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Georges H. Bousquet

Vilfredo Pareto

Neoclassical Synthesis of Economics and Sociology

Classics in the History and Development of Economics
General Editor: Michio Morishima

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Series Editor's Introduction

This series, with its designation 'for the development of economics' has at least four areas of focus, though it would be too restrictive to call them aims.

Since the last war economics has become 'mathematicized' to what could be deemed an excessive degree, so much so that mathematical models are incorporated into the analysis even of questions where there is no need for mathematical argument. As a result, those issues which cannot be expressed in mathematical terms have been all but forgotten. Moreover it has become almost impossible to establish links between economics and other social sciences, in which mathematics are little used. This increasing use of mathematics has thus meant that economics has become isolated; the isolation has in its turn promoted mathematical inbreeding.

The net result is that the discipline of economics has lost many of the capabilities which it formerly possessed. Moreover, since such capabilities have been dispensed with in the selection of specialists, it has become more and more difficult to shift economics away from the path along which it is now proceeding.

One effective means of correcting this tendency, and of giving the contents of economics a better balance, is to dig out some of the economics of the past, and to learn again from those who have gone before us. In the earlier decades of this century economics was not the overwhelmingly English language dominated discipline that it has become in the postwar period. There were top-class economics achievements in French, German, Italian and other languages as well. My intention, therefore, is to select from the papers and books written in other languages some which I consider to contain useful knowledge and suggestions, which may help to promote a more balanced economic theory. By translating these works into English, they will be made available to all. This is the first point we will take account of. Secondly, I will try to annex to the series wherever possible critical biographies of scholars active in a wide variety of fields, apart from mathematical economics, in order better to learn from them.

This series is not, however, necessarily 'anti-mathematical'. It is also the intention to include in the series works which might well have played a major role in the mainstream development of economics in the postwar years but the misfortune that they were written in a language other than

English has caused them to remain unknown. This, therefore, is the third point we have in mind.

Finally, modern national economies have not all evolved in an identical fashion. In Japan, for example, and in some other non-English-speaking economies, there have developed perfectly viable and, indeed, efficient economic systems. Work to clarify the structures of these kinds of economic system has been accumulating, but mostly in the language of the country itself. I am also anxious, therefore, to incorporate into the series translations of works in this area, and also research on the historical experience of these economies.

Given the four areas of focus which I have outlined above, the series as a whole will inevitably have a somewhat 'motley' character. While the works may be somewhat disparate, though, I want to build up a series in which all the volumes will prove enjoyable and interesting to read. The endeavour involves a great deal of translation work, meaning that publication at regular intervals is likely to be impossible. In addition, there are many candidates whose work must be considered for inclusion. This, of course, makes a great deal of work for a single editor, and therefore it will take time for him to put the project into orbit. My fervent hope, however, is that this series, which, among other things, expresses my own philosophy on the need for a more balanced economics, will succeed in arousing the interest of both students and specialists in a wider economics, and educating them in that economics.

MICHIO MORISHIMA

Note on the Authors

Alfonso de Pietri-Tonelli

Born in Carpi, Italy, in 1883, Alfonso de Pietri-Tonelli graduated in economics in 1906 at the University of Venice. There he became Professor of Political Economy in 1923, a post he held until his death in 1952.

After a few years of passionate interest in labour organisations, Marxism and Malthusianism, he finally devoted himself to the study of economics using mathematical methodologies, following Pareto.

His most valuable contributions include: general studies on political economy, conceived as a rational synthesis of political theory and economics (*Corso di politica economica*, 1927); innovative generalisation of equilibrium theorems by Cournot, Walras and Pareto (*Traité d'Economie rationelle*, 1927; *Prospetto dell'economia matematica*, 1930); a rigorous theory of political behaviour (*Teoria matematica delle scelte politiche*, 1943); analytical studies on stock market speculators (*La Spéculation de Bourse*, 1924); essays on fiscal policies (*L'inflazione fiscale in Italia*, 1951).

Apart from his many books and articles, his critical acumen emerged clearly from his reviews, a regular feature of the academic journal *Rivista di politica economica* for almost thirty years.

Georges H. Bousquet

Georges H. Bousquet (1900–78) started his career as Professor of Comparative Islamic Law and North African Sociology of the French Law Faculty of Algiers. He developed a keen interest in the history of mathematical economics and moved to France as professor at the University of Bordeaux. There he soon became a well-known economist and sociologist, with a very long association with the journal *Revue d'Economie politique*.

He was a great admirer of Vilfredo Pareto, whom he befriended, and greatly contributed to the knowledge of Pareto's theories in France.

Bousquet's main works are *Essai sur l'évolution de la pensée économique* (1927), *Cours d'économie pure* (1928), *Esquisse d'une histoire de la science économique en Italie* (1960).

Foreword

I

If we take the view that economics is part of a single whole along with the other social sciences (for example, sociology), it must be considered that there are key thinkers – Marx, Pareto, Weber and Schumpeter. In the case of Marx the social philosophy of historical materialism is synthesised with Marxian economics, while Pareto's own sociology is one with the so-called Walras-Pareto theory of general equilibrium. Leaving aside its methodology, Pareto's sociology consists mainly of a theory of the general form of society, a theory of social equilibrium and a theory of class circulation concerned with the decline of the ruling class and the change in the form of society which accompanies it. This means that Pareto's theories as a whole take on the form of a spectacular equilibrium theory of both society and the economy. Of course, the concept of equilibrium found in his economic theory comes from classical mechanics, while that in the social theory is more related to the concept of equilibrium of statistical mechanics, so it is not an easy thing to achieve a harmonious coexistence between these different equilibria. What I want to do in this introduction is to look generally at the Marxian synthesis and the Pareto-type synthesis, and in doing so to clarify the characteristics of the latter. At the same time I hope that it will provide some insights to those with an interest in the multi-disciplinarisation of economics.

II

Pareto devised a scrupulous methodology in order to construct the kind of synthesised theory he desired. He took the view that human behaviour is not necessarily logical. This results from the fact that neither individuals nor groups always act according to their own particular principles. In many cases their desires and decisions are formulated impulsively, emotionally or illogically. Where they do act in accordance with certain principles, an analysis of the kind of action implied or rejected by those principles enables clarification of the kind of action taken or never taken by both groups and individuals. Economics assumes that individual and collective

actions result from the rational pursuit in this sense of certain principles – rational in the sense of utility or profit calculation – and the theory is constructed on this assumption. However, not all economic activity is logical and based on specific principles. (For example, a worker's decision whether or not to strike is never made purely in this logical manner.) Economics is totally inadequate when it comes to dealing with economic actions resulting from non-logical decision-making. It is assumed that none of these actions has any economic significance, and economists have developed their discipline as a kind of economic geometry whose basic axioms are the economic principles of the individual and the firm.

In non-logical actions an important role is played by human sentiment, human feelings and human emotions. Action based on utility and profit calculation (which I call economic actions in the narrow sense) is logical, while other, non-routine economic actions – for example those resulting from an upsurge in labour movements such as strike decisions or others which are affected differently according to political circumstances – (referred to as economic actions in the broad sense) are not necessarily logical. Moreover, behind new economic plans relating to innovation we find inspiration, vision and motivation of the innovator. Should we fail to understand this, and try to explain new projects purely in terms of utility or profit analysis, we will end up failing to recognise their true nature and their significance.

By contrast Marx took a different view, namely that relations of production or an economic structure lay at the root of society. On this basis was constructed a political and legal system, and a spiritual life (religion, morality, scholarship, the arts, etc.) developed. The various systems and spiritual life constructed on this economic foundation were termed the superstructure. Seen from this perspective the fundamental economic relations and activities of society – if we exclude economic activity in the broad sense – are seen to be logical, while those phenomena occurring in the superstructure are mainly non-logical.

Both economic action in the narrow sense and that in the broad sense are inherent in the sphere of economics. However, we have in addition actions in other areas not directly related to the economy, such as law, politics, religion and culture – actions in those areas referred to by Marx and Engels as the superstructure. Pareto regarded activities of this kind as being in principle non-logical. Pareto recognised the existence of economic action in the broad sense of the term, but his analysis of that particular area remained incomplete. For that reason his economics consisted mainly of a theory of logical action, hence for him the problem of synthesising eco-

nomics and other social sciences was essentially the problem of how to bring together the analysis of logical action and the analysis of non-logical, non-economic activities.

III

Now for Marx, the relationship between the basic structure and the superstructure was in principle a one-sided one. If the basic structure changed, then the superstructure would change accordingly, while by contrast changes in the superstructure would not lead to appropriate changes in the foundation structure. Even if there were any such changes, they would be insignificant. Any reverse influence from the superstructure to the substructure could thus be disregarded. If we accept the existence of this kind of one-sided structural relationship proposed by Marx, then economics – the study of the foundation structure – effectively remains the study of logical action, and there is no need to deal with non-logical actions whose economic significance is negligible.

However, as Max Weber has made clear,[1] where religion influences the mode of people's economic activity – and as has recently become apparent in the countries of Eastern Europe and the former Soviet Union, if there is a change in a people's value system – the economic structure also ends up changing accordingly. Given that, the relationship between the foundations and the superstructure is clearly not a one-sided one, but a two-way one. Pareto, too, believed the relationship to be a two-way one. This being the case, economics must come together with those disciples concerned with the superstructure to create 'a far broader economics'. The above-mentioned equilibrium theory relating to both economy and society is just such a theory.

In Marx the appearance of historical materialism is premised in the one-way relationship between the superstructure and the foundation. According to this basic assumption productive forces determine the relations of production, and the superstructural phenomenon we call ideology is also determined in accordance with the relations of production. If, by contrast, we reject this assumption, then ideology and religion – as asserted by Max Weber – will influence the mode of people's economic behaviour. In fact Pareto regarded socialism as a kind of religion; he believed that, just as the appearance of Protestantism had influenced people's ethos and work ethics, so socialism changed people's motivations, altering the economic system they supported.[2]

IV

I now want to try and change, and adjust the terminology used up to now. Since what I have thus far called 'broad economics' deals with questions usually regarded as being dealt with by economics, I will from here on simply call it 'economics'. By contrast what I have been calling 'economics in the much wider sense', I will henceforward call 'comprehensive economics', since it looks at things connected with economics, including problems that are not normally dealt with in economics. I shall refer to 'economics in the narrow sense' just as 'economics theory'.

If we use this kind of vocabulary, it is possible to make the following statement. In normal 'economics' economic actions in both the broad and the narrow sense are dealt with together, while in standard 'economic theory' – for example the theories of scholars such as Walras and Hicks, and even more so postwar economists such as Debreu and Hahn – economic actions in the broad sense are tacitly ignored. Only economic actions in the narrow sense are analysed, all others being assumed not to exist. For those persons who neglect economic actions in the broader sense, 'economics' and 'economic theory' become one and the same, and we end up with economics as the study of routine, logical economic actions.

Non-routine economic actions are outside the routine application of logical economic laws. The significance of these kinds of action was emphasised by Schumpeter. His view was that entrepreneurs are far from being normal individuals who act in a textbook fashion driven by calculations of profit and utility. Only unusual individuals of the entrepreneur type can become entrepreneurs. This requires special characteristics; their decisions are individualistic, not governed by principles which can be laid *a priori*. Moreover, such individuals have to be possessed of greater leadership qualities than others. The actions of this kind of entrepreneur are not those of a human type which establishes 'principles of entrepreneur behaviour' and then follows the course of action logically dictated by those principles. These kinds of individual must have, as their requisites, abilities to understand people's sentiments and to appeal to their feelings, in addition to the passion which will sway them. Since they act on the basis of apparently original ideas, entrepreneurial activity cannot be analysed merely through utility analysis or marginal productivity analysis. In extreme cases entrepreneurs are people who feel they have a mission just to find out whether or not the innovation they have thought of is actually workable, and whether it can become highly successful work. The result is that these entrepreneurs do not carry on their work with the objective of making a profit, which means that when it

becomes clear that their businesses are firmly on the right lines and able to make a profit, they lose interest in these businesses, selling them off and moving to new enterprises. There are many of these fickle entrepreneurs. It can even be said that it is this very kind of person who is the entrepreneur among entrepreneurs – the pure entrepreneur. This fact is well demonstrated by the fact that a country which has effected a great many innovations is not necessarily blessed with economic success. Just look at the case of Britain. A theory of entrepreneurs requires an understanding of the entrepreneurial spirit, and for that reason requires us to provide ourselves with a certain kind of theory of non-logical behaviour.

V

Another kind of non-routine economic activity can be found in the take-over. In Tobin's q-ratio theory we have a logical theory which uses profit calculation to explain in what kind of circumstances takeovers will occur. As is well known, the q ratio is derived by estimating the market value of the net assets possessed by the enterprise and dividing the total share value of the enterprise (its total market value) by this sum. If $q < 1$ the total share value of the enterprise is less than the value of the net assets, so if the enterprise is taken over through buying up shares the net assets obtained will be in excess of the cost needed to do this, and the enterprise's takeover will achieve a profit. Thus where $q < 1$ the enterprise will be taken over, while if $q > 1$ the enterprise will be safe.

At first glance this would appear a rational theory to which we can have few objections, but if we look at the actual economy we find that the size of q has little to do with whether or not enterprises are the object of a take-over. There are many enterprises which are not taken over where $q < 1$, and others where there is a takeover although $q > 1$.

In the latter case, therefore, why is it that the takeover is carried out in full knowledge that a direct loss will be incurred thereby? Let us suppose, for example, that there are two competing enterprises, A and B. Let us assume $q_B > 1$, whilst it is immaterial whether q_A is greater or lesser than 1. If we now assume that A takes over B, just by doing so it will incur a loss. However, if it eventually eliminates B, A's position will be enhanced because one of its competitors will have gone. The aim of obtaining this kind of indirect benefit can be enough to make A initiate a takeover. Nevertheless, this indirect benefit is not certain, and the takeover is not necessarily carried out even if the benefit is great. Behind such an action there is

likely to be the animosity and fear which A feels towards B. As long as we fail to explain sufficiently this kind of sentiment, the q theory of takeovers will be little but a fabrication. If we understand non-illogical modes of activity, it would be accepted as very reasonable that enterprise A, which is aware of the danger that it will be the object of a takeover as $q_A < 1$, may make a pre-emptive attack and take over B. In short, there does not exist any purely logical economic theory relating to who initiates a takeover, and under what circumstances.

Let me give one more example. In West Germany in 1976 it was decided that in all companies with more than 2000 employees the shareholders' meeting would select a certain number of *Aufsichtsrat*, who would constitute a committee along with the same number of *Aufsichtsrat* chosen by the employee side, and that committee would make decisions concerning important management problems. This practice marked a considerable concession on the part of the shareholders, but there is no purely economic logic behind their having to make such a concession. Why should the employee representatives share *Aufsichtsrat* with those of shareholders in the very proportions of fifty-fifty? It only resulted from the shareholders being compelled to acknowledge an equivalent social power on the part of the employees. It is not possible to discuss this kind of problem in terms of the conventional, axiomatic economics, and even if we consider this as the establishment of some sort of balance of power by means of a kind of game between shareholders and employees, the game's pay-off matrix is not defined, so it cannot be explained in game-theoretic terms. This kind of problem is a problem of economics outside what I have called 'narrow economics'.

Now we cannot make any *a priori* assertion as to the likely results of non-logical activity. We have no choice but to observe a large number of examples – and though it may be non-routine activity, there exist a great enough number of such instances – and to observe with great care the kinds of result that occur. With the results obtained in this manner, the theoretical model is constructed inductively.

Where the theoretical conclusions thus deduced from this kind of model do not accord with the state of affairs that exists in the real economy, the model is refuted and has to be reconstructed into a more appropriate one. Thus the element of 'broad economics' in 'economics' is methodologically inductive and empirical, and has a totally contrasting character to the elements of 'narrow economic theory', which are axiomatic, deductive and mathematical. Schumpeter's economics is regarded as being impossible to formulate analytically, and this can be said to stem from this kind of situation.

VI

It has been suggested above that there is a strong similarity between Schumpeter and Pareto, whether or not Schumpeter himself was aware of it. For a start, Schumpeter developed an analysis of economic activity which belongs outside the sphere of economic activity based on standard utility or profit calculation. Pareto showed a keen interest in the analysis of this kind of non-logical activity. He produced a huge volume of general analytical rules, but was almost totally unable to point out relevant major problems and give them a theoretical explanation. In that sense it can be said that the examples of Pareto's analysis of non-logical economic activity are empty, or something pretty close to it. By contrast, while Schumpeter failed to achieve a complete analysis, and his examples hardly rested on a profound methodology, he did highlight the existence of some very important examples of this kind. One of these is his theory of innovation. By doing this, he filled Pareto's empty box with a range of subject matters.

Secondly, Schumpeter presented his famous – and totally anti-Marxian – theory of system transformation, or theory of revolution;[3] this kind of theory can be seen as an application of Pareto's theories relating to the rise and decline of the ruling class – the rise and fall of élites. More will be said in detail on this point later on. Unlike Marx's theory of system transformation, which is based on a theory of class conflict, these other theories of transformation are based on the existence of hegemonic struggle within the ruling class. It is appropriate to call Pareto's whole system, which brings together this kind of anti-Marxian social theory with orthodox economics, a neoclassical comprehension, but it was Schumpeter who can be seen as the heir of this grand design of Pareto's.

Pareto's comprehensive economics imply refutation or at least a revision of the materialist view of history. In this, Pareto's sociology – his theories of social equilibrium and dynamics – plays an important role. In Marx, as well, we find a magnificent synthesised economics which includes an analysis of the superstructure, but because the study of the superstructure is, as it were, detached from its own economics, this economics, in the narrow sense of the word, is no different from normal economics (for example, neoclassical theory) in that it consistently remains the study of logical activity. By contrast, in the case of Pareto's integrated economics no such separation can be made, so we end up with a structure where, strictly speaking, it is not possible to abstract from it a self-contained, normal economics, i.e. the study of logical activity.

Pareto's comprehensive economics is thus multidisciplinary. At the same time, as we have already seen, the methodology is not a unitary one. First of all the section on general economic equilibrium theory which deals with logical activity is 'geometrically constructed' exactly in the manner of Spinoza, as shown later in the Arrow-Debreu and Arrow-Hahn theories which perfected it. This theory is a purely deductive inference of the implication of axiomatically formulated economic principles. By contrast, for non-logical actions there are no such principles, and we have no alternative but to discover the rules inductively and empirically. The task of explaining in a logically convincing way why the results of non-logical actions of this kind are as they are, falls to the non-geometric part of the integrated economics.

VII

Let us look at this in a bit more detail. Pareto prepared his main work on sociology, *Trattato di sociologia generale*, with a view to analysing people's non-logical behaviour.[4] He believed that instinct, emotion or feelings were the predominant forces in determining non-logical behaviour, and called these the residues. He studied inductively what kinds of residue existed. However, just pointing out what kinds of residue exist is not in itself a convincing explanation of actions based on those residues. Pareto termed the reasonings for why a certain residue stimulates a particular course of action, or the arguments justifying these kinds of reasonings, 'derivations'. A derivation is an attempt to give a logical explanation to a non-logical action; as people's capacity for logical thought develops, so what could have been a derivation at one stage of development ceases to be able to play the role of a derivation at a subsequent stage. For that research new derivations are sought. Just as religion has become gradually more rational with the advances of human knowledge and society, so too have religious derivations evolved and developed. Derivations are thus a product of history, and constantly changing. The resultants brought about by residues and derivations were termed by Pareto 'derivatives'. This demonstrates our recognition of non-logical behaviour.

This kind of theory of non-logical behaviour consists of two elements: one which is an inductive observation of residues, and the other an element of deductive reasoning, which must be both quasi-logical as historical fact, and perfectly logical as an ideal and complete derivation. Pareto's sociology is therefore the methodological antithesis of pure economics. The

former is inductive-logical, while the inductive element in the latter is zero or negligible, rendering it purely or mainly deductive (or axiomatic). As has already been suggested, economics will increasingly in the future have to research non-logical behaviour as well, and this branch of research will need to devise laws inductively and explain them rationally. Thus it is not just comprehensive economics but economics as well which will be a methodological hybrid – empirical, inductive, logical and deductive.

VIII

Now if the relationship between these two elements – the empirical-deductive and the transcendental-logical – is a separable, one-sided one, as is the case in Marxian theory, the methodological structure of the comprehensive economics can be succinctly stated. In the case of Pareto, however, there is no such separation, but a relation of mutual influence. To elaborate on this, in Marxian theory, the parts for which we need empirical, inductive analysis – namely the areas of political structure, legal system, learning and culture, and the structure of human knowledge and consciousness (the so-called superstructure) – are determined by the nature of the substructure, i.e. the relations of production which are in turn determined by productive forces. Marx took the view that the reverse relationship, namely the superstructure influencing the substructure either does not exist at all, or is negligible. Any study of the superstructure is therefore a derivation of the study of the basic structure, that is, economics. For that reason economics for Marx clarified the fundamental movements of society, and played the commanding role among the various social sciences.

Pareto's broader economics, with its assumptions of a mutually interactive relationship between the superstructure and the substructure, is not just more logically universal than Marx's theory with its assumption of a one-sided relationship between the two, but also more realistic. This is abundantly apparent if we take a close look at a wide range of past history, as Pareto himself did. The very question of whether the relationship between the two is one-sided or two-sided needs an inductive, empirical judgement. If Pareto was right on this point – and I believe that he was – then both the neoclassical theorists with their attempts to structure economics axiomatically and the Marxian economists with their purely economic explanations of social trends are totally mistaken. Such explanations must be at the very least extremely one-sided and imperfect. Pareto did not necessarily succeed in synthesising sociology and economics, but it is not

difficult to identify in his work a declared intention of reaching such a synthesis, and the outline for doing so. My own belief is that it was Schumpeter who advanced economics a considerable way down the road intended by Pareto.

IX

Pareto indicated the following six residues – instinct for combinations, instinct for group-persistence, tendency to express any strong emotion by external action, residues of sociability, residues of concerning the integrity of the individual, and the sex residue. It is the first two of these which can be regarded as being of theoretical importance, and therefore in need of some explanation.

As the translators of the *Trattato* into English stated in the translation, the Italian word 'combinazione' was translated into English as 'combination', even though they were unhappy with this. According to them the Italian word 'combination' embraced a much broader meaning than the English one, with the phrase 'the instinct for combination suggesting "the inventive faculty", "ingeniousness", "originality", "imagination" and so on'.[5] In fact, as Pareto, too, stated in explaining combinational activities, 'The scientist in his laboratory makes combinations according to certain norms, certain purposes, certain hypotheses, for the most part rational (at times he combines at random).'[6] Now all kinds of innovation are the fruits of activities of this nature, so the 'instinct for combinations' could probably be translated as 'the instinct for innovation'. It is true, as Pareto himself commented, that 'The ignorant person makes combinations in view of analogies that are mostly fantastic, absurd, childish (often also by chance).'[7] Such being frequently the case, positive results of course cannot be obtained from these. Whatever the case, attempts to obtain results from combinational activities are non-logical acts, whether or not the attempts are successful.

Interpreted in this way it is clear that Pareto's *combinazione* residue and Schumpeter's theory of innovation are closely related to each other. Individuals possessing this kind of residue are progressive and innovative; entrepreneurs can be seen as the embodiment of this special type of person. Schumpeter took the view that because capitalist society was one dominated by entrepreneurs, capitalism, or the free enterprise system, was of itself innovatory. Socialist society was regarded as one where this instinct had become paralysed. After around 1903, when *Les Systèmes socialistes* was published, Pareto reached a more positive evaluation of socialism.

Human behaviour, he believed, consisted of that based on logically conceived doctrines and that based on non-logical passions and feelings. A socialist movement based on socialist doctrines fell into the former category, but this was not simply logical behaviour; it was accompanied by non-logical behaviour – that based on an 'instinct for combination' which gave people the will-power to try and contribute to the making of a new and better society, and stirred up in them fierce passions. Pareto emphasised the latter aspect and considered that what was important for socialism was not the theory, but the passion to push forward the doctrine. Marxian theory might have its deficiencies – and Pareto believed that it did – and its theory of value might be wrong, but such things have had little impact on socialism. 'All this has hurt the socialist faith little or not at all. It was not the book by Marx which has created socialists; it is the socialists who have made Marx's book famous'.[8] The 'new and better society' may be nothing more than a myth, a mere castle in the air. Even so, Pareto adjudged it to be a powerful factor in mobilising the masses. Such passions gave an energy to the mass of people and enabled them to realise their aspirations. Liberalism might appeal to their reason, but socialism mobilised their feelings. Liberalism held no appeal to the feelings of the masses, however much it might stir up the passion of the intelligentsia. (This cannot, perhaps, be said of the present time, but Pareto's conclusion was almost certainly correct at the start of the twentieth century.) Thus socialist activity was politically that much more effective than liberal activity, causing Pareto to evaluate socialism positively.

Pareto believed that socialism could achieve the same things as could a market economy. His *Manuele d'economia politica* was published in 1906, with a revised edition in French, *Manuel d'économie politique* appearing in 1909. In these works, as in E. Barone's work 'II Ministro della produzione nello stato collettivista' (*Giornale degli economisti*) published in 1908, it was recognised that a socialist society could work in exactly the same way as a society based on private ownership in perfectly competitive conditions. Pareto is said to have told Schumpeter that he was himself a socialist[9] and it is undoubtedly true that, at least at certain times, Pareto's evaluation of socialism was more positive than that of Schumpeter.

X

Pareto's second items, the residues of group persistences or residues of persistence of aggregates (class II residues), are the antithesis of the residues