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Menger and Jevons on value: a crucial difference

by

Maurice Lagueux
Université de Montréal

While it is well known that Carl Menger and Stanley Jevons adopted very different views on the role of mathematics in economics[1], it is usually admitted that their respective views on the theory of value were relatively close. Indeed, both strongly objected to the classical theory of value which is based on objective costs of production, whether these be labour or capital costs. Moreover, each elaborated, roughly at the same time, an alternative economic theory based on a comparison between the various degrees to which needs are fulfilled thanks to goods whose effect tends progressively to diminish with the fulfilment of these needs. Furthermore, each managed to ground a theory of economic exchange on the fact that people are rational enough to choose which of two goods will provide them with the greatest benefit. In the face of such similarities, it is tempting to conclude that, while using very different terminologies, these two economists developed quite similar analyses whose key element is a *subjective* theory of value which was opposed to the *objective* theory of the classical economists. It is true that specialists of Austrian economics have often underscored the originality of Menger's position and its differences with those of the two other fathers of the so-called marginalist revolution, but while they have seriously questioned the

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1 For a well documented statement on this point, see Mirowski (1989, pp. 254-261).

alleged "marginalist" character of Menger's position, they have rarely contrasted his theory of *value* as such with Jevons' theory.[2]

My claim, however, is that while it is true that both economists proposed comparable analyses of exchange, they explained this exchange with the help of extremely different conceptions of value. One should be alerted to this difference by the very terms used by each author: Jevons based his analysis on the concept of utility, a word which is almost never used by Menger, whose analysis instead refers to satisfaction. While satisfaction effectively describes the subjective state of mind of what Menger calls an "economizing man", utility describes the more objective character of the good which can bring him such satisfaction. Even though Jevons insisted on the fact that "utility is not an intrinsic quality" of goods (Jevons, 1957, p. 43), he defined utility as "the abstract quality whereby an object serves our purposes, and becomes entitled to rank as a commodity" (p. 38). Consequently, in his famous graph of the variation of utility (p. 46), Jevons can compare different levels of utility provided by successive increments of the commodity in question. By contrast, in the tables which play a comparable role in his own analysis,[3] Menger refers only to degrees of satisfaction in relation to the various needs which are considered, and draws comparisons only between these different degrees of satisfaction. In keeping with these terminological

[2] Indeed, it is now usual among specialists to "de-homogenise" the relations between Menger, Jevons and Walras (see, Jaffé, 1976 and Loasby, 1991, p. 42). Streissler (1973) is probably the most vocal on this ground, but his arguments related to the questions of development, information, equilibrium and perfect competition essentially question the relevance of characterizing Menger as a marginalist. However, with the possible exception of what is said on the law of one price (but, on this point, see note 7 below) they do not affect the received view on Menger's theory of value as such. It is true that Mirowski (1989, p. 261) clearly claims that the core of Menger's theory of value is totally different from Jevons', but he argues this particular point in a fashion which is much too allusive to be really convincing.

[3] Menger, 1976, p. 127. According to Kauder 1965, p. 76 (quoted by Mirowski, 1989, p. 260), Menger "crossed out" this table in his author's copy, apparently for being not happy with this kind of "semi-mathematical interpretation"

differences, it is noteworthy that, even though he is credited by Friedrich Hayek with being "the first to base the distinction between free and economic goods on the idea of scarcity"[4], Menger never uses the word "scarcity"[5] and systematically refers to the "availability" of goods whereas Jevons pays special attention to those of his predecessors who have used the word "scarcity" (Jevons, 1957, pp. 54-57 and pp. 161-164) or his equivalents. In fact, this word was quite congenital to the approach of Jevons, even though it was rarely used before his time. It is true that the significance of this terminological difference between Menger and Jevons should not be exaggerated. Indeed, to be economically scarce a good has to be useful to at least one potential user. Yet, whereas "scarcity" points to a relatively *objective* character of a good when it is compared to other goods, "availability" has no meaning unless one refers explicitly to the *subjective* capacity of someone to use or to consume this good at will.

Two substantially different theories of value

Now, if one considers the substance of the respective value theories of these two economists, one has to conclude that a significant difference exists. Whereas Menger consistently developed the radical subjectivist consequences that follow from his starting point, Jevons systematically managed to reintroduce some degree of objectivity into his theory. In such a context, the famous opposition between objective and subjective theories of value has to be restated and replaced by two subjective-objective oppositions which are expressed with the same words taken in totally different senses. *In the first sense*, a theory of value is objective if the value of a good depends upon the circumstances of its production and subjective if it instead depends upon the needs of potential consumers. If matters are put in such a way, Smith's, Ricardo's and Marx's

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4 Hayek's Introduction in Menger, 1976, p. 18.
5 *Ibidem.*

theories of value are objective, whereas both Jevons' and Menger's theories are clearly subjective. *In the second sense of this opposition*, a theory of value is objective if it asserts that a good possesses value if it has the objective capacity to fulfil the needs of potential consumers and, given this capacity, can be exchanged for other goods of comparable value. By contrast, a theory would be subjective if the value of a good was taken to be nothing but the significance it takes on for a potential consumer who becomes aware of its capacity to satisfy some of his or her needs. If matters are put in such a way, Menger's theory is clearly subjective while Jevons' theory must be said objective.

The kind of objectivity which this reintroduces into Jevons' theory corresponds to what is required to allow the development of a mathematical treatment of economics. Indeed, as illustrated by Walras' *Éléments* and most subsequent works in mathematical economics, the formal treatment of prices is a key element in such a development. In fact, for most economists, a theory of value is important because value is generally conceived as the cause which determines price levels; a price — or a ratio of exchange, as Jevons prefers to say — is nothing but the phenomenal manifestation of the value of a good. In such a context, it will appear meaningful to refer to the price of a good and, *a fortiori,* to measure such a price, if and only if the price is a feature of the good as such and not a reflection of the degree of awareness a potential consumer subjectively develops about the capacity of this good to fulfil his need. Thus, in order to be the basis of a quantified price theory, a theory of value must be objective, at least in the second sense that I have distinguished above. Incidentally, the appeal which an objective theory of value exerted on the classical economists was largely due to its expected ability to provide an objective basis for a theory of price. Ricardo was desperately looking for "an invariable measure of value", which classical economists mistakenly associated with objectivity, and Marx expended considerable effort in looking for a solution permitting him to transform his objectively grounded labour values into prices. For Jevons and Menger, however, this kind of attempt was unquestionably a dead-end.

Both of them rejected the classical objective theory of value, but it is important to note that this rejection was much less radical on the part of Jevons than of Menger. According to Jevons, the classical economists were wrong to pretend that costs of production directly determined value without considering seriously the role of utility, because according to his own "tabular" form:

Cost of production determines supply;
Supply determines final degree of utility;
Final degree of utility determines value (Jevons, 1957, p. 165)

I do not want to deny the determinant role played here by the final degree of utility nor its dependence on consumers' needs and satisfaction, but it is nonetheless true that the indirect role acknowledged for cost of production provides a basis for a more objective interpretation of value and price. Far from being a kind of projection of a subjective state of mind concerning the usefulness of some good, value is a magnitude which is determined by the interaction of two factors, one (cost of production) which is strictly "objective" and the other (final degree of utility) which is presented as the inscription in a good of its actual efficiency in satisfying people's needs. As is well known, this interdependence of Ricardo's and Jevons' theories was underscored by Alfred Marshall in the Appendix I of his *Principles*, where he compares it to the two blades of a pair of scissors (Marshall, 1966, p. 675) after recalling Jevons' tabular form and inverting its order to obtain what he presents as a "rather less untrue" catena:

Utility determines the amount that has to be supplied,
The amount that has to be supplied determines cost of production,

Cost of production determines value (Marshall, 1966, p. 674)

This quasi rehabilitation of an objective theory of value did not relax the objections which had been raised against a theory of value based on cost of production, but it contributed significantly to a relatively objective interpretation of the neoclassical theory of value and price.

By contrast, Menger's own rejection of the cost of production theory of value left no way out of it. It is not that Menger was less sensible than Jevons or Marshall to the economic importance of production. On the contrary, he largely devotes the two first parts of his *Principles* to an analysis of the economic characteristics of what he calls "goods of higher order", namely goods which "do not have the capacity to satisfy human needs directly, but which are nevertheless used for the production of goods of first order" (Menger, 1976, p. 57) which can directly satisfy these needs. But one of the most important conclusions to which such an analysis leads is what Menger calls the law according to which "the goods-character of goods of higher order is derived from that of the corresponding goods of lower order" (p. 63). When it comes to discussing economic value, this law allows Menger to claim that "it is evident that the value of goods of higher order is always and without exception determined by the prospective value of the goods of lower order in whose production they serve." (p. 150) It is in the name of this way of seeing the matter that Menger denounces with the most extreme severity "the argument that goods attain value for us because goods were employed in their production that had value to us".[6] With such a principle implying an upwards transmission of value from consumption (first order) to production (higher order) goods, there is no more room left for any objective theory of value. Even Jevons' and Marshall's moderate attempts to rehabilitate the role of costs of production in a fashion

6 Menger, 1976, p. 149; on this point, see Kirzner, 1990, p. 99.

which contributes to reobjectivize to some extent a utility-based theory of value are definitely disqualified with such a principle.

Quite consistently with this approach, Menger did not hesitate to define value in a totally subjective fashion: "Value is thus the importance that individual goods or quantities of goods attain for us because we are conscious of being dependent on command of them for the satisfaction of our needs." (Menger, 1976, p, 115) Furthermore, he insists that "not only the nature but also the measure of value is subjective" (p. 146) in the sense that "a good can have great value to one economizing individual, little value to another, and no value at all to a third, depending upon the differences in their requirements and available amounts". True, Jevons would not have rejected such considerations, since they play a crucial role in his own analysis of the final degree of utility — which is nothing but what we today call "marginal utility". Now, there is little doubt that marginal utility can be interpreted in a subjective or Mengerian way when successive degrees of satisfaction are compared, but the very fact that Jevons refers to utility rather than to satisfaction opens the door to a more objective interpretation. In such an interpretation, as we have seen, it is utilities, or the capacities of goods to fulfil needs, which are compared. Given the supply of these goods, this utility will determine their value according to which they will be exchanged at a determined price (or ratio of exchange). What has to be underscored at this point is that, for Jevons, these values, prices and ratios of exchange can be treated as objective magnitudes, given two postulates which are emphatically admitted by him. The first of these states that, in the same open market, any portion of a good will be traded at the same price (or at the same ratio of exchange) as any other part: this is the point of his so-called "law of indifference" (Jevons, 1957, pp. 90-95), which is frequently called "the law of one price". The second postulate, which, incidentally, is one of the most basic postulates of economic theory, is the principle of equivalence in exchange. Jevons illustrates this principle when he claims that "if a ton of pig-iron exchanges in a market for an ounce of standard gold....the value of the ton of iron is equal to the value of the ounce of gold, or .. their values are as one to one" (pp. 77-78). If these two apparently reasonable postulates are admitted, Jevons' theory of value can hardly be thought to suffer very much from its "subjective" character. The value of a good is not determined solely in its production and independently of consumers' demand, but this circumstance does not exclude that a good *has* a value based both on its cost of production and on its utility. Further, this value, which is the same for any portion of a good to be considered in a specific economic problem, can be measured by the strictly equivalent value of the good with which it is exchanged. With this kind of "subjectivity", the value of a good really doesn't need to be objective!

Two radically different views on equivalence

But let us consider this principle of equivalence in exchange which seems to play such an important role and which is so solidly anchored in the economic tradition. The principle according to which traded commodities are equivalent (or have necessarily the same value) goes back to Aristotle who, in the *Nichomachean Ethics*, described both parts in an exchange as strictly equivalent (1132b, 12-20, 1133a, 23-25) and, in the next paragraphs, looked for the proper way to establish that the respective values of exchanged commodities are equalised, given that there is "no exchange without equality" (1133b, 17). Faithful to this tradition, Turgot, when constructing what is arguably the first modern theory of price, claims that two goods exchanged between individuals are "seen as exactly equivalents" (Turgot, 1970, par. XXXI) and that, on a market where many goods are exchanged between many traders, all those which are exchanged for one another are mutually equivalents (par. XXXII and XXXIII). Similarly, Adam Smith's thesis, according to which the value of a good is measured by the value of a commodity it can buy, also implies such a principle. (Smith, 1937, I, V) Ricardo rejected Smith's thesis on this point, but his theory of exchange, as illustrated in his famous theory of comparative advantage, implies the principle of equivalence in exchange as well (Ricardo, 1951, VII). Finally, Marxian economics as a whole is based on this principle, as are all neoclassical price theories from Walras to Samuelson. But what are Menger's views on this point?

Streissler argues that Menger would have not accepted the first of the two postulates invoked by Jevons, since he insisted on "price conflict" and on "divergence between demand and supply prices"[7]. In any case, Menger emphatically rejects the second of these postulates which is nothing but the venerable principle of equivalence in exchange. Not only does he flatly condemn as responsible for "incalculable damage" this pernicious "error of regarding the quantities of goods in an exchange as equivalents",[8] but he denounces (Menger, 1976, Appendix F) all those economists who had before his time adopted this principle, including Aristotle, Turgot, Smith and Ricardo, as well as Le Trosne and Condillac, whose respective theories of value had been particularly praised by Jevons (1957, pp. 82-83). For one who adopts, as Menger did, a strictly subjective theory according to which value must correspond to a degree of satisfaction subjectively and independently experienced by each of the traders, it is not possible to maintain that two goods are equivalent for being exchanged one for another, since an equal satisfaction for both traders with each of the goods exchanged would

[7] Streissler, 1973, pp. 170-171. However, one could object to Streissler that, given his commitment to the principle of rationality, Menger, who observes for example that speculators "takes care that the differences in price between the various markets do not significantly exceed the costs of transportation" (Menger, 1976, p. 251) would have accepted the essential idea of the "law one price", were he to develop his views at the abstract level adopted by Jevons.

[8] Menger, 1976, p. 192. See Jaffé, 1976, who quotes this passage (p. 519) and rightly relates it to Menger's denial of the fundamental role usually attributed to prices.

make any trade meaningless. More precisely, if the goods exchanged were really equivalents, "there would be no reason, market conditions remaining unchanged, why every exchange should not be capable of reversal". (Menger, 1976, p. 193). For Menger, the very existence — generally admitted by economists — of a "difference between supply prices and demand prices" (p. 193) confirms that there is no such equivalence. Actually, the followers of Jevons who maintained this principle of equivalence had to deal with the difference involved by introducing, as Marshall did, the concept of a consumer's surplus (Marshall, 1966, p. 103 & ff.). This notion corresponds fairly well to what Menger had in mind when he analysed an exchange in which a price is established at a level sufficient to allow gain from trade for both traders (for example, Menger, 1976, pp. 194-197), even though for Menger, this gain from trade had to precede price formation. For him, this gain did not have to be related to an objective price; it was rather a result of the comparison made by traders of the respective satisfactions they would get from the goods to be traded.

In fact, for Menger, prices are only "incidental manifestations" or "symptoms" of an equilibrium reached by the traders (Menger, 1976, p. 191) which can be compared to superficial waves on a body of water (p. 192). According to Menger, prices reflect temporary equilibria which traders happen to reach, but the only determinant force, "the ultimate and general cause of all economic activity" is not price but "the endeavor of men to satisfy their needs as completely as possible, to better their economic positions." (p. 192) Such a downgrading of the role of prices was surely in keeping with the strictly subjective approach of Menger who found it important to distance himself from any kind of objectivation of value into prices, since prices tend to be perceived as much more objective than the striving of people attempting to improve the level of their satisfaction. It is true that, for his part, Jevons does not very often use the word "price" in his *Theory of Political Economy*. However, he refers to the notion of a "ratio of exchange", which is central to his analysis and is equivalent to a price, at least in a non-monetary economy, as is made evident by the fact that, in his discussion of the law of indifference, Jevons uses the expressions "price" and "ratio of exchange" interchangeably (Jevons, 1957, pp. 91-93). For Jevons, a ratio of exchange corresponds to one of the senses commonly given to the word "value" when it is taken to mean the purchasing power of a commodity, or more precisely, "the circumstance of its exchanging in a certain ratio for some other substance". (p. 77) Such a conception of value reduced to a ratio of exchange is sufficiently objective to allow the kind of impersonal measurement that Menger's subjective approach made impossible.

A final illustration of this difference of perspective is to be found in Menger's views on the relation between use value and exchange value. It is well known that since Adam Smith the two members of this couple, which originates with Aristotle, were not put on the same footing. Value in use "expresses the utility of some particular object", (Smith, 1937, p. 28) but it is value in exchange or the "power of purchasing other goods" which was to be the subject matter of economics. Similarly, Jevons, after distinguishing three meanings of the word value, including value in use and purchasing power, informs his reader that it is this last one (corresponding to exchange value) which will be mostly referred to in the remainder of the book under the name of ratio of exchange (which, as we have seen, corresponds roughly to price) (Jevons, 1957, p. 81). In other words, for these economists, the value in use subjectively experienced is not commensurable with the value which is objectively manifested in economic exchanges and takes the form of a price. For Menger, by contrast, since value is attributed to a good through a subjective awareness of its capacity to fulfil a need, it makes perfect sense to put value in use and value in exchange on the same footing. (cf. Menger, 1976, pp. 228-235) A good takes on significance for someone either as a means to directly satisfy one of his needs or as a means to satisfy a need through exchange. It is legitimate to compare these two different satisfactions and consequently to inquire whether it is the value in use or the value in exchange of a good that is the economizing one — which means the one to be chosen by an "economizing individual". Menger's answer is that, depending on the case, it is the larger of these which is the economizing one (Menger, 1976, pp. 230-231). Such an answer would have sounded rather odd to Smith, Marx or Jevons who, like most economists referred to by Menger in his brief review of the matter (Appendix G), strictly distinguished value in use and value in exchange as two different kinds of magnitude. But for Menger, this commensurability between use value and exchange value not only made sense in the context of a strictly subjective theory of value, but was important as a way to explain the very fact of entering in a trade relation. One decides to sell an object (which once had more use value than exchange value to oneself) when it loses so much use value that this relation is inverted in such a way that exchange value become larger (in terms of satisfactions forgone) than use value. Similarly, the effect of a change in total wealth which transforms the relation of individuals to any and all goods is analysed by Menger on the basis of such an inversion between use and exchange value (Menger, 1976, p. 234-235). On each of these questions, Menger's economics, based on a careful analysis of the conditions which allow individuals to subjectively improve their own situation, and Jevons' economics, based on a systematic development of a conceptual apparatus appropriate for analysing the most objective dimensions of economic life, were doomed to diverge more and more.

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I do not want to exaggerate the importance of these differences between Jevons and Menger. Actually, when it comes to elaborating a theory of exchange, both of them arrived at roughly similar results, since choosing the good which is deemed to provide most satisfaction tends to be the same as choosing the good which, in specific circumstances, possess the most utility for the person involved in the exchange. Consequently, for economists interested above all in the theory of exchange, both theories have seemed equivalent, and since Jevons' theory was more straightforward and more adapted to mathematical formalisation, it was preferred by most of them. Nonetheless, whether these differences are judged significant or not, there is little doubt that they are the main source of the steadily enlarging gulf which was to divide the Austrian and Neoclassical schools of economics. Were there no other reason to do so, it would still have been worthwhile to underscore them.

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