

# **Marshall and Richardson on Markets \***

Preliminary draft

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It is not obvious to evaluate the impact of George B. Richardson's works on contemporary industrial organization. For instance, some time ago, in a review of a book edited by N. Foss and B. Loasby (*Economic Organization, Capabilities and Co-ordination: Essays in honour of G.B. Richardson*) in honour of this author, David Collard wrote:

“There had been much in Marshall and in Robertson (especially the latter) about the co-ordination of investment and other activities. One can, therefore, understand the frustration at the ‘empty formalism’ of the 1930s of those economists who wanted to write about ‘real’ industry with its rich mixture of informal contacts, clusters, and co-ordination. Richardson, too, was frustrated and threw out some interesting ideas which could have created a new industrial economics in the 1960s. But it did not and he himself withdrew from the fray. The ‘new’ industrial economics had to wait for the 1980s and turned out to be distinctly mainstream”

(Collard, 1999: 840)

This negative judgement is in clear contrast with an entirely opposed viewpoint stated by Stan Metcalfe in his entry to the *Elgar Companion to Institutional and Evolutionary Economics* five years earlier (by the way, we may also note that this viewpoint was quoted in the introduction of the *Essays in honour of G.B. Richardson* elaborated by Nicolai Foss and Brian Loasby):

“In Richardson's work are found clear insights into modern debates on markets v. hierarchies, the stability of prices, the economics of information, the basis for rational expectations, and the economic reform of socialist economies. More significantly, by emphasising competition as a process based upon differentiated firms, Richardson anticipated many of the questions credited to modern evolutionary theory”

(Metcalfe, 1994: 241)

If the importance of Richardson's contribution to industrial economics is still debated, none however questions its Marshallian orientation (see Loasby, 1976, 1998 and 1999; Earl, 1983; Teece, 1990; Foss, 1994 and 1998; Arena and Charbit, 1998). But the objective of our paper is somewhat different. The aim of this contribution is to show that Richardson did not only follow and develop the type of approach to industrial economics that Marshall initiated in the *Economics of Industry*, the *Principles* and *Industry and Trade*; our purpose is also to show the extent to which Richardson's own analytical developments provided a better understanding and even sometimes gave sense to Marshall's theory of economic and industrial organization. Furthermore, in our view, the analytical compatibility and complementarity between Marshall and Richardson's constructions are so strong that they allow the characterization of a common

genuine theory of economic organisation and competition which differs from modern ‘mainstream’ industrial organisation theory. This is why this paper will successively consider the concepts of *organisation*, *market*, and *competition*.

### 1. On the theory of economic organization

In former papers (Arena, 1998, 2000a, 2001 and 2007), we argued that Marshall’s theory could prevalently be considered as *a theory of economic organization*. This fundamental organic characteristic of the Marshallian approach is already present in the *Economics of Industry* and remains active in all Marshall’s subsequent works. We know that A. and M. Marshall already characterized the economic system as a “body” (Marshall A. and Marshall M., 1881: 45-46), implying that the whole as well as each of its parts are organized. Firms, markets, “industrial towns”, districts, nations, for instance, are all ‘organized’. This view of organization implies that individual agents cannot be regarded as homogeneous atoms playing similar roles in the economy. Agents have specific ‘works’ to ‘perform’ (ibid: 45-46); these ‘works’ are complementary and their combination is the condition of an ‘efficient working’ (ibid: 45-46) of the economic system. Agents are therefore and essentially *heterogeneous* agents. The key for understanding the extent to which this heterogeneity is compatible with the existence of a coherent system lies in the principle of organization, that is, the existence of a rule which is exogenous to individual agents but assigns specific functions to them. This is the significance of Marshall’s well-known metaphor of the cathedral. This metaphor does not describe agents as isolated atoms, but as members “of some particular trade or industrial group” (Marshall, 1916: 25). Therefore, social interaction among agents is not only behavioural but is also organizational. This is why Marshall uses a biological analogy that emphasises the unity between the physical and the moral ‘laws of nature’. This unity “involves an increasing subdivision of functions between its separate parts on the one hand, and on the other a more intimate connection between them” (Marshall, 1916: 241). Within the economic world, this subdivision of functions takes the form of the division of labour and of what Hayek will call later ‘the division of knowledge’. The necessary ‘intimate connection’ which Marshall refers too, prevents a disordered specialization and ensures communication and coordination, including “such forms as the increase of security of commercial credit, and of the means and habits of communication by sea and road, by railway and telegraph, by post and printing press” (Marshall, 1916: 241).

‘Subdivision’ implies *three* levels. At the level of the national economy, it entails the ‘*social form*’ of the division of labour and the emergence of what Marshall calls – in *Industry and Trade* (Marshall, 1923: 8) – “sections”, “strata” or “compartments”. Referring to Adam Smith, in Marshall’s view, this tendency of « social organization » (Marshall, 1916: 431) towards a growing division of labour is nothing else than an example of the more general movement of complex organisms towards functional specialization. A *second level* of organization corresponds to the very project of *Industry and Trade*, namely, « a study of industrial technique and business organization and of their influences on the conditions of various classes and nations » (Marshall, 1923, sub-title). It is close to both forms of organisation that Loasby associated to ‘various businesses in the same trade’ and ‘various trades relatively to one another’ in his organisational typology (Loasby, 1990: 114-115). Here, Marshall abandons the general systemic dimension of organization and enters into networks composed by disaggregated structures. Those structures are more meso- than micro-economic. They indeed provide the means which permit the economic system to perform its characteristic functions. They include all the institutional and organizational arrangements which reinforce inter-individual coordination (see Arena, 2000b). These arrangements essentially emerge on markets or within industries and social classes and they include market institutions as well as inter-firm relations within or among industries. They introduce permanence and stability amongst agents, thus reducing the effects of ‘systemic’ uncertainty. The *last level* of organization refers to Marshall’s use of the word « business organization » (Marshall, 1923: chapters XI and XII of book II). It also corresponds to what Loasby calls the form of organisation of the ‘single business’ (Loasby, 1990: 114). The internal organization of elementary productive units is here analyzed, taking into account the qualities and knowledge of decision-makers as well as the social environment within which business takes place. This interpretation leads to describe the firm as an organization and contributes to Marshall’s attempt of « rejecting economic man » (Whitaker, 1977: 163).

Now, Richardson also considers the necessity of building a “theory of economic organization” (Richardson, 1971: 243-248 and 1972: 883) and stresses the same levels of industrial organization that Marshall considered before him. Concerning the theory of social organisation, Richardson argues that its purpose must be similar to the traditional and normative one, namely “to secure an efficient allocation of resources” (Richardson, 1971: 244). The originality of his approach is that

“allocative decisions are in fact taken, and in the nature of things have to be taken, on the basis of individual beliefs and opinions, usually uncertain and sometimes contradictory. It is not merely that our knowledge is probabilistic in character; the point is that it is fragmented, in the form of imperfectly consistent estimates held by different people”

(Richardson, 1971: 244)

Put differently, the problem of the existence of dispersed knowledge is considered even at the social and most general level of inter-individual coordination. In Marshall, this problem also appeared but only under the form of the constraint of “intimate connection”: the more complex the social division of labour became, the more necessary the means of information and communication had to be.

The second – meso-economic – level of organization is at the heart of the originality of Richardson’s analytical contribution. According to his view, economic coordination in market economies does not operate only through direct *market contracts and transactions*. It can also be implemented in two other ways: sub-systems managed by *direction* or various *cooperation* clusters (Richardson, 1972: 890). These three different modes of coordination deserve further comments, which will be presented later on in our contribution. Their introduction is however sufficient to understand why, in his 1972 contribution, Richardson concluded:

“This article began by referring to a vision of the economy in which firms featured as islands of planned co-ordination in a sea of market relations. The deficiencies of this representation of things will by now be clear. Firms are not islands but are linked together in patterns of co-operation and affiliation. Planned co-ordination does not stop at the frontiers of the individual firm but can be effected through co-operation between firms. The dichotomy between firm and market, between directed and spontaneous coordination, is misleading; it ignores the institutional fact of inter-firm cooperation and assumes away the distinct method of co-ordination that this can provide.”

(Richardson, 1972: 895)

The third level of organisation (‘business organisation’) corresponds to the famous richardsonian distinction between *activities* and *capabilities*:

“It is convenient to think of industry as carrying out an indefinitely large number of *activities*, activities related to the discovery and estimation of future wants, to research, development and design, to the execution and co-ordination of processes of physical transformation, the marketing of goods and so on. And we have to recognise that these activities have to be carried out by organisations with appropriate *capabilities*, or, in other words, with appropriate knowledge, experience and skills.”

(Richardson, 1972: 888)

It stresses the specificity of the purposes but also of the cognitive means which permit to characterize a given firm and to evaluate its comparative advantages. As we know, in Richardson, this specificity and these comparative advantages are the determinants of the institutional and organisational arrangements which characterize the three main modes of coordination. Thus, Richardson suggests that the classification of capabilities in relation with the degree of similarity and complementarity of their activities provides the basic tool for explaining the contents of the organisation of industry at any particular time and for investigating the variety of relationships between firms. If Marshall was not so explicit, it is still clear however that, as Raffaelli noted recently, human agent ‘character’ is nothing else than

“a cluster of capabilities, which endows them with unity and coherence. Both character and capabilities belong now to individuals, now to organisations, now to local or national systems”

(Raffaelli, 2007: 493)

Even if Richardson contributed to change the general view which prevails today concerning the opposition between planning and competition at the general level of the society (Richardson, 1971) and if he is sometimes considered as the founder of the so-called capabilities theory of the firm (Loasby, 1998), his main contribution however concerns the meso-economic level of competition and cooperation on markets and in industries. The following section will focus on this argument.

## 2. On the organization of markets

Alfred Marshall at length hesitated in his definition of the word ‘market’. The definition of the *Economics of Industry* is strongly related to the notion of free competition:

“When the competition among dealers is perfect, there can be but one price in the same market: so that we may say a **Market** for a ware is a place where there is such competition among buyers, and also among sellers, that the ware cannot have two different prices at the same place”

(A. and M. Marshall, 1881: 66)

Mary and Alfred Marshall were perfectly aware that in the real world, competition was far from being always free. They however believed in the existence of a tendency to market equilibrium which permitted them to define normal values, similar from this standpoint to classical natural prices. This is why they thought that in the long run, the average and the normal prices would not

differ very much. It is also clear that, in their view, normality and free competition were two equivalent expressions.

The definition of a market is substantially different in the *Principles*. Marshall quotes Cournot and Jevons in a paragraph dedicated to the 'definition of a *market*' (Marshall, 1916: 324) and insists on the essential criteria of the unity of the supply and demand mechanism. This stress does not mean however that the tendency to the uniformity of the price of a given good is still a part of the very definition of a market but only now of its degree of perfection (Marshall, 1916: 325). Moreover, as Marshall stresses in another paragraph of introduction of the *Principles*,

“The fundamental characteristic of modern industrial life is not competition, but self-reliance, independence, deliberate choice and forethought.”  
(Marshall, 1916: 5)

Therefore, markets on which *free choice prevails instead of free competition* are still markets, even if they are not perfect markets (see also *Industry and trade*, Marshall 1919/1923: 178).

Finally, *Industry and Trade* entirely breaks with a definition of markets based on the tendency to the uniformity of the market price:

“In all its various significations, a “market” refers to a group or groups of people, some of whom desire to obtain certain things, and some of whom are in a position to supply what the others want.”  
(Marshall, 1919/1923: 182)

The organization of markets then becomes Marshall's major preoccupation. Thus, immediately after this definition, Marshall opposes two meanings of the word 'market':

“Everyone buys, and nearly every producer sells, to some extent in a 'general' market, in which he is on about the same footing with others around him. But nearly everyone has also some 'particular' markets; that is some people or groups of people with whom he is somewhat in close touch: mutual knowledge and trust to approach them, and them to approach him, in preference to strangers.”  
(Marshall 1919/1923: 182)

Three major ingredients permit to introduce this differentiation since '*general*' (Marshall 1919/1923: 182) or '*highly organised*' (Marshall, 1916: 326) *markets* “satisfy in an exceptional way these conditions of being in general demand, cognizable and portable” (ibid. 326).

The reference to 'general demand' corresponds to the notion of free entry. Put differently, it ensures that nobody is *a priori* excluded from the market. Therefore, the number of demanders is large and all of them are anonymous. The cases of the basic raw materials (wool, cotton, wheat, etc.) or securities are especially significant if we consider them at the

international level since these goods are requested “in every part of the globe” (Marshall, 1916: 327).

The reference to 'cognisable' goods is partly a consequence of the universal dimension of the market. Goods which can be sold everywhere in the world must be easy to describe. In other terms, they are supposed to be standardised and, if possible, measurable. Therefore, the reference to entirely 'cognisable' goods *a priori* excludes the existence of product differentiation. But it also eliminates what modern economics would define as problems of product quality.

Finally, the reference to 'portable' commodities means that the market must not be confined to the near neighbourhood of specific demanders and tradesmen, but rather to a more universal part of those agents. It is therefore easy to understand why, in his definition of a market, Marshall quoted Cournot, who denied that a market could be a particular place or location. This last reference also paves the way to the assumption of perfect competition. Thanks to the portable dimension of goods, there are no barriers for producers of consumers and no differentiation among individual agents.

Marshall, then, refers to '*particular*' markets he defines as 'at the opposite extremity to international Stock Exchange securities and the more valuable metals' (Marshall 1916: 328). On these markets, competition is restricted, even if individual choice remains entirely free. They first correspond to markets of “things which must be made to order to suit particular individuals, such as well-fitting clothes” (Marshall 1916: 328). Therefore, on these markets, suppliers and demanders are not anonymous but necessarily display a given individual identity. Moreover, it is doubtful that, within a given industry — here the clothes industry — the good appears to be standardised or homogeneous: again the usual conditions of perfect competition are clearly violated. The problem of the validity of the assumption of independent agents might also be considered: demanders and suppliers indeed enter into *goodwill* relations and cannot therefore be longer associated to independent forces. 'At the opposite' of competitive markets, Marshall also refers to markets of 'perishable or bulky goods' (Marshall, 1916: 328). They do not fill the condition of 'portability' and therefore they are not 'general'.

Then comes '*the great majority of the markets which the economist and the business man have to study*' (Marshall 1916: 329). They are located between the two extremes just previously referred to. Marshall seems to include commodities markets amongst this last category:

“Manufactured goods of textile materials, leather, metals, wood, etc..., not being perishable, can often be maintained in constant supply at no very great cost; especially if they are not bulky; are not in uncertain demand, through changes of fashion or otherwise; and are so far standardized at all events relatively to the needs of the locality, that the demand for them is not greatly affected by varieties of individual need or taste.”

(Marshall, 1919/1923: 281)

Finally, we must not forget *perfect markets*:

“A perfect market is a district, small or large, in which there are many buyers and many sellers all so keenly on the alert and so well acquainted with one another’s affairs that the price of a commodity is always practically the same for the whole of the district”

(Marshall, 1916: 112)

Perfect markets therefore do exist in Marshall’s developments, even if perfect competition is absent from his contributions. They are nothing else than what the *Economics of Industry* defined as *markets*. By contrast, in the *Principles* as well as in *Industry and Trade*, perfect markets only constitute a very specific and extreme case of general markets where information is complete and perfect, and therefore where prices tend to total uniformity.

According to the type of market one considers, the organization of markets varies in relation with the two main activities which form what Marshall calls ‘the organization of markets’ (Marshall, 1916: 326), namely, ‘bargaining’ and ‘marketing’ (Marshall, 1925/1966: 278). *Bargaining* refers to the mechanism of price regulation and speculation, including the forms of information diffusion, the role played by ‘middlemen’ and the use of a money account. *Marketing* refers to the very organization of trade or supply, which often supposes goodwill relations, firms’ relations and networks.

Particular markets have sometimes been interpreted as an indication of competitive imperfection. This is not however Richardson’s own view. According to him, particular markets are often a strategic means of firms to improve their competitive advantage:

“Not only do the firms already in the industry have "economies of experience," they also, as Marshall indicated, have "particular markets" in which, by virtue of goodwill or other ties, they have a significant advantage. These restrictions or "imperfections" could reasonably be regarded as natural, but they shade into others which are artificial, in the sense that they were devised for the purpose. A tacit

agreement to live and let live may become formal market sharing, and entry may be impeded by deliberately erected barriers.”

(Richardson, 1959: 13)

To a large extent, Richardson therefore extended the scope of Marshall’s theory of particular markets. As Marshall, Richardson did not at all defend the idea that pure competition was the rule and market imperfections the exceptions. In his various contributions, he tried to show that, far from being ‘artificial’ imperfections, *monopolistic* or *oligopolistic* firm behaviour is ‘part of the machinery’ (Richardson, 1959: 235) which reinforces their chances of survival. Now, the creation of particular markets by firms is a good example of this kind of behaviour. This creation can be the result of product differentiation which decreases the relative ease with which a good can be described or classified; of ‘barriers to consumers entry’ which may be implied by national restrictions to some goods imports; and prevalently of goodwill relations, in Richardson’s view (Richardson, 1960/1990: 64-65):

“The particular form of market attachment known as ‘goodwill’, however, has probably received more attention from business men than it has from the majority of economists”

(Richardson, 1960/1990: 65)

Goodwill can consist, for instance, of maintaining relatively low prices in the face of excess demand in order to have a permanent group of reliable customers. It can also aim at the *preservation* of some excess capacity, seeking to satisfy usual loyal consumers.

### **3. Markets, information and knowledge**

To a large extent, Marshall’s distinction between bargaining and marketing activities leads to characterize the role of markets in the processes of information diffusion and knowledge dissemination.

Bargaining clearly refers to the mechanism of price regulation and speculation. It therefore implies the analysis of the various forms of price information diffusion. These forms can be direct from producers to consumers. They can also be indirect from wholesalers to retailers, and from retailers to consumers (see Casson, 2007 for a very clear survey of the Marshallian notion of “marketing”). Obviously, the modalities of information diffusion are entirely dependent on the institutional and organisational characteristics of the price mechanisms. We will not enter too much in the details of these mechanisms which are out of the scope of this contribution. As far as this contribution is concerned, it is sufficient to stress the *variety* of

these mechanisms which depend on the properties (perishability, durability, portability,...) of the good, on the nature of the period, of the degree of free access to the market or on the existence of well-informed middlemen or retailers for instance. Consequently, the very working of markets requires the definition of various modalities of information diffusion provided by the bargaining conditions.

Marketing refers to the very organization of trade or supply. It implies goodwill relations as well as firms' relations and networks. Information diffusion is still essential here. For instance, as Casson stressed it, the role of retailers may be central:

“The market-making entrepreneur is an intermediary – or ‘middleman’ – who looks back down the supply chain to producers, and also forward up the supply chain to retailers and consumers. ‘The chief functions of middlemen generally are however those of studying the wants of consumers, and the resources of producers; and bringing the two into connection.’ (Marshall, 1919: 278)

The entrepreneur plans ahead by anticipating what consumer wants will be at the time when current orders for production will be ready for sale. The entrepreneur bears the risks that his judgements may be wrong”

(Casson, 2007: 464)

However, marketing does not only include retailing effects. It also implies the consideration of goodwill and inter-firm relations. Now, the study of these relations is not only founded on information but also on knowledge and more particularly on entrepreneur's knowledge.

Now, what is interesting in Richardson's original revival of the Marshallian approach is precisely his focus on this theme, even if the other issues related to bargaining and marketing are both *very central concepts* in his approach.

Bargaining issues are necessarily present in Richardson's theoretical contribution since its origin was precisely to analyse what he called himself the *market conditions* of the Walrasian theory of general economic equilibrium. Interestingly enough, market conditions both include ‘primary’ ones which correspond to the technical possibilities of production and the current state of consumer preferences and ‘secondary’ ones which refer to the ‘relevant projected activities’ of other economic agents, including consumers, competitors and suppliers (Richardson, 1959: 229). In this context, if for any reason, there is a change in demand, which affects the various firms of the economy, what would be their reactions? The issue is simple: each of these firms must include the information on other firms' investment decisions to take its own decision, given the market conditions of the model. Now, in a general equilibrium theory framework, we know that primary conditions are supposed to be known by the various firms. There is, however, no reason to think that any firm is *a priori* able to guess the

secondary conditions. The reasons of the problem are two. On the one hand, there is no direct connection between primary and secondary conditions, since the second ones relate *beliefs* about relevant conditions and *projected* activities. On the other hand, the *kind* of uncertainty to which firms are submitted ~~to~~ is typically strategic: the set of expectations of each of the firms depends on all the other sets which depend themselves on the other sets, and so on... As Richardson summed up,

Firm's "mutual interdependence clearly presents, for entrepreneurs, a barrier to obtaining the necessary secondary information, and, if we are to hope to show how a system can work, we cannot escape the obligation to explain how the barrier is overcome"

(Richardson, 1959: 230)

This critique directly concerns the Walrasian equilibrium theory but also unfortunately Marshall's one. As Richardson pointed out, the solution could have been to interpret the long-run supply curve as an *ex ante* function relating expected price to planned supply. Marshall's indications are, however, clearly insufficient to provide the foundations of such an interpretation. Richardson's problem therefore also concerns Marshall's approach. We know his solution. It consists of assuming that producers could obtain information about the projected activities of other firms in three main ways. The first way is explicit collusion and entirely incompatible with the context of free competition. The second was called by Richardson 'implicit collusion' (Richardson, 1959: 232-233) and was based on conventional and extrapolative behaviour. The last one leads to cooperative agreements between entrepreneurs and will be considered in the last section of this paper.

If we relate it with Marshall's theory of the organisation of markets, based on bargaining and marketing activities, Richardson's theory of competition and cooperation appears to be complementary but it also permits some advances within a Marshallian research program. Richardson indeed showed that the analysis of *bargaining activities* is faced to a logical difficulty related to the information diffusion process among interdependent agents. He also pointed out how the solution to this difficulty requires taking explicitly *marketing activities* into account. In Richardson, marketing activities indeed appeared to be the adequate means to ensure the diffusion of information within entrepreneurs, distributors and consumers. Moreover, the solution put forward by Richardson implies that markets do not only permit the diffusion of information, but also lead to the dissemination of knowledge.

This result is not surprising in a Marshallian framework. Knowledge plays indeed an essential role in the Marshallian construction (Arena, 2000a). More precisely, in the context of markets,

the kind of knowledge which is the most relevant to understand the organisation of markets is entrepreneurial knowledge. As Pesciarelli recently reminded us, this knowledge is supported by what Marshall called business abilities. These abilities are especially relevant for our context, since they include the “knowledge of things in his own trade”, the “power of forecasting the broad movements of production and consumption”, and the ability “to judge consciously and undertake boldly” (Marshall, 1917: 297). Referring to these abilities, Pesciarelli (2007: 347) noted that Marshall used the term ‘ability’ as synonymous with knowledge, insisting on the possibility of knowledge improvement through education.

Richardson’s contribution to this Marshallian view on the importance of education and knowledge emerged progressively with time. Thus, according to Loasby (2001), in his first published article, Richardson (1953) started from Knight’s and Ryles’ distinctions and underlined the respective categories of “knowledge that” and “knowledge how”. The first category suggests the notion of tacit knowledge and therefore of objective information; the second corresponds to tacit knowledge and is based on some potential of the mind. Later on, Richardson developed two ideas. He first stressed the impossibility of reducing uncertainty to risk because of the existence of incomplete and not only imperfect information:

“Irreducible uncertainty, as a factor, in any conceivable economic system, owes its existence, in part, to incomplete information about preferences and production functions.”

(Richardson, 1960/1990: 81)

Richardson showed how *activities* had to be carried out by firms with relevant *capabilities*:

“It is convenient to think of industry as carrying out an indefinitely large number of *activities*, activities related to the discovery and estimation of future wants, to research, development and design, to the execution and co-ordination of processes of physical transformation, the marketing of goods and so on. And we have to recognise that these activities have to be carried out by organisations with appropriate *capabilities*, or, in other words, with appropriate knowledge, experience and skills. The capability of an organisation may depend upon command of some particular material technology, such as cellulose chemistry, electronics or civil engineering, or may derive from skills in marketing or knowledge of and reputation in a particular market.”

(Richardson, 1972: 888)

Therefore, here again, Richardson completes Marshall’s approach to knowledge stressing how the organisation of a market economy implies both the introduction of a device of information diffusion and of a foundation of knowledge dissemination. Entrepreneurial capabilities which were already present in Marshall, indeed, permit the emergence of goodwill relations and inter-firms networks. This emergence does not only requires a slow discovery of the strategic

projects of other agents but also a systematic use of the ‘know how’ and the ‘know that’ of firms in the construction of market institutions and forms of organisation.

#### 4. Conclusive remarks: competition and cooperation

We know why, in his *Principles*, Marshall preferred to characterise the economic system through the expression of ‘free choice’ rather than ‘competition’. On the one hand,

“The term ‘competition’ has gathered about it evil savour, and has come to imply a certain selfishness and indifference to the well-being of others”.

(Marshall, 1917: 6)

On the other hand, Marshall clearly preferred cooperation to competition as it appeared for instance in *Industry and Trade*, when our author opposed the German and American forms of combination to the expected British one, based on freedom and cooperation:

“If competition is contrasted with energetic co-operation in unselfish work for the public good, then even the best forms of competition are relatively evil. While its harsher and meaner forms are hateful. And in a world in which all men were perfectly virtuous, competition would be out of place; but so also would be private property and every form of private right. Men would think only of their duties; and no one would desire to have a larger share of the comforts and luxuries of life than his neighbours.”

(Marshall, 1917: 9)

Finally, as Richardson himself stressed it, the ambiguity of Marshall’s message on competition should not be underestimated: Let us only remind the sentence of the *Principles* quoted by Richardson in which Marshall considered that in a dynamic context,

“every plain and simple doctrine as to the relations between cost of production, demand and value is necessarily false; and the greater the appearance of lucidity which is given to it by skilful exposition, the more mischievous it is”

(Marshall 1916; quoted by Richardson 1990: 15)

Surprisingly, Richardson also favoured cooperation but for very different reasons.

His analysis of economic organisation and of the organisation of markets convinced him that cooperation was the best way to provide the information and the knowledge which are necessary to sustain economic progress in modern economies: the simplest forms of stable inter-firms cooperation indeed make demand expectations more reliable and thereby facilitate production decisions. In his 1972 article, Richardson gave more details on these forms. He

pointed out that firm coordination in a market economy could be implemented in three ways: by direction, by cooperation or through market transactions:

“Direction is employed when the activities are subject to a single control and fitted into one coherent plan. Thus where activities are to be co-ordinated by direction it is appropriate that they be *consolidated* in the sense of being undertaken jointly by one organisation. Co-ordination is achieved through co-operation when two or more independent organisations agree to match their related plans in advance. The institutional counterparts to this form of co-ordination are the complex patterns of co-operation and affiliation which theoretical formulations too often tend to ignore. And, finally, co-ordination may come about spontaneously through market transactions, without benefit of either direction or co-operation or indeed any purposeful intent, as an indirect consequence of successive interacting decisions taken in response to changing profit opportunities.”

(Richardson, 1972: 890)

This approach to cooperation and competition substantially changes our general view of market economies. The tradition in economic theory has always been to associate pure competition to agent anonymity. The theory of general economic equilibrium, as it was interpreted and reshaped after Léon Walras, has always considered that the central figure of the market was given by a universal relative prices interaction between a large number of suppliers and demanders whose individual identity did not matter. At the beginning of his scientific life, and in line with his classical precursors, Marshall was not probably far from sharing this predominant view. This is why, in the *Economics of Industry*, Alfred and Mary Marshall tended to assimilate markets to pure competitive markets. Little by little, however, Marshall’s conception of competition changed. His introduction of the case of particular markets and the attention he paid to economic organisation through his analysis of economic districts, industrial towns, or nations, convinced him that there was some space for the analysis of firm coordination in which their identity mattered. To a large extent, George Richardson only developed this new line of thought. He tried to show logically that a conception of competition based on anonymity and on primary market conditions only, could not be seriously defended. Therefore, he paved the way to a view of competition in a market economy where a fundamental room was given to goodwill relations between producers and consumers, and to inter-firms cooperation. According to this new view, cooperation ceased to be a kind of idealistic system to become a real device to sustain competition in market economies. It also ceased to be considered as a form of imperfect competition to become the very condition of the working of the real economic system. From this standpoint, one cannot deny that Richardson’s contribution gave sense to Marshall’s approach of markets and competition. Obviously, it was not sufficient to build the foundations of a general approach to

industrial organisation which could replace the modern mainstream tradition based on game theory and imperfect competition. Some economists, however, tried to go further on the way paved by Richardson. Others remained fundamentally sceptical. More recently, the last ones tried to incorporate Richardson's approach in modern evolutionary economic theory, combining in their way, Marshall and Richardson. It is highly probable that some new chapters of the history of this interpretation of the Marshallian approach still have to be written.

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