

Marshallian Anomalies*

By Giacomo Becattini

1. Understanding a man

" We can never appreciate the importance of what Adam Smith wrote unless we know the importance it had to him. For to him they were living truths, energising, fertile in hope, forcing him to seek further truths. And they must be living for us also, if they must be of much use to us."

From P. D. Groenewegen, *Alfred Marshall on the Method and History of Economics circa 1870*, Reprints of Economic Classics, series 2, number 5, Centre for the Study of the History of Economic Thought, Sydney.

The title, Marshallian Anomalies – rather than, say, aspects of Marshall's thought – was deliberately chosen to prepare readers for the operation on which I intend to embark here: shielding Marshall from the powerful undertow that would fatally suck him under and drown him in "disciplinary regularization". Disciplinary regularization is a fearsome process, capable of trivializing even the most original thinkers by forcing them into whatever paradigm happens to be dominant, disactivating all presumptive originality of thought in their writings. Marshall, for instance, although depicted by some writers as a stuffy pedant, an eclectic who dedicated his efforts to mediating among incompatible positions – in short, the classic figure of a professor – was in actual fact an original and stimulating thinker, with a pronounced taste for paradox.^[1] Now, when seeking to solve a problem, such an indomitable figure of a thinker tends to make a systematic comparison between solutions A and (different) non-A solutions, giving each one a chance. Anyone observing the process from a distance, in the light of A which has become the accepted creed over the course of history, no longer sees the discarded non-As. But very often it is precisely one of these non-As, discarded yet preserved in the recesses of the author's mind and surfacing here and there in his writings, like karstic rivers, that affords sanctuary to the crucial message. Such a message can often be of immense value in illuminating a world that has now parted ways from the universe in which A, as a result of a multiplicity of factors, some probably of a historical and transitory nature, ultimately emerged triumphant.

Just as the "biological anomalies" – the powers-driving new developments of the species – are the raw material of biological evolution, so also the intellectual anomalies of the great thinkers, enigmatic and paradoxical to mainstream thought though they are, can constitute the raw material of new intellectual achievements. Many such anomalies will naturally remain mere curiosities, just as many biological anomalies founder owing to a hostile environment; yet now and then the occasional anomaly does shine through, is seen to be well-founded and swells up until it envelops the entire world of thought. Now, I do not mean to claim that the Marshallian anomalies I will propose can indeed succeed in this undertaking, but one never knows.

Anyone who regards Marshall as a sort of *pontifex maximus* of neoclassical economy – and there are many who hold such a view – will find that the concept of Marshallian anomalies has a curiously contradictory tone. Can the Pope ever be a heretic? Indeed, if one were to unearth certain statements, possibly not totally accidental or even blatantly snobbish, made by an author considered so central to mainstream thought as Marshall (for instance, statements that do not "fit" with the strand of neoclassical thought within which he is usually categorized), then what would be the fate of the mental peace of today's representative economist? One of the remedies to which those who are sorely "distressed" by such phenomena most frequently resort is to expunge the anomalies from the living body of Marshall's theoretical thought, banishing them into a sort of "residue" of personal eccentricities such as one might associate with *Victoriana* of *The Old Curiosity Shop*, where "only the biographer" need pry inquisitively.

I by no means concur with this portrayal. As one who has engaged in prolonged perusal of Marshallian works and jottings, I can vouchsafe that Marshall is a veritable goldmine of theoretical and methodological anomalies that diverge from the stream of thought to which he is usually ascribed. Many of these still deserve to be taken quite seriously – perhaps even more seriously today than yesterday! In this paper I will group them under six headings^[2].

When I began to address the problem of this lecture, I decided, first of all, to set about re-reading Marshall's entire correspondence. Upon accomplishment of this mission, I have no regrets about my decision; there was definitely no better way to test certain hypotheses concerning the most intricate strands of Marshallian thought that had gradually taken shape in my mind as I studied his more properly speaking scientific writings. For it is in correspondence rather than in the more guarded and tormented published works that an author's real desires and hopes are much more strikingly revealed. It is here – often in a fit of anger^[3] – that the real mindset of Marshall the man comes into view, a temperament that was indissolubly both human and scientific.

In order to attune one's viewpoint to the anomalies on which I aim to dwell, I believe it is necessary first to give a broad outline of British thought during the period in which Marshall was setting out on his path. Studies conducted in recent years - roughly, that is, during the decade following the centenary of *Principles*, have considerably extended our knowledge of the general cultural background within which Marshall took his first steps as a scholar.^[4] Previously, all essays on Marshall hinged on the splendid piece of biographical literature composed by J.M.Keynes with the assistance of Mary Paley, upon Marshall's death.^[5] A piece that is as splendid as it is misleading on many points that are far from secondary – as has been shown once and for all by Peter Groenewegen, who has written a remarkable biography of Marshall^[6]. What is more, the Keynes-Paley biography now appears irremediably dated in its historicisation of the cultural context in which Marshall commenced his work. This context will constitute the primary focus of the following section.

2. Cambridge around 1870

"Clifford was not content with merely giving his assent to the doctrine of evolution: he seized on it as a living spring of action, a principle to be worked out, practised upon, used to win victories over nature, and to put new vigour into speculation. For two or three years the knot of Cambridge friends of whom Clifford was the leading spirit were carried away by a wave of Darwinian enthusiasm.

F.Pollock, in *Lectures and Essays by the late W.K.Clifford, F.R.S.*, edited by L. Stephen and F. Pollock, London, Macmillan, 1886, p. 24.

" There is probably no one who gave as strong a stimulus to the thoughts of the younger Cambridge graduates thirty years or forty years ago as he (H.Spencer). He opened out a new world of promise; he set men on high enterprise in many different directions; and though he may have regulated English intellectual work less than Mill did, I believe he did much more towards increasing its vitality"

Letter from Alfred Marshall to *The Daily Cronicle* of November 1904, Cfr. *Correspondence*, n. 811.

The first move, therefore, must be to call to mind – albeit succinctly, of course – the Cambridge and British *milieu* of the 1860s and 1870s in which Marshall took up his studies. At that time, the intellectual climate of Cambridge was being whipped up by two great revolutionary movements of human thought: Darwinian evolution and non-Euclidean geometry. Darwinism, with its irresistible force of reasoning and highly persuasive documentation, represented a major threat to the by now crumbling traditional edifice of the organic world, which held the world to have remained immobile in its fundamental partitions since the day of creation. No less dramatic was the impact of non-Euclidean geometry, a keen interpreter and champion of which was to be found in a close friend of the young Marshall, William K. Clifford, who was active in Cambridge in those very years. The idea of a single geometry – namely Euclidean geometry, the focus of apodictic certainties, had played a special role in the overall architecture of culture, providing formidable support for the traditional order: not only the social and political order, but also for religious beliefs as well.^[7] Faced with these two powerful assaults, the religious faith of whole cohorts of young scholars collapsed. The young Marshall was among those who – “not without tears , as H. Sidgwick put it^[8] – and wailings and cuttings of the hair” lost their faith.^[9]

One aspect that frequently escapes historians of economic thought, especially those outside Britain, is the role played by the young Marshall's contacts with the most prestigious exponent of Christian Socialism, F.D.Maurice. Christian Socialism stood at the intersection between the movement of rebellion against Anglican religious conservatism and philosophical and political criticism of the rampant cash nexus society.^[10]

This period also saw several ambitious attempts, arising as it were in contraposition to the above tendencies, which sought to construct a general science of society that would enable man to dominate social phenomena and thus guide him towards earthly bliss. The three attempts against which the young Marshall measured his strength were those by Auguste Comte, Herbert Spencer and John Stuart Mill. It is well known that all three attempts failed, but Marshall did not – or so I would argue – draw the conclusion this was to be attributed to their being intrinsically misconceived, but only that they were premature...in fact several centuries ahead of their time! For instance, the great Millian attempt to close the edifice of social science with ethology^[11], the science of character, clearly foreshadowed future developments: by tracing out a path from the forms of social organization to the traits of human personality, it would open the door, among other things, to “scientific” management of social reform.^[12] But on closer inspection it is no less clear for Comte, whose conception of *consensus* among social phenomena Marshall jealously preserved, and for Spencer, on whom Marshall drew extensively both in terms of methods and overall architecture of thought^[13]. Thus when weighing up the Millian attempt, Marshall did not throw in the sponge, but, like Mill before him,^[14] he filled the gap with an amateur version of ethology. This was the only type of ethology possible given the circumstances, and, although unnoticed or rejected by many of his interpreters, it effectively constitutes the connective tissue of a large part of his thought. And it kept the problem in the limelight: “social science” – he wrote emphatically in 1897 – or the reasoned history of man, for the two things are the same, ... is seeking her unity in the forces of human character.^[15]

One theme that whipped up passions in the age of the first Workers’ International was the nature and historical origin of the Trade Unions. Credence was given to a reading prompted by the work of the Englishman J.M. Ludlow and the German Lujo Brentano, which underlined a line of continuity between the ancient “guilds” and the “great republics of our time”, as the young Marshall emphatically called the Trade Unions.^[16]

But this raises other questions concerning the overall turmoil of the period, and enquiry into this atmosphere of cultural ferments can shed light on Marshall’s initial stages. A typical example is the “birth” of anthropological studies, occurring precisely during the Victorian period.^[17] Marshall’s interest in these ideas is revealed by a number of signals. For instance, it can be presumed that the ideas of Henry S. Maine, an important figure in Cambridge circles, had some effect on Marshall, not only directly but also indirectly through the writings of an Irish economist, Thomas Cliffe Leslie, with whom Marshall was familiar and whom he appreciated.^[18] Other sources testify to such interests: for example, Mary Paley Marshall, describing the Oxford period (1883-84), wrote: “Alfred happened one day to meet Professor Vinogradoff^[19] and he was so much fascinated that he asked him to dine with us. ... I never heard him talk as freely as he did that evening, and I would give much to be able to recall that conversation”^[20].

Turning our attention now to matters more properly belonging to the field of political economy, here Marshall also had to contend with the challenges K. Marx and F. Lassalle^[21] were launching against mainstream political economy. While on the strictly analytical plane – I mean, development and completion of the labour-value theory – Marshall categorically threw out these challenges, on the plane of social concern and even on the ideological plane, he by no means ruled them out.^[22] For throughout his life Marshall would continue to ponder the question of communism, wondering whether it did indeed represent the only true alternative to the market “mechanism”. Note, however, that it was not the Fabian variants of socialism that attracted his attention. These, he felt, were unconvincing statist compromises.^[23] Rather, it was genuine communism (*perfect utopia*) that made a lasting impression on him, i.e. the conscious and deliberate participation of the individual agent in social production in its broadest sense, even though Marshall regarded this form of utopia as bristling with intractable problems and in any case impracticable on a large scale, with mankind the way it is.^[24]

There was also another sense in which social criticism, particularly in its Owenian variant^[25] centring around the effects of the organization of production on character, exerted substantial influence over Marshall’s development. For brash Victorian prosperity raised a question in the young Marshall’s mind: why did the staggering surge of productive forces that ensued from accumulation and technical progress not eliminate poverty

and indigence? [26] Why did wealth accumulate at one extremity of the social scale and misery and wretchedness at the other? [27] Must a social *Residuum* necessarily exist? Or can we all, eventually, become Gentlemen and Ladies? It should be pointed out that Marshall rejected the claim according to which the living conditions of those at the bottom of the scale have worsened in absolute terms, [28] a claim fiercely argued by many radical critics of the system. He merely called attention to the fact that the distances were certainly unjustifiably large and the social exclusion of the underclass had increased.

In short, among all the influences cited, the one which most profoundly affected the young Marshall's thought was, as I will endeavour to show further on, a form of Darwinian evolution overlaid with Spencerism, which was to underlie his conception of the task of the economist right up to his death. But what truly fuelled his intellectual effort was and remained throughout his fellow-feeling for the suffering members of mankind and his firm belief in the marvellous potential for progress and happiness contained within the mind – as we will shortly see – of ordinary man.

3. The first anomaly: man as a varied and variable entity

"The chief fault, then, in English economists at the beginning of the century was(...) that they regarded man, as, so to speak, a constant quantity, and gave themselves little trouble to study its variations. The people whom they knew were chiefly city men; and they took it for granted tacitly that other Englishmen were very much like those they knew in the city.(...) The change that has been made in the point of view of Economics by the present generation is then (...) due to the discovery that man himself is in a great measure a creature of circumstances and changes with them.. "

The Present position of economics(1885), in *Memorials*, pp. 154-155

Through the work of Tiziano Raffaelli, who has published and established the setting of Marshall's early philosophical writings, [29] today we know what lay behind the questions concerning the future of the working classes Marshall raised at the outset of his explorations. In a manuscript written during his youth, *Ye machine*, Marshall constructs an automaton and shows, by incorporating ideas that must have mirrored many of the studies on the human mind of his day, [30] that its normal functioning consists in continually routinising the valid solutions it excogitates to problems arising in the sundry environments of life and in the ensuing progressive release of mental energies and powers which enables the automaton to soar towards higher and more difficult accomplishments. Now, it is no exaggeration to state that the idea pervading the entire work of Marshall the economist, even when this is not fully apparent, is that society achieves progress by virtue of a mechanism, *mutatis mutandis*, analogous to that of the human mind. The growing division of labour and the shifting of so many production tasks from man to machines are equivalent, roughly speaking, to the routinisation of experiences that takes place within the individual organism. [31]

It is here, effectively, that the key to the explanation of increasing returns should be sought. Thus what needs to be explained is why society - unlike the individual, who becomes fully caught up in the release of mental energies that goes hand in hand with the process of routinisation and draws immense benefit therefrom [32] – remains trapped in a very restricted, excessively restricted, social sphere. Why, Marshall wondered, did Victorian society, full of pious sentiment though it was, produce a vast social *residuum* (it was already the society of the two-thirds!) trapped in grinding poverty, lacking all dignity, living without hope, [33] when the productive force of man, accelerated by accumulation and technical progress, was undergoing such prodigious development? This, I repeat, was the passionate, real, burning question that drove the young Marshall to abandon the lush fields of philosophical thought to venture into the intricate meanders of economic problems. [34]

These scruples marked the start of a line of differentiation of Marshall's economic thought from both the classical and the marginalist economists. Although not unknown, this distinction does not play an adequate role in standard historical and conceptual positioning of Marshall's work. How to overcome the vicious circle of the wretchedness of the masses - bypassing the scarcity of capital - through the direct effect of "becoming civilised" on labour productivity: these themes formed the *leitmotif* of his inaugural lecture in 1885. [35] "The chief fault", Marshall argued, "in English economists at the beginning of the century was that ... they regarded man as, so

to speak, a constant quantity and gave themselves little trouble to study his variations.(...) It [their conception of man] led them to regard *labour simply as a commodity* without throwing themselves into the point of view of the workman; without allowing for his human passions, his instincts and habits, his sympathies and antipathies (...) They therefore *attributed to the forces of supply and demand a much more mechanical and regular action than they actually have* (...). But their most vital fault was that they did not see how liable to change are the habits and institutions of industry. In particular they did not see that *the poverty of the poor is the chief cause of that weakness and inefficiency which are the cause of their poverty.*"^[36] Now, I would argue that the four phrases I have highlighted in italics embody a substantial portion of the "Marshallian heresy" to which this lecture is devoted. Marshall put forward a conception of a path that would lead to enhancement of human labour by other means than accumulation and technical progress - eminently appropriable activities: instead, improvement would be achieved by furthering greater intellectual complexity and refinement in the average man. In expounding this point of view, Marshall exploited a special concept he had devised, "productive consumption".^[37] Only if the additional consumption prompted by an increase in salary was of a specific type (civilising) would this result in an increase in income and in all the components of the latter. Hence his censure of conspicuous consumption and his claim that it behoved the ruling classes of a country to act as an example for all the others. This was not the Victorian equivalent of throwing the scraps to the dogs, but a central part of Marshall's message.

This, then, is the first Marshallian anomaly: man conceived not as a puppet that maximises a utility function, the arguments for which are defined elsewhere (but how?) and are of no interest to the economist,^[38] but as a variable, plastic entity, that generates its own social environment and is, in turn, generated by the latter; the law according to which this comes about are, Marshall argued, both complex and unknown, partly because they have been little studied, and are intertwined with the mere mechanics of exchange.

4. Towards a theory of socio-economic change

Following this line of interpretation, one can easily perceive that from the very moment he adopted this philosophical approach, there was a huge distance separating Marshallian constructs not only from those that characterised classical economic thought but also from those of canonical marginalism. If man is a complex and variable entity, if the variations that arise depend both on the "genetic"^[39] and cultural heritage of the past and also on the circumstances of an environment that happens to be created by man, then the area on which studies should focus is that which explains how the average man of different social classes and/or of different territorial environments is shaped by environmental circumstances. Such an area is nothing less than economic ethology.^[40] For only a science of this nature would make it possible to construct a theory of development – which either is "total" human development or is no development at all – that can be of use for a positive reform of society. It is this, I believe, that represents the young Marshall's deepest conviction as he turned to economic studies. And it would remain the bedrock of his thought throughout his life. ^[41]

It does not require much imagination to realise that by pursuing this line of enquiry Marshall would be left practically isolated as a result of the epistemological shift wrought by the advancing forces of neoclassical economic thought. Nor should it be cause for surprise that even his closest students surrendered to the pressure of the environment. Demonstration of the mere interdependence of economic phenomena was not enough: buoyed up as the intellectual climate was by the thoroughly ideological aspiration to provide a rigorous demonstration of the rationality of the invisible hand – that particular mode of rejecting social criticism which had gained favour in the epoch of scientism – it turned away from any desire to engage in scientific study of change, and this in the age of Darwin!

This shift was destined to lay waste to the entire edifice of theories on economic phenomena. Suffice it to mention the crucial example of the damage wreaked on the theory of the firm, where a veritable fracture would open up between the real configurations and the schematic representations – not unlike oriental stylisations of animals - offered in even the most advanced economic manuals.

Now, while it may be true that contemporary economic analysis is developing numerous approaches that cater for man as a varied and variable entity (eg. with the economics of learning, the new theories of the "labour market" ^[42] and of so-called endogenous growth, studies on production organisation, game theory,

[43] etc.), I feel that it cannot but be an arduous task unless a serious attempt is made to decipher the causes of the limits of such analysis – for instance by re-visiting the fundamental dilemmas of Marx and Marshall.

5. The second anomaly: the industrial district

"the customary method of treating the advantages of division of labour and of production on a large scale appears to me in one respect defective. For the manner in which these advantages are discussed in most Economic treatises is such as to imply that the most important of them can as a rule be obtained only by concentration of large masses of workmen in vast establishments"

The Early, vol. II, p. p. 195

In the Marshallian manuscripts of the early 1870s one finds several statements that clearly outline a stance adopted by Marshall that differed from the predominant views of his time, concerning some of the crucial themes of the rising theory of production. In particular, the standard conclusion that Marshall challenged was the claim that the factory system, with its concentration of all production operations under the same roof and their vertical integration, was necessarily superior to methods of production dispersed throughout various communities, and less integrated. Reading the descriptions of British industry, [44] mulling over economics texts that appeared during that period [45] and observing the reality around him with a keen eye (for example the *metal trades* in Birmingham), Marshall very soon reached the conclusion that at least for certain types of production there existed two routes to production efficiency: the well-known one, based on large production units vertically integrated in a single establishment, and a second, based on the concentration of many small factories specialised in the various stages of a single production process within a fairly circumscribed geographic district.

“We have next to inquire” – wrote Alfred and Mary Marshall in their slim 1879 handbook of economics – how far these advantages are dependent on the size of the factories in which the work is done.(...) We shall find that some of the advantages of the division of labour can be obtained only in very large factories, but that many of them, more than at first sight appears, can be secured by small factories and workshops provided there are a very great number of them in the same trade. The manufacture of a commodity often consist of several distinct stages, to each of which a separate room in the factory is devoted. But if the total amount of the commodity produced is very large, it may be profitable to devote separate small factories to each of these steps. If there are many factories, large or small, all engaged in the same process, *Subsidiary Industries* will grow up to meet their special wants. (...) But small factories, whatever their numbers, will be at a great disadvantage relatively to large unless many of them are collected together in the same district. We may then consider the advantages of the *Localisation of Industry*. The localisation of industry promotes the education of skill and taste, and the diffusion of technical knowledge (...) Thus both large and small factories are benefited by the localisation of industry and by the assistance of subsidiary trades. But these benefits are most important for small factories, and free them from many of the disadvantages under which they would otherwise labour in competition with large factories.” [46]

These considerations, I feel, are not only economically well founded, but they also link up directly to Marshallian reflections on the functioning of the human mind. The “district anomaly” naturally calls to mind Marshall’s above-described social and dynamic conception of the growth of the individual’s intellectual powers. For instance, the celebrated passage on the “industrial atmosphere” is indicative of his attention to the circulation and accumulation of mental routines – eg. productive know-how – within localised groups. [47] “Where large masses of people - wrote Alfred and Mary – are working at the same kind of trade, they educate one another. The skill and the taste required for their work are in the air and children breathe them as they grow up.” [48].

Man is transformed through work, and he undergoes a different type of transformation in different organizational and social contexts. [49] The industrial atmosphere is one aspect of the Marshallian concept of the “chorality” of the production process, which effectively is none other than social life considered from the point of view of production; it encompasses not only the technical “climate” (eg. the textiles culture as compared to that of mechanics) but also the “moral” climate of industry (eg. morality of the American “frontier” versus that of the “British industrial districts” [50]). Thus as a counterargument against “dogmatic” economists who on the one

hand clung obstinately to the wage fund and, on the other, had eyes only for economies of scale and the factory system, Marshall took advantage of a neat concrete example – the district formula. What he sought to show thereby was that in actual fact there already existed at least one alternative, or possibly a complement, to the idea of boosting production “externally” (more and better machines *pro capite*): namely that of boosting production by acting on man’s interior nature and character through an action of, as it were, “targeted civilising” (targeted toward competition) exerted by the local environment.

This new avenue opened up by Marshall, the effect of which was to shift the focus of analysis from the appropriable and cumulable exosomatic^[51] tools of production (machinery, factory plants, canals, railways, etc.) to individual endosomatic tools such as human capabilities, or to intrinsically non-transferable and/or non appropriable collective commodities such as “local social capital”^[52], was to lead to an immeasurable widening of the rift between himself and other mainstream economists, either classical or marginalist. At the same time it constituted a reply to the Marxian concept of the capitalist mode of production, a concept which was too heavily based on historical phenomena more properly ascribable to a particular stage of capitalism, such as the enclosures and separation of the worker from the material tool of production. The crisis of the Fordist stage of capitalism, which provided a more appropriate key to the Marxian approach, today brings this particular Marshallian key more vividly to the fore.

6. Towards the multiplicity of the paths of industrial development.

It may be worthwhile briefly following up some of the possible implications of this “Marshallian correction” of prevailing opinion. Had it found favour, industrial capitalism would not have been read as nurturing within its bosom the one single developmental path preordained by accumulation and technical progress, destined to lead in the future to firms of ever-increasing average size linked together in ever more concentrated industries. Such a vision was certainly held by the majority of economists of Marshall’s day, and almost all economists who came after him were to continue to hold fast to this belief. But had the Marshallian correction been more favourably received, (at least) two pathways would have been discerned, the second of which allowed for the reproduction of territorial agglomerations of small and medium-sized businesses that are not only able to survive but indeed develop through appropriate modulation of the production structure of the corresponding human aggregations.

This could prompt the suggestion that the second anomaly is no more than a special case of the first. But this would be wrong, I would argue, because there is a new element that comes into play here, namely territorial contiguity among agents (the “intellectual contagion” of practical writers) as a distinct force of production. For Marshallian external economies were inspired specifically by spatial contiguity, together with the concept of industrial district. Only later, if I am not mistaken, would Marshall make reference to an “industrial sector”, of which he provided no rigorous definition, thereby laying himself open to the well-known criticism by those who interpreted the Marshallian sector as equivalent to, shall we say, the Walrasian concept.

Now this discovery *ante litteram* of “different routes to industrialisation”, variously intertwined as they unfold and coexist during the same period, might have had a number of consequences: a) by allowing for the persistence and development of forms of self-employment and small businesses in certain production sectors, it would have worked against the prediction of social polarisation of industrial capitalism into the two classes of owners and proletarians;^[53] b) by contesting the prediction of a type of capitalism racing towards a small number of very large urban conglomerations, it would have directed attention towards a variety of alternative models for the establishment of human settlements and production plants in a given area;^[54] c) by postulating an array of correspondences between productive activity and people’s ordinary lives, it would have deterred the image of production gradually becoming enclosed within a factory, and the ensuing desertification of social and natural contexts;^[55] d) by foiling the “facile” idea that was dear to socialist critics of capitalism, according to which the tendency towards technical, economic and financial concentration of industry was setting the stage for a transition from private to public ownership, it would have saved mankind from bitter disillusionment.^[56] The economic, cultural and political consequences of the “district anomaly”, had the latter found favour as a concept, could have been enormous. But the Marshallian idea was turned down.

One may wonder why Marshall himself jettisoned the district, to the point of not including it in the

subject index of his books. I do not yet have a real answer to put forward, but I think it should be sought in the area of the ideological compatibilities among the different parts of his theoretical work. He certainly did continue, here and there, to mention industrial districts, and he was instrumental in guiding the much-loved Chapman towards intensive study of the district of Lancashire.^[57] Marshall's annotations on a paper by his favourite pupil J.M. Keynes^[58] give some indication of the extent to which his mind was still preoccupied with the industrial districts theme in 1906. If some of the annotations of his lecture on American industry (1875) concerning the moral character induced by the different forms of organization of industry are examined while bearing in mind that Marshall effectively gave an in-depth account of only four nation-states (Great Britain, USA, Germany and France),^[59] one might be led to conclude that at the dawn of the new century he now considered the nation-state to be fully formed and to constitute the smallest unit of investigation of the unified process of production of commodities and formation of character.

7. The third anomaly: "compact social groups"

"Much is to be learnt from the applications of the pure theory of foreign trade to the circumstances of the relations between the supply and the demand for the wares produced or the services rendered by any unorganised industrial group. But this application becomes of vital moment in the case of those industrial groups which are formally organised and which set themselves deliberately to regulate the supply of their wares or of their services so as to dispose of them on terms as advantageous as possible to themselves"

The Early, 2° vol. p. 123

Let us return to the intellectual climate at the outset of Marshall's career. The decades following 1830, tossed out by Marx as decades of vulgar economy, were in effect highly important for British economic thought which, like a weary python, was endeavouring to digest Ricardian abstractions. Partly as a reflection of what was taking place on the Continent, and partly as the outcome of indigenous cultural ferments, there arose a historicist reaction that boasted several noteworthy presences, such as Richard Jones and Thomas Cliffe Leslie, whose ideas were noticed and absorbed by the young Marshall.^[60] But the overwhelming majority of British economists, true to the practical bent of the British, elected not to devote themselves to methodology but rather to embark on the task of assessing how far classical economic science could be of assistance in deciphering the existing intricate web of social relations.^[61]

Thus the controversy surrounding the wage fund, for instance, which was gathering pace by the middle of the century, sought to determine the true range of possible actions that could be undertaken by those bothersome protagonists of the new economic, social and political scene that were the Workers' Unions.^[62] In other words, in England this period was characterized, as I see it, by the attempt to make use of economic theory to unravel the puzzles that real society presents presented. It is hardly surprising that there was a general tendency to step back from the brilliant and sharp-edged constructions of Ricardianism in the direction of what Marshall termed "the more circumspect inductions of Smith".

A question now arises: on what basis did Marshall's first economic ideas take shape? The Marshall materials unfortunately do not furnish a univocal answer. Marshall was engaged in hundreds of activities:^[63] he taught in the college and on special courses for women; ^[64] he entered into polemical exchanges with trade unionists on the *Bee-Hive*;^[65] he presented weighty memoranda to scientific-philosophical discussion groups,^[66] etc. etc. In addition, he was a voracious reader, of mathematics, physics, philosophy, psychology, history, and increasingly, as time went by, of economics as well. In 1871, when the book by W.S. Jevons came out, he felt he already had sufficient mastery of the central issues of economics to publish (1872) a lengthy and fairly critical review.^[67] The economic works he perused most certainly included the classical authors and J.S. Mill. Not only did he pore over them but, he claimed – and this is likely to be true –, he checked the mathematical correctness of the parts that lent themselves to this form of verification. In so doing he came across the Millian theory of reciprocal demand, which seemed to call for an appropriate analytical formulation. Thus it was that he devised his celebrated international trade curves. And, hand in hand with these, the most disturbing anomaly - or the most promising, depending on one's point of view - namely his intention of applying those very curves to relations

among “compact social groupings”. [68]

In order to determine what exactly Marshall had in mind, we must backtrack a little. The existence of obstacles to territorial and social mobility had already been noted by many scholars, but the one who had built up an entire theoretical edifice on this issue was John Elliott Cairnes. [69] The latter had concluded his enquiry into this problem by asserting in no uncertain terms that if one wished to conduct a closer scrutiny of phenomena that were blatantly evident and available for the whole world to see, even in England, the supposed promised land of political economy, then it would be necessary to integrate the theory of internal value with that of international exchanges. [70] Needless to say, this was a worrisome conclusion because it threatened to undermine the aesthetic harmony of classical thought, which had made a clear-cut distinction between the theory of domestic values, i.e. the theory of value, and the theory of international exchange. This distinction had been made on the basis of an apparently simple and clear differentiation: the different degree of mobility of production factors, presumed to be fairly elevated within each nation-state and practically nil between nation-states. Thus the conclusion reached by Cairnes not only tended to subvert the generally accepted identification between the political nation and the “nation” of economic studies, but it also generated a serious problem of logical coordination between the two. [71] For Marshall was careful to specify that it was only to the latter, i.e. the “nation” of economic studies, that the logical apparatus of the theory of international trade could properly be applied.

Here the real cause for scandal proved to be above all the world of labour though this was not the only thorny element – which the theory implicitly assimilated to water flowing between communicating tanks, whereas on the British scene the working world persisted in clinging to habits and modes of behaviour that in no way matched that analogy. [72] And if they were a very bad fit for England, the birthplace of capitalism, the likelihood their being a good fit for the rest of the world was surely very slim indeed!

8. The torments of the young Marshall

“ The line of demarcation traced out by the marginalists did not cut through the entire field of economics: the attempt to place Marshall at all costs either within or outside the marginalist school made it impossible to see the most important aspect, namely that with respect to that line of demarcation Marshall stood neither on this side nor on the other, but elsewhere.”

M. Dardi, *Il giovane Marshall: accumulazione e mercato*, Bologna, Il Mulino, 1984, p. 10

A very thorough study focusing on these problems and on this period which marked the dawn of Marshallian thought is the work published by Marco Dardi in 1984 entitled *Il giovane Marshall*. [The Young Marshall], which in my view goes straight to the point. In the majority of works by Marshallian scholars, Dardi argues, “it is implicitly taken for granted that the endpoint - whether real or intended – of Marshall’s theoretical training consisted in a fully developed marginalist model, compared to which his early works are read as anticipations or incomplete formulations. [73] In contrast – Dardi goes on -, the perspective adopted in this study is exactly the opposite: Marshall’s writings, whether early or not, are read as the most sophisticated and mature products of the process of dissolution of classical economy.” [74] A process of dissolution that resulted in contemporary economic analysis, which – it should be noted – Dardi does not identify with the “fully developed marginalist model”. In effect his book, in harmony with the above-described intent, demonstrates that Marshall not only overturned the logical hierarchy of accumulation and market, thereby automatically sweeping away the “wage fund” approach, but also introduced a subtle but pervasive change in the meaning of the main classical economic categories. There is in Marshall, Dardi suggests, a constant gradual transfiguration of schemes and categories - from the natural to the normal, from value to price, from theory to economic analysis - at the end of which one realizes that ... everything has changed, or almost. In other words, no change, or hardly any, in appearance, so that everything changes – as Sraffa would later write: this is claimed to have been Marshall’s strategy, although how conscious he was remains unknown. But if one views the question from the perspective of a single process of organic growth of contemporary economic analysis, then Dardi’s book and the survey on the market in economic theory that he published a few years later, [75] which develops the central themes of his book, represent fundamental contributions to establishing a clearer picture of the role played by Marshall. After

examining the possible meanings of the ideas implicitly embodied in this off-the-record Marshall, Dardi was able to reinfuse a substantial portion of that innovative potential into contemporary economic analysis, with a fairly extensive interpretation of the Marshallian theoretical construct.

There are a few passages in Marx that curiously – but perhaps not too surprisingly - touch upon the same theme. For instance, in the third book of *Capital* Marx writes:” solange die ... Produktionsmittel nur mit Schwierigkeit aus der einen Sphäre in die andre übertragbar sind ... die vershiednen Produktionsphären sich daher innerhalb gewisser Grenzen zueinander verhalten wie fremde Länder oder kommunistische Gemeinwesen”^[76] Frederick Engels added a note to this passage, making a specific allusion to anthropological and ethnological studies.^[77] Another case is found in the *Grundrisse*, where there is a mention of the fact that “Der Austausch beginnt nicht zwischen den Individuen innerhalb eines Gemeinwesens, sondern da, wo die Gemeinwesen aufhören – an ihrer Grenze, an dem Punkt des Kontakts vershiedner Gemeinwesen”.^[78] In a note in which he touches on the works of Henry S. Maine, Dardi brings up this possible line of interpretation, but then does not pursue the matter.^[79]

I grant that the solution devised by Dardi, cleverly bringing back into the fold of economic analysis only those strands of anthropological-historical analysis that most conveniently lend themselves to the operation, both enriches and appropriately “complicates” economic investigation without subverting its nature. Yet I cling firm to my opinion that a non secondary part of the revitalizing potential of that insight is thereby lost. It seems to me that it might be well worth adopting precisely the opposite strategy: underlining the radically innovative, nigh on subversive power of that construction, relating it more openly to its historical-anthropological inspiration. And to its political wellhead.

I will now endeavour rapidly to sketch out a sort of alternative utilization of that roughly drafted Marshallian construction: a theory of international trade applied to the “social nations” rather than to the political ones.

9. Towards a theory of social conflict

"It is advisable to dwell upon the close analogy which the politico-commercial relations which exist between two organised industrial groups bear to those which exist between two nations. The trade guilds had continued quarrels with one another(...) In recent times the bricklayers', the plasterers' and the masons' Unions have quarrelled as to the proper boundaries between their respective provinces. Episodes of alternating alliances and jealousies (...) When ironmasters or coalmasters or cotton manufacturers meet together in formal assembly and discuss whether it be not in their interest that they should agree partially to suspend their operations(...) they proclaim the fact that they constitute for some purposes 'a nation' (...) Agriculturists are for some purposes a compact nation having interests distinct from those of the manufacturing classes"

The Early, 2^o vol. pp. 124-126

For fear of making myself insufficiently clear, I find myself compelled to include a few parenthetical remarks on the somewhat poorly known Marshallian concept – or rather, concepts – of economic nation. In an early version the “economic” nation is a place, or a system of places, characterised by a form of cultural homogeneity (values and institutions), ease of circulation of information and territorial contiguity such that movements of capital and of workers rapidly bring the profit and salary rates to exactly the same level. A territorial area of such a nature can thus be said to constitute a sort of “economic nation”, even though it may not have evolved any precise awareness of its own autonomy and expresses no unified mechanism of government. Compact industrial districts can in a certain sense be regarded as examples of such phenomena. A political nation (the ordinary nation-state) will thus be composed of a collection of economic nations. Nor can it be ruled out that an economic nation may straddle the borders of several political nations.^[80]

In its second version, the economic nation is, instead, a “bloc of subjects” within a nation-state, or possibly also cutting across different nation-states (e.g. the working class), which has the striking feature of achieving social cohesion by turning its own (or part of its own) fundamental economic interests into a rallying point in opposition to the interests of analogous blocs within the same country. A case in point would be that of unionised miners,

or alternatively, owner-managers of coalmines. Furthermore, in such groups the conviction of having common economic goals interacts with non-economic forces of cohesion, thereby forging a highly unique type of social body whose “grip”, as it were, on its stalwarts may vary depending on the make-up and intensity of those non-economic forces. Unlike the first kind, this second type of economic nation always has some form of government of its own, albeit not necessarily explicit, and conducts its own “foreign policy”, fully coherent and complete in all its parts, which decides on alliances and decrees what struggles to embark on. To demonstrate that such a construction, which may appear preposterous to contemporary common sense, was not at that time simply the fanciful whim of a theoretician closeted in his ivory tower, suffice it to point to the political movement of “guild socialism”, which – significantly – attracted Marshall’s attention.^[81]

This means, among other things, that in a dialectical relation which is as yet largely unexplored, for every “type 2 economic nation” Marshall saw not only a conflict of interest between masters and men but also a powerful force of cohesion that was common to them both and set them jointly in opposition to the rest of society. However, there was no guarantee that this force of cohesion was identical to the strong bond among inhabitants of the same area, or to the bond supposedly holding the international working class together, but it was certainly something along these lines.^[82] In my view these features of Marshallian thought are indicative of the possible influence of historical-anthropological studies of that period, and are certainly suggestive of his willingness to take up the challenge of the class struggle.^[83] In particular, they represent aspects that would inevitably be brushed aside by any attempt to read Marshall purely as one who perfected the mechanics of the technique of exchange outlined in the third book of John Stuart Mill’s *Principles*, or as the co-author of the canonical marginalist revolution.^[84] Only in appearance would a reading of the latter type draw close to interpretations which place emphasis on the ideological response to Marxism as the focal point of economic debate at that time. For the reading in question is most definitely not centred on the logical difficulties of the Marxian theory of value, despite the claims put forward in this sense by the aforesaid historiographic approach. Marshall’s answer to Marx, as I see it, is to set a theory of social conflicts (plural!) against a theory of the class struggle (in the singular). What lies at stake, in essence, is – and this is no mean concern! – the very conception of man and of capitalism. For instance, in the *Blue Books* and in his factory visits, Marshall seeks to ascertain the truth regarding the alleged alienating effects of the mechanization of labour.^[85]

Let us take another look at the above-mentioned example. In ordinary market theory, the price of coal arises from a blend of forces that belong to the technique and organization of production (supply) and other less complicated and less powerful forces belonging to the technique and organization of, shall we say, consumption (demand). It is therefore the main tool for guiding not only the forces of demand and supply that are held to be directly involved, but also, indirectly, the entire social setting from which such forces sprang, steering them towards a rational allocation of “resources” – although the definition of the latter remains somewhat shadowy. In the background we can dimly make out a sort of trade-off on the margin between utility and disutility, which would presumably seal the triumph of a principle of substitution that orders all economic phenomena, enslaving exchange values as the handmaid of use values.^[86]

Now, even in the Marshallian scheme of “economic nations”, price - or rather the term of trade - between two blocs of commodities, always functions as the key that sets in motion the interaction between clusters of social forces that are at odds with one another, but the groupings are profoundly different from those previously described. The visible network of interests, solidarity, collusion, etc. that lies behind the coal supply is, here, no more than the tip of an immense iceberg of multifarious social relations. And if there were any further point at this stage in talking about partial equilibrium, the latter would in this case appear simply as a particle of a general social equilibrium as opposed to a fragment of a purely economic equilibrium. For the price of coal is seen as one of the instruments for distribution of social power between “the nation” of coal producers – miners, owners of the mines, distributors, hauliers, etc. – and the rest of society. No apologetic reading of the market is possible in this case, not even implicitly: the whole issue lies on a different level. In contrast to the stereotyped competition among individual suppliers of manpower or capital that dominated mainstream marginalist theory, here there is a built-in place for the most bewildering array of bonds (solidarity, emulation, connivance, etc.) among the headstrong components of each of the groups involved. Here the worker appears just exactly as Marshall conceived him, namely with all “his human passions, his instincts and habits, his sympathies and antipathies, his class jealousies and class adhesiveness, his want of knowledge and of the opportunities for free

and vigorous action”^[87]. Furthermore, the capitalist-entrepreneur is by no means a maximizing puppet: rather, he is prompted by “all the infinite variety of motives that are commonly grouped under the term ‘love of money’”^[88]. There is also ample room for long-run strategies that can take the expectations of the most disparate human groupings into account;^[89] although it should be noted that the long-run period Marshall had in mind was historical and not analytical.^[90] The pattern of defence of individual interests, imbued with sociality *ab ovo*, was here manifested through a continual kaleidoscopic alternation and recomposing of subjective configurations, now conducted on a local basis, now sectorial, and now class-based.

It is understandable that unlike price as defined in standard economics, the “term of trade” of this model sorely troubles the mainstream economist, given its opaque account of the tangled knot of economic and non-economic relations forming the intricate maze of social intercourse. However, one may legitimately enquire into what kind of judgment the Marshall who was so strongly critical of economic abstraction – a Marshall of whom we seem to have a glimpse here – might, in his heart of hearts, have passed on a framework that hurled him directly into that socio-economic fray where the causes and effects of social phenomena are inextricably intertwined. His judgment, I would suggest, would have been both favourable and adverse. Favourable, because instead of erecting the economic world on the generic abstraction of *homo oeconomicus*^[91] this framework populated it with men rich in motivations, held together by a great variety of forces of “social cohesion”. But also adverse, because by dissolving the image of an order concealed in market phenomena, it not only deprived the social scientist of the price that indicated relative scarcity but also left him without one of the essential tools for systematic penetration into the convolutions of social facts (see below).

One may perhaps go a little further. The possibility comes into view here of a philosophical overturning of the interpretation most typically adopted by economists: from the commodity economy to the economy of men. It is this, in my view, that constitutes one possible meaning of that unfulfilled revolution. If this different manner of “carving up” social phenomena had gained credence, I think it would have ushered in momentous consequences which would also have made their effects felt on the division of scientific labour.

As to why exactly Marshall decided at a certain point to back off from this alternative approach, I have no clear answer to offer. I would suggest, however, that the key lies in Marshall’s growing conviction, which became stronger in his later years, that if individual interest were allowed to operate incessantly, and much more consciously and better equipped as well, then in the long run it would dissolve any type of stable grouping based on non-economic bonds – *pace* Cliffe-Leslie^[92] (and *pace* even what Marshall himself had thought in his youth). *Gutta cavat lapidem*. The economic nations, including the working class, would in effect be no more than ephemeral surface ripples on a vast sea bubbling with conflicts: conflicts between individuals, needless to say.^[93] Therefore, Marshall must have mused, if, in the last analysis, the compact social bodies on which that interpretation is grounded have no future, why bother persisting with a research programme that in any case is riddled with disadvantages when it comes to “scientific” elucidation of social phenomena? From the heights of Edwardian prosperity, the social fabric of England must have appeared very different from the way he had seen it around the 1860s: well entrenched in its empire, turn-of-the-century *Britannia* may well have given the impression of being a society on the march towards the utopia of his youth: a world of ladies and gentlemen.^[94]

10. Grand ambitions frustrated: conjectures on a book that was never written.^[95]

"Many a bold student at the age of 20 or 25 is pretty confident that he has got hold of the right clue to the missing link in at least one important line of enquiry: that if his life is not cut short, he will leave his mark in the world's history.

The Early, vol. II, p. 360

"Would you kindly alter 'Industries' in the title of my forthcoming book to 'Industry'. The title which you have printed is that which I had originally proposed. (...) The change from 'Industries' to Industry means that I have been forced to abandon the original notion of treating particular industries in some detail."

A. Marshall to the publisher Macmillan, 8th September 1910

"my vacillations as to scope and arrangement of my work(...) have been caused (...) by my tardy recognition of the magnitude of the task proposed "

A. Marshall to the publisher Macmillan, 25th August 1917

One point that Marshall biographers have often raised, but which I do not believe has been adequately addressed so far, concerns the chronology of Marshallian publications: what was it that engaged Marshall's attention after the publication (1890) of the first edition of *Principles*? One answer has been put forward, in some detail, in the biography by Groenewegen. There we find Marshall wandering around Conferences, Committees, investigatory Committees, philanthropic-cum-environmental Associations, or we meet him at class; we see him waging battle in the Faculty Board in the attempt to secure greater scope, and above all to achieve enhanced status, for the teaching of economics, and later we spot him founding the Faculty of Economics, or busy defending and correcting *Principles*, edition by edition. We catch sight of him, hovering in the wings, as he sets up the British Economic Association and, through Edgeworth, directs the affairs of the *Economic Journal*, and engages in a thousand other projects. What we distinguish less clearly is the focus of his study, once *Principles* has been successfully published, and above all what general line of research he is following. We only know that he "is writing" a second volume in which he plans to show the world some results of his research that could not be included in *Principles*: a second volume of that text, which was gradually to be transformed, year after year, from *Principles of Economics. Vol. II*, into *National Industries and International Trade*,^[96] *National Industry and Trade*, which would finally appear, in 1919, as *Industry and Trade*.^[97] He did publish articles of considerable importance, yet it is difficult to believe that they alone constituted the outcome of what can be perceived as a tremendous thrust of research and meditation. If judged purely by its results, the period following *Principles* would thus appear to be one of intellectual dispersion, devoid of a clearly defined research programme. Completion and clarification (to himself as well as to others) of certain obscure points in *Principles* and the defence of his work against the onslaught of criticism would seem to have been his overwhelming, if not exclusive, concern at this time.

Such a picture, however, accords ill with the broad sweep of Marshall's interests, such as it emerges for instance from his correspondence or even from his repeated assertions that the really dark period, the one that deprived him of the possibility of achieving genuinely important breakthroughs, was the decade stretching from 1879 to 1888.^[98] The initial phase of the barren period, as he termed it, is fairly clear. It began with the publication of the book together with his wife, and with the "carelessness" of his Cambridge friends in the editing of his papers, to conclude with the "betrayal" – this was how Marshall saw it – by Henry Sidgwick. The latter made use of notes taken by J.N. Keynes during Marshall's lessons in order to publish a manual^[99] which on a later occasion was to turn him into a deadly academic rival in the field of economics. But perhaps there were other problems as well, internal to the couple, with Mary reaping enormous success as a teacher of economics and mistress of the house in Bristol, while Alfred failed as Chancellor of University College.^[100] Not to mention Alfred's illness, the true nature of which (psychosomatic?) has never been fully clarified.^[101]

The real questions arise when investigating the final part of the barren decade, when Marshall, already basking in the glory of Cambridge, was working on *Principles*. Is it plausible to imagine that Marshall remembered the period when he was in his prime, a respected, if contested, professor at Cambridge and was working on his *magnum opus*, as a period of "aridity"? The only possible answer I can suggest is that in Marshall's eyes *Principles* may not, after all, have represented that fulfilment of a lifetime's intellectual ambitions that the histories of economic thought have made it out to be. Why it should have been cast in such a role is an issue to which I will return in the conclusions. But however this may be, there may have been a number of reasons that induced Marshall to compose this work, after his "great crisis" of the early 1880s. Some of these reasons may have been of a practical nature, such as the desire to procure himself an academic publication unequivocally of his own making that would be of aid in advancing his career, and – who is to say? – to take up the challenge of Sidgwick's definitely unloved *Principles*.

Whether this hypothesis can be reconciled with the conviction that Marshall's really fundamental contribution to the development of economics resides in his theory of normal values (Book V), with *Principles* being simply an expansion of this theory - both in a backwards and forwards direction - is a moot question.^[102]

I would propose the following scenario: Marshall came to the conclusion that the part of his early works he had long disregarded, leaving it to gather dust on his bookshelves while he turned his attention to the much more alluring theory of social conflict, would have a favourable reception in the cultural atmosphere that had by now come to reign in the wake of the marginalist paradigm; he therefore decided to flesh it out into a manual that would bring him fame and fortune. He therefore dug up his old notes on value – which, as he more than once stated, he had already nearly completely shaped in his mind before 1870 – and he set about gradually building it up into *Principles*, a task he may have approached somewhat reluctantly, intent as he was on achieving far greater ambitions and building up much more “real” interests. But perhaps by the end (1889-1891) he had even begun to enjoy it, and he certainly found a way of slipping all the ideas he held most dear “into the crack of his arguments”, especially his own philosophy of economics. Yet if I am right in this conjecture, he never really loved *Principles*, and in the last resort he considered it as no more than an introduction to the introduction of the book “on the world” he had always been going to write.

On one occasion he offered a clarification of the term *kernel* he sometimes used to designate Book V, and thereby provided the pivotal element on which the predominant fifth-book reading of Marshall has hinged ever since. Thus in a letter to Edgeworth he wrote: “ ‘The ground traversed in books V and VI commands and gives access to that which lies yet before us’. To that I adhere and I like it better than the old phrase ‘a kernel’. But V and VI rest on III and IV (...) In that old phrase you would perhaps take the kernel to be the essential part: I take it to be a small part; and, when taken alone, more likely to be misapplied than in the case of other sciences. (...) I conceive no more calamitous notion than that abstract, or general, or ‘theoretical’ economics was economics ‘proper’. It seems to me an essential but a very small part of economics proper: and by itself sometimes even – well, not a very good occupation of time”^[103] He could hardly have been clearer... For someone having this conception of the place of the theoretical kernel within economics, and of economics – as we will see later – within the vaster framework of social knowledge, it would scarcely seem appropriate to make everything hinge on the analytical contents of the fifth book.

No sooner had he delivered himself of the first volume of *Principles* than Marshall threw himself into the second volume, which would soon become the half real, half imaginary place of his boldest research plans, only vaguely hinted at though they may have been.^[104] In 1892 he made a momentous decision, which was widely misunderstood in economic circles: he replaced *The Economics of Industry*, written together with his wife,^[105] by a new *Elements of the Economics of Industry*,^[106] in which he incorporated the most original results of his research-reflections on the labour market. And here the questions already on the table are compounded by yet another one: why did he choose *Industry* as the title of a book that was the summary of a general text like *Principles*? The defiant intent of erasing the old book – Heaven only knows why, and assuming such an intent ever existed at all – is hardly a sufficient explanation. I am more inclined to think that it shows the lengths to which he was prepared to go during that period in order to prove his point about the two-fold industry-market concept, alias production-exchange: although these two aspects were obviously complementary in the edification of the market society, by giving his work that title Marshall made it plain that the driving force was “industry”.^[107]

Yet we have not come much further in seeking an answer to the question raised at the beginning of this section. What, indeed, did Marshall study during the years following *Principles*? Clear and unambiguous signs are rather thin on the ground, but the hypothesis can be advanced that Marshall imperceptibly shifted from the project he had entertained in his youth, concerning *social discords*, to one of intensive exploration of the phenomenology of industry, where a flash of inspiration sparked by research on topics midway between Spencer’s *First Principles* and Darwin’s *On the Origin of Species*^[108] led him to discover the laws of progressive complexity of industry. There is appreciable evidence in his correspondence in support of this hypothesis. This was the period in which Marshall incurred the disapproval and even the disparaging irony of many, not excluding the mild-mannered J.N. Keynes, for allowing himself to become engrossed in books on the most varied aspects of the economic situation. As I see it, the “dream” of this *fin de siècle* Marshall was to disentangle the interwoven strands of specialisation and integration, homogenisation and diversification and the incessant alternation of the principles of continuity and substitution, in a quest to identify the laws guiding the formation, subdivision and dissolution of industrial sectors and their corresponding markets.

That Marshall’s thoughts were leading in this direction is also suggested by the fact that during this same

period he: a) sought to penetrate into the tangle of facts “like an artisan”, with his “Red book”;^[109] b) discovered the marvels of multiple correlation,^[110] to which he was extremely attracted, although he was also rather distrustful of it; c) endeavoured to improve both the tools (extenuating diatribe on means^[111] and graphic representations) and also the statistical material (e.g. his proposals for modifying the manner of conducting statistical surveys) needed by the economist; d) urged his star pupils to pursue studies that would enable them to get to grips with the real economy;^[112] e) realised that the *ceteris paribus* clause, an essential ingredient of Book V of *Principles*, would be insufficient to protect economic abstraction against the onslaught of the attendant phenomena.^[113] In short, the conclusion towards which my conjectures seem to be pointing is that after *Principles* Marshall allowed himself one more grand attempt at a theory of social conflict, but when it came to the crunch this one would turn out to be every bit as over-ambitious as the one on which he had tested his wits in his youth. *Industry and Trade*, and to a much lesser extent *Money, Credit and Commerce*, disclose to posterity that portion of the results of the undertaking which he decided to make public. Admirable results, as is slowly but surely being acknowledged, but certainly results that were inadequate with respect to the ambition cherished by the man and the grandiose character of the plan he threw overboard – assuming, that is, that my hypothesis is warranted.^[114]

11- The fourth anomaly: “proper” economic science”

I understand economic science to be an application of powerful analytical methods to unravelling the action of economic & social causes, to assigning each its part, to tracing mutual interactions & modifications; & above all to laying bare the hidden causae causantes”

Letter to W.A.S. Hewins dated 29th May 1900, *Correspondence*, 2nd vol. p. 280.

Bearing in mind the conjectures outlined above, let us now, finally, turn to what can be considered the mother, and at the same time the crossroads, of all the anomalies: the Marshallian conception of economic science.

What is economic science? It is a constant spiral of field research, logical models material to such research and general reflections on economic phenomena, which latter are identified with the most ordinary and recurrent acts of life.^[115] The crucial point that differentiates Marshall from other contemporary figures, and even more so from later thinkers, is that instead of stressing the individual moments of reflection and observation, either deductive or inductive, he drew attention to their necessary “psychological co-presence” at every stage of research.^[116] Thus Marshall came down firmly on the side of the “fine blend” of the two moments.^[117]

Inside every economist there are actually, according to Marshall, three characters: the investigator, the modeller and the philosopher, who act in coordination in a highly specific manner. The first is the “specialist” (e.g. Chapman when he studies the textile district of Lancashire), while the other two, in different ways, jointly act as “generalists” (e.g. Edgeworth).

The economist-investigator must: a) immerse himself in the problem under consideration, suffusing it with all the intuition at his disposal and seeking both to acquire and to refine his “sense of proportion” by work in the field; ^[118] b) make use of the most powerful tools he can find that derive from the aforesaid social research,^[119] which are set out and neatly ordered in works on empirical research methodology.^[120]

On the approaches to unravelling linkages among social facts, Marshall traces a distinction. I am unable to say how original his comment was in those years, but it certainly seems important. Thus on the one hand there is Le Play’s method, i.e. “*intensive* study of all the details of the domestic life of a few carefully selected families”, while on the other there is “the *extensive* method of first rapidly collecting a large number of observations with the hope that any inexactitudes and oddities will balance each other out, and subsequently proceeding to interpret the data in the form of statistics”.^[121] The first of these two methods, which requires a “rare combination of painstaking care in selecting the cases and acute perception and sympathy in interpreting them, is - at its best - the best of them all”. However, “in ordinary hands it is likely to suggest less reliable

conclusions” than the other.^[122]

I cannot omit a mention of the distaste Marshall invariably displayed for abstract discussions on method. The less time wasted on such things, the better, Marshall felt; instead, any method that sets about deciphering facts is acceptable.^[123] This signals his rejection of an idea towards which others, e.g. J. M. Keynes, were more favourably inclined, namely that “the method” can be a sort of “machine” which need only be applied rigorously in order to produce, semi-automatically, the best approximation to “the truth”. What Marshall proposed as the pivotal point of his reflection was not an abstract method, but a profoundly rooted conception he himself had developed, based on a dynamic idea of man in society.

The economist-modeller must seek first and foremost to construct his models in such a manner as to ensure they can be of use for field research, building them on the basis of statistical and non-statistical information that is historically documented and accessible. When confronted with the choice between the appeal of elegance versus the equally appealing concept of “falsifiability”, the modeller must always opt for the latter.^[124] But I am well aware that this statement is likely to raise a few eyebrows: it is, I imagine, this part of the revisitation of Marshall that is bound to stir up most controversy in the present cultural atmosphere. The truth which has to be faced is that Marshall awards only a limited, circumscribed, slightly asphyctic, role to the construction of theoretical models, especially mathematical models, whereas today they are adored as if they were veritable fetishes. Which is exactly what Marshall feared.

One noteworthy point, although slightly more difficult to comprehend, is that Marshall did not view the essence of economic research as residing in the collection of analytical models, to be pulled out of the tool drawer: precious though they may be, they have a purely...instrumental value.

Naturally, this should not be taken to mean that Marshall was oblivious of the pleasure that can be had from unconstrained model-building, or that he was insensible of the mental asphyxia that can stem from excessive anchorage to available data or to the specific nature of the particular problem under examination.^[125] However, he did believe that orienting the intelligence of the modeller-economist towards problems that touched the sensibilities of flesh and blood agents would, all things considered, accelerate the process of advancement of social knowledge.^[126]

Finally, the philosopher-economist should not miss any opportunity for proposing a valid generalization of the results of all specific forms of field research, or for setting up correlations among generalizations already reached and thereby building up increasingly abstract logical patterns. This means, incidentally, that someone who is purely a philosopher by trade and does no field research cannot travel very far. The real philosophers of economic research are therefore those who are the best researchers, those who are most painstaking and intent on reflection.

In other words, the progress of economics depends on a much broader multidisciplinary or indeed interdisciplinary process, in which all participants – theoreticians of all kinds and levels, researchers doing work in the field and even intelligent and self-critical practical operators – play their part. In the last analysis, one might almost go so far as to say that in Marshall’s vision, the progress of economic science also includes such things as the autobiography of a famous person like Henry Ford, the reflections of a successful financial speculator, all the way to the “great” novels on corporate dynasties.^[127] In this perspective, the spiral of economic knowledge is fuelled by a twofold source: on the one hand, all these investigations and reflections that spring from everyday life, and on the other, the continual distillation of just a few major lines of reasoning that have philosophical implications. But this is not all, for a non-negligible contribution is also made by a sequence of theoretical models that stylise certain aspects of the particular element of reality that is coming under close scrutiny (e.g. the partial equilibrium of the market for a homogeneous and well demarcated commodity), or forge tools for general use (e.g. elasticity); such developments help to explore certain types of connections that anyone resorting to ordinary logic – unless he or she be Ricardo – will surely struggle to grasp. But once these connections have been brought into sharp focus with sophisticated mathematical tools, they still need to be clearly expressible in ordinary language, in terms that convey their logical essence. Scholars studying economic activity thus proceed by systematically carrying out cross-studies of production environments and exchange mechanisms (*Industry and Trade*), in a constant alternation and recombination of empirical research and

theoretical modelling.^[128]

However, this to-ing and fro-ing between analytical models and field research reveals its greatest value only when it produces something that ultimately enriches our stock of general principles. We therefore have a complex scaffold of generalizations, say, first level generalizations, such as economies of scale and variety, the principle of concentrated reserves, etc...etc.;^[129] we also have second-level generalizations such as the principle of substitution on the margin, and third level generalizations such as the Spencerian mechanism of specialization-integration, etc.^[130] The core of social knowledge consists precisely in this system of highly general principles that have sprung from, and are continually tested and validated in, well conducted social research. This enables us to renew the circle of the reading of social facts over and over again, soaring to ever higher realms of complexity.

The picture emerging from this depiction is most definitely *not* one of a theory that first identifies its central problem (eg. allocation of scarce means among several competing goals), next freely grows on itself, and only afterwards “plunges” into social phenomena, where it makes use of no other tools than formalised quantitative methods. Quite the opposite: it is a theory that arises and grows in the field together with its tools, “getting its hands dirty” if need be, and it displays some aspects that cannot be reduced to the form of quantitative models. What is more, it engages in dialogue with flesh and blood men, elaborating the signals of human action according to the two methodologies mentioned earlier, intensive and extensive.

It is in this light that one should consider Marshall’s reservations concerning Edgeworth, a great, very very great “half-economist”:^[131] that is to say, only a “generalist” in the Marshallian sense. Such reservations are clearly voiced in the Marshallian correspondence, where Marshall states in no uncertain terms: “*The work of the economist is ‘to disentangle the interwoven effects of complex causes’; ... for this, general reasoning is essential, but a wide and thorough study of facts is equally essential, and ... a combination of the two sides of the work is alone economics proper.*”^[132]

12. Towards a theory of industrial evolution.^[133]

Marshall thus drew his fundamental methodological inspiration for economic studies not just from Kant and Hegel, who loomed large in the background, but also from Spencer and Darwin. Delving into the latter two writers in his early years, the young Marshall spent long hours passionately pouring over their every word, presumably in fervent conversation with Clifford. The essential point of the methodological pattern Marshall cherished is, as I see it, that if the continuity of the spiral “reflection, observation, reflection” is to be preserved, then one must create a bridge – the strongest one possible – between the concepts of theory and the tools of research in the field. This will lead to the imposition of constraints, in terms of unit and method of investigation, which will apply both to field research and modelling. Field study must respect certain non generic logical requirements, and must above all bear in mind the concrete possibilities of quantification and modelling. Modelling activity, in turn, must bow to the requirements of that dialogue. The equilibrium model of the market with a homogeneous and well demarcated commodity is only an elementary and almost symbolic example of what Marshall intended to build.

The economist, Marshall argues, craves for facts, but not all facts supply him with adequate material for his studies. He will need to conduct his studies in “organic blocks” that satisfy certain pre-requisites. Study of a given block of facts is useful for the cognitive spiral if the block in question is: a) conceptually distinguishable, within certain limits,^[134] from others that are both similar and contiguous; b) empirically identifiable; c) relatively more stable than the individual facts of which it is composed.

Take the field of biological phenomena. Here the species, with its reproductive closure, its power of multiplication and its notable stability over time, is precisely the main unit around which research experience is accumulated.^[135] What, then, is its equivalent in the world of social phenomena? The answer I think Marshall would give is that the best approximations are the “economic nations” of the first type, the technologically most easily isolated industrial sectors, or markets of homogeneous and well demarcated commodities. Each of these units lives in a situation of continuous renewal of its elements – the firms and families or the buyers and sellers, yet

for a period of time that is long enough for comparative observations to be made, each one also retains its individual distinctive features, which are linked to its specific technical and cultural base.

If the economic situation were stationary, study of the different “economic nations” or the different “industries” or homogeneous and well demarcated markets would, providing it were suitably generalised and incorporated within an adequately systematic framework, totally exhaust the task to be performed. But if that situation has within its bosom an inexorable principle of change – that is to say man himself, impelled towards change and progress^[136] - then the problem will also include the explanation of that very force of change.^[137] The crux of this part of Marshallian discourse thus lies in identifying: a) where and how variations arise within the industrial framework that constitute the material on which selection operates; b) how the selection process takes place.

Biologists seeking to identify the propulsions that engender species modification resort to in-depth study of the different environments in which a species lives: “The individuals of a given species are organised into populations by virtue of their genetic bonds; but insight into the behaviour and history of these homogeneous populations with respect to the species can be gleaned only in correlation to the behaviour and history of other populations. The biotic community is definable... as the smallest group of populations that can be studied and identified as a more or less self-sufficient unit”.^[138]

An interesting question now appears. What is it, in my reading of Marshall’s view of economic science, that corresponds to the biotic community in which species modification begins? The answer I would propose is the following: it is the “district”,^[139] or locality, or local system, that Marshall interpolates – enigmatically, at least for the mainstream economist – in many definitions of general problems.^[140] Let us now take a look at a passage from *Principles* which highlights the functioning of this incubator of variations. “Each locality has incidents of its own which affect in various ways the methods of arrangement of every class of business that is carried on in it: and even in the same place and the same trade no two persons pursuing the same aim will adopt exactly the same roots. *The tendency to variation is a chief cause of progress* (italics not in the original) ... In some trades, ... as for instance in some branches of the wood and metal trades, in farming, and in shopkeeping, there can be great variations. For instance, of two manufacturers in the same trade, one will perhaps have a larger wages bill and the other heavier charges on account of machinery. ... And in minor details the variations are numberless”^[141]. This teeming wellspring of variations that surge incessantly around a common production theme, in response to an infinite multiplicity of local and general stimuli, constitutes the breeding ground on which the principle of substitution operates, representing the social equivalent of the principle of natural selection.

To be sure, a factory, especially if large, is already a “local system”, but it is an “artificial” system, too geometrical, hierarchically structured and finalised to profit to generate the entire range of possible spontaneous variation that is latent in the head of its members. A factory, like a locality in the strict sense, is an assiduous producer of variations, above all if it devotes a division of its own to that specific need.^[142] But even in the latter case the welling up of variations is likely to develop along fairly predictable and reproducible lines. Overwhelmingly lacking will be the serendipity and conviviality of relations characterizing the chaotically created environment of the local system.^[143] In contemporary post-Marshallian industry, however, there is a specific function of orientation and acceleration of variations: scientific research. Scientific enquiry intensifies the quest for variation, either by systematically exploring a wide range of alternatives, or by developing organic projects designed to undertake research on certain characteristics. Now, in the real local system, variation is the sum of spontaneous and “induced” variations. But it is important to bear in mind that in Marshall’s day, variations brought about by scientific research (like mutations resulting from livestock breeders’ specialized selection programmes) represented no more than an exiguous fraction of spontaneous change. Furthermore, even today, at least for certain types of production, it is the spontaneous, production-based and organizational innovations that constitute a significant portion of the total.

Consequently, whenever a firm belonging to a certain compact production locality more or less accidentally produces a technical or organisational “anomaly” in the business framework, the anomaly will be judged on its results. Thus the crucial factor in determining whether it is adopted or discarded by other firms in the same area is the extent to which it proves successful. If it achieves success in its place of origin, it becomes

a candidate for expansion to other similar environments, and it may eventually reach the stage of giving rise to a new industrial sector inside the old one, or a new market that is added to the network of existing markets. It should be pointed out that the process by no means isolates production from exchange, since one of the features of the process in question is that the increasing complexity of the original industry is accomplished through the interposition of new markets within its different phases. Conversely, the formation of new markets follows on from the growing complexity of production.

Industrial change thus always originates from some concrete place (a large factory or local system) where, under the pressure of competition and the impulse to emulation, the dynamic interplay of skills and aspirations incites the factory or the population of the firms to expand and move in the direction of increasing complexity. This is none other than an offshoot of the principle of Adam Smith, according to which the division of labour is a function of the breadth of the market and viceversa. But in any area the progressive subdivision of industry, unless it be a large factory, must necessarily be accompanied by a process wherein each new entrepreneur becomes confident that a regular and remunerative outlet (at first local and visible) for his products will be found. This implies that study of the confidence-building process must proceed hand in hand with study of the increasing complexity of industry.^[144] A further question now comes to mind: since the core of this process can be seen either as industrialisation, market formation, anthropisation of the natural world or construction of human society, can the study of this core be conducted while remaining rigorously within the framework of economic analysis? Might it not be necessary instead to call upon sociologists, anthropologists, social psychologists, and so forth, as well as economists? If one wishes to search for those most crucial “variations” when studying the dynamics of a concrete and determined local system, then what is required is a far more co-ordinated action among the different disciplinary approaches than that afforded by the study of capitalism in its canonical form: for the latter is founded on accumulation and scientific-technical progress apprehended according to the developmental paths of broad sectors that do not possess the requisites outlined above.

13. The fifth anomaly: from economic science to social science

"Social science or the reasoned history of man, for the two things are the same, is working its way towards a fundamental unity; just as is being done by physical science, or which is the same thing, by the reasoned history of natural phenomena. Physical science is seeking her hidden unity in the forces that govern molecular movement; social science is seeking her unity in the forces of human character. To that all history tends; from that proceeds all prediction, all guidance for the future.

Memorials, pp. 299-300

The evolution of economic science, although characterized by its own distinctive traits, was in Marshall's view to be seen as a piece of the vast mosaic of the construction of social science over history.^[145] Social science can be conceived both as a genuine endpoint, even if remote, and also as a cognitive idea towards which one should constantly strive. I contend that Marshall stands in this latter perspective.

Thus the crux of this part of my paper, which is somewhat at variance with currently prevailing cultural attitudes, is that Marshall did not abandon his strong anchoring to Comtian *consensus* among social phenomena. A true explanation of any part of these (e.g. the classical balance between demand and supply of a commodity in a period that is neither extremely short nor too long) must, therefore, always allow for the spatial-temporal totality of social relations. And what is worse, such relations are not only those obtaining at the present time, but also the subjective representations of future situations, scaled and distributed in sundry ways. This implies that the totality of social relations looms over the economist, who seeks to defend himself by “imprisoning the totality according to scalar criteria” in the sack of *ceteris paribus*.

Yet there is still a way to enhance ordinary logic when attempting the arduous task of unravelling the tangled effects of complex causes: namely by mobilizing the powerful analytical methods that mathematics and statistics have placed at the service of the science of nature. This result can be achieved by exploiting the market as a tool for measuring the importance of the human motivations that underlie decisions. How desperate a traveller is to quench his raging thirst under the blazing sun can aptly be measured by the price he is willing to pay for a glass of water. Thus insofar as it is possible to hypothesise a tendency towards convergence of current prices to “normal levels” – the *central truth* of his 1876 essay – then even a most trivial element such as current

prices, suitably averaged and normalized, becomes quite a respectable tool for measuring the force of motivations underlying behaviour.

Once the facts have been recast in numerical form with the aid of prices, they can be treated with methods and tools derived from well-established sciences. For instance, as far as the short or medium term is concerned, that is to say for periods that are neither instantaneous nor too long, it is possible to transfer the model of partial static equilibrium of physics to economics, with only minor modifications. As one approaches short and medium term equilibrium, where it can be supposed that the *ceteris paribus* condition substantially holds, the movements of the partial equilibrium theoretical model are of assistance in deciphering the movements of certain portions of the real situation.^[146]

But the most serious difficulties are encountered when one seeks to go beyond the short term. The movements of the – unspecified – entities imprisoned in the *ceteris paribus* sack have an undecipherable effect on phenomena observed in the market. They may or may not balance one another out.^[147] Basically, then, the longer the period to be analysed, the less validity the tool displays. One is therefore compelled to fall back on the *Red Book*^[148] with its blend of historical series and qualitative information, wherein the scholar's eye scans the data up and down the temporal axis in search of significant correlations, combining them, of course, according to his own best judgment.^[149]

If the ideal model of a science of society is the total explanation of social reality, virtually without residue, and if it is only by means of its transit through the market that a part of it can be explored scientifically, then the most appropriate course of action to, shall we say, “tame” an increasing portion of disturbing forces is to proceed to systematic enlargement of that portion of the field of investigation in which economic tools function most successfully. Now, let us assume for a moment that the market has indeed by now become the stable form of social organization. Marshall was well aware that within certain limits the market would in fact be capable of measuring choices, and therefore of disentangling their intertwined connections, but only if the area of depersonalized exchange were sufficiently broad. In the last analysis, if the whole of life itself, in all its manifestations, were reduced to commodities, the tool would be absolutely in its element. But this is not only impossible: to Marshall's mind, it is not even desirable.

Marshall long cherished the idea of a strategy for the expansion of economic science into what we may call his “sociocultural container”. Since “any enlargement of that scope [of economics] must no doubt result in some sacrifice of definiteness and precision”,^[150] Marshall argues, it will be necessary to proceed with extreme caution, constantly comparing the costs and benefits of expansion. In an ideal world, one would hope to have “a general principle which shall determine the point in the widening of the scope of economics, at which the growing loss of scientific precision would begin to outweigh the gains of increasing reality and philosophical completeness”.^[151] This, roughly speaking, is actually the path followed by national accounts-keeping. But then another question rears its head: why did Marshall erase this passage in the fifth edition of *Principles* (1909), leaving a “gap” in his scientific project that went totally unnoticed?

Whatever the reason, that abandoned passage offers us a chance to take a peep at the most intimately Marshallian vision of economic knowledge on the march. In itself, this was but a tiny domain of social knowledge, yet it was an area in continuous expansion according to a highly idiosyncratic method of its own, swathed as it was in an interminable array of considerations, a land stretching out to boundless horizons - the dominion of the other social sciences and of everyday experience.

If this was economic science, how should it be taught? Basically, by appealing directly to the personality of post-graduate students^[152] and ensuring that they become involved. The three most important aspects of this endeavour are: awakening in students the passion for research; discouraging students from setting out on the alluring but rather oversimplified path of pure modelling; showing them “how it is done”.^[153]

Although Marshall obviously relied heavily on statistics, he was rather distrustful of the statistics of his day, and likewise of the incipient econometrics. In the case of statistics, his mistrust stemmed from his rather low opinion of the quality of the data utilized;^[154] as regards econometrics, it was because he smelt in it a tendency

towards empty formalism.^[155] Essentially, what Marshall truly hoped to achieve was to educate his students to creativity combined with rigour; he had no interest in producing snobbish researchers who could hardly wait to flaunt their virtuosity in constructing pointlessly complex and/or elegant models. It was necessary, he argued, for young scholars to submit to the harsh intellectual discipline which originates from the fact that: a) the social world is far more complex than that of biology, which in itself is already complicated enough; b) the economist is weighed down by the duty to contribute to alleviating the suffering of victims of the marketplace.

And what lay at the end of that road, what was it that Marshall could dimly make out? Perhaps a book, or so I would conjecture, one that, playing on the title of Darwin's well-known work, one might imagine to be called *Origin and evolution of industrial structure*.

14. The sixth anomaly: the nature of the market.

"What may be called the 'commercial adjustment' by means of an equilibrium between demand and supply price has not any claim to yield a true maximum of satisfaction: it can have no claim to be ideal. All that can be reasonably claimed for it is that so long as present inequalities of wealth are maintained by existing social institutions it would not be easy to obtain by artificial contrivance a much better adaptation of man's effort to attaining man's ends than is provided by this commercial adjustment."

From an unpublished manuscript entitled *The several functions of individual, associated and collective enterprise in industry and trade*. From: G.Becattini, *Market and .. cit*, p. 182

An exchange of letters with Bishop Westcott in 1895 allows us to state with absolute certainty that Marshall continued to reflect on the enigma of the social system even in his later years, following a line of thought that had greater affinity with the Christian Socialists' critique of the market than with Marxian criticism or that of the Fabian socialists. The issue that now tormented him concerned possible effects on the British character caused by the criticism of free competition being levelled by certain intellectuals – late followers of Maurice and Ludlow. For deep down, he still felt quite close to this group of intellectuals. So there could be no better occasion to test the strength of his defence of competition. Marshall admitted that the fundamental reservations expressed by the Masters of *Christian socialism*, which were based on moral considerations, were justified: 'In 'competition' as it is commonly understood, I find something crude, ugly, harsh; but with this evil, which can and ought to be diminished, I find very much good that has hitherto been attained by no other route'^[156]. His strongest objection to Westcott was that, with man the way he is, every criticism, if unaccompanied by any convincing alternative proposal, could easily be adversely exploited by anyone with a quick tongue and little inclined to submit to social duties. This could have disastrous consequences, Marshall worried, for a country that had to operate in a situation of world-wide competition. And it could lead to a serious set-back in the progress of society in general.

This has no implications whatsoever on whether the motivations to act that are conventionally associated with the idea of communism should, in abstract terms, be regarded as desirable: Each individual should give according to his means, each should receive according to his needs. The latter are, according to Marshall as also for Westcott, certainly nobler than those that drive a market society. But they are incapable, as Marshall undeniably concluded as early as 1875, after visiting one of the communist communities of North America, of ensuring the proper functioning of a complex society amidst a changing world.^[157]

This raises a further query, concerning Marshall's approach to the market society. Personally I have reached the conclusion that he saw it as a fortunate solution to the problem of the survival and development of the human species, while yet remaining fully aware that the market was still to some extent unfathomable and therefore ultimately disquieting. Like all economists, Marshall laid great emphasis on the market-induced heterogenesis of ends (the central truth of his 1876 essay), but he repeatedly stresses that this point has "no philosophical reality". It is certainly a fundamentally important product of human history, but it is neither ethically "just" nor aesthetically "pleasing" (for it is crude, ugly, harsh), nor does it offer any guarantee that it will not in the end turn against man himself. "The harmony resulting from the free play of self-interest, untrammelled by combination and monopoly, would indeed be nearly perfect in a community of independent craftsmen". But the onslaught of capitalist relations (capital and wage labour) modifies the rules of the game in such a way as to yield no definite conclusions that admit of unambiguous judgment. Thus the capitalist market appeared to

Marshall as “an *artificial compromise*, [which] lacks philosophic reality. Its main strength lies in the arithmetical definiteness and precision it imparts to the forces of industrial organization.”^[158]

It may be objected that Marshall was not alone in nurturing doubts about the market, for many of the exponents of mainstream marginalism, such as Wicksteed, themselves had no lesser doubts. One may further object that welfare economics, with Sidgwick and Pigou, effectively rose from the failure of the market. This is admittedly the case, but what I wish to underline is that the suggestion of intrinsic casuality of the market mechanism advanced by this, as it were, “covered” Marshall may harbour within it a fundamental reservation, of unexplored gravity.

15. The fresco and the cartoon

Now that we have reached the end of this deconstructive and reconstructive journey through Marshall’s thought, I feel it emerges fairly clearly that under the well-known and celebrated *Principles* there lies a cartoon of no lesser importance, for a proper reading of Marshall, than the universally admired fresco. It was a sketch destined to remain merely a statement of intent, admittedly, yet it provides a key to deciphering everything that was incorporated in the book Marshall did write. One can now understand why the visible fresco is studded with signals – like the six major anomalies illustrated here and a swarm of other minor signals – all of which can be discerned and deciphered only in the light of the hidden cartoon. This does not mean they are not present in the fresco – in fact they are. Indeed, they are clearly visible in the fresco, often standing out in strong relief (for instance man as a variable entity), sometimes hidden in apparently secondary details, yet no-one notices them. Meanwhile, experts rake through Marshall’s pages seeking to decipher the scene of the fresco in terms of intentions the painter adopted perhaps only *oborto collo*, or, worse still, never had in the first place. Too often the eye of contemporary economists – or, more seriously still, that of the historian of economic thought – sees in Marshall only that which forms a prelude to the current state of the “discipline”.

Let us now run through our six anomalies again, casting them in a positive light: a) the idea of a theory of human development; b) the idea of a concept of industrial capitalism more open to a variety of developments than is the case in the classical-Marxian framework; c) the idea that the principle of substitution acts electively on the margin of social groups bound together by forces of cohesion whose nature and strength is not well defined; d) the idea that with the aid of social science, of which economics represents the robust analytical backbone, it is possible to identify the laws of increasing complexity of human productive activity; e) the idea that the cognitive horizon of the economist ultimately remains the overall and integrated understanding of social facts; f) his idea that the market is – I venture to suggest – something certainly “actual” but perhaps not “real”. Do these six anomalies constitute a system – or should we say, an antisystem running counter to current economic science? Let us take a closer look.

His two main unrealised intentions were, as we now know, *a general theory of social discords* that would provide an answer to the Marxian theory of the class struggle and *a general theory of the evolution of industry*, which would draw on the research of Herbert Spencer and Charles Darwin, but also on descriptive sociological studies *à la* Spencer as well as anthropology, demography and social psychology, thereby offering a key to social change. Great uncertainty reigns in the present cultural climate concerning the status of the fifth anomaly, the quest for a general science of society. Prevailing opinion today appears to be opposed to such a concept, but in my view the last word has not yet been said. In contrast, the first and second anomaly seem to be regaining ground in the overall body of recognised economic studies. Disquieting, finally, at least with respect to the economic vulgate that dominates politics and ideas in circulation today, are Marshall’s doubts concerning the “philosophical reality” of the market.

Among the many speculations to arise from these considerations, there are a few that deserve greater scrutiny. Marshall’s thought, if I am correct in my interpretation, is anchored to the culture and problems of what I like to call “the aftermath of Mill”. Suffice it to reflect on the subterranean life of the problem of the “economic nationality” raised by Mill and Cairnes, the effects of which made themselves felt in Marshall’s work right up the very end.^[159] The “other thinkers”, seduced by the project of canonical marginalism, soon lost sight of it. The “rigour” of the new science was content to establish its foundations on the facile identification of economic nationality with political nationality.^[160] It would take many decades and much social upheaval before the false theorems descending from this assumption could be demolished. Or consider the Millian, Spencerian and

Comtian “methodological aftershocks”. Or Marshall’s metaphysical doubts about the market. Many of these discrepancies hint at original approaches to the problematic post-Millian scene. Now, I am not defending the manner in which Marshall set about solving these problems: I merely underline that he solved them in a different way from the overwhelming majority of economists of his time.

Taken together, the six anomalies appear to be rooted in a vision of human agents who, by virtue of the transformations they experience, for better or for worse, eventually transform the entire world. How different is this view from the rational neoclassical agent! No decreasing returns here, none of the equilibrium that is pivotal to canonical marginalism, but increasing returns and change: this is the philosophical background of Marshallian analysis. All things considered, therefore, the conclusion towards which I lean is not too distant from that of Dardi, although argued in a different manner. Marshall cannot be placed either further on or further back along the path of neoclassical economy: rather, he should be placed elsewhere.

Marshall’s contradictions and uncertainties, on which critics have a field day, are argued in the reading presented here to spring both from tensions internal to his thought and also from distortions brought about by an inappropriate interpretation. The internal tensions are due to the extravagant ambition Marshall cherished from the very start to forge an economic science that would combine “increasing realism” with “philosophical completeness” – an ambition which even today leaves scholars perplexed and questioning whether it can legitimately be cultivated. What is more, in pursuing his enquiry Marshall set himself an even more exacting task: that of furnishing the answer to two questions from which he had started out in his youth: a) how to organise society in order to eliminate the *residuum*, b) how to release the potential for intellectual growth hidden deep in the mind of billions of simple men. This hefty burden of tasks inevitably led him to stray beyond the confines of the very discipline he was seeking to define, moving towards a type of knowledge that would encompass the totality of social phenomena. But the tool he excogitated, namely the market as the force that would keep human motivations on course and ultimately escort that grandiose, composite and gradual project to maximum efficiency, subtly conflicted with his own aspirations. This was a tension between plan and tool which, I believe, more properly warrants a greater effort at understanding and at possibly critical elaboration rather than an attempt to eliminate it by “clanging the cymbals of mathematics”.

Several years ago I concluded that Marshall’s system had no logical closure,^[161] and I would stand by that same conclusion today. The principle of substitution cannot, alone, govern the social universe; it requires “something” that is co-ordinated with it and can explain the emergence and dissolution of the social bodies on the margin of which it produces its effects. Alternatively, there must be a transition to a higher plane of generality, allowing us to take in both problems at a single glance. Something, in other words, hinging on the Victorian concept of character – or on some other ill-definable quality – that would link the forms of social organisation to the behaviour of ordinary subjects, and viceversa. Is it possible to detect that something while remaining within the framework of contemporary economic analysis? Some would claim it is. Only time will tell.

If a verdict is given on the basis of the exigent yardstick of, so-to-speak, Marshallian methodology, what then remains of the positive work of this author? On the plane of the unravelling of factual nexuses, the most significant results are the three books of *Industry and Trade* (1919), the two chapters on labour and the trade unions that he added to his *Elements of Economics of Industry* (1892), and just a few other items. It is in these works that he makes a statement which, if summed with the ideas advanced earlier by figures such as Adam Smith or Karl Marx, enriches our knowledge of capitalism as it was in his day and as it is now. Absent from the roll-call are the two most important works - that is, if my surmise is correct: *Theory of Social Conflicts* and the *Origin and Evolution of Industry*.

His major “theoretical” contribution, that which gathers together the most innovative generalizations, is contained basically in the third, fourth and sixth books of *Principles*; flashes of novelty also crop up here and there in *Industry and Trade*, and a few other writings.

And of course, also in his celebrated fifth book, where Marshall displays his dazzling model of temporal equilibrium. I fully understand that mainstream economics includes this among the most seminal creations of his life history, but – and this is the question I ponder constantly – how did it measure up in Marshall’s own assessment, in his most intimate feelings? An admirable second-best, I would say, as compared to his most lofty ambitions. Like *The Wealth of Nations* or *Das Kapital*, more or less, or, in a different field, the *Origin of Species*. Perhaps he did not exactly view it as a mere trifle, but certainly as something very like that, a diversion,

shall we say. It is emblematic, in my opinion, that at a certain point he defined his celebrated international trade curves, which belong to the same type, as mathematical pastimes.

I realise that I am likely to meet with the objection that there are, as I mentioned earlier, explicit declarations in his correspondence concerning its centrality within *Principles*. However, one must distinguish between a centrality in the organisation of a book, which is a social product, and a genuine centrality in his system of thought. Furthermore, the suggestion that he allowed himself to be carried away by the incorporation of this segment of his ideas in the glittering new science of economics is no cause for scandal or surprise. For if I am not mistaken, the road that leads from those models of comparative static to the evolutionary laws of economic – nay, social – activity, the pilgrim's one and only real Mecca, seemed to him to be stretching out ever further into the distance, bristling with obstacles. So, only an introduction to the *real thing*: this, in my view, was his final verdict on the fifth book of *Principles*.

Unquestionably, models of comparative static are of importance, and learning how to handle them properly is an integral part of the training of the Marshallian economist, but they are hardly the stuff of a triumphal ovation. They are more akin to piano exercises by a novice practicing his scales. The real concert, the one in which the pianist's ability to interpret a score is finally put to the test, is quite a different matter. Now as I see it, there were not one but two concerts in Marshall's life in which, as it were, the performer failed to make an appearance, but both were fairly distant from the tune played in book V of *Principles*.

This gives some idea of the futility of the diatribe on priorities. If my conjecture as to what really mattered to Marshall is correct, then there are no true priorities that need concern us: apparently similar words occurring both in Marshall and mainstream marginalism cover concepts that are functional to substantially different research programmes which, as I hope to have convincingly demonstrated, are in many respects incomparable. And Marshall was mistaken, and led others to fall into error as well, when, in a moment of weakness – even Homer may drift off to sleep at times – he allowed himself to be drawn onto the shaky ground of individual priorities, riveting his attention on technical details and temporal sequences which, to my mind, have no real significance at all. The devious way in which he proceeded does not express the guilty conscience of a plagiarist caught red-handed, as has sometimes been insinuated. It is far more likely that he himself was only dimly conscious that he was actually talking about something quite different. [\[162\]](#)

Just a few more comments. Firstly, the role of biographic studies for a true understanding of the thought of an author. In any published work – even in that of a parsimonious and careful author such as Sraffa – there are always bound to be contradictory or unresolved aspects. It would be surprising if this were not the case. How should one pick out the most significant position? Select the one that is of greatest help for current problems? Select the one that is most extensively developed in the rest of the author's work? Choose not to choose, maintaining the contrasting positions in dialectical tension? I do not mean to say that knowledge of a scholar's life is always indispensable in order to settle such dilemmas; in some cases it is probably not. But in many cases, including the one under consideration here, it is. Without knowing how Marshall proceeded, how he taught, what really mattered to him, who his conversation partners were, who and what irritated him, - in short, without reconstructing the overall context of his life, no incisive judgment on his intellectual choices, even those furthest away from the hustle and bustle of life, can ever be passed. Any statement is doomed to be purely generic, inexorably drawn into the web of our preconceptions.

Finally, recall what I termed at the outset of this paper as the “fearsome” process of disciplinary normalisation. I think that a historian of thought who assumes the current version of a given discipline, or any of its versions, to be a “natural” part of social knowledge and not merely a historical component of the culture of the time, will all too easily fall into the hypostatic conceptions of setting up dividing lines, or categorical methodologies and structures, that have little to do with the problem in its own right, but only with the scholar's contingent manner of addressing the issue. And this, among other things, creates obstacles to an understanding of the message the author really intended to convey. Only by appropriately contextualising an author's ideas will the latter appear to us in their true guise: facets of an exchange of ideas with the men and *milieu* of his time, shaped and determined by the concrete historical setting, not assertions uttered within the vacuum of an abstract search for truth, or, worse still, prefigurements of our present-day, provisional, petty views.

If one truly seeks to grasp what a man's writings or assertions meant in his own mind, I think one must first “draw a parenthesis” round the present conformation of the discipline – which, however, does not imply

relegating it to oblivion or, even worse, ignoring it. But the task at hand means stepping deep into the writer's world and the writer's problems, a journey we must undertake armed, fundamentally, with our own general culture, our intellectual finesse, our desire to understand. Only thus will the writer's ideas shine through and embody Marshall's phrase recalled at the opening of this essay: "living truths, energising, fertile in hope, forcing him to seek further truths".

This is the history of economic thought which we really need.

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[1] As a young man, around 1870, Marshall belonged to a clique of *fellows* of the great Cambridge colleges, composed of Henry Sidgwick, three mathematicians - himself, second wrangler in 1865, William K. Clifford, second wrangler in 1866, J. Fletcher Moulton, Senior Wrangler in 1868 – and a few others. The three mathematicians, as can be read in the Diary of J.N. Keynes, available in the archives of the Cambridge University Library, were called the "smart set", indicating a small bunch of young men who had the habit of talking in paradoxes. For a confirmation of the young Marshall's taste for paradox, see A. Cunningham, *William Cunningham. Teacher and Priest*, London, S.P.K., 1950, p. 19.

[2] The anomalies "stated" in the oral presentation numbered only three, partly for reasons of time, excluding the first and the last two of this text.

[3] The letters I will use in the present paper will be cited according to the progressive number they bear in the impressive and admirable collection edited by J. Whitaker. Cf. *The Correspondence of Alfred Marshall, Economist*, edited by J. K. Whitaker, 3 voll., Cambridge, Cambridge University Press, 1996. Henceforth: *Correspondence*

[4] The centenary of *Principles* triggered a whole series of works on Marshall's thought, but one of the central arguments of this lecture is that the current revival of interest in Marshall is not predominantly due to celebratory ritual, linked for instance to the centenary of *Principles* (1990) or the hundred and fiftieth anniversary of his birth (1992). Rather, there has been a spontaneous re-emergence of a certain portion of Marshall's thought, more specifically of his first two anomalies, in the framework of economic work in the field conducted to clarify current phenomena that are particularly refractory to mainstream economic analysis. The edition of *Principles of Economics* that I will use is the 1961 *Variorum*, in two volumes, edited by Ch. Guillebaud. Henceforth: *Principles*.

[5] Cf. J.M. Keynes, "Alfred Marshall, 1842-1924", reprinted. in A.C. Pigou (editor), *Memorials of Alfred Marshall*, Macmillan, London, 1925. Henceforth: *Memorials*. But it should be noted that the original texts have not always been sufficiently carefully reproduced. Cf. J. Whitaker, "How far do the *Memorials* Versions of Marshall's Essays Correspond to their Original Texts?", in *Marshall Studies Bulletin*, n. 6. 1996, pp. 25-44.

[6] Cf. P. D. Groenewegen, *A Soaring Eagle. Alfred Marshall, 1842-1924*, Aldershot, Edward Elgar, 1995. This is a superb work in which Groenewegen skilfully uses even the smallest shreds of evidence available. Henceforth: *Biography*.

[7] How close Marshall was to Clifford on this point too can be seen in *Correspondence*, n. 25.

[8] Sidgwick, in actual fact, used this colourful expression to indicate his separation from Mill and Comte. Cf. A. and N. Sidgwick, *Henry Sidgwick. A Memoir*, London, Macmillan, 1906, p. 158.

[9] On the context of the specifically philosophical, but also theological debate that enlivened the British scene during that period, see the work by Tiziano Raffaelli "Gli studi filosofici del giovane Marshall", in *Atti dell'Accademia dei Lincei. Rendiconti della classe di scienze morali*, 1990, vol.9, which as far as I can judge constitutes the best portrayal of the British philosophical approach to an understanding of Marshall's thought; see also the two works by Cristiano Camporesi: *L'Uno e i molti. L'idealismo britannico dal 1830 al 1920*, Florence, la Nuova Italia, 1980, and *Scepsi scientifica*, Roma, IANUA, 1985. Naturally the English-language literature on this subject is boundless.

[10] Within the historical literature on this movement, normally ignored by historians of economic thought, I find that T. Christensen, *Origin and History of Christian Socialism, 1848-1854*, Uuniversitetsforlaget, I, Aarhus, 1962, is particularly useful and to the point. For a direct reference to relations between Maurice and Marshall, see: A and N. Sidgwick, op. cit. p. 137 and T. Raffaelli (ed.) "Notes taken by Marshall during discussions at the Grote Club meetings, February-November 1867", in *Marshall Studies Bulletin*, n. 6, 1996, pp. 49-64. I would argue that historians of economic thought do not pay due attention to the criticism of classical political economy by Carlyle and Ruskin. The reflections by the latter two authors exerted

considerable influence over British culture of the time, and thereby indirectly on the development of British economic thought as well.

[11] Cf. J.S. Mill, *A System of Logic, Ratiocinative and Inductive*, libro VI, chap. V, London, Longmans, Green and Co, 1st ed. 1842.

[12] Where it can be seen that the project of rational and conscious management of social activity (effectively, from the “art” of politics to the “science” of administration of public affairs), in response to the worrying anarchy of the market, was common to much of the thought of the time. Even to Mill, despite the fact that he continued to figure as one of the advocates of political liberalism. The Gordian knot of Millian anomalies, certainly no less intricate than the Marshallian anomalies, has given rise to an immense range of literature. See, in particular: G. Duncan, *Marx and Mill. Two Views of Social Conflict and Social Harmony*, Cambridge, Cambridge University Press, 1973; S. Collini, *Liberalism and Sociology*, Cambridge, Cambridge University Press, 1979.

[13] Worth noting is the historicisation of the Kantian *a priori* that the young Marshall derived from Spencer: “with Kant ‘*a priori*’ means ‘of which the origin is unknown’; with H. Spencer it means ‘of which the origin probably dates from a long time back’”. Cf. T. Raffaelli, ‘Gli studi ...’ cit, p. 147. Cf. *Correspondence*, n. 811. Concerning the influence of Spencer’s thought on Marshall’s research programme see: John Laurent, ‘Alfred Marshall’s annotations on Herbert Spencer’, in this issue of *Marshall Studies Bulletin*.

[14] Allow me to take the liberty – in order to justify this statement – of referring to several works of mine in which I address this issue: Introduzione a J.S.Mill, *Principi di economia politica*, (new translation by B. Fontana) Turin, UTET, 1982; ‘Pensiero economico e pensiero politico nell’Inghilterra vittoriana: il ruolo cruciale di J.S. Mill’ in *Il pensiero politico*, 1982, XV, n. 1.

[15] Cf. *Memorials*, pp. 299-300.

[16] Marshall felt considerable affinity with J.M. Ludlow, an eminent “Christian Socialist”, as revealed. For example, by the transcript of the evidence given by the latter in the Labour Commission. Cf. *Official Papers of Alfred Marshall. A Supplement*, edited by P. Groenewegen, Cambridge, Cambridge University Press, 1996. Henceforth: *Official*.

[17] U. Fabietti states: “The birth of anthropology (...) should be set within the intellectual climate of Victorian evolutionism.” *Alle origini dell’antropologia*, edited by U. Fabietti, Turin, Boringhieri, 1980, p. 10.

[18] Marshall’s relationship with this economist, perhaps somewhat overlooked by the history of economic thought, deserves more careful reconstruction. When it was a case of taking up a stance vis-à-vis the contraposition between Mill’s two Irish followers, Cairnes and T.C.Leslie, Marshall, bitterly opposed to the former – whom he considered as disrespectful towards Mill – decidedly sided with the latter. It is worth recalling Cliffe Leslie’s lengthy and favourable review of the work by Alfred and Mary Paley Marshall, *The Economics of Industry* (1879). Reprinted in: Th.Cliffe Leslie, *Essays in Political Economy*, II Ed., London, Longmans etc, 1888. A work on this close-knit group of savants who probed the pages of late Millian works has recently appeared, which touches on some of the questions raised in this lecture. Cf. Jeff Lipkes, *Politics, Religion and Classical Political Economy. John Stuart Mill and his Followers*, Macmillan, London, 1999.

[19] P.Gravrilovitch Vinogradoff was at this very time working on his *Villainage in England* (Russian ed. 1887, English 1892). We have found few other traces of such interests in his correspondence, apart from his passion for the problems of India, which however also arose from practical concerns relating to his teaching duties. But in any case see *Correspondence*, n. 176. The more strictly-speaking Marshallian type of ethnology, if such it can be called, is, instead, linked to the Midlands factories and the London slums.

[20] Cf. M.Paley Marshall, *What I Remember*, Cambridge, At the University Press, 1947, pp. 38-39

[21] At first, it was the thought of the latter writer, more clearly concerned with current issues, that struck English readers more forcefully. Marshall, who possessed the complete works of F. Lassalle (the copy kept in the Marshall Library) engaged in serious discussion on several “constructive” ideas of Lassalle’s, in his short unpublished early treatise. Cf. *The Early* cit. pp. 37-39; *Correspondence*, n. 837

[22] See, further on, the sixth anomaly.

[23] Marshall’s reservations on Fabianism emerge in sharp focus in, for instance, the examination of Sidney Webb that Marshall conducted as a member of the *Labour Commission*. Cf. *Official* pp. 172-213. But see also, for ex., *Correspondence*, nr.396. However, the problem was more general: Marshall was wary of all organisational forms, whether municipal socialism or the great industrial concerns, that impoverished human creativity and introduced rigidity into the organisational plasticity of society. Cf. T.Raffaelli, “Order and Creativity in Marshall’s Views of Social Progress”, *Kwansei Gakuin University Annual Studies*, vol. XLIV, 1995.

- [24] For a more extensive treatment of this subject, which is clearly a sensitive area and, in my view, crucial for an understanding of Marshall, see my 'Market and communism in the thought of Alfred Marshall', *Quaderni di Storia dell'Economia Politica*, 1991, n. 2-3.
- [25] Cf. e. g. *Memorials*, p. 155.
- [26] I draw the reader's attention in particular to the text of the 1873 lecture, The Future of the Working Classes which took up again and expanded the subject of a famous chapter of Mill's *Principles*, responding at the same time to ideas that were circulating during that period concerning alienation in capitalist society. See, preferably, the version of the text reproduced in *Alfred Marshall's Lectures to Women*, ed. by T. Raffaelli, E. Biagini and R. McWilliams Tullberg, Edward Elgar, Aldershot, 1995, p.125. Henceforth: *Lectures*.
- [27] For a quasi-Marxian passage, in which the young Marshall saw wealth and misery polarising at the opposite ends of society, see: *Lectures* p.125.
- [28] Cf. e.g. *Correspondence*. ns 116 and 118.
- [29] Cf. T. Raffaelli, 'Alfred Marshall's Early Philosophical Writings', in *Research in the History of Economic Thought and Methodology*, editor W.J. Samuels, JAI Press Inc., London, 1994. Henceforth: *Philosophical*
- [30] Certainly the Cambridge controversies formed no mean portion of the overall picture. I would like to point out that the restless unbridled genius who went by the name of W.K. Clifford was exploring the same terrain at this very time (roughly 1870). Cf. "On Some of the Conditions of Mental Development" and other writings in *Lectures and Essays by the Late William Kinson Clifford, F.R.S.*, ed. by L. Stephen and F. Pollock, London, Macmillan, 1886. I have reason to believe that there was extensive agreement between W.K. Clifford's general ideas on scientific knowledge and those of Marshall.
- [31] On the limits of this similarity see: T. Raffaelli, 'Il ruolo degli studi psicologici di Marshall nella sua analisi dell'organizzazione dell'industria e degli affari', in *Giornale degli economisti e annali di economia*, October-December 1994.
- [32] The preparatory notes for the fine lecture *On machinery and life*, published by Raffaelli, show, though, that even the individual mind can be suffocated by too many automatisms: for instance education as a mere routine exercise. Cf. T. Raffaelli, 'Marshall on "Machinery and Life"', *Marshall Studies Bulletin*, 1994 and Becattini, 'Market ...', cit.
- [33] There is a need for in-depth investigation of Marshall's participation in the work of the *Charity Organization Society*. Cf. *Biography*, pp. 596-598.
- [34] "I ... repelled with indignation the suggestion that I was an economist: 'I am a philosopher, straying into a foreign land. I will go home soon'. *Early Economic Writings*, vol. 1, p. 7.
- [35] This emerges particularly sharply in the letter to the *Times* dated 30th May 1885 in which Marshall, countering the criticisms levelled by the reviewer of his Inaugural Lecture, gives a more detailed explanation of the concept. Cf. *Correspondence*, n. 160.
- [36] Cfr. *Memorials*, pp. 154-155.
- [37] The classical clear-cut opposition between productive and unproductive consumption is transformed in *Principles* into a subtle distinction between *standard of living* and *standard of comfort*, which I am not aware of having traced in neoclassical authors.
- [38] A fundamental contribution in this regard is given by N. Georgescu Roegen's criticism of the inexorable shift from needs to utility, the need for needs, carried out surreptitiously by canonical neoclassical thought. Cf. the entry for Utility in *International Encyclopedia of Social Sciences*, London, Macmillan, 1968 and his lengthy Introduction to: H.H. Gossen, *The Laws of Human Relations*, Cambridge, Mass. 1993.
- [39] Indicative are the many scattered Marshallian references to the ethnic and racial components of peoples and individuals (e.g. Ricardo).
- [40] Cf. *Memorials*, p. 300.
- [41] Besides, this was the belief held by the mature Mill, from whom Marshall started out.
- [42] In inverted commas to indicate my disagreement with the implicit representation of labour as a commodity for which there is supposed to exist a market, in more or less the same way as there is a market for potatoes. In my view – and, I believe, in

Marshall's eyes as well – this is a half-truth, which points economic reflection in the wrong direction.

[43] In contemporary times, the author who has most successfully taken up this strand of Marshall's thought is Brian Loasby. Cf. e.g. *The Mind and Method of the Economist*, Aldershot, Edward Elgar, 1989.

[44] For example: W. Cooke Taylor, *Notes of a Tour in the Manufacturing Districts of Lancashire*, London, Duncan and Malcolm, 1841; W. L. Sargant, *Economy of the Labouring Classes*, (London, Simpkin, Marshall and Co, 1857) which draws heavily on the classical *Les Ouvriers Européens* by F. Le Play, on whose method of investigation Marshall reflected very carefully, as we will see.

[45] For example: W.E. Hearn, *Plutology. Theory of the Efforts to Satisfy Human Wants*, Melbourne, G. Robertson and Co, 1863. The handbook that formed the butt of Marshall's criticism was probably the one by H. Fawcett, commonly termed "Mill and water".

[46] Cf. A. and M.P. Marshall, *The Economics of Industry*, 1st ed. 1879, pp. 52-54.

[47] From as early as the model in *Ye machine* Marshall showed that he conceived the education of his automaton not as an isolated and self-sufficient process but rather as an interactive process among a number of automata. The singularity of this configuration of the model gives some clue about the degree to which the young Marshall was fervently concerned with the social nature of man.

[48] Cf. A. and M.P. Marshall, *Economics of Industry* cit. p. 53.

[49] There are numerous passages, above all in his early works, in which emphasis is clearly placed on this environmental and cultural conditioning, to the point of verging on historical determinism. See in particular the text of the lecture, Some Features of American Industry, in *The Early*, cit. 2nd vol.

[50] Cf. 'Some Features ...' cit.

[51] The expression and the distinction stem from the writings of Georgescu Roegen. Cf. N. Georgescu Roegen, *Analytical Economics. Issues and Problems*, Harvard University Press, Cambridge. Mass., 1966, pp. 98-99.

[52] Cf. *Stato e Mercato*, n. 3, 1999 a substantial portion of which is dedicated to an examination of the concept of "social capital".

[53] Apart from the early weakness mentioned above (note 27), Marshall never believed in the ineluctability of the concentration of wealth and poverty at the two opposite poles of society. He saw strong tendencies in capitalism pointing in this direction, but he also saw counter-tendencies. The latter were particularly of an economic nature (for ex the tendency towards the bureaucratisation of "big concerns", whether public or private, as opposed to the infinite reserves of fresh initiative constituted by the world of small concerns that are seeking to get ahead), but they were also of a moral and intellectual nature (the "tendency of all social classes to become more civilised").

[54] This corresponds to Marshall's participation in the activities of the *Society for Promoting Industrial Villages* and the *Garden City Movement*. Cf. *Biography*, Chap. 13. On the connection with Ebenezer Howard see: R. Beevers, *The Garden City Utopia. A Critical Biography of Ebenezer Howard*, London, Macmillan Press, 1988.

[55] It is no coincidence that Marshall always harboured a "problematic" attitude towards the so-called *sweating system*, which made him highly unpopular among left-wing and trade union opinion. Cf. e.g. *Memorials*, p 225.

[56] Marshall's open scepticism as regards these Messianic expectations was palpable in his examinations of the labour leaders conducted at the *Labour Commission*. Cf. *Official*, cit. See also *Correspondence*, e.g. n. 898.

[57] Among S. Chapman's works, see not only *The Lancashire Cotton Industry. A Study in Economic Development* (Manchester, Manchester University Press, 1904), but also the richly detailed autobiographic notes deposited at the library of the London School of Economics. Cf. *Correspondence*, n. 807.

[58] Cf. T. Raffaelli, 'La formazione di Keynes nel laboratorio marshalliano', *Rivista Italiana degli economisti*, n. 1, 1996.

[59] In Book I of *Industry and Trade*, Macmillan, 1st ed. 1919.

[60] Cf. e.g. *The Early*, vol. 2, p. 264.

[61] On Marshall's view of British economists' feeble interest in methodology, see a letter penned in both their hands, Alfred

and Mary, dated August 1889, to John Neville Keynes. Cf. *Correspondence*, n. 272.

[62] On this problem, which to my mind is far more “sticky” than that of the completion or logical overturning of the theory of the labour-value, I apologise for referring the reader to the more extensive treatment of this issue given in my work: ‘Henry Fawcett and the Labour Question in Mid-Victorian Britain’, in L. Goldman (editor), *The Blind Victorian. Henry Fawcett & British Liberalism*, Cambridge, Cambridge Univ. Press, 1989.

[63] For a broad-ranging and very detailed picture of these activities see chaps. 5, 6 and, in part, 9, of the biography by P. Groenewegen.

[64] The notes taken during Marshall’s lectures, in 1873, by his pupil Mary Paley, are reproduced in *Lectures*, with a commentary by three scholars who were experts of the period.

[65] Cf. R. Harrison, ‘Two Early Articles by Alfred Marshall’, *Economic Journal*, Sept. 1969. Better in *Lectures*.

[66] Reproduced in *Philosophical*.

[67] Reproduced in *Memorials*, pp. 119-133

[68] Cf. *Correspondence*, e.g. ns 54, 97, 197, 365, 556.

[69] Marshall denied this originality in Cairnes, arguing, in a slightly partisan fashion, that the essence of the problem was already in Mill. Cf. *Correspondence*, e.g. ns 55, 239, 440, 1109.

[70] Cf. J. E. Cairnes, *Some Leading Principles of Political Economy newly expounded*, London 1874.

[71] This may explain why the Cambridge “friends” were interested in publishing - albeit only for limited circulation, so that Marshall would not be deprived of his priority “on the curves” – the four chapters on domestic and international value of a Treatise they believed to have ended up in a blind alley. The choice of chapters to be published, with the exclusion of the first, which contained our third anomaly, shows that the friends, guided by Henry Sidgwick, did not take Marshall’s idea of applying the international trade curves to social conflict at all seriously. Marshall was profoundly offended by this rebuff, downcast as he already was for other reasons, and this episode lay at the origin of his rift with Sidgwick. This squabble, which had some bearing on the development of economy in Cambridge, endured from 1879 to the death of Sidgwick in 1900 and dragged on considerably longer as well.

[72] Traces of the problems Marshall derived from that vast literature can be found above all in the chapters on labour and the trade unions in the *Elements of Economics of Industry* (London, Macmillan, 1st ed.1892) and in the debates of the *Labour Commission in Official*. The most appropriate place for these reflections, which certainly constitute one of the culminating points of his thought, should have been volume II of *Principles*, which Marshall would never succeed in completing. On the role that his efforts in the *Labour Commission* played in preventing him from accomplishing the second volume of *Principles* see: P. D. Groenewegen, ‘Alfred Marshall and the Labour Commission 1891-1894’, in *The European Journal of the History of Economic Thought*, 1-2, Spring 1994.

[73] Among the numerous studies that take up this perspective, I would draw the reader’s attention to the recent, and in a certain sense noteworthy: G. De Vivo, ‘Marshall's Position in the Development of Economic Theory, in *Contributions to Political Economy*, 1992, 11.

[74] Cf. M. Dardi, *Il giovane Marshall: accumulazione e mercato*, Bologna, Il Mulino, 1984, p. 11.

[75] Cf. M. Dardi, “Il mercato nell’analisi economica contemporanea”, in G. Becattini (editor) *Il pensiero economico. Temi, problemi, scuole*, Turin, UTET, 1990.

[76] “As long as the means of production (...) encounter severe difficulty in passing from one sphere to another (...), the different spheres of production, within certain limits, stand to one another in the same relation as foreign nations or communist collectivities.” Note the ambiguity of that *or*.

[77] Cf. K. Marx, *Das Kapital. Buch III*, in K. Marx, F. Engels, *Werke*, band 25, Berlin, Dietz Verlag, 1964, p. 187,

[78] “Exchange does not begin among individuals within a community, but rather at the point where communities cease – at their boundaries, in the contact zone between the different communities”. K. Marx, *Grundrisse der Kritik der Politische Ökonomie*, Berlin, Dietz Verlag, 1953, pp. 763-64.

[79] Cf. M. Dardi, *Il giovane Marshall*, cit., p. 111, n. 108.

[80] I addressed this conception of "economic nation" in 'Nazione economica e nazione politica nel pensiero di Alfred Marshall' in P. Roggi (editor) *Quale mercato per quale Europa*, Milano, Angeli, 1994. See also, in the same work, several brief jottings on the theme, by M. Dardi. Cf. also *Correspondence*, n. 928.

[81] Cf. *Industry and Trade*, Libro III, par. XIV, 7.

[82] To my knowledge, the only contemporary economist who has considered this problem is Jan Steedman in his work: 'Trade Interest versus Class Interest', *Economia Politica*, 1991. But I am not aware of his having offered any follow-up to the new suggestions contained in those pages.

[83] Marshall openly reveals this link on p. 126 of the 2nd vol. of *The Early*.

[84] In some sense this reading of the young Marshall's motivations has some affinity with interpretations that place emphasis on his ideological response to Marxism as the culminating point of the evolution – or involution – of post-classical economic thought. But there is one important difference: Marshall did not focus on the logical difficulties of the Marxian value theory, but was concerned with the social and political consequences of the Marxian doctrine of the class struggle.

[85] In the *Blue Books* kept in the Marshall Library, Marshall's own handwritten annotations can be seen. For an amusing comment on research involving field work on these jottings, see: M. Paley Marshall, *op. cit.* p. 43. The Marshall Library has also preserved several "protocols" of those visits, drawn up by Mary Paley.

[86] This "subjugation" is crystal-clear in that which the young Marshall, drafting the first article in which he sought to come to grips with theoretical issues (1876), calls "the central truth" of political economy. *Memorials*, p. 126. In a manuscript dating from his last years – or so I assume – entitled *Notes for conclusions- on collective v. individual enterprise and business*, Marshall more soberly concludes that the above-mentioned central truth would be fully valid only for an ideal community of independent artisans operating in a stationary world, a world free from the troublesome pair capital-labour.

[87] Cf. A.C. Pigou, *Memorials*, p. 155.

[88] A.C. Pigou, *Memorials*, pp. 160-161

[89] Cf. *The Early*, pp. 124-126.

[90] In other words, this had nothing to do with the "long run" of Book V of *Principles*, in which economic analysis collapses disastrously, on account of the inability of the *ceteris paribus* to contain the welling up of surging social forces.

[91] The *homo oeconomicus*, as is known, is one of his favourite targets.

[92] Cf. A. Marshall, *Money, Credit and Commerce*, Macmillan, London, 1923; in particular: Introduction.

[93] The clearest indications on this theme surface in the controversy between Marshall and W. Cunningham. Cf. *Biography*, pp. 469-473.

[94] "The average level of human nature has grown rapidly in the western world over the last 50 years" he wrote in 1919. Cf. *Industry and Trade*, cit. p. VIII.

[95] From this section onwards, the text has been entirely re-written in order to respond to the observations that were put to me during the discussion session. I take the opportunity to thank Dr. Marta Berni who, by recording and transcribing the contributions from the floor to the debate, has enabled me to make the best possible use of the material.

[96] Groenewegen reproduced the frontispiece designed for the book in 1904!

[97] In actual fact, also in *Money, Credit and Commerce*, cit. The sequence of events involved in this story is clearly reconstructed in chap. 12 of the *Biography*.

[98] Cf. *Correspondence* n. 899.

[99] H. Sidgwick, *Principles of Political Economy*, London, Macmillan, 1983.

[100] A rather vivid picture of the Marshall couple in Bristol, with Alfred in the depths of despair, can be gleaned from *William Ramsay. Letters and papers arranged* by Morris W. Travers (c.o. *University College London*).

[101] Cfr. *Biography*, Chaps. 8 and 9.

[102] Cf. *Correspondence*, e.g. n. 946

[103] Cf. *Correspondence*, n. 713. The two expressions here confronted – ‘ground traversed ...’ and ‘a kernel’, come from the prefaces respectively to the fourth and first edition of *Principles*.

[104] Perhaps the Sidgwick episode, which he may have overdramatised (this is what J.N. Keynes felt), affected him deeply: that is to say, he did not wish to run the risk of being once again dispossessed of his ideas. The growing distance between his Darwinian-Spencerian version of evolution and the paradigms that were in the meantime gaining greater popularity may have discouraged him from publishing partial results that might not have stood the test of criticism, especially unfair criticism.

[105] Marshall would gradually come to have a genuine loathing for this slim work, to the point of defining it “light literature” and worse, uncaring that this might seem disrespectful towards its co-author. This too is an open biographical problem. Cf. *Correspondence*, e.g. n. 1060.

[106] Cf. A. Marshall, *Elements of the Economics of Industry*, London, Macmillan, 1st ed. 1892.

[107] Cf. *Correspondence*, n. 831.

[108] On the blend of these two sources of inspiration I refer the reader to the above-cited work by Laurent.

[109] On the philosophy that underpins the use of his "red book", see e.g. , *Correspondence*, n. 637.

[110] Cf. *Correspondence*, e.g. n. 1115.

[111] Cf. *Correspondence*, e.g. n. 840.

[112] For an interesting glimpse of these endeavours, cf. *Correspondence*, n. 941.

[113] Cf. *Correspondence*, n. 1013.

[114] Perhaps someone may wish to put my conjecture to the test. I would start off from the bundles of articles that Marshall collected in binder folders during those years, stored in the Marshall Library, in order to determine whether any overall line of reasoning might emerge. One could also explore the cellars of the Macmillan in search of scribbling pads containing drafts of *National Industries and International Trade* that may have escaped the gnawing of London rats.

[115] In actual fact, the area of application is restricted by the logical constraints of the instrument to certain fairly marginal, albeit highly frequent, manifestations of human behaviour.

[116] On the subject of Smith, for instance, whom he considered to be the best approximation to the Darwin of political economy, Marshall states that he is never "merely inductive".

[117] To J. N. Keynes he wrote insistently: "You make your contrasts (between induction and deduction) rather too sharply for me" Cf. *Correspondence*, in particular n. 321.

[118] Marshall believed that analytical and theoretical training did not in itself give the proper sense of proportions. This can only be acquired by field work. For instance, he chided Cournot on this account in his letter n. 713. I think these Marshallian ideas may lie behind the Keynesian requirement that an economist should have an *intimate and messy acquaintance* with the facts investigated. Cf. *The Collected Writings of John Maynard Keynes*, edited by D. Moggridge, vol. XVI, Cambridge University Press, 1973, p. 300.

[119] However there is one exception that confirms the rule: David Ricardo, an impressive example of what semi-nude intuition can do, if it is combined with genius. But David Ricardo, as is known, was, to Marshall's mind ... a case to himself.

[120] Marshall did not have a very high opinion of books on the methodology of economic research written by those who have never engaged in field work. He would become particularly irritated by the foibles of pure philosophers when they started pontificating on the method of socio-economic studies without the least awareness of what Marshall regarded as the real task of the economist.

[121] Cf. *Principles*, vol. I, p. 116. note.

[122] I am strongly attracted by the comparison of Marshallian ideas with some of the methodological orientations of contemporary anthropology.

I am grateful to Dr. Patrizia Messina for having set me on this track through some remarks she made on the identification of the industrial district. Cf. e.g.: G. Gangemi, 'Costruire i concetti in scienza politica: dall'idiografico e nomotetico alla *thin e thick description*', in *Teoria Politica*, n. 1, 1995.

[123] For a discussion of these problems in a framework I find very congenial, I refer the reader to: P. Barrotta and T. Raffaelli, *Epistemologia ed Economia*, Turin, UTET, 1998, Chap. 3.

[124] Marshall is extremely clear on this point. For instance, in choosing the independent variable of a given model, the Marshallian economist chooses the one that most successfully facilitates comparison with available data rather than the one that makes for the most elegant model. This fundamental methodological bifurcation accounts for many of the conflicts between Marshall and Edgeworth. I will not mention any particular letters here, since the entire correspondence with Edgeworth constitutes a corpus that should be considered as an integral whole. In addition, see also several important indirect allusions to Edgeworth in the correspondence with other thinkers. Cf. *Correspondence*, e.g. ns 288 and 637.

[125] One may perhaps detect, here, the awkward "Victorian" presence of the "social responsibility of the scholar". This was to weigh heavily on his successors, and in fact they would eventually all opt in favour of the free flight of the intellect, although there was somewhat greater resistance in Cambridge than elsewhere. But there is perhaps also a judgment on the limits of mathematics in modelling social phenomena, attributable to the fact that some of the more powerful developments of mathematical thought of that period or of a slightly later date were not available to Marshall. Awareness that his outlook was to some extent conditioned by the facts of history and an inkling that this influence was likely to wane with the gradual refinement of mathematical tools are hinted at, here and there, in the correspondence with Edgeworth. Unless, of course, these hints are intended as a form of appeasement towards the addressee. Cf. *Correspondence*, e.g. n. 1008.

[126] This orientation emerges in numerous letters where Marshall, openly irritated by the proliferation of "gratuitous theories", discouraged development of mathematic modelling. Particularly noteworthy in this respect is his correspondence with A. L. Bowley, which is bristling with such observations.

[127] It may also be of interest to perform a systematic investigation of Marshall's preferences in terms of novels – as has in fact been undertaken for Marx – in the hopes it might shed some light on the innermost "cohesive forces" of his thought.

[128] Two models of which Marshall provides no more than a brief outline are the statistical equilibrium of industry (tree-forest cycle) and the industrial district.

[129] A fairly good expression of this level of generalisation can for instance be found in the works of several direct students of his, such as S. Chapman and D.H. Macgregor, and also of indirect students such as P.S. Florence, E.A.G. Robinson and even R.F. Kahn.

[130] Cf. *Principles*, p. 241.

[131] I have to admit that this expression of mine caused a small uproar among a number of colleagues who took part in the debate. But perhaps they had no real reason to be incensed, in that a) my expression in no way affects the great merits of Edgeworth as a "pure" theoretician, i.e. as one who forged well-honed concepts and as a model-builder, and I think this was the issue of vital concern to them; b) after all, it is no more than the opinion of Marshall, moreover in my interpretation. But, I repeat, it is worth pursuing the problem of the complex relation between Marshall and Edgeworth through the overall body of their correspondence, even following up the more abstruse psychological facets. In addition to the exchanges between the two men, one should also glance at the indirect references to Edgeworth, e.g. in *Correspondence*, ns 288, 637.

[132] Cf. *Correspondence*, n. 713

[133] The reader is hereby warned that I am emotively so wrapped up in the theme of this section that the interpretation of Marshall shifts smoothly and imperceptibly into reflection on my own personal research experience. In this paper, however, I am making every effort to focus the discussion on Him.

[134] These limits were fairly elastic, since Marshall applied the principle of continuity to definitions as well. Perhaps it would be well to delve more deeply into the philosophical debate of his day on the subject of the principle of continuity. Marshallian definitions, like Georgescu Roegen's dialectical concepts, often exhibit a shadowy semantic area in which they tend to be partially overlapping. Cf. N. Georgescu Roegen, *Analytical Economics*, Cambridge, Harvard University Press, 1966; A. Boland, 'The Methodology of Marshall's "Principle of Continuity"', *Economie Appliquée*, n. 1, 1990.

[135] "The idea of a species", wrote a specialist, "corresponds to something that has a real existence of its own ... one of the essential tasks of a naturalist is to catalogue all these populations, assigning to each one a specific name so that it becomes possible to study them and communicate the results of his work to others... Without such a system of classification, the accumulation and ordering of observations and experiments would be impossible." From M. Bates, *La storia naturale. Natura e metodi una disciplina*, Torino, Boringhieri, 1970, p. 39; italian translation of *The Nature of Natural History*, London,

Chapman and Hill 1951.

[136] Recall that not even *Ye machine* can act without learning, i.e. without changing.

[137] Essentially, this is an ambition not markedly different from that cherished by Marx (the laws of change of capitalism), but it is formulated in such a manner that it does not allow Capital, which is One, to cancel multiplicity, i.e. the individual in all his multifarious groupings.

[138] Cfr. M. Bates, cit., pp. 129-30.

[139] This latent presence of “place” in Marshallian theory deserves closer attention. For an interesting, although incidental, statement by Marshall on the scientific importance of economic geography, cf. *Correspondence*, n. 859

[140] I allude here to an idea I have long nursed: the recurrent surfacing of the spatial dimension in Marshall’s theoretical constructs suggests he may conceive of economic phenomena as distributed over space similarly to the way, *mutatis mutandis*, he sees them distributed over time. In this perspective, the basic Marshallian abstraction appears intrinsically temporalised and spatialised. But much work still needs to be done in order to turn this intuition into serviceable results.

[141] Cf. *Principles*, p. 355.

[142] Highly significant is the favourable, although cautious, welcome given by Marshall to the developments of Fordism and the scientific organisation of labour. Cf. *Industry and Trade*.

[143] For types of production in which contextual knowledge is predominant, a locality that is also an industrial district may produce a greater range of variations than a comparable large factory. I refer to the distinction between contextual and codified knowledge. Cf. G. Becattini and E. Rullani, ‘Local systems and global connections: the role of knowledge’, in F. Cossentino, F. Pyke, W. Sengenberger (editors), *Local and Regional Response to Global Pressure: The Case of Italy and Its Industrial Districts*, Geneva, International Institute for Labour Studies, 1996.

[144] Indeed Marshall believed that studies in social psychology constituted an indispensable complement to strictly economic studies.

[145] "His (H. Spencer’s) attempts to trace out the lines of a unified sociology were, I would say, at least 100 years ahead of their time. Cf. *Correspondence*, n. 811.

[146] But always with many limitations, on account of the capricious interdependence between events and expectations. Suffice it to reflect on the basically unpredictable action of the “fear of damaging the market”!

[147] Cf. *Memorials*, pp. 314-315.

[148] "Intense" and repeated observation of those pages gave him inspiration both for research and for teaching. Cf. *Correspondence*, e.g. n. 637.

[149] On the use of the *Red Book* in class, interesting light is shed in the notes taken at Marshall’s lectures (1906) by Walter Layton. Layton’s notes are kept at Trinity College Library. Further information on Marshall’s teaching style can be gleaned from: G. Becattini, ‘La vecchia scuola di Cambridge’, in G. Becattini (editor) *Il pensiero economico* cit.; P. D. Groenewegen, ‘Alfred Marshall and the Establishment of the Cambridge Economics Tripos’, *History of Political Economy*, Winter 1988; T. Raffaelli, ‘J.M. Keynes nel laboratorio ...’, cit.

[150] *Principles*, II, p. 763.

[151] *Ibidem*.

[152] As regards undergraduates, Marshall paid little attention to this category unless the circumstances strictly required it.

[153] In the correspondence there are numerous letters on these revealing “didactic” themes. I mention a few: cf. *Correspondence*, e.g. ns 448, 669, 856, 1008.

[154] Cf. *Correspondence*, n. 858.

[155] Jha argues that Marshall subtly tended to discourage the study of econometrics; Jha bases this claim on a comparison between the early years of the *Economic Journal*, which were influenced by Marshall, and the parallel issues of the major economic journals of Marshall’s day; Cf. N. Jha, *The Age of Marshall. Aspects of British Economic Thought 1890-1915*, 2nd ed.

London, Frank Cass, 1973, p. 21.

[156] Cf. *Correspondence*, n. 627.

[157] This stands out clearly in the description he sent to his mother (1875), telling her of his visits to the American communist colonies of the Shakers and the Oneida perfectionists; the letters throw into sharp relief the feelings welling up inside him. Cf. *Correspondence*, n. 27.

[158] Cf. G. Becattini, "Market and ..." cit., pp. 181-82.

[159] From the *Early Writings* cit. (1860s and 1870s) right up to *Money, Credit and Commerce* (1923).

[160] This theme would later live on in works by social psychologists, but economists would increasingly turn away from it. Cf. e.g. W. McDougall, *The Group Mind, A Sketch of the Principles of Collective Psychology with some Attempt to apply them to the Interpretation of National Life and Character*, Cambridge, Cambridge University Press, 1920.

[161] Cf. *Il concetto d'industria e la teoria del valore*, Turin, Boringhieri, 1962, pp. 124-125.

[162] Cf. *Correspondence*, n. 989.