not be Pareto improvements if they involve sacrifices by the rich (Hammond, 1996). More generally, issues relating to income and wealth distribution and therefore policies to reduce poverty and social deprivation, are lacking a solid theoretical basis if utility comparability is rejected (see also Sen, 2002, p. 273).

Policy Decision Making and Policy Assessment

Apart from providing theoretical basis to standard policy issues and tools, the adoption of comparability would facilitate the policy decision making and policy evaluation in

many current applied policy topics. Setting the level of minimum wage is one prime example. An increase of the minimum wage implies economic loss to employers and to some workers who might lose their jobs, but increases wages and utility of low-wage workers (Card and Krueger, 1995). It is almost impossible to assess the net social welfare of this policy by following the Pareto criterion without interpersonal comparisons. However, and by allowing comparability, the overall assessment of the policy measure could be done in terms of calculating the economic losses incurred compared to economic gains. Similar observations hold in the case of income transfer programs (such as unemployment insurance, disability and sickness benefits etc.), which are part of welfare policies in many countries. Income transfers reduce labor supply and private savings, but they also reduce poverty rates and inequality. Estimating the magnitudes of the effects are clearly important. The question of the balance of the gains against the costs is open, but it certainly involves relative weights attached to each of those factors and their measurement (for an extensive discussion and for other examples, see Goodin, 1995).

Measurement involving comparability also matters in the cases of employing cost-benefit analysis (CBA). The social impact of large-scale projects is often based on CBA (e.g. Beckerman, 2017). For instance, the construction of a new highway implies gains to some in terms of reduced transport costs and road accidents, but also losses for some others in terms of a reduction of available land and environmental pollution. CBA assumes comparability and points to a decision if the welfare gains to those whose are better off by the project are larger than the welfare losses to those who are worse off (Adler and Posner, 1999). In fact, Government agencies in the US routinely use CBA when evaluating regulations and other projects (Morrison, 1998).

In a similar manner, policy measures regarding environmental protection are often based on CBA (e.g. O'Mahony, 2021). For example, improvements to air quality is a clear case of public good.¹⁵ Given that most public goods are provided by the public sector, Governments wish to measure the desirability of public goods that consumers do not pay for on the open markets. The desirability of improvements to air quality brought about by government regulations implies an estimation of the benefits of providing the good compared to the costs of provision (Anomaly, 2015; Beckerman 2017). The decision here is also based on performing cost-benefit analysis that implicitly requires utility comparability.

In general, the application of Paretian welfare economics to policy decisions and policy evaluation is extremely hard and requires a great number of assumptions, especially under conditions of uncertainty. The policy paralysis problem is present, or “when interpersonal comparisons are systematically eliminated, every policy can be optimal.” (Mandler, 2000, p.96). This means that Paretian welfare economics fails to fully address questions that policy makers ask (Buccola, 1988). Full endorsement of comparability will bring economic welfare theory closer to the goal of maximizing overall well-being (which is a basic role for governments in all major political theories), and it will promote further expert backing to policy implementation (for an extensive discussion, see Goodin, 1995). In the final analysis, “most policy changes involve losers, and public agents need to know how to think about their losses relative to winners' gains. Interpersonal judgments are required for making comparisons across any individuals or group.” (Buccola, 1988, p.457).

¹⁵ Pure public goods are those goods which are non-rivalry in consumption and non-excludable (e.g. national defense, air quality). Given their characteristics, the public sector is their main provider.

Methodological Observations

As was argued, the positivist rejection of interpersonal utility comparisons has brought huge difficulties to the theoretical backing and evaluation of many economic policies and policy tools. Thus, even since the 1950's, there were attempts to resolve the conflict between welfare policy and theory (see also Author, XXXX, reference removed for blind review). Dennis Robertson's views about comparability reflect the uneasiness of some economists concerning the inconsistency between theory and practice. Robertson emphasizes that by “cardinal utility and interpersonal comparisons of utility we can draw inferences about important matters such as taxation policy.” (Robertson, 1954, p. 38). In his view, the tools of measurable utility and of comparability are necessary in order to deal with economic problems which are central to society. Similarly, John Harsanyi has followed a more utilitarian approach, not far from the views of Marshall and Pigou. He holds that the concept of additive cardinal welfare is a logical one and that interpersonal comparison of utilities are admissible in the case of persons with similar preferences and expressive reactions (Harsanyi, 1955, pp. 317-321). A couple of decades later and in the spirit of Harsanyi, Yew-Kwang Ng advocates an acceptable but imprecise comparability (Ng, 1979, p. 15; see also Ng, 2022). Some theorists like I. M. D Little rejected the conception of comparability as a value judgement and argued that “interpersonal comparisons rest on observations or introspection and therefore they are empirical judgements about the real world.” (Little, 1973, pp. 56-66). Amartya Sen also condemns the idea that comparability should be rejected and he is prepared to allow partial interpersonal comparability (Sen, 1997; Sen, 1982).¹⁶

¹⁶ Concerning the status of interpersonal comparisons, the philosopher John Rawls supported Sen's idea that they must be based, in part at least, on a measure of what he calls a person's “basic capabilities” (Rawls, 2001, p. 168).

The problem of comparability is associated to the more general issue of the role of ethics in economics. Allowing interpersonal comparisons, Sen observes, would also be a way of “linking up normative social choice theory to ethical traditions that go back a long way and that have received a good deal of critical attention in recent philosophical discussions.” (Sen, 2002, p. 338). The long history of the role of values in economic thought is also demonstrated by the indicative example of Gunnar Myrdal’s work (e.g. Myrdal, 1958). Further, relatively recent developments in the philosophy of science under the name of post-positivism, have greatly weakened the influence of logical positivism on scientific discourse, and thus its stronghold on the treatment of values. The well-known works of Karl Popper (falsificationism), Thomas Kuhn (scientific paradigms) and Imre Lakatos (scientific research programmes) are key representatives of the criticism of positivist scientific philosophy (for a survey see Redman, 1993). Their influence is also clearly visible among contemporary economic methodologists (Dow, 2002; and for a survey Drakopoulos and Karayiannis, 2005).

The rise of post-positivism philosophy has also opened the debate concerning the nature of value judgement arguments in moral philosophy and in philosophy in general. For instance, philosophers such as Norwood Hanson among others, introduced the notion of theory-ladenness, and rejected the absolutist fact–value distinction which was central in logical positivism (Hanson, 1971). In the same vein and in the post War II decades, Oxford philosophers Elizabeth Anscombe, Philippa Foot, Mary Midgley and Iris Murdoch argued against the logical positivism stance that ethics is mere expression of emotion, and developed versions of ethical naturalism. Moreover, they strived to re-orientate philosophy towards the role and place of value judgements in ethics (Lipscomb, 2022) .

With respect to economic methodology, the current drive to open up pluralism in economic discourse so as to include aspects of ethical decision making into models, is also in the same direction (e.g. Lawson, 2003; Courvisanos et al, 2016). In the same conceptual framework, there are recent trends by prominent philosophers such as Hilary Putnam, to reconsider the role of value judgements in social sciences. After analyzing how social sciences such as economics have fallen victim to the bankrupt metaphysics of Logical Positivism, Putnam criticizes Hume's conception of a "matter of fact" (Putnam, 2002). Putnam identifies a path forward in the work of Amartya Sen and argues against the dichotomy between the objective and the purely "subjective." (Putnam, 2002). It seems that there is an emerging movement towards the critical re-assessment of the scientific ideal of value-free economics (see for instance the collection of essays in Putnam and Walsh, 2014; Davis, 2022). Further, Putnam's and Sen's approaches can be viewed as a general recent attempt to reintroduce ethical issues into economics, which were so clearly part of classical economics in the days of Adam Smith (Van Staveren, 2008; see also Hodgson, 2001). As Sen aptly had observed:

"Modern economics has been substantially impoverished by the distance that has grown between economics and ethics" (Sen 1987, p. 7).

However, and in spite of the above, the dominant view still adheres to positivism, and interpersonal comparisons are rejected as unscientific with all the ensuing consequences for policy that were discussed.¹⁷ This stance is reflected in contemporary influential economics textbooks. Thus, one can read: "...there can be no accurate scientific assessment of the utility that someone might receive by consuming a frozen dinner or a movie relative to the utility that another person might receive from that same

¹⁷ One of the earliest and systematic criticisms of positivism in economics can be found in Hollis and Nell (1975) who argued that positivism has provided neo-classicism with important support, which they then show to be unfounded.

good.” (Miller, 2011, pp. 436–7). The same approach is found in other well-known texts by Samuelson and Nordhaus, (2010, p. 89) and by Varian (2010, pp. 57–8; for a review see Ng, 2022). This attitude towards comparability has spread to the neighboring discipline of happiness studies, a field of study which uses extensively subjective well-being data and attempts to contribute to public policy issues (for a survey, see Kristoffersen, 2017). The opinion of Arik Levinson towards cardinality and comparability is indicative: “economists normally assume utility is ordinal rather than cardinal, and that interpersonal comparisons based on stated happiness are impossible.” (Levinson, 2012, p.873).

Concluding Remarks

Since its formation in the first decades of the twentieth century, mainstream economics has embraced a positivist conceptual framework in which value judgements are completely inadmissible as part of the theoretical discourse. The core issue of this paper was to discuss the problematic character of this methodological stance, especially with reference to interpersonal utility comparisons and the great obstacles that it imposes to the theoretical foundation and evaluation of many common policy measures. In order to build the argument, the paper started with a historical outline of the notion of value-free economics and proceeded to a discussion of utilitarianism in economic thought. Consequently, it focused on the influence of logical positivism on Paretian welfare economics and the effects of the rejection of comparability. Importantly, it was shown that utility comparisons are necessary for the theoretical justification of key economic policies such as progressive taxation, policies grounded on GDP based welfare comparisons, and social welfare measures. Given that Paretian welfare economics fails to fully address questions that policy makers ask, allowing comparability would also

facilitate the policy decision making in many current applied policy issues. It will also promote further expert backing to policy implementation and evaluation. Finally, it was argued that the tension between theory and practice might be resolved through the efforts of prominent economists and philosophers to challenge positivism and its treatment of value judgements. However, and despite the appearance of works which condemned a strict positivist approach to economic welfare, the norm that interpersonal comparisons are not scientific is still prevalent among mainstream economists.

Certainly, the role of value judgements in economic theory and economic policy is still the subject of debate and investigation. Economic theorists have recently started to realize that policy measures need to rely on ethical assumptions (i.e. Fleurbaey and Maniquet, 2018). In this respect, the emphasis on role of ethics in economics of some notable authors such as Kenneth Boulding (1970), Bernard Hodgson (2001), or Julie Nelson (2018), seems to be gaining ground. The case of interpersonal utility comparisons that was discussed here, is a very illustrative example of the usefulness of the study of the interrelationship of ethics and economics. It is hoped that the discussion will provide more strength to the view that policy makers and their economic advisers cannot avoid ethical questions in their analysis of the workings of the economic system.

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