

GECO5105: Foundations of Political Economy II

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Essay Examination

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First Essay on Differences between Menger, Jevons and Walras

Walras' System

I will start by making the case that it is Walras who is most different than Menger and Jevons, who are more similar, but who of course, are different from each other as well.¹ It was Walras of the three who most attempted to turn economics into something resembling a “system” based on the principals of the conservation of energy. This might be seen, by some, as a high point of modernism in economic science as it involves a ‘grand theory of everything’. Schumpeter approves of this approach and states “His system of economic equilibrium, uniting, as it does, the

¹ Much of my analysis on the similarities (and differences) between Menger and Jevons is drawn from Sandra J. Peart, “Jevons and Menger Re-Homogenized?: Jaffe after 20 Years”, *Journal of Economics and Sociology*, Vol. 57, No. 3 (July 1998), pp. 303-325, and from Lionel Robbins (1998), *A History of Economic Thought: The LSE Lectures*, Steven G. Medema & Warren J. Samuels, eds. (Princeton: Princeton University Press). My analysis of Walras is drawn mostly from Joseph A. Schumpeter (1954), *A History of Economic Analysis* (New York: Oxford University Press). I have also used Jevons [1871], *TPE*, available <http://www.econlib.org/library/YPDBooks/Jevons/jvnPE.html>, Walras' *Elements* [1874] “Edition Definitive” (5th Edition, in French, 1926), and Menger's' *Principles* [1871], Libertarian Press edition (1992), in the preparation of this essay.

quality of ‘revolutionary’ creativeness with the quality of classic synthesis, is the only work of an economist that will stand comparison with the achievements of theoretical physics” (Schumpeter 1954, 827).

Using this entry point into the question at hand, Walras’ “analytical agenda” then was to turn economics into an axiomatic science based on simultaneous equations. Marginal utility is used in these equations as a means for establishing instantaneous price clearing based on the given set of initial endowments held by those in an economy.² The ‘system’ clears instantaneously as

² I would like to point out here that there appears to be disconnect (perhaps unresolved and irresolvable by historians of economic thought) between Walras’ words and his equations, the latter which result in the well-known ‘one-price’ theory of perfect markets in neo-classical economics. Walras uses the term *tatonnement* which to me appears to represent some kind of entrepreneurial search process. (Translations are mine).

Or ce tâtonnement est précisément celui qui se fait de lui-même, sur la marche des produits, sous le régime de la libre concurrence, alors que les entrepreneurs affluent vers les entreprises ou s’en détournent suivant qu’on y fait des bénéfices ou des pertes. (Walras 1926, 221).

That is to say tatonnement is precisely that which, in product markets under free competition, is what causes entrepreneurs to come together for business if there are profits or to turn-away if there are losses.

This implies not that entrepreneurs are price takers but take into consideration subjective risk and return criteria, not just pricing criteria in their economic behavior. And,

Le système des nouvelles quantités fabriquées et des nouveaux prix de vent est donc plus voisin de l’équilibre que l’ancien, et il ne faut que continuer le tatonnement pour rapprocher de plus en plus (Walras 1926, 221).

The system of new produced quantities and the new sales prices are therefore closer to equilibrium than the previous prices and quantities, so there is nothing for the “search process” to do but become closer and closer to equilibrium.²

It does not appear that there is any equilibrium (the concept of instantaneously solved equations leading to one set of prices clearing all markets simultaneously) at all, but instead something which ‘tends’ towards equilibrium based on

marginal utilities (relative consumption preferences) and starting-point quantities set the prices (one set of prices clears all) and trade makes everyone better off as total utility is maximized. (Production (credit markets) is handled the same way; endowments, marginal productivity (marginal returns), equations, instantaneous clearing). Economic actors under this instantaneous clearing are ‘lightning quick calculators’ who use what Veblen calls “the hedonic calculus” of maximizing the utility of consumption, the productivity of physical inputs and the returns to capital.³

It has been said that Walras was the inventor of General Equilibrium Theory in economics.

Veblen critiques this analytical agenda as follows,

It offers no theory of movement of any kind, being occupied with the adjustment of values to a given situation...but as to the causes or the unfolding of economic life they have nothing to say hitherto; nor can they, since their theory is not drawn in causal terms but in terms of teleology (Veblen [1909], p 143-1444).

For the remainder of this paper we shall look at Veblen’s critique of marginal utility theory, which holds fully to Walras, only partially to Jevons, and not at all to Menger.

a discovery process. Since it is the equations for which Walras has become known, that “analytical agenda” will continue to inform this essay. It should be noted that I was not able to find the ‘Walrasian auctioneer’ in this “definitive edition” of his treatise.

³ See Thorsten Veblen. ([1909] 1994). “The Limitations of Marginal Utility” in *The Philosophy of Economics: An Anthology*, Daniel M. Hausman, ed. (Cambridge: Cambridge University Press) for an extended critique of the “hedonic calculus”.

Jevons' Incomplete, but Non-Static, System

Jevons like Walras has a 'system', using mathematical relationships to illustrate the concept that trade will occur until marginal utilities in relation to prices are equalized (in this case the concept of a lever - actually it resembles a see-saw - which rocks and forth until it balances). However Jevons' system is less complete as it does not include equations for production and capital, so it cannot be said, like Walras', to be a 'grand theory of everything', it is not a general equilibrium theory of an entire modeled system. Therefore in this writer's view, it shares Walras' systemic failing of the use of mathematical equations to make human relationships analogous to physical relationships, without taking it to its systemic completion as does Walras. However it also improves upon Walras because the lever actually does capture the imperfectability of trade, showing that there is no one equilibrium clearing instantaneously. Prices can overshoot and undershoot (people don't have perfect information at the moment of trade, e.g., Jevons captures both time and uncertainty) therefore the lever metaphor captures movement towards an equilibrium, not a static equilibrium as under Walras' system as generally interpreted. However per Veblen's critique this concept might be "occupied with the adjustment of values to a given situation" and does not explain dynamic movement without a stated starting point (getting on each end of the lever in the first place so to speak) , nor as stated, is production part of an integrated Jevons' system.

Veblen's Too Rough on Jevons' and Menger's Hedonic Calculators

Peart 1998 makes the argument that Veblen mischaracterizes the nature of *homo economicus* in both Jevons and Menger. People in exchange relationship are not welfare maximizers using the hedonic calculus because the personalities of those exchanging effect the outcome. In addition according to Peart, both Menger and Jevons used utility theory to emphasize that individuals (for Jevons, many, for Menger the poor) prioritize immediate consumption over future consumption and therefore that government institutions are needed to insure savings for the future. Economic actors in both Jevons and Menger do not act in the perfectly equilibrating, socially-alienated, utility-maximizing world Veblen sees them in. Veblen is critiquing Walras' *homo economicus* not Menger's and Jevons'. However not 'lighting quick', these actors are not "bumbling" (Jaffe 1976, 521, cf. Peart 1998, 312); Menger's is "purposeful" (Peart 1998, 312) and Jevons' has a "hierarchy of motives" (Peart 1998, 312).

Menger's Economics is Both Evolutionary and Institutional

It should be noted that where Menger and Jevons part company and where at least according to the present writer, Menger can answer to Veblen's claims that he "offers no theory of movement of any kind" in that Menger (and the Austrian School economists who followed Menger) view the market economy as a "process" not as a "system". Economic actors are not rational in the conventional sense acting with perfect knowledge but are ignorant of future events. Through trial and error they learn and improve their decisions *as time goes on*. It is this learning process which characterizes movement. It is this search for knowledge which too characterizes the development of human institutions, "As soon as a society reaches a certain level of civilization,

the growing division of labor causes the development of a special professional class which operates as an intermediary in exchanges.....” (Menger [1871], p. 91). In Menger’s case economics *is* an evolutionary science.

Similarly to Walras and Jevons, Menger uses the concept of decreasing marginal utility to explain trade, however instead of using equations based on algebra and/or calculus he uses specific examples in table format (Menger [1871], 175-190).⁴ And, unlike Walras and Jevons, Menger explicitly notes the role that transactions costs play in exchange decisions (p. 189). In this regard, Menger can be seen as institutional, the market “process” is not an (idealized) frictionless “system”.

The Introduction of Causality and Uncertainty into the “Marginal Revolution”

Menger demonstrates the concept of diminishing marginal utility⁵ as *subjective value* (utility is ‘revealed’ not only through interpersonal exchange) for an individual choosing amongst trade-offs in between numerous goods where the consumption of each of the goods are equalized (an equilibrating ‘resting point’) relative to the (diminishing) value of the consumption of one more unit of that good (Menger [1871], page 127).⁶ It is this subjective relationship *between* goods

⁴ This illustrates perhaps why Menger does not use calculus, how do you logically divide a cow or a horse into infinitely small amounts?

⁵ Both Walras and Jevons use the term “utility” itself whereas Menger uses economic “satisfaction”, perhaps to avoid any association with the Benthamites. Robbins states there is “no suspicion of Benthamite utilitarianism” in Menger (p. 271).

⁶ The example given is that “consumption of tobacco begins to have the same importance for him as further satisfaction of his need for food”. It can be noted that this is an early example of an Indifference Curve, perhaps one

which sets Menger's theory apart from the other "revolutionaries". Menger divides economic goods into lower-order goods (consumption goods) and higher-order goods (inputs into production). These goods have causal relationships through the production chain. In this case Menger's "analytical agenda" is related to Walras' system (because it describes the workings of the entire economy) however it is not a teleological one because time and uncertainty are part and parcel to the market process. "In order to transform goods of a higher order into goods of a lower order, the passage of a certain period of time is necessary" (Menger [1871], 157). It is the causal chain between goods and the passage of time which creates uncertainty, "A person with consumption goods directly at his disposal is certain of their quantity and quality. But a person who has only indirect command of them, through possession of the corresponding goods of higher order, cannot determine with the same certainty the quantity and quality of the goods of the first order that will be at his disposal at the end of the production process" (p. 69).

And now we further separate Walras (although not if we re-read his *tatonnement* process as analogous to the market discovery process as discussed above in footnote 2.) and Jevons from Menger by introducing Menger's concept of *entrepreneurial activity*. It is subjective valuation by entrepreneurs who use their "economic calculation" (Menger [1871], 160) to bring supply into the market for consumption goods. Unlike Walras who uses marginal productivity analysis in his system of instantaneous price determination for determining the costs of inputs, and Jevons who uses a "more or less Ricardian" theory of land rent (Robbins 1998, 268) combined with a disutility theory of labor to determine labor costs (and who stated that "cost of production

far superior to those drawn in two-dimensional space by Edgeworth and Pareto because Menger shows relative utility between 10 different goods.

determines supply”), Menger stated that supply (like demand) is a function of marginal subjective valuation based on the relationship between goods of lower and higher order.⁷

Because there is learning involved (cognitive processing), markets do not clear instantaneously nor optimally. Because there is time involved, there is uncertainty. It is the entrepreneur who bears the risk and gains returns due to this uncertainty and the skills of the entrepreneur are seen, moreover, as an economic good in themselves.

Above all we must bear in mind that an entrepreneur’s own *technical* labor services are often among the goods of higher order that he has at his command for purposes of production. When this is the case, he assigns them, just like the services of other persons, their roles in the production process....After what has been said, it will be evident that I cannot agree with Mangoldt, who designates “risk bearing” as the essential function of entrepreneurship in a production prices, since this “risk” is only incidental and the chance of loss is counterbalanced by the chance of profit....Hence whenever we wish to determine the present value of complimentary quantities of goods of higher order, the prospective value of the product determines the total value of all of them together only if the value of entrepreneurial activity is included in the total (Menger [1871], 160-161).

Conclusion

This essay has shown the main differences in the “analytical agendas” between those who are considered as the founders of the marginal revolution in economics. The one similarity they all share is that exchange is based on the subjective marginal utility of the goods exchanged

⁷ This is the forerunner of the notion of *opportunity cost* (formally named in its modern vernacular by Weiser) which is now common fodder for many mainstream economic textbooks.

between people. Walras then used this marginal analysis to encapsulate the costs of production into a system of simultaneous equations to create General Equilibrium Theory by assuming that economic agents are instantaneous hedonic calculators. Jevons used simultaneous equations for the demand for consumption goods but not for the supply nor production of these goods and thus did not have a comprehensive analytical method for an economy. Both Jevons and Menger factored in inherent human limits to their economic agents; people who are incapable of Walras' infinite all-knowing foresight and whose personalities effect the exchange process. Therefore for Jevons and Menger exchange is a movement *towards* equilibrium, not one based *on* equilibrium. Menger's analysis does include a theory based on both consumption and production, using the causal analysis between production and consumption goods as measured by subjective value. Menger's method is also based on time and uncertainty and therefore, unlike Walras', does not fall prey to Veblen's critique of marginal analysis as a teleological method. Finally what makes Menger different from the other marginalist founders is the use of the entrepreneur in production as an economic good.