Conceptions of Competition in Austrian Economics Before Hayek

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I. Introduction

A broad concept of 'dynamic competition' is at the core of developments in modern Austrian economics (O'Driscoll and Rizzo, 1985, 100-109, 130-31 and Kirzner 1991, 85). That concept is coextensive with the current Austro-American emphases on the subjectivism of market participants' knowledge and on entrepreneurial discovery. It is well-known that the scope and content of Austrian 'dynamic competition' was systematically treated by Hayek in his essay on 'The Meaning of Competition' (1948, 92-106) and again thirty years later in Hayek (1978). Less directly, at least on the subject of competition, the contributions of Schumpeter and von Mises should not go unnoticed.[1] The Austrian 'scientific milieu' before Hayek's post-war contributions had always 'stimulated the growth of independent thinkers' (Haberler, 1951, 29); it expressed rather heterogeneous visions of the economic process and of competition in particular, which diverged from mainstream neoclassical orientations in their conventionally accepted Marshallian and emerging Walrasian forms.

Mark Blaug (1992, 33) maintained that 'Hayek's appreciation of the learning and discovery aspects of the dynamic process of competition, as distinct from the static properties of *end*-state competitive equilibrium ... strikes us today as remarkably original and perceptive' (emphasis in original). Modern Austrians would doubtless agree that Hayek was 'charting a whole new territory from that of the Walrasian mainstream of economics that was beginning to emerge in the late 1930s' (*ibid*).[2] That Hayek's insights on the meaning of competition were in many respects anticipated by earlier luminaries in the Austrian tradition is something yet to be fully documented. The purpose of this paper is to recover and enlarge upon early perspectives on competition in the work of three leading first generation Austrians: Menger, Wieser and Böhm-Bawerk.[3]

An investigation of the intellectual antecedents of modern Austrian conceptions of competition must have justification beyond mere antiquarianism. While we are interested in the variegated intellectual background to the modern Austrian paradigm, the Austrian economic-theoretic foundations have been neglected.[4] It may have been the case that Austrian ideas were believed erroneously to have been absorbed without much difficulty into mainstream economics post-1945 or regarded as differing 'not very much beyond style' (Kirzner, 1991, 84) from other leading streams of economic theory. However, in the case of theorising on competition (and apart from a discernible Austrian strand in von Neumann and Morgenstern, 1947) relative neglect of Austrian conceptions has been an important factor.[5] For example, as late as 1961 in a treatise on *Competition as a Dynamic Process*, John Maurice Clark failed to mention any Austrian source (other than Schumpeter 1934, 1942 *en passant*) yet his theme throughout was that in 'the field of theory the most challenging opening seems to be for an approach that would shift the emphasis from *competition as a mechanism of equilibrium to competition as a dynamic process*' (1961, 2, emphasis added).[6]

In a recent study of different notions of competition in late nineteenth century American economics, Morgan (1993, 566) presented a 'stylized version' of the early twentieth century 'neoclassical analysis of competition'. In short, this version contrasted perfect competition with monopoly. Whereas the former category contains many price taking firms which 'do not actively compete according to any commonsense definition of the word' (Morgan, 566 citing Hayek), the latter is a single price monopolist who cannot actively compete with other firms. Accordingly, Morgan deduced that these 'limiting cases mold an analysis that is largely static and that portrays competition as a situation devoid of behavioural content....When neoclassical economists talk of the market, they often mean the competitive structure of the industry, not the relationship between buyers and sellers' (*ibid*).[7] Accepting Morgan's stylization, our objective will be to consider whether the Austrians from Menger onwards can be said to have treated competition in a 'neoclassical' manner. Jaffé (1976) successfully dehomogenised the economics of Menger, Jevons and Walras and this behoves us to inquire whether the early leading Austrians, as an amalgam of independent theorists on competition, continued to develop economics along non-Walrasian lines.[8] Furthermore, while acknowledging a 'potential danger' of reading 'modern Austrian notions into earlier Austrian contributions', Lavoie (1985, 22 and 26) made an important beginning by distinguishing between Austrian 'rivalrous competitive process' and the 'neoclassical notion of non rivalrous, static competitive equilibrium.' Our task will be to subject the early Austrian foundations to closer scrutiny. Foreshadowing one of our results, the Austrian conceptions of competition expounded in this paper seem to have been developed as part of the internal logic of Austrian economics set in motion by Menger's *Principles*. By contrast, Morgan (1993, 597-600) noticed that contemporary American conceptions were mostly suggested by economists' observations of existing industrial circumstances. The Austrian conceptions were formulated in an intellectual tradition which, while not completely insulated from advances in Marshallian and Walrasian market theoretical frameworks, produced some unique insights later recovered by Hayek.

II Competition in Menger's Principles: Behavioural Aspects

1. Exchange

Patterns of human behaviour elucidated in the *Principles* ([1871] 1950) may be associated with the verb 'to compete'.[9] Menger began with what he called the 'simplest case' of isolated exchange where two traders - bilateral monopolists - are involved in 'economising' *activity* (*Wirtschaftend*, Menger 1950, 48 n.4 translator's note). The scene is a spatially isolated spot market where individual trades take place and where 'atomistic' competition prevails.[10] The atomistic orientation of pure economic theory was, for Menger, a virtue, but this is not to say that he regarded atomistic competitive behaviour as necessarily virtuous or desirable.[11]

In Menger's spot market there are no artificial barriers to exchange although there are some constraints as we shall see anon. First, exchange is contemplated by both traders because it has the potential to satisfy their needs or, alternatively stated, to fulfil their plans.[12] Menger's economisers make plans to trade *ex ante*; they 'carefully consider every exchange in advance' (Menger 1950, 117). Secondly the traders will only be motivated to exchange of they have 'command' over goods which they are able and willing to dispose of in return for other goods which they value more highly (180). The 'command' condition on its own is trivial; it is a necessary but not a sufficient condition for exchange. Thirdly, for beneficial exchange to be effected Menger specified a knowledge or information condition: the two

traders must 'recognise the situation' (179). This condition does not mean that they must have equal abilities to consider the situation and to perceive an opportunity for trade in advance. It requires only given abilities. Menger's subsequent elaboration on the knowledge condition allowed for the possibility that the 'full gains from....trade are sometimes *not immediately forthcoming*...[if] knowledge of trading opportunities' is incomplete (188, emphasis added). Implications for the meaning of competition in exchange are profound: if the traders are *equally* constrained by imperfect knowledge or information processing abilities to understand all the potential trading possibilities then no one could act as a predator in the situation. Menger's argument is open-ended on this point, and we will elaborate on the other implications of imperfect information separately below. The fourth condition for successful exchange requires that economisers have 'the power actually to perform the exchange of goods'. Here power (*macht*) is used not in the sense of power over the other trader. For Menger, power relates to the ability to trade in the face of given, essentially non-human impediments: any transport difficulties, time, inadequate communication facilities (185, 188-189). Menger implicitly presumed that these impediments operate with uniform effect on both traders. Altogether, Menger's numerical examples of bilateral exchange are founded on his four conditions for mutually beneficial outcomes - planning, command, knowledge and power - being satisfied for 'any given point in time' (187). Trading takes place in a time vacuum. Finally, trading ceases when the economisers mutually and simultaneously calculate that the marginal gains from further trading do not exceed marginal costs (see Moss 1978, 23).

Menger's knowledge condition for successful exchange, in conjunction with the planning requirement, deserves elaboration. While economisers' trading plans may be consistent *ex ante*, competition between them may not be perfect in the sense that all opportunities for gain would not instantly be exploited. According to Menger, the 'first trading contacts of economising individuals are usually the most advantageous economically. It is usually *only later* that opportunities for trade that promise smaller economic gains are exploited' (188, emphasis added). Furthermore, evaluation of goods offered in exchange are 'generally....observed to be subject to constant fluctuations' (188). Ongoing production is continuously making available additional quantities of tradeable goods. Consequently, 'the foundations for economic exchanges are constantly changing, and we therefore observe the phenomenon of a perpetual succession of exchange transactions' (*ibid*). In this process of successive exchange, changes in knowledge and learning can take place; it takes time for all the mutually beneficial opportunities to be revealed and exploited. Whether the process may be conceived as an iterative trial and error sequence remains opaque in Menger's text. It is clear, however, that Menger's analysis reasoned toward equilibrium in exchange, that is 'points of rest at particular times, for particular persons and with particular kinds of goods' (*ibid*). Notwithstanding this tendency, it is accurate to report that 'Menger stressed all those aspects which make attainment of point equilibria unlikely' (Streissler 1990 b, 59). So far we have identified knowledge imperfections and time delays as crucial factors constraining the gains from isolated exchange. Indeed, Menger proceeded as if the time structure of exchange was of the utmost importance; the equilibrium case was a limiting one in which 'no exchange takes place' (Menger 1950, 188) and in which, *ipso facto*, competitive behaviour is absent. The precise content and consequences of competitive behaviour in Menger's text become clear when he considers how prices are formed in exchange.

2. Price Formation

In the chapter on 'The Theory of Price' (Menger 1950, 191-225) we might at first gather from section headings that Menger was interested in analysing those factors which

influenced price (presented as ratios in exchange) in the case of isolated bilateral exchange, monopoly, and types of 'competition' with varying numbers of buyers up to the final case of large numbers on the demand side facing more than one seller. We have considered elsewhere Menger's theory of price formation and demonstrated that there were significant differences between Mengerian market pricing and the Walrasian tâtonnement process, Edgeworth's concept of recontracting and Marshallian models of monopoly price discrimination (Endres 1995). However, in that study, the behavioural determinants of 'competition' between market participants were ignored. It would be misleading to neglect all except section three of Menger's chapter on price simply because that section expressly treats 'competition'. Menger used the term 'competition' sparingly in the first two sections of that chapter but this does not mean that the equivalent conceptual content of the verb 'to complete' or connotations of the noun 'competition' are necessarily lacking in some of his illustrations of price formation.

The foundations of isolated exchange in section 1 of the chapter on price include allowances for 'bargaining' (195). Thus,

> [e]ach of the two bargainers will attempt to acquire as large a portion as possible of the economic gain that he deprived from the exploitation of the exchange opportunity, and even if he were to try to obtain but a fair share of the gain, he will be inclined to demand higher prices *the less he knows* of the economic condition of the other bargainer and *the less he knows* the extreme limit to which the other is prepared to go (195, emphasis added).

The imperfect knowledge condition upon which isolated exchange is based is prominent in this passage. The outcome of the 'price war' (195, *Preiskampf*) which ensues between the traders will strongly be influenced by the knowledge each has of the situation of the other player both *ab initio* and as it evolves in the exchange process. The general case may be one in which neither one or other trader has a knowledge advantage or an 'overwhelming economic talent' (196) to process given information, but in that case the traders would be no more than bargainers manqué. In any particular case Menger therefore conceded that the exchange 'will prove sometimes more favourable to one and sometimes more favourable to the other of the two bargainers' (195). In commonly observable cases of exchange, such as the one Menger alluded to in the preceding passage, each bargainer is confronted with a *rival* whose actions are not fully predictable in advance; the result is an exchange ratio which is highly personalised.[13] In short, the traders do not behave as if they were involved in a 'mutually paralysing' (196) or perfectly competitive situation. Only perfect knowledge or foresight for all traders would have a 'paralysing' effect as Morgenstern (1935) and Hayek (1948) were later to explain.[14] The competitive activity enunciated by Menger involved each trader using an aggressive price leadership strategy during the course of any price war, especially in the usual situation where knowledge was incomplete.[15] The different states of knowledge and their development during the price war are not followed through in Menger's account of pricing, although there are game - theoretic implications here. The Mengerian price war implies conflict, manoeuvre and bluff. Price-making behaviour in the *Principles* is highly personalised. As a corollary, the implicit notion of competition which is part of the context of pricing, is not of the Walras-Pareto type. Morgenstern (1972, 1171) was to characterise the Walras-Pareto vision of competition 'as a situation in which no one has any influence on anything, where there is *ni gain, ni perte*, where everyone faces *fixed conditions, given prices*, and has only to adapt himself to them so as to attain an individual maximum' (his emphasis). Evidence presented from Menger's work up to this point indicates that he held an entirely different conception of competition.

The behaviour of market participants in Menger's well-known horse auction also deserves consideration in a bargaining context (204-208). In the auction there is 'competition'

among buyers for horses offered by a single seller. The seller is presumed to 'choose an auction where he must sell....a monopolized good completely within a limited period of time' (208). There is no price discrimination in the first case outlined by Menger. Individual traders are eliminated from the bidding as those with higher valuations use their material buying power as a screening device. For Menger 'competitive strength' is rendered by ability to pay and, coupled with 'eagerness', that strength keeps buyers involved in a price war. As some buyers are eliminated, those remaining may recognise a 'common interest' and by negotiation 'agree to a price' (206) or bid which is just high enough to exclude marginal buyers. It is notable that again Menger allowed for bargaining initially by way of simultaneous bids first amongst buyers and then between remaining keenest buyers and the seller, before a final transaction price was established. The bargaining protocol in which a final price is found is not given sufficient discussion in the *Principles* but this should not detract from the broad notion of competition which is implied. First, buyers' competition in Menger's illustrations does not rest easily with what Morgenstern (1972, 1172) labelled 'free competition' which 'cannot take care of the phenomenon of bargaining which pervades all economic life'. Moreover, continued Morgenstern, bargaining 'always takes place where the object sold or bought involves a significant part of one's patrimony or income. At a given level we do not bother to bargain, e.g., for a loaf of bread, but we do bargain when buying a car or a house'. Now Menger's focus was precisely on bargaining over indivisibles - barrels of wine and horses. As well, the buying opportunities in Menger's illustrations were limited in number - buyers could not purchase an unlimited number of horses at a given price, nor were they able or willing to do so. A second dimension to Mengerian competition (which is related to bargaining over budget-significant indivisibles) concerned the finitely small number of buyers in his horse auction. Each buyer constituted a large share of total demand. Consequently, buyers behaved in the belief that other buyers would feel the tangible effects of their bidding activity; they were conscious of potential effects on, and reactions of, other buyers.

That Menger's buyers were rival-conscious raises the issue of knowledge and plan complexity once again. The plans of individuals in isolated exchange would not need to be so complex and so demanding of information as those involving the interlocking actions of several competing buyers in a horse auction. Menger presumed that each market participant on the demand side must develop increasingly elaborate plans which incorporate responses to the actions others. The information requirements may be so demanding and the consequences of insufficient information so devastating to any individual participant, that they may resort to collusion. When Menger considered 'competition in supply' he agreed that '[s]harp competition is usually disadvantageous' to suppliers (221 n 8). Therefore, in the case of two competitors on the supply side producing a homogeneous good, initially they may be 'so hostile to each other, [but] generally [they] come to a quick understanding'. If possible these suppliers may 'enter into a mutual understanding to exploit consumers' (221). Nevertheless Menger equivocated here. The outcome in this case depends fundamentally on knowledge conditions or in Menger's words, on whether the two suppliers can generate a 'common understanding'. Consistent with his general methodological outlook on organically created institutions (Menger, [1883] 1985, 158), the two suppliers may conceivably generate a spontaneous order by acting 'without an express understanding but "in their mutual well-understood interest" '. In the event, they will continue to pursue 'a monopoly policy toward their customers' (Menger, 1950, 221).

By acting 'independently' two or more market participants on either the demand or supply side or both, can produce 'real competition' (221) or 'true competition' (223) but there is nothing to suggest slavish price taking behaviour in these remarks. There are several

behavioural results of Mengerian 'real' competition. First, economisers in competitive situations will be moved to place all their goods on the market rather than withhold or destroy supplies. The 'malpractice' of destroying or underemploying factors of production is also terminated in competitive markets; in the long run more goods will be brought to market (223). Secondly, 'real' competition for Menger meant that 'even the smallest' profit opportunities were exploited (225). Thirdly, in a final comment on the effects on human behaviour of independent, competitive selling activity, Menger was adamant that sellers cannot act as mere automatons in accepting a market price or in being uncritical of existing methods of production. While sellers in a competitive process do not have 'the power to regulate...price or the quantity of goods traded', they must consider their market as changing and changeable. Competition for Menger had the tendency to drive out *'unthinking* continuation of business according to old-established methods' (225, emphasis added). Menger broadened the ambit of competition to include inducing innovations in methods of business organisation and production, but not product innovation. However primitive, this is unmistakably a process analysis.

III Competition in Menger's Principles: The Theory of Market Structures

When we attempt to classify the institutional structures within which competitive behaviour takes place in the *Principles* we are led to consider Menger's theories of markets and of commodities in chapter VII. We have already had occasion to reflect briefly on the market structures Menger had in mind in his examples of exchange and price formation: in stating the number of buyers and sellers this was tantamount to adumbrating a microeconomic structure in which traders behaved. In Menger's horse auction examples made much of in the *Principles* Chapter V, there are at least two buyers and a single seller. The 'competition' among buyers in this auction is a case of oligopsony. Oligopsony is a competitive structure where 'buyers are conscious of the effects on rivals' reactions of their bidding policies' (Machlup 1952, 129). In addition, according to Machlup, oligopsony 'may be unorganised - with buyers engaging in guessing games, bluffing games, or even price wars - or cooperative, with understandings among the allegedly competing buyers' (152). We demonstrated in the previous section that both unorganised and cooperative strategies combined at different stages of the Mengerian bidding process to generate transaction prices.

Competition for Menger originated in monopoly-type arrangements (Menger 1950, 217). In the preface to the *Principles* Menger promised what later in the Austrian tradition was to be termed a 'genetic-causal' analysis (Mayer, [1932] 1994, 57). According to Mayer, genetic-causal analysis explains 'the formation of prices....through knowledge of the laws of their genesis'.[16] By investigating the 'causal connections between economic phenomena', Menger intended to ascertain how 'the more complex phenomena evolve from their elements' (1950, 47, 48). Thus the causes of competition were first traced back to their origins in simple isolated exchange activities - bilateral monopolies. These monopolies often called into being oligopsonies where the emphasis was on the volitional actions of more than two individual traders. In any market structure such as oligopsony the precise relationship between buyers' competition and price must be founded on ultimate generative causes residing in the plans economisers make for their needs - satisfaction. So when Menger wrote of a competitor in oligopsony who 'economically excludes' another from an exchange transaction, he denied that the remaining competitor or competitors were still active in the price formation process merely by dint of a 'power physically and legally' to acquire the seller's goods (220 n2). The power to purchase fades into the background once the originating cause for an

exchange relation and price is located in the filter of the trader's mind which ranks an individual's needs according to a subjective order of importance.[17]

Geographical isolation and temporal divisions in exchange give rise to considerable price dispersion for the same good (216-217, 252-253). Structures within which competition takes place are described exceedingly broadly as those arrangements which organise 'trading relationships' in special 'markets, fairs, exchanges and [other] points of concentration of trade'. For the economist as an observer the process of competition becomes a 'more complex' one with the advent of these structures (218-19 n7). As Menger averred cryptically, 'the need for competition calls forth competition' (217), thereby implying that no one trader determined the structure within which competition is effected. The complexity of competitive relationships is compounded by the development of 'speculation', formal markets, fairs and exchanges as well as by the varying degree of marketability of commodities (219, 242). Despite the existence of requisite institutions for exchange, a host of factors including legal or physical impediments to trade, insufficient knowledge on the demand side and seasonal variations in supply can all limit both marketability and the nature of rivalrous behaviour over the tradeable goods concerned (242, 247).

With the growth of markets, fairs and specialised exchanges, competitive behaviour becomes organised in time and space. Arbitragers or 'speculators' may be able to smooth-out price fluctuations over time. To the extent that potential competitors are easily able 'to find' (249) one another, the subsequent spatial concentration of traders will result in a highly competitive but analytically complex process. There is nothing in the *Principles* to suggest that this process is harmonious; from the point of view of an individual competitor price wars will have the effect of changing their preconceived demand or supply prices. Whether each trader is able to keep any trading plan completely intact during the competitive process is unlikely, although Menger recognised that plan maintenance depended on whether traders were large sellers or buyers or small traders 'whose scale of operation are too insignificant to have any appreciable effect on prices' (250). Market depth is critical. The quantitative limits on amounts that may be sold 'is sometimes wider, and sometimes narrower' (252); if the limits are narrower, price variance may be so great as to subvert stable, consistent 'economic prices' with all that this implies for the revision or ruination of traders' plans.[18] Menger identified markets for financial securities and raw materials as highly 'organised' and 'continuous' (in the sense that they had depth). By way of contrast, less rivalrous interaction amongst traders will take place in markets for specialised, differentiated consumer goods such as 'telescopes, meerschaum ornaments and potted plants' (253). To be sure, Menger entered no judgement that competition for the latter was weak or imperfect or that the dynamic process of competition would be any less conflict-ridden as compared with activity in highly organised markets for (say) financial securities. All that he predicted was that competition in less organised markets led to greater price variance. Overall, Menger did not proceed to the point of analysing highly organised competitive arrangements in the limit, that is, in atomistic terms where large numbers of small traders predominate and prices are parametric. As we saw earlier, he reserved atomistic trading to less well-organised more transparent trading situations with small numbers of traders in highly personalised structures such as bilateral monopoly and oligopsony.

On stock and grain exchanges parcels of the same security or of grain respectively may 'change hands ten times in a few hours' (255). Prices will doubtless move about or be dispersed in fairly narrow ranges. Trading prices in these highly organised exchanges move against one another in an interactive process paralleling the intensive, rivalrous struggle of opposing plans which traders are attempting to implement. Many things are not as easily or

frequently traded as stocks and grain but competition is still active. Menger gives the example of farms and factories; these are 'entirely unsuited to rapid circulation' because they are usually highly indivisible and traders need to take time over assessing their value (255).[19] Greater price variance is the specific manifestation of competition for these goods since each is unique and traded less frequently than stocks or grain.

In his theory of markets, Menger minimised discussion of average price outcomes and of single price equilibria as centres of gravity. His concentration on variances was consistent with an interest in dynamic competition. Even in highly organised markets where changes in average prices are usually small, Menger was aware of the importance, in real competitive bidding, of price variance. Thus, when

> a hundredweight of wool of given quantity is sold in a particular transaction on a wool market for 103 florins, it is often found that transactions are taking place at higher and at lower prices *on the same markets and at the same time*, at 104, 103½, and at 102 and 102½ florins....(273).

The exchange value of wool in *the* market for wool is an aggregative, average measure which is not the same as the individual's valuation. Here Menger emphasised the subjectivism of prices quoted in monetary terms because it is 'the intention of the person making the estimate' (274) of the value of a good which is both the ultimate measure of value and the cause of price variance in highly organised markets.[20]

All Menger's examples of trading institutions within which competition proceeded, explored acts of striving to buy or sell by market participants. The trading arrangements were diverse; they exhibited more complexity insofar as they went beyond simple isolated exchange settings. Menger focussed on a variety of possible outcomes and on the variance of prices resulting from competition understood as an *activity* in all the market forms that he considered.

IV Weiser on Competition as Social Conflict

Hans Mayer ([1932] 1994, 58) maintained that Wieser (and Böhm-Bawerk) 'consistently stuck' to genetic-causal theorising following the foundations established by Menger.[21] Like Menger, Wieser also began with processes of exchange and price formation for atomistic, isolated, bilateral arrangements; he then proceeded to account for competition and price formation in more complex structures by using what he called the method of 'decreasing abstraction' (Wieser [1914], 1927, 178).[22]

In *Natural Value*, Wieser ([1889] 1930) referred to the Mengerian price war in a section on the 'inter-competition' of buyers for one or more goods offered by a single seller. There is a 'competition of prices' on the buyers' side of the market (41). In the market as a whole the bidding process led to a price for the goods offered that is determined by the 'marginal buyer' (46). There may not be a single price outcome since a single seller may price discriminate by 'find[ing] out those among all the buyers who can pay most and.....drive them.....to the margin of their purchasing power' (46). If there is more than one seller the 'inter-competition' among them, coupled with buyers' competition, led to all buyers 'paying for the same article the same price as is paid by everyone else'. Under 'really free competition' sellers' market power is reduced, supply is augmented and these factors 'press prices far on the down grade of exchange value' toward a unique market price (55, 56). Wieser mentioned repeatedly the 'struggle of competition' (46) and the 'war of competition' (57). Moreover, the competition which was of interest to him was a 'conflict of price' along Mengerian lines (also Wieser 1891, 119). Wieser's expressions connote ongoing conflicts of interest, of rivalrousness as a source of change; they did not describe frictionless equilibrium conditions.

There is also a sense in which competition has social selection effects. Buyers with sufficient purchasing power have a greater chance of survival when they enter the competitive battle for a wide range of goods. According to Wieser,

> [t]he rich have not only the advantage over the poor of possessing more means wherewith to purchase goods; they have the further advantage of being for the most part in a more favourable position to utilise their means....[in] the battle of price (58).

Since the price of bread for instance is largely adapted to the valuations of the poorest buyers those with greater purchasing power pay well 'under their personal valuations' and are thereby able to enter other markets and use their consumer surpluses to compete for a wider range of goods. Wieser developed this elementary insight in his later work.

In Wieser's *Social Economics* ([1914], 1927), at least in the first section treating the idealised 'simple' or 'natural' economy, the analysis is defined as 'static': here the theory of value and price 'are presented with the assumption of a static economy, showing neither progress or retrogression' (Wieser, 1927, 13). The simple economy is 'entirely detached from exchange' (49); competition in the way it was discussed in *Natural Value* was therefore redundant.[23]

When we enter Wieser's 'social economy' the level of abstraction is lowered and the 'social process of acquisition and exchange' (1927, 149) is a preeminent consideration. Individual market participants 'meet from all directions. Indeed they clash with great force' (151); the consequences of such a clash for price formation will be different depending on both the degree of market organisation and the nature of the goods traded. Readers of *Social Economics* first encounter competition defined as 'rivalry in trade' in the context of an 'auction sale' in which buyers have in their minds a 'demand-index' or 'demand-series' much like a Marshallian demand schedule (174, 181, 182, 184). The demanders as bidders in the auction do not wish to pay their valuations (as imagined in their mental experiments which construct demand-series). Instead they 'will endeavour to make their acquisition with the lowest bid.....[and] only gradually will they raise their bids to the upper limit as they become convinced that their end cannot be reached otherwise' (182). Knowledge of market conditions is not presumed to be complete in advance of the auction at least on the demand side. Once the quantity offered in a closed auction is known, exchanges are effected simultaneously and normally at a price which is uniform for every unit sold. As Wieser insisted, '[n]o purchaser will pay a higher price, while someone at his elbow pays less'. Formally,

> the price is regularly fixed between the maximum offer of the lowest demand-series that must still be admitted to trade in order that the entire quantity offered may be sold and the highest offer of the next succeeding demand series, which must be over-bid in order that the higher series may be protected against their competitors (183).

It is notable that Wieser simplified the auction by assuming fixed supplies which *must* be sold. Ostensibly the suppliers in Wieser's example do not form supply-series, they merely offer all their goods to the highest bidders. The 'price war' takes place exclusively between buyers who are, in this case, the sole 'vehicles of values' (183). Suppliers in this auction have an entirely passive role; evidently they bring their goods to market in the expectation of receiving a price which at least covers their 'utility value' from the suppliers' standpoint.[24]

In predicting the outcome of competition in terms of price variance, Menger's claim that the characteristics of the goods traded was a vital consideration also found expression in Wieser's example of 'scarcity-commodities' such as antiques, works of art and other luxuries (Wieser, 1927, 183-184). All that may be anticipated is that competition between a 'small number of wealthy individuals' resulted in 'fortuitous prices'. That is, the limits of price formation were predicted to be much wider; the 'whim of the moment' on the part of a single

competitor may affect price so that the potential 'latitude of [price] movement is great' (184). By comparison, individuals cannot have a significant price influence when competing for mass produced goods, goods offered in large quantities to a multitude of buyers and subsistence goods. Price variation is minimised and demand for these goods becomes 'stratified':

> [t]he series of demand are here formed not by individual persons, but by classes of the people whose stratifications are shaded into one another. These series are interwoven into a network of narrowest meshes, leaving to the formation of prices a scarcely perceptible latitude of movement (*ibid*)

In short, the 'struggle of competition' confirmed the law of one price.

Single price outcomes of competition are, for Wieser, 'just or equitable' (185).[25] In the markets for mass produced goods price is 'a social institution' that is 'a result of a social contest for the possession of the offered supply' - a contest between individuals of varying appreciation for the goods on offer and with varying powers of demand (189).[26] The maximum offer of the marginal stratum is decisive. Therefore 'price does not take its standard form from the marginal utility but from the stratified marginal utility' (188-189). The formation of a 'just' competitive price is causally connected not to individual trades ('single combats') but to the 'struggle' which is 'fought group to group and class to class' (185). The *social* law of one price is derived from 'socially controlled egoism' which produces a form of competition unlike that which is forthcoming from 'a conflict of unbridled personal egoism'. Each buying class knows its place, having been 'fully educated to social egoism' and classes then coexist under conditions which are 'morally and legally correct'. Nevertheless prices will not necessarily remain constant since social competition is a process which may bring about secular price changes. The influence of changes in needs and changes in income distribution 'may transform the entire system of prices' (192, 195).

Unbridled competition deriving from 'personal egoism' is made the subject of Wieser's obloquy on two grounds. First, competition which leads to 'unheard of prices....for luxuries' were declared 'immoral' because they created social disruption over income and wealth distribution. Secondly, in a market that is scattered spatially or temporally, vent can sometimes be given to competition among market participants which is likened to 'panic' and which takes the form of 'the fiercest struggles' on the demand and supply sides (195). Furthermore, in these conditions market 'powers unthought of before' are abused at will (185). In the intense struggle, competition becomes destructive. For example, selling at 'mad prices' may be observed as may untrammelled monopoly price discrimination which upset the 'social judgements' of traders previously accustomed to stable bases for planning to satisfy their needs. In the event, the appropriate marginal offer determined in a stable, stratified market would not be ascertained. That the resulting 'chance prices' would not strictly clear markets (in the Walrasian sense) was not within Wieser's purview. His principal concern was that prices transmitted accurate information to market participants. In 'disorderly' markets price information was incorrect or insufficient to determine a result which preserved the social status quo. For example, putative 'inter-competition' among those with low purchasing power or weak selling power could produce 'over-excited fear' (208). In Wieser's labour market illustrations, the price war, if one-sided among labourers, would produce 'over competition' (373) and 'proletarian misery' (381). Labourers would end up not being paid the full value of their marginal products when there was too much competition on one side of the market. In summary, there are social limits to competition in Wieser's system. Competition in some forms can yield unreliable price signals.

The degree of competition need not be perfect to attract Wieser's approval. Indeed, what would now be regarded as imperfectly competitive arrangements, far from being treated as exceptions, were regarded as part of the normal course of things in a growing social

economy. Competition promoted *change*. Competition as a state was not dilated upon at length in *Social Economics*. Wieser maintained that, on the supply side in particular, those 'who have the ability will strive to advance beyond the general ruck and will ever be eager to gain headway against their rivals, [so as] to wrest from them in the commercial conflict increasing sales'. Wieser's dynamic competition involved sellers mutually underselling one another until cost prices had been reached (205-206). In some social economies merger activity may be rife; 'competitive conflict' is part of the merger process and is potentially unifying rather than destructive (237). In addition, the aggregation of capital, especially creation of large scale cartels and trusts may 'obviate the injuries of over-competition' (224), provided that a tendency toward cost price is preserved. Wieser's argument turned on the need to encourage active competitive process on the supply side among cartels, trusts and combines at the technical and managerial level at one remove from price competition. Rivalry between business organisations took place over technical innovations (which resulted in a larger scale of production) and over leadership (including financial and managerial) skills, both of which impacted on the position each business could take in the price conflict with consumers. Unlike Schumpeter's leader-entrepreneur, Wieser's leadership function did not 'perish' since the factors giving rise to competition as a process are always recreated in a progressing social economy.[27] The overall outcome is not single price monopoly, but 'monopoloidal' competition because 'the elements of monopoly one finds in them are interspersed with those of competition' (237, also 221, 225).

In conclusion, Wieser's discussion of the institutional aspects of competition as a species of social conflict distinguishes his contribution from Menger's. While competition selects which traders will be rewarded, the prices paid will be the result of the use of power on both sides of the market. Stratified marginal utility on the demand side and production innovations and leadership on the supply side 'decide the competitive conflict' (237). And, for Wieser, victory in competition will not necessarily result in 'perfect' competition in the sense that it will automatically select, in one-fell-swoop, the most deserving consumers or the ablest business leaders.

V Competition as a Bargaining Process: Böhm-Bawerk's Version

Böhm-Bawerk's fragmentary remarks on competition bore the stamp of their Austrian pedigree. For the most part, competition for Böhm-Bawerk was entirely bound up with behavioural patterns motivated by market participants' mental evaluations of tradeable goods. The interaction of subjective valuations in the trading process involves competition. We must perforce be concerned not with the 'economy of a Crusoe' but with 'the laws according to which we pursue our interests when they are entangled with the interests of others' in exchange (Böhm-Bawerk [1891] 1962, 20).[28] An explanation of human behaviour which leads to price formation in exchange (but not necessarily to some competitive equilibrium price) will also of necessity be an explanation of competition.

Formally, competition 'is a sort of collective name for all the psychical motives and impulses which determine the actions of the dealers in the market, and which thus influence the fixing of prices' (BB [1896] 1962, 278). The active interplay of these motives on both sides of the market have their superficial, overt referents in bid and offer prices. 'Egoistic price waves' are the consequence of the intensity of the bid-offer duel in which a 'single motive' *viz*, self-interested gain seeking is predominant (BB [1912] 1959, 212, 214). More fundamentally, subjective marginal utility valuations give economising traders the impulse to maximise their utility; they endeavour to exchange goods at a price less than the marginal utility which they confer on those goods.[29] Like Wieser, Böhm-Bawerk considered prices as

signals to act. For example, entrepreneurs observe consumers' bids and may be induced thereby to expand or contract production (112).

The 'free competition' of prices may be modified by the intervention of non-egoistic motives such as habit, custom, pride, national enmity, prejudice and power in general (212). In one of his later essays, Böhm-Bawerk ([1914] 1962) distinguished between purely economic, egoistic motives which if universally applied led to free competition, and non-economic motives which change both the *form* of competition and subsequent price outcomes.

> Whoever is moved by non-economic, outside considerations like friendship or humanitarian impulses to make a gift to the other party of the bargain, may as a buyer consent to a price which will exceed his subjective valuation and as a seller be content with a price far below his own valuation. (BB *ibid*, 156).

There is presumably 'competition' of a different nature in these circumstances. *Any* motives determining the actions of bargainers are relevant considerations when the form of competition was of interest.

Böhm-Bawerk's horse auction market was set in a bargaining context (BB 1959, 220 *ff*). In its full-fledged form the auction exhibited competition between bargainers on both sides of the market and it contained rudimentary game-theoretic elements (simultaneous offer bargaining) which have been explored elsewhere (Schotter 1992, 98 and Endres, 1996). Buyers' competition forces price upwards, and sellers' competition drives price downwards. The horse auction examples in *Positive Theory of Capital* move beyond mere isolated exchange and atomistic arrangements; large numbers of traders become attached to the auction. To be sure, some are 'excluded' as the bid-offer duel proceeds (BB 1959, 228 *ff*), but those excluded play an *active* role in determining the final transaction price. The auction price outcome 'virtually shrinks to a point' consistent with the valuations of the 'marginal pairs', provided only that there is a large number of buyers and many suppliers (240, 248). The market is analysed as a process, except in the limit where a hypothetical 'momentary market situation' is imagined in which supply is fixed and buyers' competition produces a single transaction price. As 'time goes on' supplies are considered variable, provided there is ease of entry into horse production and there is 'brisk competition among suppliers' (249 and BB [1924] 1962, 280). Böhm-Bawerk's entrepreneurs will notice any deviation between trading price and marginal cost and then take advantage of 'unexploited opportunities' (*BB*, 1959, 254-55). These entrepreneurs act much like their modern Kirznerian counterparts (Kirzner, 1979). The entrepreneurs in Böhm-Bawerk's market seize upon opportunities in a spirit of rivalry; they exploit opportunities which are potentially 'infinite in number' generated by the bid-offer bargaining process. There is 'no moment of time.....which could boast a complete absence' of profit opportunities (256).[30] Here Böhm-Bawerk turned away from an analysis of equilibrium states in which all profit-seeking, competitive activity had been exhausted.

As a market structure, 'free and perfect competition' is considered with reference to wage determination. In *Positive Theory* the price of labour was said to be the 'object of bargaining' (BB, 1959, 308). When there is 'effective competition on both sides' of the labour market, Böhm-Bawerk predicted that wages will be determined by the marginal product of labour ([1914] 1962, 162-63). Labour markets were interconnected: 'outside competition' was permitted in that 'employers in *all* branches of industry' determined wages in any one branch (*ibid*, 164). Böhm-Bawerk was chary of committing himself to an analysis of competition and price formation in a *general* competitive equilibrium sense.[31] His theoretical 'superstructure' was 'built up on a host of communicating partial markets'. Böhm-Bawerk introduced the concept of intertemporal exchange by incorporating the phenomenon of interest and the problem of exchange of present for future goods into the 'fully developed competitive market'. However, for the economist, 'to attempt to depict....the whole profusion

of influences whose complex interaction constitutes the *activity* of that market [would] face a task of great, nay, of insuperable difficulties' (BB, 1959, 312 and 351 emphasis added). Accordingly he turned his attention to competitive activity in partial, market-by-market contexts.

Market participants have only *partial* knowledge; they take a partial but not a single market perspective when involved in the bid-offer process. They will imagine the potential threat of 'outside competition' or the creation of 'new competition' or new markets in response to their own actions. For instance, employer 'monopolists' in a labour market would have to take into account the potential effects of their attempts to fix the price of labour on the behaviour of employers in other industries. They would have to 'conjecture' on the 'probability of outside competition' for labour. The supposed 'monopoly' control over wages in any one market would be thwarted by uncertainty, for

> just as in ordinary market competition for prices, when negotiations are carried on with covered cards, traders less experienced or less shrewd commit errors in sizing up....market situations, so that actual prices are caused to fluctuate over a wide range (BB, [1914] 1964, 166-67).

Coalitions of employers will not be omniscient; they must act without knowing with certainty whether or not outsiders will appear who can 'pierce a hole through the dominant phalanx of entrepreneurs'. Similarly on the supply side, organised labour may attempt to set wages above the marginal product of labour but this prompts the appearance of a 'steady stream of competitors' (*ibid*, 179-80). Workers' coalitions must constantly manoeuvre to stave off competitors. In any case, Böhm-Bawerk was supremely confident that 'economic law' would prevail in the conflict of competition. That is, the subjective motive forces making for free competition were rooted in the individual desire for gain; this desire would work within and through coalitions and monopoly elements in labour markets so that the final effect was a price of labour consistent with the level of its marginal product.[32]

All the ingredients for a market process perspective of competition are made available in Böhm-Bawerk's work. The most striking confirmation of this perspective comes in his implicit acceptance of Menger's theorem of non-equivalence. Menger (1950, 192) insisted that exchange involved genuine choice. Traders made decisions to exchange and hence *to compete* over goods which were regarded as being exchanged for other goods of non-equivalent value in a subjective sense. The observed irreversibility of exchanges was proof for Menger that individuals exchanged goods of unequal subjective value.[33] Similarly, Böhm-Bawerk (1959, 214) apprehended exchange as a 'personal quest for advantage'. Bargaining over goods pointed to 'the existence of some inequality'. An exchange involved a change of ownership whereas equivalence in exchange from the standpoint of the individual trader implied that 'exact equilibrium' obtains and 'no change is likely to occur to disturb the balance' (BB [1896] 1962, 260). Like Menger, Böhm-Bawerk (as well as Hayek, Schumpeter and Kirzner later in the Austrian tradition) wished to focus on the competitive process which led to the equilibrium situation.[34] Böhm-Bawerk's bargainers considered price as a variable rather than as a parameter, otherwise exchange and competition would have ceased. Böhm-Bawerkian competition is conceived generally as the bargaining actions of traders in markets which generate prices but not necessarily an equilibrium price. Here competition effected changes in a key market condition, that is, price. This orientation meant that he was moving toward a genetic-causal theory of price formation. Austrian economics between the wars, particularly the Mayer Circle, attempted further to develop a genetic-causal theory although it remained largely a promise (Boehm 1992, 21).

VI Conclusion

When Hayek (1948) expanded on the distinction between perfect competition as a final, end state and genuine competition as a process, his contribution acted as a conduit for transmission of some earlier Austrian insights to the economics profession post-1945. While we may readily acknowledge that 'Hayek's views on competition ... represent a rediscovery and also an expansion and further development of the notion of competition put forward by Adam Smith and his predecessors" (Veit 1990, 105), the more immediate influences on Hayek's ideas surely hailed from Austrian sources. Hayek contended that competition involved the acquisition of 'new knowledge'; it was 'essentially a process of the formation of opinion' (94, 106). The context of Hayekian competition, like that in the work of Menger, Wieser and Böhm-Bawerk, was one in which market participants had imperfect knowledge. Competition then functioned to 'teach' participants about the available alternative goods for buying or selling and about the patterns of responses to be expected from other traders with whom they had 'contacts' in the market (96, 97). Indeed, Hayek insisted that an adequate explanation of competition must outline the 'personal relationships existing between [trading] partners' (96, 97). Just because it may take 'a long time' for market participants to adapt to the variety of tradeable goods in the market or to the behaviour of rivals did not warrant application of the epithets 'weak' or 'imperfect' to any competition which took place in the interim (103).

All these Hayekian ideas were in keeping with the ideas of the early Austrians except that the latter freely added the term 'conflict' to describe the competitive process. Menger, Wieser and Böhm-Bawerk, much like Hayek, were unencumbered in their theorising on competition by the traditional neoclassical distinctions between perfect competition and monopoly or perfect competition and imperfect competition. The early Austrians were not moved to construct a formal taxonomy of market structures or analyse the properties of competitive equilibrium states. They were driven by the internal logic of Menger's original analysis of exchange, price formation and markets to envision the essential character of competition as a conflict over prices. At one remove from prices, Menger and more so Wieser, considered competition over production and managerial techniques on the supply side. And Wieser's institutional analysis of competition as a profoundly *social* process in markets where participants were endowed with substantially different buying power, was highly original. For Menger, Wieser and Böhm-Bawerk taken together, competition and the prices which were generated therefrom could not be sundered from bargaining. In the early Austrian vision of the market, bargaining behaviour was regarded as omnipresent and acted as a source of change in markets. Another common thread in their respective conceptions of competition was the stress on price-making activity by individuals (and in Wieser's work also by large firms) who set prices and then altered them in the interactive bid-offer process as they gathered additional knowledge of the market and as they adapted their plans in response to the actual or expected actions of others.

It may have been the case that 'much of what was genuinely Menger's tradition got lost' (Streissler, 1972, 430) when Wieser and Böhm-Bawerk came to dominate Austrian economic thought in the early twentieth century. Wieser and Böhm-Bawerk imbibed some Marshallian and Walrasian ideas respectively, but these influences were weak and diffuse (Hennings 1986, 237 *et passim*) especially as regards conceptions of competition. Our results cannot sustain Max Alter's (1990, 14) claim that 'the predominance of perfect competition in Wieser's and Böhm-Bawerk's theories ... served to assimilate the Austrian strand of neoclassical economies into the strands issuing from Jevons and Walras'. The Austrian conception of competition, broadly conceived as a dynamic and faltering human process of rivalry and bargaining was not borrowed from, or for that matter assimilated by, other

traditions in economic thought; it was preserved as a coherent theme in the work of the three leading first-generation Austrian economists before Hayek.

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Notes

1 See for example Kirzner (1990, 248) who stated that 'for each of these two scholars, this attention to the process of dynamic competition must have appeared entirely consistent with the common training they had received in Vienna.'

2 See O'Driscoll and Rizzo (1985, 97-102) and Lavoie (1985,172).

3 We exclude consideration of minor Austrian contributions for reasons of space. We also submit that Menger, Wieser and Böhm-Bawerk offer a representative sample of principal early Austrian ideas on the subject of competition. Other minor Austrian contributions to this subject came from H. von Schullern-Schrattenhofen and G. Gross, and, on the cognate subject of bargaining, Hermann and Schäffle were important influences on Menger (see Streissler, 1972, 437-38). We will have occasion to mention Schumpeter's work in passing. However, we concur with Hayek (1934, 393) that the reputation of Menger and the Austrian 'School in the outside world.....were due to the efforts of his brilliant followers, Eugen von Böhm-Bawerk and Friedrich von Wieser.' As well, Schumpeter's ideas on competition have been dealt with extensively elsewhere. For the latest survey see Boudreaux (1994).

4 On competition the exception is McNulty's (1987) article on 'Competition: Austrian Conceptions' but unfortunately he begins with Schumpeter thus leaving out of account other contributions in the Austrian tradition *before* Hayek (and Mises) on the subject.

5 To be sure, von Neumann and Morgenstern (1947, 9) do not neglect the Austrian influence on the theory of games. The fact that several Austrian economic classics were not available in English prior to 1950 (e.g. Menger [1871] 1950, and sections of Böhm-Bawerk 1962) is a rather weak reason for neglect. It is notable that over 60 years after publication of Menger's *Principles*, Hayek (1934, 393) was driven to lament that 'there must be few instances in economics or any other branch of knowledge, where the works of an author who revolutionised the body of an already well-developed science and who has been generally recognised to have done so, have remained so little known as those of Carl Menger.'

6 McNulty's (1987, 536) inclusion of Clark (1961) in an article on *Austrian* conceptions of competition is difficult to justify. More difficult to understand in the light of extensive research on the Austrians is Backhouse (1990, 63) which only considered Schumpeter's 'dynamic.....evolutionary' ideas on competition. Dennis (1977, vii) admitted that he 'only skimmed the surface of the German literature [on competition] with passing reference to the writings of...von Wieser.'

7 Harris (1988, 141) reinforces Morgan's 'stylization' of neoclassical competition which might at first sight seem to be a caricature.

8 In other words, with respect to ideas on competition, we will put to the test Hayek's (1934, 393) assertion that 'during the last sixty years the Austrian School has occupied an almost *unique position* in the development of economic science' (emphasis added).

9 Here we follow Hayek (1948, 96) and McNulty (1968, 640-41 and 644) in distinguishing between competitive behaviour or activity in markets from competition which is formalised by the idea of a *market structure*. According to McNulty, 'the "perfection" of the concept of competition, that is, the emergence of the idea of competition as itself a market structure, was a distinguishing contribution of neoclassical economics' (644).

10 Later Menger ([1883] 1985, 93, 94) made no apology for beginning all his economic theorising by reducing the 'complicated phenomena' of markets to their simplest 'elements'. In Menger's view it was desirable to proceed by reducing 'the more complicated phenomena of national economy', including presumably the phenomenon of the market, to the 'singular phenomena of human economy'.

11 Atomism was a useful analytical *starting* point for Menger's theorising. Cf., Boehm (1992, 16):

'[h]arking back to Menger....the starting point for Austrian analysis is not 'the market' as such, but individual trades.'

[12] According to Hayek (1934, 400) all Mengerian economic activity, including exchange, involves planning for the future.

[13] According to Stigler (1947, 24), '[i]n everyday usage....*competition* is used in a very personalised sense...[And] economic relationships are never perfectly competitive if they involve any personal relationships between economic units' (his emphasis). This insight was also noted approvingly by Hayek (1948, 97n).

[14] Hayek (1948, 95) claimed that the assumption of perfect knowledge had a 'paralysing effect...on all action'. O'Driscoll and Rizzo (1985, 84) noticed the importance of Morgenstern (1935) in the development of Austrian market process analysis.

[15] Situations of isolated exchange are said to be 'most common in the early stages of the development of civilization'. However, isolated exchange may be 'observed in highly developed economies wherever an exchange of goods that have value only to two economising individuals takes place, *or where other special circumstances economically isolate two persons* (Menger, 1950, 177 emphasis added). Going by his earlier remarks, uppermost in Menger's mind here in respect of 'special circumstances' were information asymmetries and problems of knowledge.

[16] Menger did not wish to offer a 'functional' theory of competition and price formation. A functional theory is one 'which by precisely determining the conditions of equilibrium aim[s] to describe the relation of correspondence between *already existing prices in the equilibrium situation'* (Mayer [1932] 1994, 57 emphasis added).

[17] In Mengerian mode Mayer ([1932] 1994, 50, 60-61) remarked on the 'process of economic cognition', to the 'mental factors making up demand' and to the 'significance of the subjective factor' in causal-genetic theories which distinguish them from functional theories of exchange, competition and price.

[18] Price 'variance' is used here and in the following discussion in place of Menger's term price 'fluctuations' (255). Menger wrote that some commodities 'are subject to violent fluctuations' of price (255-256).

[19] Cf. Hayek (1948, 103) who, elaborating on competition as a process, stated that 'it takes *a long time* [for market participants] to find out about the relevant merits of available alternatives [and] where the need for a whole class of goods or services occurs only discontinuously at *irregular intervals*, the adjustment must be slow *even if competition is strong and active*.' (emphasis added).

[20] According to Menger, estimating a good's value involved making an allowance for 'the special situation that the good or quantity of goods, whose equivalent (in the subjective sense of the term) is under consideration, occupies in the economy of the economising individual' (275).

[21] Mayer's article offered a critique of 'functional' theorising from the point of view of the genetic-causal approach avowedly common to the Austrians. He devoted the article to Wieser (149). For a modern discussion of causal-genetic theorising see Cowan and Rizzo (1991).

[22] Mayer ([1932] 1994, 109) mentioned the method of 'decreasing abstraction' which was purportedly adopted by 'Austrian theorists'. According to Mayer, this method corresponded to the idea that the theorist could use successive approximation to deal with complexity.

[23] Lavoie (1985, 81) rightly argued that 'Wieser's simple or natural economy abstracts form rivalry'. However, the abstraction referred to is not made with any explicitness or conviction in *Natural Value* or in the bulk of *Social Economics*. In the latter the 'social economy' takes up most of the text and its vital constituents are exchange and rivalry in various market contexts. The high profile we give to *Social Economics* in this paper is consistent with the views of Streissler (1986, 8) who described the book as a 'monumental textbook in economic theory' and Schumpeter (1951, 300) who believed that the book contained Wieser's 'last and ripest message on pure theory'.

[24] As Wieser explained: 'we assumed that the consumption wares to be sold have no utility value for the vendor personally.' Otherwise, if the goods have utility value for the vendor '[h]e will not be satisfied with anything less than a money-price whose use in exchange still promises a gain over and above the utility value' (185, 186).

[25] Streissler (1986, 103-4 and 1990, 176) discussed Wieser's moralising about the need for a stable basis for calculation in the social economy; prices arrived at socially are 'just' because they are stable and stability necessarily implied that prices signalled resource allocative efficiency.

[26] See also Ekelund (1970, 186 *et. passim*).

[27] Schumpeter ([1911] 1934) outlined 'an entrepreneurial kind of leadership' which created positive

economic profits and which attracted competitors who attempt to 'reduce and then annihilate' those profits (89). The profit incentive generated a 'competitive struggle' (131) in which the leader-entrepreneur eventually 'perish[ed] in the vortex of the competition' (134).

28 All citations to Böhm-Bawerk are hereafter abbreviated as "BB".

29 In 'extremely highly organised conditions of exchange', Böhm-Bawerk asserted that economisers' make global marginal utility estimates: 'we almost never estimate the value of goods which are indispensable to us according to their direct utility, but in nearly all cases according to the 'substitution utility' of unrelated categories of goods' (BB, 1959, 152).

30 These opportunities 'are the *inexhaustible* source from which flows the *constant stream* of entrepreneurs' profits - and of entrepreneurs' losses as well' (256 emphasis added).

31 His appreciation of Walras's *Elements* was probably limited perhaps because of his attitude to mathematical methods. Nonetheless, he absorbed *some* influences from the Lausanne School (Hayek, 1992, 51).

32 In his essay on the Marxian system, Böhm-Bawerk ([1896], 1962) remarked that Marx assumes that competition is operative but he neglects the motive forces 'causing' competition. These forces are highly individualistic in origin; they are 'psychical impulses' (270) which are 'economico-psychological' (287) in nature. Elsewhere, Böhm-Bawerk noted that competition is the result of active 'subjective' factors governing bargaining relations (299).

33 Menger gave the example of trader A exchanging a house for B's farm. Now if 'these goods had become equivalents in the objective sense of the term as a result of the transaction....there is no reason why the two participants should not be willing to reverse the trade immediately' (193).

34 See Boudreaux (1994) for discussion of the treatment of competition as a process in the work of Schumpeter and Kirzner. See also Kirzner (1973).

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