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**THE ENTREPRENEURIAL FUNCTION
IN ECONOMIC LITERATURE: A SYNOPTIC REVIEW**

by
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Introduction

It is well known that until recently a distinct and crucial entrepreneurial role has been absent in most economic market models (Baumol, 1968, p. 64; Leibenstein, 1968, p. 72; Casson, 1982, p. 12). On the other hand, many economists have repeatedly emphasized the need for an entrepreneurial theory consistent with the body of economic analysis (Simpson, 1919, p. 151; O'Brien, 1929, pp. 8-9; Hebert and Link, 1982, p. ix). Or, to put it differently, it is necessary to answer the question of what is the crucial and distinct function of entrepreneurship (i.e. pure entrepreneur) which is inherent in economic models.

The main justification for the above inadequacy of economic theory lies in the difficulty of empirical recognition of an essential and peculiar entrepreneurial function which purely performs in the same "manner" at all times (Haynes, 1895, p. 426; Evans, 1949, p. 337; 1959, p. 250; Hebert and Link, 1982, pp. 107, 112; Casson, 1982, p. 9).

However, searching in economic literature and following some analytical classification it is seen, though inadequately, that a lot of economists recognized explicitly and/or implicitly key elements of the entrepreneurial function which could be used for the development of a "synthetic" theory of entrepreneurship. For analytical purposes the entrepreneur is treated purely as an abstract type which is related to a fundamental economic activity. Moreover, in the following concise historical review the pure and

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ion-pure entrepreneurial functions ' are properly distinguished in order, as Walras mentioned one hundred years ago, to "avoid both the error of the English economists who identify the entrepreneur with the capitalist and the error of a certain number of French economists who look upon the entrepreneur as a worker charged with the special task of managing a firm" (Walras, 1977, p. 222). The non-pure entrepreneurial function is more or less a mixture of either capitalist-entrepreneur or labourer-entrepreneur functions. The role of pure entrepreneur is that which could stand alone in economic activity. Generally speaking, the capitalist-entrepreneur exercised a mixed role which basically rests on capital ownership, while the labourer-entrepreneur acted as a supplier of either a routine function which could be substituted for labour, or a special activity which could also be performed by a skilled labourer or specific enterprise (organization enterprise). On the other hand, the pure entrepreneurship in Kirzner's words (1973, p. 16): "is exercised only in the absence of an initially owned asset".

As we are going to see, many authors have not analysed entrepreneurship in isolation to the role of capitalist and/or labourer "with which the entrepreneurial role comes packaged in the real world" (Kirzner, 1979, p. 42). However, there were some economists who attempted to define the crucial entrepreneurial function and distinguished it from that of capitalist and/or hired skiller labour. In the following pages the key roles of pure and non-pure entrepreneurship as presented explicitly and/or implicitly by various authors through time are emphasized. It is a common view that the differences describing the crucial entrepreneurial function by various authors reflect differences of actual economic conditions, differences in methodology, in analytical devices and in the main scope of their analysis (see for example, O'Brien, 1929, p. 49).

On the other hand, it seems that the time has come to develop a "synthetic" view on the most energetic functions of entrepreneurship which could be fulfilled independently of social and institutional states.

In the first part of this paper (titled *Past*) the views which were developed by various authors on the function of entrepreneurship from ancient times to the development of specific theories of entrepreneurship (i.e the beginning of the 20th century) are examined. In the second part (titled *Present*) the main theories, specifically developed for the function of the entrepreneur are presented (little emphasis will be given to the works of economic historians)². While, in the last part (titled *A Synthesis*) a synthetic entrepreneurial role is analysed on the basic course of its special activity.

¹ See also KIRZNER (1973).

² Special emphasis is given to works which are either recognized as masterpieces in economics or contain specific analyses on the entrepreneurial function.

Past

In the ancient Greek literature a few references are found describing the role and activities of merchants and landowners. However, considering these roles as showing — though not very clearly — some elements of entrepreneurship, it will be interesting to analyse Xenofon's ideas on the subject in question. Xenofon (*Economicus*, ch. III, xxi) emphasized the role of farmers and landowners in the organization and superintendence of the "enterprise". With regard to capitalist-entrepreneur (his function is more obvious in mining and shipping) he considered that his functions are concentrated in capital supply and (general) risk-bearing (*Poroi*, ch. IV). On the other hand, the merchants, having special knowledge of the market discrepancies in prices and quantities and continually searching for specific information, act as "arbitrageurs" in filling the gap produced by the market disequilibrium in various places (city-States). Also, through their activities, they diminish transaction costs and distribute in various places the quantity supplied according to the dictates of demand (*Economicus*, ch. XX).

The Schoolmen of the Middle Ages under the dictum of "justum pre-tium" mainly analysed the following functions of merchants as fulfilling a beneficial role for the economy:

1) The merchant acts as an equilibrating force filling the gaps between disequilibrium market prices and quantities [T. de Aquinas, *Summa Theologica*, articles II, IV; Bernardino of Siena (de Roover, 1974, pp. 33-9)].

2) The merchant assumes the (general) risks of transporting and selling the products at a price covering the cost of production [J. Nider (B. Gordon, 1975, pp. 230-5); J.D. Scotus; B. of Siena (B. Gordon, 1975, p. 344)].

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In this historical period, that is, until the Renaissance, the entrepreneur was conceived as playing a "passive" role in economic progress.

During the era of mercantilism and until the publication of Smith's *Wealth of Nations* (1776) the role of merchants took its triumphant place in economic activities. The main attitude of merchants was the exploitation of every profit opportunity emerging from the alienation of products. Their specific functions were considered to be the following:

1) A. Serra (1975, pp. 147-8) and later on B. Mandeville (1970, p. 365), emphasized risk-bearing as the main role of merchants.

2) The market experience, the gathering of information and the access to credit are the proper characteristics of the merchant-entrepreneur (T. Mun, 1952, pp. 178-9).

3) D. Defoe (1966, pp. 35-6) mentions that manufactures and shop-peepers fulfilled their energetic role in the economy by organizing the production process and trade.

4) The crucial role of merchants, according to Hume, was to eliminate the ignorance of producers and consumers on the market opportunities open to them (*Of Interest*, 1970, p. 52).

5) The merchants, acting as a time saving operation, decrease the transaction costs of the economy. This role was emphasized by Harris 1966, pp. 21-2), and Sir J. Steuart (1967, vol. I, book II, pp. 231, 239).

6) The entrepreneur as an innovator is recognized by Steuart, though he did not develop it as the crucial role of entrepreneurship (1967, *ml* I, book II, pp. 390-1).

During the last period of mercantilism the most fundamental role attributed to entrepreneurship is the one introduced by Cantillon. His justification of entrepreneurship is simply based on assuming the risk of uncertainty. Cantillon (1964, pp. 47-51) emphasized that the entrepreneur having ex-post (contractual) expenses confronts ex-ante rate of selling prices. At the same time, the entrepreneur, receives a non contractual income of uncertain rate which is determined partly by his ability to predict the future course of economic variables, and partly by the uncontrolled course of economic forces.

In another passage, Cantillon (1964, pp. 150-2) recognized the function of the entrepreneur as arbitrageur, in buying cheap and selling dear in different (disequilibrium) market situations (see also Hebert and Link, 1982, pp. 18-9).

During the period of liberalism Queans and the Physiocrats stressed the function of farmer-entrepreneur in providing capital, hiring other factors of production, and reinvesting his profits (part of produit net) in improving agriculture (*Tableau Economique*, ed. 1972, pp. 11-2; Hoselitz, 1951, pp. 205, 207-8; Vaggi, 1985, pp. 367, 369 ftl, 371, 374). Another role which was attributed by the Physiocrats to the capitalist-entrepreneur was the transformation of small scale (agricultural) operation to large scale, in order to increase land and labour productivity (*Tableau Economique*, ed. 1972, p. 3; Meek, 1963, p. 26).

Some years later, Turgot (1973, p. 153) considered that the main role of the capitalist-entrepreneur ³ was the supply of capital, and the organization and management of the enterprise (see also, Tuttle, 1927, p. 504;

³ TURGOT (1973, pp. 177-8) clearly distinguished the role of capitalist from that of capitalist-entrepreneur.

Hoselitz, 1951, p. 212). With regard to merchants he emphasized their role as arbitrageurs in filling the market discrepancies of prices and quantities (Turgot, 1973, p. 158).

In 1767 Nicholas Baudeau developed a similar idea with Cantillon in regard to the role of entrepreneurship as bearing the risk of uncertainty. In Other words, the entrepreneur according to Baudeau confronts known expenses but unknown revenues (Hoselitz, 1951, p. 209).

With the coming of the representative book of liberalism, Smith's *Wealth of Nations* the analysis of the role of pure entrepreneurship lost insight. However, there began a period where the capitalist-entrepreneur *was* conceived as playing an "active" role in capital accumulation and economic progress ⁴.

TABLE I

CAPITALIST-ENTREPRENEUR FUNCTIONS

Authors	Capital supply	(General) Risk-bearing
Smith	1976, 66	1976, 66, 128
Say		1967, 355
Ricardo	1975, 122	1975, 122, 328-9
Torrens	1965, 53, 88, 150	
Craig	1970, 69-70	1970, 75
Scrope	1969, 138-9, 145, 149	1969, 161-2
McCulloch	1965, 482	1965, 482
NEWMAN ⁵	1973, 283	
Ramsay ⁶		1974, 217-9
Senior	1965, 61, 89	1965, 187, 209
Tucker	1964, 55	
Carey	1965, 321	
J.S. Mill	1977, 405-6	

⁴ I want to thank Professor R. Griffin for pointing out to me that in the pre-Renaissance centuries the authors recognized the entrepreneurial role "passively", while after the 18th century the entrepreneur appears in an "active" light. For reasons explaining the inability of classical economists to specify the distinct role of the entrepreneur see, TUTTLE (1927, pp. 507-8); KIRZNER (1979, pp. 44-52); BLAB (1986, pp. 220-1). However, the philosopher Bantam in his work *Defence of Usury* (1787) emphasized the role of the entrepreneur as manager, contractor and innovator (see REDLICH, p. 709; HEBERT and LINK, 1982, pp. 12-3).

⁵ NEWMAN (1973, p. 282) devotes a whole chapter to describing the role of undertakers. He particularly distinguished between the role of undertaker as manager from that of capitalist.

⁶ Ramsay clearly distinguished between the master of enterprise and the capitalist (see SELIGMAN, 1967, p. 107).

Table I presents (without specific analysis) the functions of the capitalist-entrepreneur as developed in classical literature. In Table II, the role of labourer-entrepreneur is also presented as accomplishing a routine function or an activity which could be substituted for skilled labour or special enterprises). The role of pure entrepreneur as explicitly and/or implicitly (brackets are used to mention the second case) developed by classicists is depicted in Table III. As can be seen from these tables, with the exception of Say, little has been added to the theory of entrepreneurship.

During the 19th century many economic critical treatises emerged in opposition to classical economic theory. Covering all those treatises under the general title of Socialists (including Marx) it is easily seen from Table [V that they failed, as the classicists did, in developing a crucial entrepreneurial function. As it is known, they were against the function of the capitalist and capitalist-entrepreneur as exploiting the fruits of labour.

TABLE II

LABOURER- ENTREPRENEUR FUNCTIONS

Authors	Management	Superintendence	Control	Responsibility
Newman	1973, 282	1973, 283		1973, 282, 284
Senior	1965, 133			
Ramsay	1974, 217-9	1974,217-9		
McCulloch	1965, 461			
Carey	1965, 323	1965, 321		

J.S. Mill	1977, 401, 556	1977, 401, 556	1977, 556	
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TABLE III

PURE ENTREPRENEUR FUNCTIONS

Authors	Innovator	Income Distributor	Coordinator	Decision-making	Organization of enterprise	Assuming the risk of uncertainty
Smith	[1976, 77 104, 277]					
Say			1971, 28-9 1967, 78, 80	1967, 330-1		
Ricardo	[1975, 81, 387]					
Craig	1970, 76-7				1970, 71-2	
Ramsay		1974, 218-9				
J.S. Mill					1977, 494-5	
Hamilton						1971, 209, 215-6

In parallel to the development of the English Classical School some German authors⁷ developed original and interesting ideas with regard to

TABLE IV

Capitalist-Entrepreneur		Labourer-Entrepreneur		Pure Entrepreneur	
Authors	Functions		Functions		Functions
	Capital ownership and supply	(General) Risk-bearing	Manager and Director	Superintendence	Innovator Organization of production

Sismondi	1966, 21-2		1966, 25-6		[1966, 130-1]	
Thompson			1963, 272			
Hodgskin	1969, 49-51, 64-5				1969, 634	1969, 88, 89, 99
	1966, 245				1966, 47, 55	1966, 45
Read	1976, 44	1976, 263	1976, 35, 244	1976, 35, 244		
George	1930, 110, 138		1930, 136			
Marx	1977, 370-9		1977, 383-8	1977, 380, 382-3		

TABLE V

Pure Entrepreneur				Labourer-Entrepreneur
	Functions			Functions
Authors	Risk of Uncertainty	Innovator	Organization & coordination	Routine management
Thiinen	Hebert and Link, 1982 45-6	Hebert & Link, [1982, 46-7]		Hebert & Link, 1982, 46-7
Roscher				Tuttle, 1927, 512
Schmoller		[Hebert & Link, 1982, 75]	Hebert & Link, 1982, 75	
Sombart			Hebert & Link, 1982, 75	

Herman			Bhatia, 1980, 207	
	Hennings, 1980, 663-4	Hennings, 1980, 666		

⁷ Max Weber also emphasized the role of the entrepreneur as a "charismatic leader" (CARLIN, 1956, p. 33), in the organization and co-ordination of the factors of production and in innovative activity (see, KILBY, 1971, pp. 6-7; HEBERT and LINK, 1982, p. 75).

⁸ See also J.B. CLARK (1893, p. 40); KNIGHT (1921, p. 27); TUTTLE (1927, p. 517); HEBERT and LINK (1982, pp. 48-9).

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the subject in question. The most important of them are presented in Table V.

The different methodology and analytical instruments employed by the Protagonists of the Marginal Revolution, that is Jevons, Menger, Walras, partly explain their differences in emphasizing a distinct entrepreneurial function.

William Stanley Jevons in his masterpiece *Theory of Political Economy* (1871) writes that: "The capitalists, or entrepreneurs, enter [in the production process] as a distinct interest. It is they who project and manage a branch of production, and form estimates as to the expected produce. It is the amount of this produce which incites them to invest capital and buy up labour" (1911, pp. 270-71, brackets added). While, some years later, in his *Lecture on the Political Economy* (1977, p. 60) he gave some consideration to the role of capitalist-entrepreneur — following the classical tradition — as the agent who supplies the necessary capital for production and has the responsibility for the superintendence and control of the enterprise.

On the other hand, Leon Walras (1977, pp. 222-3) considers that the main role of the entrepreneur is to co-ordinate the factors of production in the most (according to the technology of production) effective way. It is a consequence of this role that the entrepreneur will act also as a distributor of income (Walras, 1977, p. 225).

The leader of the Austrian School, Carl Menger, (1976, p. 172) though he did not develop a theory of entrepreneurship (Kirzner, 1979, p. 56), emphasized the function of the pure entrepreneur. This function emerged under the following activities and characteristics: 1) in obtaining information; 2) in economic calculations; 3) having the act of will; 4) in supervision (1976, p. 160). Though Menger regarded the risk of uncertainty as a burden to production he did not conceive this element to be a proper characteristic of the entrepreneurial function (1976, pp. 69-71). Thus, as Martin (1979, pp. 279, 282) rightly observes, the core activities of the Mengerean entrepreneur are the gathering of information and the coordination of production.

Among Menger's successors, Friedrich von Wieser emphasized the role of capitalist-entrepreneur in capital supply (1967, p. 324) and bearing the (general) risks of the enterprise (1967, p. 324). Also, he considered (1967, pp. 355-6) that the special activities of entrepreneurs are concentrated in the organization of production and innovation. In another statement, Wieser developed the idea — repeated some years

later by Fraser, (1937, pp. 394-5) — that the entrepreneur is a speculator who "endeavours to foresee the future price... buys whenever he anticipates a rise in order

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later to sell at a profit... [and] sells whenever he expects a decline in order to buy later and thus realize a gain" (von Wieser, 1967, p. 363, brackets added). The other Austrian economist Eugen von Bohm-Bawerk, speculating on the phenomenon of capital and interest, has added little to the subject in question. The only distinct element of entrepreneurship considered by Bohm-Bawerk is the bearing of the risk of uncertainty (Martin, 1979, p. 273).

During the last decades of the 19th century the American economist Francis Amasa Walker followed the steps of his father (Amasa Walker) who "is the only systematic writer on political economy, with whose work I am familiar, who recognizes the employers of labor as constituting a distinct industrial class" (F.A. Walker, 1968, p. 231, ft2). In consequence, he stressed (1968, pp. 232, 243, 246, 251; 1887, p. 269) the necessity of analysing the fundamental role of this class, that is of employers. The employer as entrepreneur co-ordinates the factors of production and organizes the operational framework of the enterprise⁹. In doing so the entrepreneur furnishes "technical skill, commercial knowledge, and powers of administration to assume responsibilities and provide against contingencies; to shape and direct production, and to organize and control the industrial machinery" (1968, 245)¹⁰.

The entrepreneurial functions of the co-ordination of the means of production, of the organization of enterprise, and of assuming the noninsurable risks, as deduced from Table VI, were the most crucial roles attributed by the Neoclassical economists to entrepreneurship.

In the beginning of the 20th century a different approach (more sociological) in explaining economic phenomena emerged on the horizon. The Institutional School which was established by Thorstein Veblen offered little to the development of the theory of entrepreneurship. Though Veblen *was* interested in analysing the structure and function of the "new industrial and financial system" he gave little emphasis to the role of the pure

⁹ See also TUTTLE (1927, pp. 512-3); NEWTON (1968, pp. 29, 314, 76); HEBERT and LINK (1982, p. 29).

¹⁰ WALKER (1887, pp. 273, 275, 278, 288) developed a theory of pure entrepreneurial profit as a reward of ability in the form of "rent". MACVANE (1887, p. 11) criticized Walker's thesis saying that the analogy between the earnings of management and the rent of land is "unreal and misleading". On the other hand, MARSHALL (1887), criticizing the profit theory of Walker, regards that the normal earnings of management have already entered into the cost of production (1887, p. 479). Also, he emphasizes that the net profit of the entrepreneur is the excess of "earnings of a business man who has average natural abilities and who makes sufficient profits to be a fair return for the trouble of giving a business education and a start in life, and to cover the difficulty of bringing him and his capital together" (1887, p. 481).

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TABLE VI

PURE ENTREPRENEUR

Functions						
Authors	Coordinator	Organization of enterprise	Income distributor	Innovator	Decision-making	(Non insured) Risk-bearing
Newcomb	1966, 71, 101-2	1966,71,101-2				
Marshall ¹¹	1977,115,244,550			[1977, 248] 1888, 222	1977, 297	
Pantaleoni	1957, 279-82	1957, 278-282				
J.B. Clark ¹²	1891, 290			1891, 290,313-4		
	1893, 46			1965, 56, 401,		
	1965, 3			425-6		
Hawley ¹³						1890, 388
						1893, 465, 470, 479
						1990a, 75-8, 97, 103
						1900b, 610
Davenport						1964, 98

Hobson	1969, 58, 123			1969, 129-32		
	1911, 141-4					
Taussing	1920, 160-1		1920, 159			
Foreman		1919, 133-4		1919, 128-33		
Pigou						1920, 772, 776
Cassel ¹⁴	1967, 171-2					[1967, 176]
Dobb				1925, 32- 3, 38	1925, 39	
O'Brien						1929, 20-1

entrepreneur. He (1975, pp. 174-5) mostly engaged in describing the role of capitalist-entrepreneur as the "captain of industry" who supplies capital and management to the enterprise (1975, p. 88), and "devote[s] an increasing

¹¹ See also WESTON (1949, p. 150 ft); HEBERT and LINK (1982, pp. 53-5). On Marshall's concept of the entrepreneur as a co-ordinating and innovative factor see LOASBY (1982, p. 236). KIRZNER (1973, p. 43) also, considers that the activity of the organizer is a resource of enterprise and does not show the crucial entrepreneurial role. Moreover, he points out that Tianagement is an ordinary activity out of the scope of entrepreneurship (KIRZNER, 1979, p. 117).

¹² On J.B. Clark's theory of entrepreneurship as a co-ordinating factor, see HAYNES (1895, pp. 425-6); SIMPSON (1919, pp. 152-3); KNIGHT (1921, pp. 32-4); TUTTLE (1927, pp. 516, 519); HEBERT and LINK (1982, pp. 16-7). J.B. CLARK (1893, pp. 44-8) regards that the risk-bearing does not specify the entrepreneurial role (see also HAWLEY, 1893, pp. 46-5).

¹³ On Hawley's theory of entrepreneurship, see CARVER (1900, pp. 456-7); SIMPSON (1919, p. 157); KNIGHT (1921, pp. 43-6); HEBERT and LINK, (1982, p. 65). On the various insurable and noninsurable economic risks, see HAYNES (1895, pp. 409, 411-5, 434-6).

¹⁴ Dobb, criticizing the uncertainty-bearing as the fundamental entrepreneurial function, rightly mentions: "though the entrepreneur function is connected with the bearing of uncertainty, it is connected incidentally rather than essentially" (DoBB, 1925, p. 38).

amount of attention to the differential advantages to be acquired through... [his]... accumulation of intangible assets" (Griffin, 1988, p. 3, brackets added). On the other hand, he distinguished — though not very clearly — the different activities and interests exercised by the owners and the managers of a modern corporation (O'Donnell, 1973, pp. 210-1) ¹⁵. This line of distinction between the differences in attitude and role between owners (shareholders) and managers in the functioning of the enterprise was developed later on by Simpson (1919, pp. 154-5), G. Means (see Gruchy, 1967, p. 477) etc. ¹⁶.

John R. Commons, another well known institutional economist, emphasized the role of capitalist-entrepreneur, the captain of industry, in organizing the "going concern" (1934, pp. 620, 628-30). This organizational function was developed by Commons (1964, ch. IV) also in his earlier work.

Recently, John K. Galbraith (1978, ch. VI, VIII) a follower of the Institutional School, held that the role of the entrepreneur in modern enterprises has been substituted in decision making by the "technostructure" (skilled labourers), while the role of ownership in decision making has drastically declined.

Despite the various concepts developed for the crucial entrepreneurial function by "old" economists, the first decades of the 20th century proved more fruitful in the production of — though not very original but more consistent — theories of entrepreneurship. The most important of them are analysed briefly in the following part of the paper.

Present

The entrepreneur as a by-product and cause of dynamic economics, which was specifically put forward by J.B. Clark and other neoclassical economists, was the main idea developed by Joseph A. Schumpeter under the heading of "innovator". Schumpeter (1978, p. 88) considered that the entrepreneur, as a "constructed type" (Carlin, 1956, pp. 35-6) acts upon the recognition of profit opportunity open to him. The entrepreneur exploits this profit opportunity by adopting the following innovative activity: he creates new products, opens or discovers new markets; uses a more produc-

¹⁵ For a controversy on this subject, see RUTHERFORD (1980), EVANS and LEATHERS (1980).

¹⁶ On the separation of ownership and management, see R. GORDON (1946, pp. 566-7).

tive process and organizes the enterprise more efficiently (1978, pp. L32-6) ¹⁷.

Another fundamental entrepreneurial function which has been emphasized by "old" (Cantillon, Hamilton) and more recent economists (Hawley, etc.) is the function of bearing the risk of uncertainty. This function as a by-product of dynamic economics and of "imperfect" competition (the imperfection assumes the absence of perfect knowledge and foresight) has been established in economic theory by Frank Knight (1921). He considers that the entrepreneur acting in such an economic environment and facing noninsurable and nonmeasurable risks (1921, pp. 231-2) has the ultimate control and responsibility of the enterprise (1921, pp. 289-91). The imperfection of knowledge upon which the entrepreneur must base his decisions is due to: imperfect economic calculations with regard to future economic "situations" (1921, p. 103), future rates of variables such as demand (1921, p. 238), and future unknown prices of

products and factors of production (1921, p. 317). On the other hand, the entrepreneur, according to Knight, is facing the risk of not receiving his non-contractual reward, that is, his profit (1921; p. 271)¹⁸. Some years later Knight (1942) adopted the function of the Schumpeterian entrepreneur in relation to his theory of bearing the risk of uncertainty (1942, p. 128).

From this time on more and more economists were engaged primarily in solving the problem of what the fundamental entrepreneurial function is, or, to use the words of Kilby (1971, p. 1), to "hunting the Heffalump". Following a chronological order the crucial entrepreneurial function as analysed by modern economists will be described briefly.

Arthur Cole in the "Symposium on Profits and the Entrepreneur" (*The Journal of Economic History*, 1942) considers that the essence of the entrepreneurial function is "the management of routine operation,... the selection of innovations,... and... the development of loyalty" (1942, p. 122). In the same symposium, J.M. Clark emphasized the decision making process as the central role of entrepreneurship. He enumerated the following crucial

¹⁷ On Schumpeter's entrepreneurial activity and its relation with the production of inventions, see SOLO (1951). On the innovative entrepreneur and his relationship to organizational capacity, see GURZYNSKI (1976, pp. 5-6, 11-3).

¹⁸ See also HICKS (1931, p. 177). The entrepreneurial theory as bearing the risk of uncertainty is developed also by WESTON (1950, 1954). HAHN (1947, pp. 220-1) besides this role emphasized also the entrepreneurial function as that of having the first idea in establishing an enterprise with special characteristics. On the other hand, SHACKLE (1961, p. 263; 1969, pp. 3-5) developed a theory describing the behaviour of the entrepreneur in decision making, under the assumption of imperfect economic environment where the uncertainty and expectations played a first role.

decisions of entrepreneurship with regard to: what is to be produced; the technical methods of production and organization of the enterprise; the initiation of new organizational units; and "the determination of the total amount of productive activity" (1942, p. 136). On the other hand, G.H. Evans (same symposium), gave more emphasis to the dynamic activities of the businessman "who introduces new ideas and changes the rate at which the wheels of enterprise go round" (1942, p. 142). The same writer in a later article, in a more analytical manner, stressed that in "every private business concern one or more (often all) of the following three types of entrepreneur will be found: those who carry out the more or less routine aspects of management; those who combine means of production in new ways, that is, the innovating, dynamic entrepreneur; and those who actively control or direct" (1949, p. 336). Later on Evans generalized the entrepreneurial function under the following definition: the entrepreneur is "the person, or group of persons, in a firm whose function is to determine the kind of business that is to be operated" (1959, p. 250). Moreover, he regards that entrepreneurship is related with "the core decision in the determination of the kind of business to be operated [which] are three in number: the kinds of goods and services to be offered, the volume of these goods and services, and the clientele to be served" (1959, p. 252, brackets added)¹⁹.

Harvey Leibenstein, developing the theory of x-efficiency, considers that the pure entrepreneur, as distinct from routine management (1968, p. 72), is "an individual or group of individuals with four major characteristics: he connects different markets, he

is capable of making up for market deficiencies (gap-filling), he is an input-completer, and he creates or expands time-binding, input-transforming entities (i.e. firms)" (1968, p. 75). All these activities are accomplished by the entrepreneur who is acting in an *x*-inefficiency world when he discovers a profit opportunity. However, the more crucial functions of the entrepreneur according to Leibenstein (1978, p. 46) are those of gap-filling, and input completion.

A more general approach to entrepreneurship, has been developed by the neo-Austrians. More specifically, Ludwig von Mises (1966, pp. 253-4) analyses the idea that every economic agent is more or less an entrepreneur speculating in an economic environment of uncertainty²⁰. And as Mises points out, the term entrepreneur as a function means "acting man exclusive-y seen from the aspect of the uncertainty inherent in every action" (1966, . 253).

¹⁹See also PAYNE (1974, p. 12).

²⁰See also KIRZNER (1973, pp. 85-6; 1979, pp. 94-5); HEBERT and LINK (1982, pp. 93-4).

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Israel Kirzner extending the general notion of entrepreneurship emphasizes that the crucial role of the entrepreneur is "created by the state of disequilibrium and his activities ensure a tendency toward equilibrium" (1979, p. 111; see also Hebert and Link, 1982, p. 91)²¹. More specifically, Kirzner considers that the entrepreneur is "a decision-maker whose entire role arises out of his alertness to hitherto unnoticed opportunities" (1973, p. 39). The entrepreneur having "superior command over information" (1973, p. 66) for the structure and operation of the market and the established (different) rate of prices "brings into mutual adjustment those discordant elements which resulted from prior market ignorance" (1973, p. 73). In other words, Kirzner emphasizes as crucial entrepreneurial function that of "arbitrageur" who, discovering market price discrepancies, exploits the unnoticed profit opportunity (Hebert and Link, 1982, p. 97).

Brian Loasby criticizing Kirzner's theory of entrepreneurship, mentions that, so defined, this function "destroys itself by its own success... [because] Kirzner argues that new opportunities are continually being created by changes in the underlying data, but his model provides no incentives to produce such changes" (1982, pp. 243-4, brackets added). According to Loasby, the entrepreneur is related to economic changes and "requires present decisions about an uncertain future, and part of that uncertainty is generated by the presence (known or suspected) of other entrepreneurs" (1982, p. 244).

Theodore W. Schultz, considering the entrepreneurial element in every agent's action (expressing a similar idea with Mises), mentions that "the economic behaviour of many people in a dynamic economy is neither repetitive nor routine, what is not obvious is that in addition to businessmen, there are many other people who at different junctures during their life cycle are entrepreneurs" (1980, p. 438). However, Schultz emphasizes the entrepreneurial role in allocating scarce resources with different abilities (1980, pp. 443, 449).

The same line is followed by Mark Casson who in a recent study offered the following synoptic definition of the entrepreneur as "someone who specializes in taking judgmental decisions about the coordination of scarce resources" (1982, p. 23). According to Casson this entrepreneurial role could be performed in every society

(1982, p. 25) by a person who has adequate information and better ability in taking decisions for a more effi-

²¹ KIRZNER'S entrepreneur (1979, pp. 110-1) is acting as an equilibrating force for the economy, while the Schumpeterian entrepreneur as a disequilibrating force in the economy (see also BLAUG, 1986, p. 227).

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cient co-ordination and allocation of scarce resources (1982, p. 59)²²

On the other hand, George Gilder in a recent descriptive study emphasizes the Schumpeterian role of entrepreneurship. He considers that the entrepreneur "is not chiefly a tool of markets but a maker of markets; not a scout of opportunities but a developer of opportunities; not an optimizer of resources but an inventor of them" (1985, p. 17). Thus, the key role of the entrepreneur "is not to fill in the gaps in an existing market or theory, but to generate entirely new markets or theories" (1985, p. 145). On the same line of approach, H. Abraham and Z.S.A. Gurzynski, argued that the entrepreneur as a non-factor of production (he is not included in the production function) (1987, pp. 114, 117) acts "by his imagination, [and] he introduces his own product into the economy, expecting to earn a profit (and satisfaction) in the given situation" (1987, p. 118, brackets added).

On completing the journey aboard the ship of history, it can easily be seen that the entrepreneurial role has been justified in various ways by the "old" and "modern" economists. Though the more crucial functions of the entrepreneur have been adequately analysed, this has been made possible at the cost of separation and isolation of those functions. What remains is the intermixing of the most distinct and crucial functions accomplished by the entrepreneur, in order to be able to develop a theory consistent with economic dynamics. In other words, the entrepreneurial function which is a cause as well as a by-product of the dynamism of the economy must be analysed in a more synthetic way by bringing together the more concrete and fundamental roles developed by economic theorists.

A Synthesis

The role of the entrepreneur who acts on behalf of himself and of society (Houmanidis, 1979, pp. 538-9; 1986, pp. 204-5) is not a one-sided phenomenon. There is a multiplicity of actions which characterize the crucial entrepreneurial activity. However, there must be an ordering of some of them which constitute the distinct function of pure entrepreneurship. This can only be accomplished through a synthesis of those various and specific entrepreneurial actions all or some of which, clearly characterize the entrepreneurial function. Thus, to try to define this function in a sentence

²²The role of entrepreneur as a co-ordinating factor in production and marketing, was emphasized also by SCITOVSKY (1952, p. 192).

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could be a misleading thesis. However, by giving a pivotal definition of entrepreneurship we would be able to justify those special characteristics which could more or less terminate in a "synthetic" approach to the problem of the entrepreneurial

function as distinct from the function of the firm²³ Generally speaking and for analytical purposes, it will be stated that pure entrepreneurship is a function which, under the appropriation of special market knowledge and information, acts with alertness in trying to grasp and/or create a new profit opportunity. Let us see step by step how this energetic function may hypothetically accomplish its role in the economy.

Firstly, the entrepreneur has at his disposal special knowledge, information and a better insight than other people with regard to the future course of economic variables. With this qualification he formulates a "first idea" for the proper exploitation of an undiscovered and yet unknown new profit opportunity. This first idea could be translated in one or in all of the following functions: in innovative activity (Schumpeter's type), in a more efficient co-ordination of scarce resources (Casson's type), and in arbitrage (Kirzner's type).

At the second step, the entrepreneur puts his idea into existence through the decision making process with regard to the selection and effective co-ordination of various scarce resources which produces the most efficient result. As an innovator and more efficient co-ordinator the entrepreneur not only increases the production possibility curve or changes its slope, but also creates "new" products and "new" possibility curves. Also, as an arbitrageur and a more efficient co-ordinator, the entrepreneur, not only helps the economy to reach equilibrium, but also to minimize its x-inefficiency. It is obvious that before all (or part of) those dynamic actions take place a decision-making process is needed. Here the strategic role of the entrepreneur is evident in economic development, a subject matter repeatedly emphasized by many specialists²⁴.

On the other hand, the result of those actions is to increase the "dynamism" of the economy. At the same time by increasing the dynamism and imperfections (in terms of ignorance) of the economy the entrepreneur increases the uncertainty and changes the (general and particular) expecta-

²³ The firm; as STAUSS (1944) analysed, could be regarded as a representative entrepreneur.

²⁴ For example, HAGEN (1975, pp. 1 278-80) stresses the importance of the entrepreneur's innovative and problem-solving (1975, p. 271) activity in economic development. HIRSCHMAN (1958, pp. 23-8), emphasizes that the scarce factor for economic development is the ability to make decisions, a fundamental characteristic of entrepreneurship. For literature on the same subject, see KILBY (1971) and LEFF (1979).

tions of agents. In other words, the entrepreneur, through his actions, (rather indirectly) increases the uncertainty confronted by other entrepreneurs, by consumers and by property owners. This happens because he can change the quality of products, the extent of the market, etc. as was known by the other agents of production and consumption before his actions took place. Therefore, the entrepreneur (and not only exclusively he), by increasing the "dynamism" of the economy at the same time increases uncertainty (Karayiannis, 1987, pp. 617-8).

After all, the bearing of noninsurable risks is not a distinct function of entrepreneurs, but rather a symptom of their activities (Karayiannis, 1987, p. 619). It has been said that the behaviour of consumers could increase the uncertainties

confronted by entrepreneurs. However, this is not the unique course of things. Consumers sovereignty is eliminated through the actions of producers in adopting new techniques for the selling and marketing of products. While, at the same time, the entrepreneur has the power to alter the behaviour of consumers by introducing new products. Thus, the uncertainty caused by the alteration of consumers' behaviour, is nothing more than a product of other entrepreneurs' actions.

By the following scheme organized according to the entrepreneur's "first idea", the extent of activities which (though it could be presented in various orderings) produce the fundamental entrepreneurial function can be estimated.

As direct and indirect effects of these entrepreneurial functions all or

(A) Innovator	(a) new products, new marketing of products (b) new production techniques (c) new organization of production and/or of enterprise (d) new markets	(I) decreases the sovereignty of consumers (II) increases the uncertainty confronted by other entrepreneurs and other agents of the economy
(B) Coordinator	1) increases the productivity of the economy	(I') alters the rate of opportunity cost of other agents of the economy (II') alters the production possibility curve and decreases the <i>x</i> -inefficiency of the economy
(C) Arbitrageur	i) minimizes prices and products disequilibrium	(I'') alters expectations (II'') alters market knowledge and information (III'') alters opportunity cost

some (depending on what specific function is accomplished) of the following economic effects could be produced: a) a creation and exploitation of a new profit opportunity; b) an increase in the rate of uncertainty in the economy; c) an increase of the economy's productivity; d) an increase of economic welfare (specifically through the activity of imitators); e) a closer approximation in economic equilibrium.

However, in the above synthetic entrepreneurial functions there could be an intermixing of various activities and a different causation sequence of actions. For example, during the elimination of the fruits of innovative activity caused by the actions of imitators, the entrepreneur could act at the same time as an arbitrageur exploiting the market discrepancies of prices and productions. The more efficient coordination and alteration in the allocation of scarce resources could be translated as innovative activity. Also, during the time that those activities are taking place, the fluctuations in economic variables could cause the emergence of an arbitrageur to fill the gap of market discrepancies.

It is obvious that the entrepreneur, having a special position in the production process, assumes a responsibility for the completion of this process. If his actions lead

to fruitful results he receives an unknown rate of reward (pure profit) which is a non contractual income, namely, a residue after the payments of contractual incomes (Karayiannis, 1987, p. 620). Through this activity the entrepreneur is indirectly acting as a distributor of income. However, his activity in calculating economic magnitudes could be substituted by a hired skilled labourer. Also, the organization of the enterprise and the marketing of products in the most effective way could be accomplished by a skilled labourer.

Though the three main entrepreneurial functions could be accomplished by hired labourers (by the specialists or the technostucture in a large corporation), it is not certain that their effects are as fruitful as those of the individual entrepreneur. However, there is not enough evidence that will put us in agreement with Schumpeter's view for the "future of capitalism".

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