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THE FRENCH TRADITION: AN ALTERNATIVE THEORETICAL FRAMEWORK

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Abstract

This paper deals with the French economic thought throughout the eighteenth and nineteenth centuries. A series of distinctive concepts were developed to come to a clear understanding of the economic problems which the French authors were interested in. J.A. Schumpeter called these economists 'the French tradition'. The arguments presented in this paper aim at illustrating the process of construction of this framework of theoretical concepts which can be regarded as an unsuccessful alternative to the British classical economics. However, this fruitful view of the economy has left a legacy of important contributions to economic theory.

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1. INTRODUCTION

In the eighteenth and nineteenth centuries, there were authors who emphasised the crucial role of the entrepreneur in the economic activity, discovering and adding essential pieces to come to a clear understanding of the complex image they were looking at. J.A. Schumpeter called them the *French tradition* and named three authors: R. Cantillon, A.-R.-J. Turgot and J.-B. Say. However, Schumpeter failed to explain what the subject matter of the French economic tradition was. He just pointed out several links between these three authors, namely: the production-distribution-consumption schema, a utility theory of value, the triad of factors, the entrepreneur and their conceptions of economic equilibrium (Schumpeter, 1954: 492).

More recent writers have identified several concepts for establishing links among the French economists. Salerno (1978), for example, talks about a French school (including Quesnay and Condillac as well) based on methodological matters —subjective factor, axiomatic deductive method, methodological individualism. An old distinction is taken up again (see Rau 1826: 208) in James's work (1977), who mentions a group of authors (Cantillon, Roederer, Say) that used the concepts *profit* and *industry* as opposed to Smith and Physiocrats who employed *profit of stocks* and *work*. Rothbard (1995a), Ekelund & Hebert (1990) and Steiner (1997) regard a tradition based on the linkage between entrepreneurial activity and uncertainty, a tradition in which Turgot is not always included. Finally, Tuttle (1927) includes Quesnay, Turgot and Say in a tradition that distinguished property and entrepreneurial function inside the enterprise. Consequently, the existence of the French tradition has been widely demonstrated by the economic literature.

Although Schumpeter (1954) pointed out some elements of this tradition and James (1977) identified the *industry of man* as a characteristic in common, little is known about the process of construction of these concepts and the relations between them. Why those

theories had been chosen and how they were kept in time are two unanswered questions. We do not even know what the French tradition is. These are important questions in order to understand the spread of economic ideas in the classical period; the greater the strength of the tradition, the less external concepts will be accepted by it. This is especially interesting when the tradition is able to furnish a large number of fruitful and alternative ideas.

This paper deals with the French economic thought. The attempt is to demonstrate that there was a thread of continuity which links several theoretical concepts along this period. There was no breach of continuity because a particular analytical framework was shaped; originally a core of ideas was created in order to guarantee its consistency and survival; and eventually a more formal theoretical construction, which we may call the *five-factor model*, was developed. The French tradition is not a pool of ideas which were forgotten until further notice; otherwise indeed it is a structure based on an accumulative process, and characterised by a series of distinctive features. The first part of the paper briefly identifies the origins of these analytical elaborations; the second explains how a theoretical core was created in order to give consistency to the whole structure and which features were added; the third examines Jean-Baptiste Say's formal model which summarised the French tradition; and the final part assesses problems associated with the failure of this model and the end of this school of economic thought.

2. THE TWO BACKBONES

The key element of the French tradition is the industry of man. The concept of industry was the subject of a major debate (Allix, 1910; James, 1977) seeking to understand a meaning lost today and difficult to replace with a modern concept. Industry was defined as those talents useful for productive purposes and, in general, it was linked to work

(Fontaine [1992b]: 14)¹. Labour and industry often appeared joined in a common action; the former is the quantitative character of the activity and the latter is the qualitative one. Consequently, each labour requires a certain amount of industry in order to be remunerated (Fontaine, [1992b]).

Nonetheless, the beginning of the French tradition is closely linked to the entrepreneurial activity. Earlier analytical elaborations were summarised and a new theoretical core was created. The French authors placed great emphasis on the role of the entrepreneur, who was defined as an individual carrying out an activity on the basis of exclusive, inside information, which has to do with the difference between known costs and uncertain prices.

2.1. Richard Cantillon: decision making under the condition of uncertainty

The first feature of the French tradition is the existence of entrepreneurial decision making undertaken under the condition of uncertainty with respect to return. It is not easy to decide who the first author of this tradition is because Richard Cantillon's *Essai* is not the first writing on this topic; in fact it is already present in Sébastien le Prestre de Vauban, Pierre le Pesant de Boisguilbert o Josiah Child².

At the beginning of the eighteenth century, for example, the concept of entrepreneurial activity was related to uncertain price, capital supply or both of them. While Vauban posits

¹ The debate appears to end up (James, 1977) with three meanings for industry. The first refers to know-how, the second to all nonfarm economic activity—trade and industry—and the third to industrial activity. Fontaine (1992b) posits different conceptions of industry, within the meaning of practical knowledge. Preclassical industry, which considers the existence of talents in all activities, albeit in the negative sense of involving the use of unfair actions. Physiocratic industry, which conceives of actions on the fringe of morality, but only in the sterile activities. Liberal industry, which does away with the idea of unfair activity because of the harmony resulting from self-interest. Specifically, this author believes that the concept of industry in Turgot also implies the dishonest use of these talents by agents, although this would result in more profits for the whole than the initial harm caused by it..

² We could also see an individual carrying out an activity on the basis of exclusive, inside information, as described by Thomas Mun and Josiah Child, David Hume's separation between producers and an agent with inside information about a continuously maladjusted market.

an adjustment based on unknown costs for certain prices in an entrepreneur characterised by his ability to calculate the monetary value of production, Boisguilbert distinguished between the productive merchant – a piece in the reproductive cycle of the economic system – and the unproductive *entrepreneur* linked to the capital market.

Tout le commerce de la terre, tant en gros qu'en détail, même l'agriculture, ne se gouverne que par l'intérêt des entrepreneurs qui n'ont jamais songé à rendre service ni à obliger ceux avec qui ils contractent. (Boisguilbert 1707: 173)

However, Cantillon is the author who first introduced the entrepreneur as a new factor of production independent of land, labour and capital (Redlich, 1949; Blaug, 1983). Therefore, one of Cantillon's greatest contributions to economic theory is the inclusion of the entrepreneur in a formal economic system.

Traditionally, Cantillon's entrepreneur has been connected to the issue of coping with uncertainty. The distinction between known costs and uncertain prices provides an income in exchange for assuming the uncertainty of this practice. Thus, Cantillon's concept of the entrepreneurial function also becomes an essential element in order to explain the disequilibrium between the intrinsic value of products and their market prices. The entrepreneur is regarded as a driving force of commerce because he spots opportunities in the marketplace – such as price differentials, estimation of demand, and exploration of the environment – which make it possible to secure earnings. The entrepreneur is thus seen as a “price strategist” rather than a “product strategist” (Ekelund & Hébert 1990: 47).

Renée Prendergast (1991) identifies two types of profits in Cantillon's theory. The first one is a reward for the labor of superintendent – especially in agricultural activities – that was seen as part of the intrinsic value of the good; and the second one is “a return on

capital which could be kept only by entrepreneurs who had supplied their own advance”³. Although profit is an uncertain return, one part of it is considered as an essential expense of production – wage – and the other as a surplus.

This theory of profit becomes a precedent of some modern theories of the entrepreneurial function, especially Frank Knight’s contribution (Redlich, 1949) and the first feature of the French tradition (Steiner, 1997). Thus, the separation of profit from interest is not a feature of the French tradition but rather a corollary of the entrepreneurial decision making.

2.2. François Quesnay and the production organisation

Although Cantillon emphasised that farmers assume entrepreneurial responsibilities, the Physiocrats acknowledged that the uncertainty is found not only outside the organisation, but inside it as well. The appearance of Quesnay on the stage is fundamental to understand the emphases on a second aspect: the production-distribution-consumption schema.

François Quesnay, and especially N. Baudeau, explain the origin and content of the organisation, taking uncertainty and information into the production organisation⁴. They place the *entrepreneur agricole* – i.e. farmer – there, in tasks involving the organisation of production in search of greater productivity (Fontaine & Marco, 1993). This makes the farmer a scarce *asset* in a society (Steiner, 1987).

³ Both actions require a “savoir –faire” or a series of useful talents for productive goals. It is the industry of man which is going to establish as the reward as the return of capital, “... se verra obligé de vendre sa portion à un autre qui a de la frugalité & de l'industrie, qui augmentera continuellement ses Terres par de nouveaux achats (...). Les Métiers qui demandent le plus de tems pour s'y perfectionner, ou plus d'habileté & d'industrie, doivent naturellement être les mieux payés. Un habile Faiseur de Cabinets doit recevoir un meilleur prix de son travail qu'un Menuisier ordinaire, & un bon Horloger plus qu'un Maréchal” (Cantillon 1755: 6,26).

⁴ Perhaps Quesnay did not make major contributions to the theory of the entrepreneur as posited by Cantillon, but this is due to the conception, with all its limitations, of a different entrepreneurial function in a milieu different from the marketplace. Quesnay’s entrepreneur plays an important role as a supplier of capital, re-investing his profits and transforming small-scale production to large-scale (Karayiannis, 1990). Alongside these opinions, we find those who think that Quesnay’s theory of the entrepreneur pales alongside Cantillon’s contribution (Hoselitz, 1951), since Quesnay eliminates uncertainty from the entrepreneurial function and does not discuss entrepreneurial activity anywhere in his work (Hebert & Link, 1982).

Although F. Quesnay and his followers considered Nature to be the source of the agricultural surplus, they also recognised the link between adopting organisational decisions and the accumulation of capital by the farmer. The reinvestment of profits by farmers into large-scale production generates dynamic increasing returns to scale. The surplus is paid as rent to the landowners which expenditures circulate the net product. It has been described in terms of a technical process model in which the accumulation of agricultural capital is the source of growth (Eltis, 1975).

The production-distribution-consumption schema is thus seen as a single indivisible process where the farmer generates uncertain increasing returns. This concept is a second corollary of the French tradition: a critical assessment of the uses and abuses of the law of diminishing returns. Turgot suggested a series of instances – simplification of tasks and innovation – of reducing the inefficiencies which the producer is able to detect (Turgot [1766c]: 510). As a result of stating the law of diminishing returns on the cultivation of land, there appears a belated concern with reducing the inefficiencies, even in industrial production; Turgot considered that the purpose of the spatial movement of the production centre is to eliminate the uncertainty brought about by isolation. Afterwards, J.-B. Say was ahead of critical considerations of David Ricardo when the differential theory of rent and the law of diminishing returns were applied to agriculture (see Steiner, 2003).

However, Quesnay's followers easily forgot that agriculture is not limited to input capital. In contrast to them, Nicolas Baudeau introduced an economic agent who carries out two production functions; when he undertakes an enterprise he is called an *entrepreneur*, and when he manages it he is known as *cultivateur en chef*. "... il n'existe point ou presque point des cultivateurs en chef; de cette race précieuse de vrais laboureurs, de vrais fermiers, qui sachent, qui puissent et qui veuillent entreprendre et conduire, à leurs frais, risque, périls et fortunes, des grandes exploitations productives" (Baudeau, 1771, p. 697). This

distinction between *cultivateur en chef* and *entrepreneur agricole* has made it possible to view the entrepreneur as an agent who assumes the risk of uncertain prices against known costs (Hoselitz, 1951; Fontaine & Marco, 1993). We are now looking at two different actions, one of which is to lead the enterprise in search of enhanced productivity through organisation, while the other action is to undertake the enterprise.

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The production-distribution-consumption schema is a second feature of the French tradition. Since it was developed on the basis of the entrepreneurial decision taking – i.e. its first characteristic –, the organisation of production and the distribution of wealth as a single process requires us to consider the issue of entrepreneurial activity.

3. THE ANALYTICAL CORE OF THE FRENCH TRADITION

The theoretical foundations of the French tradition described above are only implicit concepts. Thus, for example, Quesnay's disciples forgot – more or less quickly – the role developed by the entrepreneurial action in the model. In *Observations sur les Mémoires récompensés par la Société d'Agriculture de Limoges* (1767), Turgot states that the entrepreneurs' capacity and intelligence, especially in the first stages of the agricultural activity, become essential elements in the optimal use of capital. This conception attributes a more relevant role to the farmer and a less significant one to capital, because the continuous increases in the advances do not assure proportional increases in the production.

La terre a certainement une fécondité bornée, (...). Il est évident que toute dépense ultérieure serait nuisible. Dans ce cas, les avances seraient augmentées sans que le

produit le fût. Il y a donc un maximum de production qu'il est impossible de passer, et lorsqu'on y est arrivé, les avances non seulement ne produisent pas 250 p. 100, mais ne produisent absolument rien. (Turgot 1767: 207).

On the other hand, Adam Smith “took full advantage of the extensive development in French economics which took place during the 1750s and 1760s when writing his famous treatise” (Groenewegen, 1994: 17); and so *Wealth of Nations* predicted essentially the same conception of endogenous growth based on developing labour and capital according to a sectorial hierarchy (Rima, 1998). Although Adam Smith and his immediate followers emphasised the important role of labour in economic growth and development, they eliminated the concept of industrial wage or profit and, consequently, the *industry of man*. Adam Smith recognised that profits normally contain an element which is not interest on capital. Remuneration for the work and care of supervising the business was always distinguished and reference was also made to risk, but in the sense of risk of loss of capital. It does not clearly distinguish profit from interest (Schumpeter, 1954; James, 1977; O’kean, 1985).

Following Quesnay and Cantillon⁵, Turgot took the *entrepreneur* and the functions described by them in order to arrange his own scheme. Turgot organises society by means of a functional classification of productive figures, that is to say, according to the function carried out by those figures in the process of production and without any other criteria. Each person may be part of several social groups at the same time, from the distribution

⁵ Turgot must have been familiar with Cantillon’s work prior to this time, since it was his other teacher together with the doctor –Vincent de Gournay– who made Cantillon known in France (Schumpeter, 1954). But Turgot makes no reference to Cantillon, although he is obviously aware of the latter’s work. Hayek holds that Turgot placed Cantillon among the century’s great authors, along with Rousseau, Melon, Hume, Quesnay and Montesquieu (Hayek, 1985: 220). On the other hand, the influence of Quesnay seems to prevail, as he was the person who initiated the classification of the fermier as entrepreneur agricole in his article Grains (1757). This is the origin of the text entitled *Des caractères de la grande et de la petite culture* (1766) in which Turgot inserts the entrepreneur for the first time. From this point on, the theoretical function

standpoint, whereas from the production standpoint he performs several productive functions. This system allows Turgot to draw explicitly the two implicit features of this tradition by means of a specific concept called *industry of man*.

3.1. The *Industry of Man* as a factor of production

Quesnay's theory of the net product matured into Turgot's economic theory where the land is converted into one form of capital. As Nature did not guarantee the surplus, a schema of factors of production becomes the essential theoretical framework in order to analyse the formation and distribution of wealth.

In contrast to Smith, Turgot considered that the way factors are employed in the process of production should be a key element in the economic theory beyond the distributive consequences of a more quality of factors. As a result of this, the *industry of man* becomes an added factor and Turgot was to play a crucial role in this tradition because he gave consistency to Quesnay's implicit contribution to the organisation.

Les capitaux étant aussi nécessaires à toutes les entreprises que le travail & l'industrie, l'homme industriel partage volontiers les profits de son entreprise avec le Capitaliste qui lui fournit les fonds dont il a besoin. (Turgot [1766b]: § LXX)

Firstly, Turgot recognised that profit is a residual income. We can see that he did differentiate between the industry of man and the labour input in his distributive analysis by introducing two different types of remuneration. He distinguished the owners of the factor who refuse to assume the uncertainty of their employment in exchange for a secure income (Fontaine, [1992a]). This topic is intensively discussed in the debate on *la grande ou la petite culture*. The *fermier* estimates the value land could produce – *valeur locative courante* –

performed by the individual using capital in an enterprise comes to be called capital advances and anyone who does this is encompassed under the name of entrepreneur.

because of his management function: an uncertain income for himself and a secure rent for landowners.

... les récoltes ne suffisent pas pour assurer aux Entrepreneurs, outre la rentrée de leurs fonds, des profits égaux au moins à ceux qu'ils tireraient de leur argent en l'employant de toute autre manière, on ne trouve point de Fermiers qui veuillent louer les terres (Turgot [1766b]: §LXIV).

Consequently, Turgot insisted on a separation of profit from interest and defined the former explicitly as a wage determined in a different way from other wages (Knight, 1921; Schumpeter, 1954). Profit becomes a wage because the industry of man had to be considered as a factor of production. Turgot's legacy is sustained when Condillac and Le Trosne place these advances in an uncertain environment where the entrepreneur receives an income over the remuneration of capital for assuming an uncertainty called *risk* or *time* (Fontaine & Marco, 1993)⁶. Moreover, Condillac introduces a new element into the retribution of the factors: the prices of the factors are determined in competitive markets (Eltis 1995: 229). But it is not until Say that the market process and the entrepreneur are included as essential elements of demand.

Turgot needed to explain what may guarantee an industrial wage. Quesnay had proposed the scale economies in agricultural activities. Turgot based his explanation on the entrepreneurial capabilities. While the entrepreneurial role played by the farmer in Quesnay's writings is implicit, Turgot's contribution explicitly accounts for the differences in the conditions of production in different sectors of the economy. Since the uses of capital are competitive, the entrepreneur will invest in alternative industrial or commercial

⁶ « Ces Commissionnaires, c'est ainsi qu'on nomme ceux qui se chargent d'une chose pour le compte des autres, sont entre les producteurs et les consommateurs; c'est par eux que se font les échanges, mais ce n'est pas pour eux. Ils y ont seulement un profit, et il leur est dû: car les colons trouvent de l'avantage à échanger leurs productions, sans être forcés à commercer immédiatement les uns avec les autres.» (Condillac 1776: 31: v. ibid: 121).

enterprises rather than in agriculture; the minimum expected return of the entrepreneur is equivalent to the *fundamental price*, which is an aggregate that appears divided into four parts, distinguishing between the rent of land, wages, capital advances and the industry of man. The *Industry of man* does not only serve to justify the remuneration of the individual who carries out an entrepreneurial activity from the production standpoint, but it also becomes a fundamental requirement for production, together with land, labour and capital.

Once the organisation of production is not an implicit matter, the entrepreneurial activity becomes a usual topic of research; its corollary is the economics of capabilities. The outcome of this organisational approach is a framework of knowledge, capabilities and skills⁷. For example, Fontaine (1992a) mentions these specific management skills in Turgot's agricultural entrepreneur: firstly, a motivational or psychological character, due to his ever-present desire to improve his economic standing, as opposed to the agricultural proprietor; secondly, a technical character growing out of his proximity to the production process, which enables him to take decisions based on practical knowledge (*savoir faire*); and finally, the *fermier's* constant vigilance of the marketplace and any indications that may be useful for his output. As we shall see later on, entrepreneurial capabilities are also employed by Turgot in order to explain how merchants guarantee a stable price in the market.

The economics of capabilities is accepted until Say's writings throughout both Condillac's entrepreneur – direction and control in an enterprise – and a series of authors

⁷ Innovation is not discerned in Cantillon, owing to the mercantile environment that surrounded his book; hence we only find comments about opening of new markets and innovations within the matter of finances. There are references solely to innovation and all are isolated allusions in Turgot, although in his first economic writings, he introduces the invention of productive tasks as the origin of the division of labour and the organisation of productive tasks. There is an agent who creates new productive tasks. He knows the resources needed to undertake this process and he takes over them. This disappearance continues until Say, although Destutt considers innovation makes it possible to increase the output by the creation of real value when performing of process or new machines are introduced (Destutt 1815: 321, 346) and Condillac talks about new methods of production. But these innovations are isolated allusions without being linked to the entrepreneurial activity.

marked by the industrial context. This is particularly clear when Chaptal presented several productive functions that were required by a dynamic demand and the evolution of knowledge. The organisation of production is a consequence of needs and a continuous process of calculating expected prices. The enterprise needs the function of direction that introduces the technical knowledge in search of inefficiencies in the productive process.

Tous les efforts du fabricant doivent être dirigés vers les moyens d'améliorer sa fabrication, de perfectionner ses produits, d'apporter plus d'économie dans ses travaux, de simplifier ses procédés: ce n'est pas que par là qu'il peut se promettre des succès durables et constants (Chaptal 1819, II: 229).

The analytical schema of the French tradition can be found again in Turgot's writings. Production and distribution are not two distinct processes (Schumpeter, 1954), thus the organisation of production plays a pivotal role thanks to a fourth factor called *industry of man*⁸. However, the latter description of the role of *industry* in the productive activity does not shape a single theoretical function. Until Jean-Baptiste Say, authors must descend into the activity of individual sectors to define the functions contained in his theoretical model. There is no single function linked to this fourth input.

There is still another aspect to be considered regarding the schema of factors. Turgot also plays an essential role because he allows a utility theory of value to be converted into an added feature of this tradition (Schumpeter, 1954; Salerno, 1985). Schumpeter (1954) demonstrated the incoherence between a labour quantity theory of value and the schema of production factors. However, the dilemma could have been solved many years earlier

⁸ We are not agree with Schumpeter who considered walrasian equilibrium was the main feature of this tradition. There is, moreover, a widely spread conception of mutual interdependence in the eighteen century (Coleman, 1995) which has not to be identify with general equilibrium.

when Turgot proposed a theory of price determination compatible with the other two features mentioned above and linked to the industry of man.

3.2. Price formation theory within capabilities

In his unfinished text *Valeur et Monnaies* (1769), Turgot describes his theory of value and exchange. From this analysis, Turgot derived three basic conclusions: firstly, the value of a commodity can be expressed only by the current price; secondly, the current price will be equal for all parties in the exchange; and thirdly, the exchange ratio will be a midway price obtained by averaging the individual *appreciative value* – i.e. the gains derived from the subjective comparison of the quantities of commodities (Groenewegen, 1970). The price formation theory is to be connected to the economics of capabilities by means of an intertemporal and interspatial exchange model, called “General market”. Henceforth, a theory of price formation is incorporated into the French tradition.

Turgot does not forget Cantillon’s *valeur intrinsèque* (Schumpeter 1954: 354) and he distinguishes between the fundamental value – *prix fondamentale* – and the current price (Turgot, 1767). The former is stated by Turgot in his papers of 1767 – *Observations sur les mémoires de Graslin et Saint-Pérany* and *Lettres à Hume* – as a basic device of a theory of price determination. The fundamental price has the function of minimum supply price or long-run equilibrium price and it is thoroughly well-matched with his theory of value and exchange (Groenewegen 1970: 181)⁹. It expresses the degree of difficulty which a man meets in producing a commodity and, for this reason, it became a key concept for transforming individual esteem value into current price.

A second aspect is the set of concepts related to the French tradition. Merchants constantly monitor the market in search of profit opportunities in the form of price

⁹ The “*valeur appréciative*” is influenced by two considerations: the usefulness of a commodity for the satisfaction and the scarcity of the object (Hervier, 1977).

differentials in time or space. It is here where Turgot shows the importance of the calculation and the constant vigilance of consumer needs, market price and the supply available in the market place. Profit justifies his necessary activity and sets the limit of his presence in the marketplace; if a merchant does not obtain a normal rate of profit – *profit ordinaire du commerce* –, he will disappear and the price fluctuation will threaten the market. A stable price requires a memory of the process – accumulation of knowledge – which allows merchants to remember the current prices of previous periods (Menudo, 2005). Turgot does so by establishing a close link between the entrepreneurial capabilities and the fourth factor, i.e. the *industry of man*.

The theory described above did not disappear off the French tradition. It survived in authors with important theories of price determination, like James Steuart, and because of the politics of grain market reform. Condillac used a well-defined and well-explained theory of value¹⁰; he built a theory of price formation and exchange in which any cost of production is an estimation based on its value. This model was drawn on in order to support Turgot's grain policy, accommodating uncertainty and excluding the likelihood of any central planning system (Condillac 1776: 6).

In short, the role of capabilities, the nature of organisation or agent behaviour in uncertain situations were characteristics in common of the French economists. However, we may proceed to consider a somewhat more complicated situation; these concepts are articulated by means of a theoretical formulation reinforced by the role of direct human contribution in production. Its weight is so important that Comte-Germain Garnier must introduce *the industry of man* in his summary of *Wealth of Nations*, *Abrégé élémentaire des principes*

¹⁰ Condillac built a theory of price formation and exchange in which new place for value allowed to consider any costs of production is an estimation based on its value (Condillac 1776: 13). He draws on this theoretical model in order to support Turgot's grain policy, opening the room for the uncertainty and excluding the likelihood of any system of central organization which can be shown to be correct (Condillac 1776: 6).

de l'économie politique (1796), creating a new part of distribution of wealth just for the *entrepreneur de travail* (section 2, chapter IV). The *entrepreneur* makes variable-capital advances and the *capitalist* is responsible for fixed-capital advances (Garnier 1796: 36). Thus we come to J.-B. Say who uses this analytical core to build his theory of production with five factors.

4. JEAN-BAPTISTE SAY AND THE END OF THE FRENCH TRADITION

The main concepts of the French tradition are all included in Say's theory, with the *industry of man* playing a crucial role in production. The industry of man is a stock of practical knowledge which was originated by means of an investment in education and which resulted in a series of entrepreneurial capabilities. The execution of this practical knowledge is called labour (Say 1803: 84), which means that Say considers the retribution of industry as a salary.

J.B. Say presents a schema of production on the basis of five factors¹¹, and a subjective theory of value. The five-factor model is the clearest explanation of the set of concepts propounded by the authors of the French tradition.

4.1. The challenge: A five-factor model

J.B. Say presents a schema of production on the basis of five factors. There are three sources from which the factors originate, namely, industry, capital and land. Those who control these sources are known respectively as *industrious man*, capitalist and landowner. The industrious man is divided further into three agents: *savant*, *entrepreneur* and *ouvrier*.

¹¹ One part of the literature considers that entrepreneurship is not an independent factor of production in J.-B. Say's writings. On the one hand, Schumpeter (1954) thinks that there is not enough emphasis for being considered a factor of production and, on the other hand, Koolman (1971) suggests that an independent economic function does not mean a factor of production. Hoselitz (1951) proposes the existence of several theories of entrepreneurship in J.-B. Say –a theoretical one and a descriptive one– which sometimes mix up entrepreneurs with capitalists. Fontaine (1992a) puts forward the entrepreneur-capitaliste of Turgot's writings was still present in J.B. Say because of the essential capabilities for the success derived from the accumulation and ownership of capital.

Say explains that production and distribution are linked in constant flux thanks to five factors, five markets where they could be bought, and five agents. The owners of funds refuse to assume the uncertainty of their use in exchange for a secure income and the entrepreneur requires factors of production in order to produce tradable products. The residual difference between the cost of factors and the income of their employment makes it possible to remunerate the entrepreneur's industry (Say 1841: 351). Revenue of land, wages, profit and capital remuneration are all supply prices, but the income of the entrepreneur is the only one that comes directly from sales¹².

The entrepreneur is the centre of Say's model of the production and distribution of wealth. The entrepreneur bears the uncertainty of the use of the factors because he is able to organise them on the basis of a model. Every production process involves a series of non-measurable risks with no guarantees of success¹³. The exact forecast is not assured but the entrepreneur's estimations and talents yield security and data (Say 1828: 16n). Therefore, the most important of entrepreneurial capabilities, called *l'esprit de conduite*, is the correct valuation of things. The system of price formation, the organisation and the production process are all mental constructions that allow entrepreneurs to understand and provide an active approach to a dynamic and complex economic activity.

Cependant la création d'un produit quelconque est une pensée unique où une multitude de moyens concourent à une seule fin. Aussi vient-elle en général dans

¹² The concept of profit in J.-B. Say's economic thought has been considered by literature from many points of view: Koolman (1971) distinguishes between short-run and long-run profit; Marco (1985) and James (1977) consider that there is a wage of management joined to a reward of risk-taking; Fontaine (1999) and Steiner (1997) prefer to add a "residual income" to the wage of management, while Schumpeter (1954) employs the concept "surplus above the normal remuneration of capital"; James distinguishes between individual profits and business profits.

¹³ Say identifies a closed bond between profit and uncertainty, on the one hand, and between rent and security on the other. However, he never distinguished both incomes according to their different nature (Say 1828: 314).

une seule tête, celle de l'entrepreneur; et ce lui qui rassemble les moyens nécessaires. (Say 1828: 52)

One mistake on the valuation of products, a series of inexact advances or an unexpected evolution of prices could diminish the entrepreneur's residual income. The entrepreneur is someone qualified to evaluate uncertain future events and his input to the process of production is called *application*.

4.2. The French tradition within classical political economy

The entrepreneurial function consists in the application of knowledge to a useful purpose (Say 1803: 5). According to the principles of the French tradition, entrepreneurship is not only a requirement of production but also an explicit factor of production. J.-B. Say directly links it to the two other operations of industry: (i) the study of the laws and behaviour of nature – industry of savant – and (ii) the manufacturing of the items by means of manual labour. The entrepreneur leads to the creation of value, or utility. The process of production requires the application of knowledge in order to avoid useless merchandises; that is, his role is vital to the production of useful goods. How does the entrepreneur lead to the creation of value? The art of application is the function of detecting the profit opportunities always present in scientific knowledge.

Quel parti puis-je tirer de ces connaissances pour créer un produit dont l'utilité soit telle que le prix qu'on y mettra soit suffisant pour m'indemniser de mes déboursés et de mes peines? (Say 1828: 45)

The evolution of knowledge is closely connected with the profit possibilities because the scientific progress becomes a powerful engine of new opportunities for profits (O'kean & Menudo, 2003). On the other hand, the art of application involves a special attention to

consumers' needs in order to know how much they are able to spend¹⁴. In Say's view, the production of wealth is the result not of exchange, but of needs (Say 1841: 240), that is to say, production without any links to demand does not make sense, in the same way as producers do not make sense without consumers. For example, Say considered English businessmen were highly capable of adapting their productions to consumers' needs (Say 1841: 82).

J.B. Say's concept of the process of production requires a special kind of calculation which leads entrepreneurs to estimate the magnitude of the amount demanded with only a limited knowledge of the object they measure (Fontaine, 1999). The art of application is a complex process of interaction which involves the scientific knowledge, the execution of the manual labour and the consumer's wants. Therefore, the entrepreneur is the main agent of production because he guarantees the success of the enterprise and the economic growth¹⁵.

Je vous ferai remarquer que l'entrepreneur d'industrie est l'agent principal de la production. Les autres opérations sont bien indispensables pour la création de produits; mais c'est l'entrepreneur qui les met en oeuvre, qui leur donne une impulsion utile, qui en tire des valeurs. C'est lui qui juge des besoins et surtout des moyens de les satisfaire, et qui compare les but avec ces moyen; aussi sa principale qualité est-elle le jugement; car il pourrait faire à grands frais ce qui n'aurait aucune

¹⁴ This concept allows J.-B. Say to take the entrepreneur into the debate on the economic role of Government. It is stopping the entrepreneurial action because Government has influence on the amount of capital and industry available for the entrepreneur, the forecasting of consumers' wants and the calculation of the value of products made by the entrepreneur could be altered by the Administration as well (Say 1841: 154 y 220). Government only plays an important role in support of the R&D activities by means of patents which allow innovators to recover the total investment previously made (Say 1841.: 207).

¹⁵ The scarcity of both capital and industrious men are the origin of underdeveloping countries (Say 1803: 8; see. i.d. 1828: 17). Entrepreneurship is a chief factor of economic progress because as well as the talent of managing business is not everywhere (Say 1841: 81; v. i.d. 1828. 48), the "application" also spreads slower than the scientific knowledge.

valeur. Telle est l'erreur qui ruine le plus sûrement les particuliers et nuit à la prospérité du pays. (Say 1828: 47)

The art of application allows Say to introduce the entrepreneur in the classical economic system. In his *Cours complet* (1828), the entrepreneurial function is part of the explanation of his *loi des débouchés*. Improvements of industry result in reduced charges of production¹⁶ and, by means of Say's Law, the other industries are benefited. The first step is an increase of products, or a diminution in the cost of production, therefore, if the sale-price of a product does not fall, any improvement of industry redounds to the profit of the producer. At a later stage, the product is thenceforward cheapened by competition and this in turn originates the full advantage to the consumer.

In the case of the economic effect resulting from the introduction of machinery, the entrepreneur is included as well. His calculation is required in order to assure that a new machine is going to increase the amount of the product. On the other hand, the entrepreneur allows the economy to overcome the delay in the general benefit of the introduction of machinery. Entrepreneurial activity, learning and investments accelerate the adjustment of a new industry – i.e. the initial surplus of products, the search for employment in the new establishments – within the economic activity.

une nouvelle industrie réclame de nouveaux apprentissages, des entrepreneurs pour la conduire, des capitaux pour faire des avances. Or c'est ce qu'on ne trouve jamais à l'instant même. Mais, d'un autre côté, faut-il que des inconvénients nécessairement passagers, arrêtent les progrès au moyen desquels les nations se tirent de l'état de barbarie et parviennent successivement au bien-être, à la civilisation, à l'abondance. (Say 1828: 89)

Finally, the entrepreneur plays an essential role in the division of labour¹⁷. The advantages accruing from the division of labour are limited by the size of the demand. However, the market could be expanded by means of (i) the consequent increase of consumption, (ii) the diminution in the cost of production and (iii) the spread of knowledge. The entrepreneurial action removes the limits of the market when the entrepreneur is able to increase demand.

In short, the five-factor model is based on a tradition of distinctive ideas which attempt to offer an alternative approach to classical economic problems.

4.3. Profit, industry fund and capabilities

According to the economists of the French tradition, the entrepreneur's salary is both a residual income and a supply price. Jean-Baptiste Say wanted to go further on this question and he attempted to explain profit disparity as well. British classical economists were able to describe how profits tend towards equality but they failed to explain either the causes of their inequality or the reasons of their tendency to diverge. J.-B. Say considers that profits are not only an incentive for the entrepreneurs, but also a source of information on the entrepreneurial activity in each branch of production. As a result he made use of the law of demand and supply.

Les écrivains qui font de l'économie politique abstraite, plutôt que de l'économie politique pratique, n'admettent aucune différence dans les profits qu'à égalité de talents, à égalité de capitaux, font les entrepreneurs d'industrie (...); s'il y a quelque différence dans leurs profits, ils supposent qu'elle est contre-balancée par l'agrément

¹⁶ Say links the successful introduction of machinery to the requirement for organising production around it; machinery also makes possible reductions in cost resulting from increased production, realized through "improvement of industry".

¹⁷ Adam Smith was criticized by Jean-Baptiste Say for considering that economic underdevelopment is not a consequence of the division of labour, as the Scottish author argued, but a scarcity of productive capabilities; the division of labour is the consequence and not the cause of the underdevelopment (Say 1828: 77-8).

ou le désagrément de la profession. Je suis loin de méconnaître cette cause de
disparité dans les profits, ainsi qu'on verra tout à l'heure (Say 1841: 328)

The price of entrepreneurial services is regulated, like that of all other objects, by the ratio of the supply, or quantity of that service thrown into circulation, to the demand or desire for it¹⁸. J.-B. Say's theory of the market process allows him to distinguish between the price of entrepreneurial services and the *natural profit*. Both prices could diverge because of temporary relations which are explained by the law of supply and demand¹⁹. An entrepreneur of exceptional ability can obtain a high return in the proportion of *natural profit* or quite the reverse. In the long run any gap between price and *natural profit* will eventually disappear and the earnings of the entrepreneur will solely depend on his capabilities. The human faculties, rather than the law of supply and demand, explain the principal cause of inequality in the natural profits of industry (Say 1841: 367).

The authors of the French tradition believe that the industry of man is a fundamental requirement for production, together with land and capital. The source of the industry of man is a fund of knowledge and industrial capabilities which become the origin of the supply of labour, savants and entrepreneurs. The concept of *industry-fund* is very important in Jean Baptiste Say's thought. Firstly, it is an accumulated stock of knowledge which Say analyses using the literature on capital; it is in essence the idea of human capital.

¹⁸ Who desires entrepreneurial service? Say was not able to describe the demand for entrepreneurs; sometimes firms demand entrepreneurs, but in other cases it is capitalist who requires entrepreneurial service to employ his funds (Say 1841: 328). Given the entrepreneur is the demand for every factor of production, maybe he is also the demand for his own services (Steiner, 1997). In that case, one same agent in both side of market brings about some theoretical problems. Therefore, the amounts of services that entrepreneurs are willing to supply are going to regulate the market price of entrepreneurial activity. There are three principal causes of a scarcity of entrepreneurs: (i) the access to capital, (ii) capabilities and (iii) uncertainty. The more rapidly the supply of factors fall, the higher the price of entrepreneurial service will be (Say [1828a]: 329). Competition will increase the supply and price will tend to fall downward. But it will not fall indefinitely to zero. Profits will move to their natural level.

¹⁹ Richard Arena (2003) considers J.-B. Say withdraws himself from Smith's gravitation process of price in favour of two variations in the price: "real variation" is due to improvement in productivity and "relative variation" is due to the law of demand and supply.

Et quant aux fonds inaliénables, tels que les facultés personnelles, comme ils ne peuvent devenir l'objet d'un échange, leur valeur ne peut de même s'apprécier que par la valeur qu'ils sont susceptibles de produire. (Say 1841: 346)

The private property principle is applied to intangible capital which is inalienable, inconsumable, capable of destruction and which can also be profitable (Say 1841: 344-5). The entrepreneur makes intangible capital advances in exchange for an income. Human capital thus emerges in the economic literature and is mostly linked to the production process.

Secondly, we find entrepreneurial earnings in greater or lesser proportion to the degree of skill or talent that may be required. Some talents and skills, far from being common, are rare and well paid. Inequality in *natural profits* can be sustained in the long run when they are based on capabilities. In Say's comments to Storch, the French author considers that the ordinary profits of industry could change because of a partial monopoly based on rare talents. The latter approach is next to the "value of the Ability to deal with disequilibria" (Schultz, 1975) and far from the exogenous approach to innovation (i.e. Schumpeter's entrepreneur).

Thirdly, the stock of industrial capabilities becomes a cause operating to limit the supply of entrepreneurs, joined to both uncertainty and the access to capital (Say 1841: 371). Entrepreneurial activity requires a combination of moral qualities which are not often found together – judgment, perseverance, and knowledge of the world, as well as that of business. The requisite capacity and talent limit the number of competitors for the business of adventurers. In sum, knowledge and industrial capabilities are the key elements with regard to the analysis of the supply of entrepreneurs.

(...) la manière dont les entreprises industrielles y sont conduites, contribue à leur succès beaucoup plus que leurs connaissances techniques et les bons procédés d'exécution dont on y fait usage, tout important qu'ils sont. (Say 1828: 158)

However, the supply of entrepreneurs has usually been dealt with not only as a part of the general theory of distribution but as an aspect of the theory of production as well. Henceforward, the supply of entrepreneurs becomes a topic of research because the scarcity of entrepreneurs is an obstacle to economic growth. Market for entrepreneurs allows education and knowledge to be seen as sources of industrial abilities, which are the supply of entrepreneurial services.

5. FINAL REMARKS

The French tradition is a theoretical framework. The idea of entrepreneurial decision making undertaken under conditions of uncertainty with respect to return was introduced in a production-distribution-consumption schema. The link between adopting organisational decisions and the formation and distribution of wealth result is a forth factor of production called *industry of man*. This latter concept became the theoretical core of an analytical structure and its additional consequences: the separation of profit from interest, the idea of increasing returns or the role of capabilities. Finally, J.-B. Say included these ideas in a model in order to struggle with the British political economy.

Classical political economists had not accepted the five-factor model because they had built it by using some concepts – capabilities, the role of uncertainty, a subjective theory of value – that had been strongly rejected by British classical economists. In contrast to Ricardian authors, Say's heritage is adulterated by the irrelevant role given to the French tradition. We could have identified a continental classical school characterised by the five-factor model. But Say's disciples– Courcelle-Seneuil, Dunoyer, Chaptal, Christian and

Blanqui— wrote only on subjects linked to entrepreneurial capabilities (Marco, 1998); Joseph Droz, Karl H. Rau or Leroy Baulieu involve only the entrepreneur in the distribution of wealth and the problem of profit, while Henry F. von Storch was criticised by Say because of his erroneous conceptions. The French tradition ends up being divided in partial aspects that continue along with the emergence of the entrepreneurial function in the German school thanks to the contributions of Hans Karl Emil von Mangoldt, with the first reference to management by the French disciples, with theoretical elaborations about profit, as in the case of Leroy Baulieu. In short, the continuity described above was the result of a fruitful view of the economic activity.

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