Transcending the Schumpeter-Kirzner Dichotomy: The Role of the Entrepreneur in Carl Menger's Theory of Price Formation

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Abstract: Carl Menger established in his pathbreaking 1871 work *Grundsätze der Volkswirtschaftslehre* (*Principles of Economics*) the theoretical foundations from which all future developments in the tradition of the Austrian School of economics can arguably be traced. However, some followers working in that same intellectual tradition have found Menger's treatment of entrepreneurship lacking with respect to its systematic integration with Menger's overriding aim to connect the subjective valuations of market participants with the prices that emerge in markets. Furthermore, an apparent dichotomy has been identified in past entrepreneurship literature between the theoretical work of Joseph Schumpeter and Israel Kirzner concerning the role of the entrepreneur in driving the market from or towards equilibrium, respectively. In this paper, we demonstrate how the entrepreneurial role as identified by Menger in his *Principles* is in fact systematically integrated with his conception of the market process as a whole. Furthermore, the more systematic understanding of the Mengerian entrepreneur also serves to clarify and overcome at least part of the apparent dichotomy between Schumpeterian and Kirznerian entrepreneurship. In doing so, we position the Mengerian entrepreneur as a potentially unifying conception from which those working within the two divergent strands may find common roots.

Keywords: Carl Menger; Israel Kirzner; Joseph Schumpeter; Entrepreneurship; Market Process; Price Theory

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I. INTRODUCTION

Carl Menger's 1871 *Grundsätze der Volkswirtschaftslehre* (*Principles of Economics*) is widely acknowledged as the founding text of the Austrian School of economics. Followers of Menger within the Austrian tradition can all locate firm roots in Menger's work, whether concerning price and value theory (Klein 2008) or considerations of time, error and knowledge (Vaughn 1990). Menger's first volume alone lays the foundations from which arguably all future theoretical developments of the Austrian School would build upon. In doing so, Menger (1981 [1871], p. 49) "devoted special attention to the investigation of the causal connections between economic phenomena involving products and the corresponding agents of production, not only for the purpose of establishing a price theory based upon reality and placing all price phenomena … together under one unified point of view, but also because of the important insights we thereby gain into many other economic processes heretofore completely misunderstood." Nevertheless, some working in the Austrian tradition have noticed seemingly paradoxical elements in Menger's treatment of entrepreneurship, particularly an apparent lack of systematic integration with his theory of price formation, which itself, it is argued, fails to incorporate his own admonitions elsewhere in the book concerning the importance of time, uncertainty, knowledge, and error in economic processes.

To address the arguments concerning this apparent paradox, we trace Menger's explicit discussion of entrepreneurship in his *Principles* through his broader treatment of economic development located throughout the book. By locating Menger's conception of entrepreneurship as key to the market process as a whole, we demonstrate how it incorporates choice over the institutional structures within which exchange occurs and therefore has direct bearing on the price formation process. We also clarify the extent to which Menger's theory of price formation can be said to be an "equilibrium" theory. Doing so also allows us to shed light on the apparent dichotomy that has emerged in the academic literature between Schumpeterian and Kirznerian notions of entrepreneurship. In particular, we argue that the systematic nature of the Mengerian entrepreneur is able to transcend this dichotomy and provide a possible basis for re-convergence between what have, since Menger's time, become divergent accounts of the market process.

II. THE ENTREPRENEURIAL ROLE IN MENGER'S *PRINCIPLES OF ECONOMICS*

The explicit discussion of entrepreneurship in Menger's *Principles* occurs within only a few brief passages in Chapter 3, "The Theory of Value." The four key functions Menger (emphasis in original; 1981 [1871], p. 160) associates with the entrepreneur include: "(a) obtaining *information* about the economic situation; (b) economic *calculation* – all the various computations that must be made if a production process is to be efficient (provided it is economic in other respects); (c) the *act of will* by which goods of higher order … are assigned to a particular production process; and finally (d) s*upervision* of the execution of the production plan so that it may be carried through as economically as possible."

Salerno (1999, p. 92) regards Menger's conception of entrepreneurial activity as "the set of functions necessary for actuating the production process." As such, "the entrepreneur's most important function is anticipating future wants, estimating their relative importance, and acquiring the technological knowledge and knowledge of currently available means." Other than erroneously categorizing entrepreneurial activity as a type of labor service, Salerno (1999, p. 93 fn. 65) identifies in Menger's conception of the entrepreneur the key ingredients that would later appear in Mises' discussion of the "promoter-entrepreneur" in *Human Action*.

Campagnolo and Vivel (2014, p. 53) emphasize how "Mengerian entrepreneurs are *foreseers*" whose specific role is to "always look further up the ladder of the goods necessary to produce some other goods." Mengerian entrepreneurs must take stock of all relevant market information, including forecasts of future consumer preferences and current prices of necessary factor inputs, and consciously arrange and direct particular production processes in pursuit of perceived profit opportunities. Furthermore, as Westgren (2020) recognizes, the functions Menger does explicitly identify with entrepreneurship involve productive transformation through time, which necessarily involves uncertainty by Menger's own recognition. Therefore, returns to entrepreneurship will be included in the ultimate valuation of the consumer goods brought to market, linking Menger's account of entrepreneurship with the chain of value imputation from the expected future prices of eventual consumer goods backwards to the competitive bidding for higher-order producer goods.

However, others working in the Austrian tradition find Menger's treatment of entrepreneurship unsystematic at best and difficult to reconcile with more modern treatments of the entrepreneur. For instance, Kirzner (1978, p. 31) wishes to determine "the extent to which [Menger's] system, explicitly or implicitly, found room for the entrepreneurial role (or to which his system might, at the hands of his followers, be expected to lead to the clear identification and explication of this role)." Yet after considering Jaffé's (1976) reading of the Mengerian entrepreneur as compatible with Kirzner's own work, Kirzner concludes that "it does not seem possible to sustain such a reading of Menger" on account of the apparent disconnect between Menger's discussion of entrepreneurship and his theory of price formation. In particular, Kirzner (1978, p. 36) finds it problematic that "in Menger's entire theory of price error is carefully excluded." Furthermore, Kirzner (emphasis in original; 1978, p. 38) finds it puzzling that "Menger's theory of prices, monopolistic or competitive, is emphatically *not* a disequilibrium theory!" on account of the fact that Menger "provides no hint of any time-consuming market processes (entrepreneurial or otherwise) through which prices are systematically formed" as well as the fact that "Menger explicitly assumed the absence of all error – an assumption guaranteeing instantaneous equilibrium, and one which in fact starts out by giving entrepreneurs little to do." Summing up, Kirzner states that "in Menger's theory, prices are shown to be determined instantaneously and inexorably by the ruling economic circumstances."

Sautet (2015, p. 68) largely shares Kirzner's interpretation of the entrepreneurial element in Menger's *Principles*, writing, "At best, Menger sees [entrepreneurship] as a special kind of labor service" and concurs with Kirzner that Menger's price theory is "paradoxically … not entrepreneurial." Sautet (2015, p. 82) joins Kirzner in reading Menger as explicitly assuming away error in his theory of price formation and therefore providing a theory of "instantaneous equilibrium." As a result, this strand of the Austrian entrepreneurship literature sees Menger's conception of the entrepreneurial role as paradoxical in the sense that it should not actually exist in an errorless state of attained equilibrium prices. With that said, Kirzner (1978, p. 41) "does not rule out a possibly pioneering role for Menger in the economics of entrepreneurship, or of imperfect knowledge, or of disequilibrium."

Vaughn (1994) takes a more ambivalent view towards Menger's theory of price and conception of the market process within which entrepreneurial activity occurs. On one hand, Vaughn (1994, p. 18) places Menger "in the neoclassical camp" insofar as he can be said to provide "a theory of the determination of equilibrium prices under varying degrees of competition in markets." But while Vaughn (1994, p. 26) believes that "Menger's theory of exchange and price … can be interpreted as a laborious definition of equilibrium prices," she also acknowledges that Menger's work as a whole might be "more appropriately viewed as a theory of economic processes" on the basis that Menger recognizes how economizing individuals "actively search out trading partners" in order to "exploit the differences in valuation between them," which at least opens up space for an implicit role for entrepreneurship throughout these activities.

These readings concerning the lack of an entrepreneurial role in Menger's theory of price formation are indeed plausible to at least a certain degree. As we have already noted, Menger confines his explicit treatment of entrepreneurship to brief passages located within a single chapter of his *Principles* and well outside his discussion of price formation proper. Furthermore, Menger (1981 [1871], p. 172) certainly does write that "entrepreneurial activity must definitely be counted as a category of labor services" and does use the term "equilibrium" on a handful of occasions during his discussion of price formation. At one point, Menger (1981 [1871], p. 192) refers to "the prices of goods" as "symptoms of an economic equilibrium in the distribution of possessions between the economies of individuals," analogizing such "equilibrium" prices to waves that begin when "the locks between two still bodies of water at different levels are opened" until they "gradually subside until the water is still once more." Finally, Menger (1981 [1871], p. 216) does indeed consider "error and imperfect knowledge" to be "pathological phenomena of social economy" that do not impact the fact that "each given economic situation sets definite limits within which price formation and the distribution of goods must take place, and any price and distribution of goods that is outside these limits is economically impossible."

It should be noted, however, that Kirzner (1978) only takes issue with Menger's treatment of time and error within his theory of price formation. According to Kirzner (1978, p. 38), "[e]xcept for his chapter on price, Menger's book displays a sensitive awareness of the inescapable influence of error and ignorance, and of the resulting continuous state of flux in which the economic system must always find itself." Kirzner himself recognizes that a "possible solution to this difficulty may be … the distinction which Menger implies at several points between 'economic prices' and 'uneconomic prices.'" Continuing, Kirzner (1978, p.

38; emphasis original) notes that "Menger is fully aware that the world will, at any given moment, display prices that are, to greater or lesser degree, *uneconomic,*" yet nevertheless finds a lack of a "systematic process linking today's prices directly to those that prevailed yesterday" to be troubling and concludes that "Menger's theory [of price formation] was *not* a disequilibrium theory at all. It did not make use of the phenomena of ignorance and error" (Kirzner 1978, p. 40; emphasis original).

As we have already established, Menger's discussion of entrepreneurial activity involves a production process through time that necessarily involves uncertainty. Next, we construct a link between Menger's explicit treatment of entrepreneurship and his theory of price formation through the general process of economic development, the choice over not only the quantities and qualities of goods to be produced and brought to market but also the market structures themselves within which exchange occurs. Doing so presents a more comprehensive view of how entrepreneurial decision making is relevant at each step of production towards the final exchange in which prices are formed.

II.A. MENGERIAN ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

Menger's overriding concern in *Principles of Economics* is to explain how the subjective valuations of individuals are causally connected to the formation of market prices (Salerno 1999, p. 72). Yagi (2011, pp. 18-29) traces the origins of Menger's interest in understanding prices to his work as an economic journalist in 1869 at the *Wiener Zeitung*, where Menger noticed a discrepancy between how market practitioners described the conditions and process of real-life price formation and the theories taught in leading German academic texts at that time. To reconcile this discrepancy, Menger set out, according to Schumpeter (1951, p. 84), with the "essential aim … to discover the law of price formation."

Readers of Menger's *Principles* will quickly find, however, that the book is also substantially concerned with the causes and implications of economic development. After a preliminary explication of economic goods-character and the inescapable presence of time and error in the production process, which involves the transformation of goods of higher order to those of lower order for the direct satisfaction of human needs, Menger (1981 [1871], pp. 71-74) turns to "The Causes of Progress in Human Welfare." In this brief section, Menger improves upon the connection drawn by Adam Smith between the division of labor and economic development by noting that meaningful economic progress occurs only when the division of labor is extended alongside saving, capital accumulation, and the intensification of the time structure of production, whereby goods of higher order are increasingly joined together and employed towards the creation of goods of lower order for eventual consumption. Streissler (1969, p. 249; emphasis in original) sees in this insight "a conscious break with the central theme of the classics" in that "while [the classics] had always asked *how* to produce best, [Menger] starts interest in the question *what* to produce best."

Menger (1981 [1871], p. 74) remarkably states that "the quantities of consumption goods at human disposal are limited only by the extent of human knowledge of the causal connections between things, and by the extent of human control over these things." Since the "increasing understanding of the causal connections between things and human welfare" informs the subsequent arrangement of more effective combinations of higher order goods into production processes, "[n]othing is more certain than that the degree of economic progress of mankind will still, in future epochs, be commensurate with the degree of progress of human knowledge." As economic progress occurs in such a way, not only will quantities of goods available for consumption in future time periods increase but so too will "the kinds of goods" as well as "the occupations" that become valuable in the now-expanded division of labor (Menger 1981, p. 73). For this reason, Streissler (emphasis in original; 1969, p. 249) characterizes Menger's Principles as "an *enquiry into the diversity of goods*."

Menger (1981 [1871], pp. 159-60) recognizes that "the process of transforming goods of higher order into goods of lower or first order … must also always be planned and conducted, with some economic purpose in view, by an economizing individual." For Menger (1981 [1871], p. 160), the entrepreneur is this "economizing individual" who "must actually bring the goods of higher order together … for the purpose of production." As we have already established, Menger recognizes saving and capital accumulation for use in production to be primarily responsible for economic progress, so in this way Menger situates the entrepreneur as the driving force of the market process much the same as his intellectual descendants in the Austrian School (see Mises 1966 [1949], pp. 333-338; Kirzner 1999b, pp. 219-220; Kirzner 2000, p. 225). Furthermore, since Menger recognizes knowledge to be intimately tied to the process of development, advances in knowledge set the stage for further entrepreneurial opportunities to satisfy newly discovered causal means-ends relationships both in terms of production and eventual consumption.

So far, we have seen how, for Menger, entrepreneurial activity drives production and therefore is essential for economic development in a broad sense, as well as the vital importance of expanding knowledge of new causal relationships. To clarify the role that entrepreneurship plays throughout the price formation process itself, one must jump past the chapter on price to Chapter VII, "The Theory of the Commodity," where Menger introduces the importance of middlemen and the institutions within which exchange occurs. According to Menger (1981 [1871], p. 239):

> The higher the level of civilization attained by a people and the more specialized the production of each economizing individual becomes, the wider become the foundations for economic exchanges and the larger become the absolute and relative amounts of those goods that at any time have commodity character, until finally the economic gains that can be derived from the exploitation of the above relationship become sufficiently large to call forth a special class of economizing individuals who take care of the intellectual and mechanical parts of exchange operations for society and who are reimbursed for this with a part of the gains from trade. When this has occurred, economic goods no longer, for the most part, pass directly from producers to consumers but often follow very complex paths through the hands of more or less numerous middlemen. By occupation these persons are accustomed to treat certain economic goods as commodities and to keep special places open to the public for the purpose of selling them.

Here we can see clearly the function of "middlemen" in identifying opportunities to profit by exploiting available but previously unrealized gains from trade. Furthermore, Menger (1981 [1871], p. 242) recognizes that "the success of the economic activity of producers and merchants depending to a very great extent on a correct understanding" of "the obvious differences in the marketability of commodities." As a result, producers of novel products "are therefore accustomed to make their commodities 'known', often at great economic sacrifice, in order to increase the numbers of persons to whom they are saleable" (Menger 1981 [1871], p. 242, fn. 9). Thus, ignorance clearly enters into Menger's conception of market exchange, as consumers are at first naturally unaware of the existence of new products but, thanks in large measure to the work of middlemen and mediating institutions, can over time gain knowledge of the different ways in which these novel products can be brought into causal connection with "human needs."

II.B. MENGERIAN ENTREPRENEURSHIP AND PRICE FORMATION

Turning finally to Chapter V, "The Theory of Price," Menger begins the chapter by examining the simplest case of isolated exchange, whereby two individuals with reverse valuations over two goods agree to exchange them at a price that both find mutually agreeable. However, "with the progress of civilization, instances in which the foundations for an economic exchange of goods are present merely for two economizing individuals occur less frequently" (Menger 1981 [1871], p. 197). As a result, Menger turns his attention to price formation under the conditions where a monopolist offers a certain quantity of a good to multiple sellers. Here too, a band of possible prices reflect the subjective valuations of market participants and provide the limits within which mutually beneficial exchange occurs. Menger (1981 [1871], p. 225) only then turns to a non-monopolistic market situation, which encourages "large-scale production" and "the exploitation of even the smallest economic gain wherever possible."

It is important to note that Menger did not offer a theory of price *determination*, where only a single parametric price is able to clear a market, but one of price *formation*, where the ultimate prices that result fall within a range of the respective subjective valuations of the parties to an exchange (Boettke 1992, p. 521). To make this point, Moss (1978, p. 29) states that "Menger's contribution was to successfully show how market price is formed out of the subjective preferences of buyers and sellers in a world where individuals are striving to satisfy as many of their most urgent needs as is possible." However, rather than reducing the complexities of market exchange to a problem of calculus, Menger remained focused on maintaining the link between the ordinal preferences of consumers and the ultimate prices agreed upon and paid. By doing so, Menger was able to avoid the single-exit understanding of the market process that characterizes general equilibrium.

Unlike his fellow marginal revolutionaries in Jevons and Walras, Menger recognized the *intentional* element in the formation of particular market structures (Ebeling 2021). As such, the institutional market arrangements themselves are objects of economizing action. While Jevons simply assumes away this aspect of the market process and takes institutions as given, Walras infamously set forward the idea of an auctioneer in order to bind together his general equilibrium system. Menger, in his account of price formation, instead gives explicit consideration to the various possible institutional settings within which the goods generated through the entrepreneur-driven production process can be brought to market and exchange can take place. For example, after describing the limits within which prices in a monopolistic market may form, Menger (emphasis added; Menger (1981 [1871], p. 208; emphasis added) writes:

> *Whenever* the monopolist can count on congregating all or at least a sufficient number of competitors, and *when* the necessary formalities can be observed without disproportionate economic sacrifices (*as in the case of an auction of a monopolized article in a well-known auction hall*, announced some time in advance), he will of course *use the method* described in the previous section as the one most certain to enable him to dispose of the entire amount of the monopolized good at his command *in the most economic manner*. He will also *choose an auction* when he must sell out a substantial stock of a monopolized good completely within a limited period of time. But the ordinary procedure *adopted* by a monopolist in marketing his commodities will ... be one in which he has the available quantities of the monopolized good ready for sale but offers only partial quantities to the competitors for it at a price set by him.

The italicized sections in the passage quoted above reveal Menger to be sensitive to the institutional mechanisms by which sellers and buyers meet, opportunities for mutually beneficial exchange are identified and, consequently, prices form. Menger (emphasis added; 1981 [1871], p. 249) recognizes the function of different "public institutions" such as "[m]arket places, fairs, exchanges, [and] public auctions" to be that of bringing "all persons interested in the pricing of a commodity together at a particular place either permanently or periodically to *ensure the establishment of an economic price*." In fact, Menger (emphasis added; 1981 [1871], pp. 218-219, fn. 7) recognizes such institutions to be essential in a developed market economy:

> From this it is at once evident that the great importance to human economy of markets, fairs, exchanges, and all points of concentration in trade in general, is due to the fact that as trading relationships become more complex *the formation of economic prices becomes virtually impossible without these institutions*. The speculation that develops on these markets has the effect of *impeding uneconomic price formation* from whatever causes it may arise, or of mitigating at least its harmful effect on the economy of men.

While Menger's explicit discussion of price formation may at times seem to lend credence to Kirzner's (1978, p. 38) reading that prices are "determined instantaneously and inexorably by the ruling economic circumstances," there does not seem to be anything "instantaneous" or "inexorable" in an *ex-ante* sense when one recognizes how Menger considers "the ruling economic circumstances" themselves to be subject to economizing individual action. Furthermore, as noted earlier, Menger (1981 [1871], p. 239) recognizes the vital role played by "middlemen" who "who take care of the intellectual and mechanical parts of exchange operations for society and who are reimbursed for this with a part of the gains from trade," which reveals a sensitivity to the fact that extra steps may ultimately be required for goods generated through the production process to eventually reach the hands of consumers. Each step in this process takes time and therefore involves uncertainty, from the physical production process to the choice over the market setting of initial sale to the potential for a series of middlemen to involve themselves with the channeling the goods to the most highly valued uses able to be identified at a given time.

Mengerian entrepreneurs thus contribute not only to product differentiation and qualitative dimensions of competition through their key role in the production process, but also are intimately linked to the choice over the conditions in which exchange and consequently price formation occurs. Once entrepreneurs assign complementary goods of higher orders and see a production process through to completion, it is then necessary to bring products to market, a decision which to Menger is by no means automatic. These "public institutions," such as the aforementioned exchanges and auctions, emerge from the economizing action of enterprising middlemen. The establishment of such institutions then enables the progressive realization of "economic prices" as "existing competitive conditions ... correspond more closely to the *general* economic situation" (emphasis in original; Menger 1981 [1871], p. 248). Finally, the public nature of such exchange institutions brings forth the emergence of "a social class of economic individuals, speculators," who "[take] care that the differences in price between the various markets do not significantly exceed the costs of transportation" (Menger 1981 [1871], p. 251).

Even if Menger only explicitly identifies entrepreneurship within the first steps of this whole process, the *functions* Menger assigns to the entrepreneurial can be seen repeatedly in each of these steps towards the eventual sale of a particular good to the final consumer. For instance, it requires the gathering of information to determine the appropriate market institutions by which profits for a certain quantity of goods may be most readily maximized. Middlemen and speculators, just like entrepreneurs situated within a physical production process, must engage in economic calculation to be sure costs expended on purchases, including interest costs related to time, are more than covered by revenues from anticipated sales. The organization of market structures requires an act of will no less than the assignment of goods within the production process. Finally, supervision of plans is undoubtedly necessary to actualize the completion of the exchange in any attempt to realize profits through intertemporal price arbitrage between the cost of present inputs and future outputs, with or without physical transformation of the goods in question.

Time and uncertainty prevail throughout this entire chain of production and distribution, as each decision undertaken by economizing individuals bears a chance of error and therefore loss if anticipated market conditions do not materialize and costs cannot at least be recovered. The actual exchange at which time prices are formed comes only at the very end of what Menger recognizes to be a lengthy sequence of interactions, all of which involve the gathering of information and economic calculation to ensure profitability at each stage in the broader production process until a good reaches the hands of the final consumer. Thus, we can see that entrepreneurship in Menger's *Principles of Economics*, both understood broadly as the functions Menger identifies as well as more narrowly within a production process utilizing higher-order goods, is integrated with the entire account of economic development and therefore the progressive overcoming of ignorance and error.

Having demonstrated the systematic connection of entrepreneurship with Menger's theory of price formation, we now turn to how the foregoing understanding of the Mengerian entrepreneur incorporates and transcends the apparent dichotomy between Schumpeterian and Kirznerian entrepreneurship.

III. THE MENGERIAN ENTREPRENEUR AND THE SCHUMPETER-KIRZNER DICHOTOMY

Kirzner (1992, pp. 38-43) conceives of two distinct sets of variables that characterize the market process. The first group of variables includes "consumer tastes, resource availability, and technological knowledge" (Kirzner 2009, p. 146). These are called underlying variables (UVs). Induced variables (IVs), meanwhile, consist of market phenomena such as prices, outputs, and methods of production that are endogenously derived from the UVs. In a market characterized by general equilibrium, the induced variables dovetail with underlying variables, squeezing out any possible scope for entrepreneurship. Outside of general equilibrium, however, a tendency exists for the prevailing IVs to be brought closer into alignment with the given UVs, despite the fact that the UVs are constantly changing in the real world. For this reason, it is not possible in principle for the UVs and IVs to correspond completely despite the tendency for changes in IVs to follow changes in UVs.

The Kirznerian entrepreneur takes disequilibrium as its analytical point of departure and acts as an arbitrageur, perceiving preexisting errors in the allocation of resources and monetizing them as previously unnoticed profit opportunities. In doing so, the entrepreneur acts as an equilibrating force by redirecting resources from less valued uses, where they are bought at a relatively low price, towards more highly valued uses, where they can be resold at a higher price "Only in disequilibrium," Kirzner (1979, p. 110) writes, "are there opportunities for entrepreneurial profit, for the purchase of inputs at a cost lower than the revenue obtainable from the sale of their potential output." For Kirzner (2009, p. 147; emphasis original), the entrepreneur "is seen as *driving the process of equilibration*. In this process the market is, as it were, gravitating (through entrepreneurial activity) towards the hypothetical state of equilibrium [that is, the state which, in the (impossible!) absence of autonomous, exogenous changes in the underlying variables, might have eventually emerged]." As such, the Kirznerian entrepreneur generates an equilibrative tendency via a change in IVs by virtue of entrepreneurial alertness and the discovery of previously unnoticed profit opportunities.

The Schumpeterian account of entrepreneurship, meanwhile, takes Walrasian general equilibrium as the analytical point of departure from which the entrepreneur acts a disequilibrating force. By disrupting a preexisting equilibrium, the entrepreneur in Schumpeter (1947 [1942], p. 83) creates new profit opportunities through non-price adjustments, such as the introduction of "new consumers' goods, the new methods of production or transportation, the new markets, [and] the new forms of industrial organization that capitalist enterprise creates" through entrepreneurial innovation. According to Kirzner (2009, p. 146; emphasis original),

> The Schumpeterian entrepreneur does not passively operate in a given world, rather he creates a world different from that which he finds. He introduces hitherto <u>undreamt of</u> products; he pioneers hitherto unthought of methods of production; he opens up a new market in hitherto undiscovered territory. In so doing the entrepreneur is, in the Schumpeterian view, pushing (what might otherwise have been) an equilibrium market *away* from equilibrium. His creativity disrupts what would otherwise have been a serene market.

Rothbard (1987, p. 98) describes some of the analytical difficulties posed by Schumpeter's dedication to general equilibrium as characterizing both the beginning and ending states of the market process. Namely, in a world where UVs and IVs are fully aligned, there is no scope for entrepreneurial profit and loss. However, "since change, entrepreneurship, profits, and losses clearly exist in the real world, Schumpeter set himself the problem of integrating a theoretical explanation of such change into the Walrasian system." In such a Walrasian system, any change that disturbs the perfect correspondence between UVs and the prevailing IVs must occur through some exogenous *deus ex machina*. Since changes in tastes and resources are ruled out within general equilibrium, Schumpeter finds the necessary exogenous shock in the entrepreneurial "innovation" permitted through the issuance of inflationary bank credit. Discrete disturbances in UVs initiated by entrepreneurial innovation then send shockwaves throughout the economy, breaking the market out of general equilibrium with a boom before readjustments bring it back to its unchanging placidity with a newfound alignment of UVs and IVs. As Rothbard (1987, p. 102; emphasis original) notes, "in the Austrian tradition of von Mises and Kirzner, the entrepreneur harmoniously adjusts the economy in the direction of equilibrium," as "successful entrepreneurs reap profits by bringing resources, costs and prices further in the direction of equilibrium." However, since Schumpeter envisions the market economy starting at a position of general equilibrium, "the *only* role for entrepreneurship, by logical deduction, is to innovate, to disrupt a preexisting equilibrium."

Retrospectively summarizing his earlier works drawing attention to the differences between these two different conceptions of the entrepreneur, Kirzner (1999a, p. 5; emphasis original) notes how "Schumpeter's entrepreneur … was essentially disruptive, *destroying the pre-existing state of equilibrium*. My entrepreneur, on the other hand, was responsible for the tendency through which initial conditions of disequilibrium come systematically to be displaced by *equilibrative* market competition." As Boudreaux (1994, p. 57) writes, "[w]hereas Schumpeter highlighted those activities that change the givens, Kirzner's focus is on the activities that actually establish equilibrium prices given the particular givens." Loasby (1989, p. 178) puts the same point succinctly when he writes, "[w]hereas Kirzner's entrepreneurs respond to changing data, Schumpeter's cause the data to change."

III.A. THE TYPE OF EQUILIBRIUM IN MENGER'S PRINCIPLES

Since the dichotomy between Schumpeterian and Kirznerian entrepreneurship principally turns on whether entrepreneurship can be characterized by disequilibrating "innovation" or equilibrating "alertness" to arbitrage opportunities, it is first important to clarify Menger's own use of the "equilibrium" construction in his theory of price formation in order to see how Menger's conception of entrepreneurial activity incorporates both Schumpeterian and Kirznerian elements and therefore transcends the apparent dichotomy.

Whereas Jaffé (1976, p. 513) argues that Walras derived the idea of marginal utility, or "rareté" in Walras' case, only out of the conception of general equilibrium, he also recognizes that one cannot say the same for Menger. Instead, "Menger kept too close to the real world for either the verbal or the symbolic formulation of the [marginalist] theory; and in the real world he saw no sharply defined points of equilibrium, but rather bounded indeterminacies not only in isolated bilateral barter but also in competitive market trading" (Jaffé 1976, p. 520). Where Schumpeter (2006 [1954], p. 918) himself considered the principle of marginal utility "not so important" as compared to Walras' system of general equilibrium as a whole, Jaffé (1976, p. 520; emphasis original) finds that Menger "was too conscious of the ubiquitous obstacles that, even *ceteris paribus*, impede the attainment of market equilibrium," obstacles which include not only the pervasive element of uncertainty but also more practical considerations such as transportation costs and barriers to trade more generally. Jaffé (ibid.) puts it well when he writes,

> With his attention unswervingly fixed on reality, Menger could not, and did not, abstract from the difficulties traders face in any attempt to obtain all the information required for anything like a pinpoint equilibrium determination of market prices to emerge, nor did his approach permit him to abstract from the uncertainties that veil the future, even the near future in the conscious anticipation of which most present transactions take place.

Streissler (1972, pp. 438-439) goes even further than Jaffé when he writes that compared to his later follower Wieser, "Menger … could not even conceive of equilibrium as anything precisely describable. His economics in its substantive content was disequilibrium economics. … Menger wanted to sketch the forces leading towards equilibrium while leaving it undecided how quickly equilibrium tends to be approached and how closely it is approximated." However, as described earlier, others in the Austrian tradition such as Kirzner (1978), Sautet (2015) and Vaughn (1994) dispute the extent to which Menger's theory of price formation can be characterized in disequilibrium terms on account of his seeming abstraction from ignorance and error within his theory of price formation.

While Menger (1981 [1871], p. 188) certainly does recognize some form of equilibrium as prevailing between individuals on the market when mutually beneficial exchanges are perceived, he describes the attainment of such an equilibrium as "points of rest at particular times, for particular persons, and with particular kinds of goods." Salerno (1999, p. 95) recognizes the notion of equilibrium that Menger is employing as the same as what Böhm-Bawerk would call "momentary equilibrium" or what Mises (1966 [1949], pp. 244-45) would refer to as the "plain state of rest." This everyday notion of equilibrium does not refer to the imaginary construction of long-run equilibrium (the "final state of rest" in Misesian terminology) towards which the market is moving at every instant yet cannot conceivably be reached in a world of constantly changing UVs.

Therefore, Menger's theory of price formation does not start or end in equilibrium in the sense of the imaginary constructions of the final state of rest (FSR) or the evenly rotating economy (ERE), the latter of which is the closest Austrian analogue to the state of Walrasian general equilibrium that for Schumpeter serves as a description of reality. Instead, exchange opportunities are temporarily exhausted when traders can no longer identify mutually beneficial exchanges. Kirzner (1999b, p. 219) himself defines this state of rest as constituting "the completion of transactions between only those who are aware of the existing situation." However, this temporary state is disturbed whenever the value scales of individuals change, new goods are brought to market, or new organizational structures are introduced that stimulate the perception and exhaustion of new mutually beneficial trading opportunities. Vaughn (1990, p. 384) in fact comes close to this understanding of plain state of rest prices when she writes that in Menger's *Principles*, "economic equilibria are at best partial and ephemeral. The world is characterized more by constant flux than by equilibrium states, although equilibrium may obtain from time to time."

III.B. MENGERIAN ENTREPRENEURSHIP IN SCHUMPETERIAN AND KIRZNERIAN TERMS

While we cannot say that Schumpeter follows Menger insofar as Schumpeter conceives the market economy as characterized by a state of general equilibrium, Westgren (2020, p. 289) recognizes that Menger's "ontology … for imputation of value from the market between entrepreneurs and potential buyers" at the very least implicitly involves a process by which "the entrepreneur designs the new entry product to be qualitatively different from incumbent products or to have a cost structure that is superior for a qualitatively similar product," which would be technological innovation in the Schumpeterian sense. Sautet (2015, p. 68) also recognizes how Menger "emphasizes product variation [and] the qualitative dimension of competition." Streissler (1972, pp. 430-431) also sees Schumpeterian elements in Menger's conception of technical progress and finds that "Mengerian goods are three-dimensional: they have quantity, quality, and variety as separate dimensions of dynamic change." Although Kirzner (1978, p. 32) does not find the evidence provided by Streissler (1972) linking Mengerian and Schumpeterian entrepreneurship wholly convincing, he nevertheless considers the possibility of a strongly Mengerian influence on Schumpeter to remain as "a fascinating possibility."

Mengerian entrepreneurship can also be considered Schumpeterian in the sense that it also involves choice over the market structures within which exchange and price formation take place. As described earlier in this paper, Menger recognizes that the choice over such institutional structures often involves a deliberate decision on the part of economizing individuals seeking to maximize profit and can include such arrangements as fairs, auctions, or simple market settings. Such institutional innovation can also be understood as a shift in UVs in the sense that different exchanges are then made possible and therefore a different array of prices may form according to peculiarities of each situation.

Mengerian entrepreneurship is thus disruptive in the Schumpeterian sense of introducing product and institutional innovation to facilitate exchange, but such disruptions also create the context within which

Kirznerian arbitrage then takes place by closing the gap between what Menger calls "uneconomic" and "economic" prices. As Moss (1978, p. 25) puts it clearly in Kirznerian terms, the "group of professional middlemen and speculators" Menger recognizes as important to ensuring the formation of "economic" prices "will be 'alert' to opportunities for profitable arbitrage. Their actions will iron out price differences and guarantee that the commodity will sell nearly everywhere for the same market price."

In his *Principles*, Menger (emphasis original; 1981 [1871], p. 248) regards "economic prices" as those prices that correspond to the "*general* economic situation." In his later *Untersuchungen über die Methode der Socialwissenschaften und der Politischen Oekonomie insbesondere* (*Investigations into the Method of the Social Sciences with Special Reference to Economics*), Menger (emphasis in original; 1985 [1883], p. 71) notes how "as a rule *real* prices deviate more or less from *economic* ones" on account of factors such as ignorance, error and external force inhibiting the realization of mutually beneficial trading arrangements. As such, Menger's "economic prices" can be said to correspond to a situation in which market prices (IVs) better reflect the information embodied in UVs.

If disequilibrium is characterized by a discrepancy between UVs and IVs, this reflects the fact that, from the array of the available resources and technological possibilities, there remains a subset of economically feasible possibilities that have not been actuated. The gap between more or less "economic" market prices due to ignorance, error, or external impediments to trade therefore present profit opportunities for enterprising entrepreneurs to facilitate greater correspondence of IVs with UVs. Such dovetailing between these two sets of variables facilitates the formation of *more* "economic" prices, even given the constantly changing UVs in the real world.

The way in which the Mengerian entrepreneur transcends the Schumpeterian-Kirznerian dichotomy is best stated by Streissler (emphasis original; 1972, p. 433) when he writes, "Mengerian man thus knows little about the present, though, interesting enough, he is constantly trying to *increase* his knowledge, creating *social institutions* to gather information, empowering growing droves of middlemen to act on his behalf." The Mengerian entrepreneur is innovative in the Schumpeterian sense of introducing new possibilities for productive specialization and exchange. Yet, at the same time, such "innovation" can be understood as Kirznerian not because the entrepreneur creates new technological possibilities. Rather, the introduction of such possibilities comes "*because of expanded awareness of existing opportunities*" (emphasis added; Kirzner 1985, p. 74).

IV. CONCLUSION

In this paper, we have sought to demonstrate how the entrepreneurial role as described in Menger's *Principles of Economics* is systematically integrated with the process of price formation and economic development in general. First, entrepreneurs arrange and supervise the production process by which higher-order goods are transformed into lower-order goods. Then, middlemen can assume the entrepreneurial function in bringing together producers and consumers to discover mutually beneficial exchanges. Finally, speculators can then engage in arbitrage when they perceive price differences not simply explained by transportation costs. In each stage towards the final sale of the good, the chance of error is necessarily present as purchases and anticipated sales are separated in time and therefore involve uncertainty. At the same time, Menger associates the overall process of economic development with increasing knowledge over the suitability of various means for the attainment of desired ends, allowing the formation of increasingly "economic" prices as information spreads more easily and more individuals are able to participate in market exchanges.

Furthermore, we have also shown how this more systematic conception of the Mengerian entrepreneur incorporates key Schumpeterian and Kirznerian elements and unites them into a coherent account of the market process. Entrepreneurial innovation occurs along multiple dimensions in Menger's *Principles*, not only concerning product differentiation in terms of quantity and quality but also the institutional configurations within which exchange occurs. Such innovations, by operating through changes in prevailing

UVs (Schumpeterian entrepreneurship), then opens space for price-adjusting behavior on the part of alert speculators to bring IVs into line with these new and continually changing UVs (Kirznerian entrepreneurship). At the same time, prices become progressively "economic" through the formation of institutions that facilitate the spread of knowledge concerning the range of goods available at certain prices. Menger therefore provides a robust and *realistic* account of the market process that at its core is driven by entrepreneurial activity that incorporates both price-adjusting and non-price adjusting behavior, thereby transcending the Schumpeter-Kirzner dichotomy.

REFERENCES

Boettke, P. J. 1992. Review of *Carl Menger and the Origins of Austrian Economics* by Max Alter. *Journal of Economic History* 52(2): 519–521.

Boudreaux, D. J. 1994. Schumpeter and Kirzner on Competition and Equilibrium. In: Boettke, P. J., and Prychitko, D. L. (Eds.) *The Market Process: Essays in Contemporary Austrian Economics*, pp. 52–60. Aldershot: Edward Elgar.

Campagnolo, G., and Vivel, C. 2014. The Foundations of the Theory of Entrepreneurship in Austrian Economics – Menger and Böhm-Bawerk on the Entrepreneur. *Revuew de Philosophie Économique*, 15(1): 49–97.

Ebeling, R. M. 2021. Carl Menger's Theory of Institutions and Market Processes. American Institute for Economic Research. Accessed 16 April 2021. https://www.aier.org/article/carl-mengers-theory-of-institutions-and-market-processes/

Jaffé, W. 1976. Menger, Jevons and Walras De-Homogenized. *Economic Inquiry* 14(4): 511–524.

Kirzner, I. M. 1978. The Entrepreneurial Role in Menger's System. *Atlantic Economic Journal* 6(3): 31–45.

________.1979. *Perception, Opportunity, and Profit*. Chicago: University of Chicago Press.

________.1985. *Discovery and the Capitalist Process*. Chicago: University of Chicago Press.

________.1992. *The Meaning of Market Process: Essays in the Development of Austrian Economics*. New York: Routledge.

________.1999a. Creativity and/or alertness: A reconsideration of the Schumpeterian entrepreneur. *The Review of Austrian Economics* 11(1/2): 5-17.

________.1999b. Mises and His Understanding of the Capitalist System. Cato Journal,19(2): 215–228.

________.2000. *The Driving Force of the Market: Essays in Austrian Economics*. New York: Routledge.

________.2009. The alert and creative entrepreneur: a clarification. *Small Business Economics* 32: 145-152.

Klein, P. G. 2008. The Mundane Economics of the Austrian School. *The Quarterly Journal of Austrian Economics* 11(3/4): 165-187.

Loasby, B. J. 1989. *The Mind and Method of the Economist, A Critical Appraisal of Major Economists in the Twentieth Century*. Aldershot: Edward Elgar.

Menger, C. 1981 [1871]. *Principles of Economics*, Dingwall, J., and Hoselitz, B. F (Tr.). New York: New York University Press.

________.1985 [1883]. *Investigations Into the Method of the Social Sciences*, F. J. (Tr.). New York: New York University Press.

Mises, Ludwig von. 1966 [1949]. *Human Action: A Treatise on Economics*, 3rd Edition. Chicago: Henry Regnery.

Moss, L. S. 1978. Carl Menger's Theory of Exchange. *Atlantic Economic Journal*, 6(3): 17–30.

Rothbard, M. N. 1987. Breaking Out of the Walrasian Box: The Cases of Schumpeter and Hansen. *The Review of Austrian Economics*, 1(1): 97–108.

Salerno, J. T. 1999. Carl Menger: The Founding of the Austrian School. In: Holcombe, R. G. (Ed.). *The Great Austrian Economists*, pp. 71-100. Auburn: The Ludwig von Mises Institute.

Sautet, F. 2015. Market Theory and the Price System. In: Boettke, P. J., and Coyne, C. J. (Eds.). *The Oxford Handbook of Austrian Economics*, pp. 65-93. New York: Oxford University Press.

Schumpeter, J. A. 1947 [1942]. *Capitalism, Socialism, and Democracy*, 2nd Ed. New York: Harper & Brothers.

________.1951. *Ten Great Economists: From Marx to Keynes*. New York: Oxford University Press.

________.2006 [1954]. *History of Economic Analysis*. London: Routledge.

Streissler, E. 1969. Structural Economic Thought: On the Significance of the Austrian School Today. *Zeitschrift für Nationalökonomie/Journal of Economics* 29(3/4): 237-266.

________.1972. To What Extent Was the Austrian School Marginalist? *History of Political Economy* 4: 427–441.

Vaughn, K. I. 1990. The Mengerian Roots of the Austrian Revival. In: Caldwell, B. J. (Ed.). *Carl Menger and His Legacy in Economics*, pp. 379-407. Durham, NC: Duke University Press.

________.1994. *Austrian Economics in America: The Migration of a Tradition*. New York: Cambridge University Press.

Yagi, K. 2011. *Austrian and German Economic Thought: From Subjectivism to Social Evolution*. New York: Routledge.

Westgren, Randall. 2020. Carl Menger's Grundsätze as a Foundation for Contemporary Entrepreneurship Research. *The Quarterly Journal of Austrian Economics*, 23(3/4): 281-312.