

Piero Sraffa and the Reconstruction of Political Economy

Piero Sraffa, who died at Cambridge (England) on 3 September last, was regarded as the greatest Italian economist, and he is widely ranked as one of the greatest economists of all time. His main work (Sraffa 1960) has been translated into ten languages; a bibliography of studies on his writings ran to some hundred items even a few years back, and the number is rapidly rising (Roncaglia 1978, pp. 154-71; 1981a, pp. 189-229). Like Keynes and Myrdal, Sraffa had been awarded the gold medal of the Swedish Academy of the Sciences even before the Nobel prize for economics had been created.

Samuelson (1971, p. 400) has spoken of "this age of Leontief and Sraffa". However, in an article with the significant title "This Age of Leontief... and Who?", Levine observed that Sraffa's work does not appear to have penetrated very deeply into the consciousness of the economic profession", at least "in North America" (Levine 1974, p. 872). It is therefore worth-while once again drawing attention to Sraffa's contribution to the reconstruction of political economy, and, more generally, to his influence on modern culture (on this question, see also Roncaglia 1978 and 1981b).

Sraffa and Gramsci

An Austrian philosopher and a friend of Sraffa, Ludwig Wittgenstein, observes in the preface to his first book (Wittgenstein 1922, p. 27) that, in order to understand him, the reader should have progressed along the same path of reflection. Perhaps this also holds good for Sraffa's work: it is not possible to grasp the full scope of his theoretical contribution if the problems tackled are not recognized and if these problems are not situated in the cultural setting from which they

have emerged. This itinerary, among other things, possesses a particular fascination, since it constantly takes us off the narrow track of pure economic theory, so that we meet philosophers such as Wittgenstein and politicians such as Antonio Gramsci, besides economists such as John Maynard Keynes.

Piero Sraffa was born in Torino on 5 August 1898. During his secondary studies he was influenced by Socialist ideas, and in 1919, as a student at Torino University, he became a friend of Antonio Gramsci, without ever joining the Socialist Party or, after its foundation in 1921, the Communist Party. Sraffa followed his friend's political activity closely, collaborating with the *Ordine Nuovo* by translations from German and English and by some short articles of an economic nature.

What gave rise to lively discussion was, in particular, a letter from Sraffa which Gramsci published with his own — extremely critical — reply in the *Ordine Nuovo* of 15 April 1924. In that letter, Sraffa maintained that, in the face of Fascism, in a situation in which the working class was markedly absent from political life, “the urgent question, taking precedence over every other one, [was] that of ‘liberty’ and ‘order’ ... Now is the time for democratic opposition movements, and it seems to me necessary to let them go ahead and indeed to aid them”. In short, Sraffa was emphasizing the role of the bourgeois opposition in the fight against Fascism and the importance of democratic institutions for the social and political growth of the proletariat. Gramsci's reply was harsh, and rejected his friend's suggestions as leading to the liquidation of the Communist Party, by subordinating it to the strategy and tactics of the “bourgeois” parties; but the very publication of Sraffa's letter was a recognition of the importance of his views, to which Gramsci drew attention in a letter reserved for his closest comrades. For, if we bear in mind the centralism prevailing in the Communist Party, at that time under the thumb of the “purist Bolshevik”, Bordiga, we can well imagine that the mere fact of publishing Sraffa's letter marked a deviation on Gramsci's part from the official party line at the time — based on a frontal opposition to all the other political forces under the banner of the Bolshevik revolution. Among other things, these were the issues round which the new leadership of the party was formed between 1924 and 1926, while Bordiga went into opposition. And it is also significant that, some years later, in 1937, Gramsci assigned to no other than Sraffa the task of reporting to the party leadership his favourable stance as regards the

Constituent Assembly, that is, an alliance with the democratic parties to fight Fascism.

After Gramsci's arrest in November 1926, Sraffa was the one who provided the most help. He organized direct assistance through Gramsci's sister-in-law, Tatiana Schucht, arranged for the purchase of books and reviews and supplied important intellectual stimuli for the elaboration of the *Notebooks from Prison*, acted as a channel for contacts between the Communist leaders still at liberty and Gramsci and promoted intensive efforts to obtain the prisoner's liberation.

Sraffa's friendship for Gramsci is an indication of an intense passion for politics which must be borne in mind to understand the ideological roots of the research project which Sraffa was to pursue in the field of political economy. It should, however, be emphasized that Sraffa's economic research and its results must be judged independently of his political background. It would not even seem as if Gramsci had any influence on the gradual switch in Sraffa's interests from problems of applied economics to theoretical ones in the first half of the 'twenties. Nor does any analogous role seem to be attributable to Keynes who, however, as we shall see, had a decisive influence in ensuring that Sraffa enjoyed the best possible setting and conditions in which to develop his research.

Sraffa and Keynes

Sraffa met Keynes for the first time in August 1921: he was preceded by a letter from Mary Berenson, a friend of Keynes as of Gaetano Salvemini, who introduced him as “a great friend of the Salvemini ... Professor Salvemini thinks very well of him”. Up till that moment and for some time later, Sraffa was mainly interested in monetary questions. His degree dissertation, which was discussed with Luigi Einaudi in November 1920, was on *Monetary Inflation in Italy during and after the War* (Sraffa 1920), and, immediately after graduating, Sraffa spent some months with the branch of a bank, thus becoming familiar with the various duties of a bank clerk and acquiring a first-hand knowledge of the mechanisms of the credit system. In 1921-2, Sraffa spent some time in England to pursue his studies, attending the courses of the London School of Economics. On his

return to Italy, he was given the task by the Socialist administration of Milan of setting up an "Office of Labour Statistics", but he resigned when Fascism took power.

In June 1922, Sraffa published in the *Economic Journal* an article, "The Bank Crisis in Italy", for which Keynes had asked. In this article, Sraffa reconstructed the story of the Banca Italiana di Sconto, from its birth in 1914 to its collapse in 1921. The article is admirable for its mastery of the banking mechanisms and for its knowledge of the interests involved, as well as for its polemical vigour. Among other things, Sraffa reminds his readers of the subsidies by the Banca di Sconto to the Fascists and the latter's demonstrations to secure government intervention and support for the Banca (p. 191); the "blackmailing" on the part of creditors, the "patent violation of the constitution" on the part of the governments and the "dishonesty" of the Banca's leaders (pp. 192-3); and he concludes:

"Even if [the banking] laws were not futile in themselves, what could be their use as long as the Government is prepared to be the first to break them so soon as it is blackmailed by a band of gunmen or a group of bold financiers? (Sraffa 1922a, p. 197).

This article was passed over in silence in Italy. On the contrary, there were violent reactions to another article, "The Present Situation of the Italian Banks", which Sraffa wrote, again at Keynes' invitation, for a supplement of the *Manchester Guardian* on the Reconstruction of Europe (7 December 1922). In that article, Sraffa notes the weakness and criticizes the practices of the main Italian banks. There were reactions both by the Banca Commerciale (whose Chairman, Toeplitz, also wrote a letter of protest to Keynes, the editor of the Supplement, who published it in a subsequent number of the *Manchester Guardian* with a short and harsh rejoinder), and by Mussolini, just appointed Prime Minister, who telegraphed Sraffa's father (Angelo, a famous professor of Commercial Law, who at the time was Rector of the Bocconi University) demanding a retraction which he did not obtain.

Sraffa was to revert to monetary questions in two letters on the revaluation of the lira which were published in the review, *Stato Operatio* in 1927. After his transfer to Cambridge, together with the more famous courses on the theory of value, Sraffa also held courses, from 1928 to 1930, on the Italian and German banking systems. Among his activities

in the field of monetary theory we may recall, to conclude, the Italian edition of the *Tract on Monetary Reform* by Keynes, which Sraffa brought out in January 1925.

In the meantime, Sraffa had begun his academic career. In November 1923 he became lecturer ("professore incaricato") in Public Finance and Political Economy in the Faculty of Law at the University of Perugia. In January 1926, he obtained the chair in Political Economy at Cagliari. This was to remain his official position in Italy, even after his transfer to Cambridge in the summer of 1927. For almost fifty years, up till 1973, Sraffa was to appear on the records as "on leave" from his chair in Cagliari and to renounce his salary in favour of the economics library at that university.

A few months after Gramsci's arrest, then, Sraffa decided to accept Keynes' invitation to move to Cambridge, possibly both because, travelling between Italy and England, it was easier for him to ensure contact between his friend in prison and the Communist leaders abroad, and because Cambridge seemed to him to offer a more stimulating base, and one more suited to research work in the field of economic theory to which Sraffa intended to devote himself. Keynes, fifteen years older than Sraffa, had now taken the young Italian economist under his wing, as he was to prove on numerous occasions in the following years; among other things, it was Keynes, in his capacity as secretary of the Royal Economic Society, who obtained for Sraffa, in 1930, the assignment of preparing the critical edition of Ricardo's works. Sraffa was never to become a "Keynesian", and was to follow an independent line of research of his own; but between him and Keynes there was built up a firm relationship of friendship and reciprocal admiration. Thus, Keynes was to say of his Italian friend: "Mr. Piero Sraffa, from whom nothing is hid" (Keynes 1933, p. 133), and, on another occasion (Sraffa 1932, p. 249) he was to recognize that "Mr. Sraffa has understood my theory accurately"; while for his part Sraffa had Keynes, and only him, read the first draft of *Production of Commodities by Means of Commodities* in 1928 (Sraffa 1960, p. vi). When Keynes published his *Treatise on Money* in 1930, Sraffa took part in the Cambridge Circus and in general in the discussions set in motion by Keynes' work on the crucial transitional phase of progress towards the *General Theory* (cf. Keynes 1973, p. 337 ff.).

In March 1932, Sraffa published in the *Economic Journal* an article harshly criticizing Hayek's *Prices and Production* (Hayek 1931), followed in the subsequent number by a short note replying to Hayek's

rejoinder. This is an intervention of fundamental importance for the development and acceptance of the Keynesian analysis for two reasons: because it underlines the radical differences between Keynes's analysis and that of Hayek, who was closer to the "pure" marginalist tradition of the Austrian school; and because it develops an analytical instrument, that of the "own rates of interest" which Keynes was to use in a crucial chapter of the *General Theory*, chapter XVII on "The Essential Properties of Interest and Money" (see Keynes 1936, p. 233).

In collaboration with Keynes, who like him was a passionate bibliophile, Sraffa in 1938 edited the republication of an extremely rare brochure, *An Abstract of a Treatise on Human Nature*, with a learned introduction in which they offer decisive proof that it should be attributed to Hume rather than to Adam Smith, as was generally held. For Sraffa as for Keynes, the publication of a joint work is not so much rare as unique.

From Criticism to Reconstruction

However, as we have already noted, the line of research followed by Sraffa is different, both in its origin and its evolution, from the one followed by Keynes. Sraffa's aim was to put forward the tradition of the classical economists as being more fruitful for economic theory than the marginalist tradition which was, with its various ramifications, the prevailing academic approach.

Initially, around the mid 'twenties, Sraffa's aim was more circumscribed: his criticisms were directed at the version of marginalism which at the time held sway in Italy — the Marshallian brand as taught by Maffeo Pantaleoni. These criticisms were developed in a long article "On the relations between cost and quantity produced" (in Italian) (Sraffa 1925). Sraffa's criticisms, which Keynes (1930b, p. 79) found "destructive", concerned two aspects, both of them vital, of the Marshallian theory: the method of "partial equilibria" and the idea of "laws of returns to scale" which, it was argued, would make it possible to establish functional relations between cost and amount produced. As regards the first aspect, Sraffa shows that there is a contradiction between perfect competition and the use of demand and supply curves to determine the equilibrium structure (price and amount produced) of the industry considered. For, when there is a change in the total amount

produced by the industry being considered, it is possible that there will be changes in its average unit cost, but for reasons which will also affect the costs of the other industries: indeed, in general, changes in the costs in other industries will be of the same order of magnitude as those taking place in the industry being considered, so that the latter cannot be considered in isolation, as Marshall on the contrary does with his method of partial equilibria (still to this very day expounded in numbers of textbooks without Sraffa's criticisms even being mentioned).

More generally speaking, Sraffa criticizes the idea that it is possible to unify the "laws" of increasing and decreasing returns to express the cost as a function of the amount produced, in such a way as to construct a supply curve to be used in the framework of the price theory together with the demand curve obtained from the "law" of decreasing marginal utility. Sraffa reminds us that, in the classical political economy, the "law" of decreasing returns, based on the existence of a scarce means of production, land, was associated with the problem of rent, that is, with the theory of distribution; vice versa, the "law" of increasing returns was associated with the division of labour, and was used in the framework of the theory of production in order to explain the general economic development which accompanied over time the expansion of the markets. The problem raised by Clapham (1922), therefore, which consisted in the difficulty of classifying "concrete" industries in three categories of constant, increasing and decreasing returns to scale, is not an empirical applied problem, but has its roots in an insoluble theoretical difficulty. The different categories of returns to scale refer to different analytical levels, and cannot be interpreted as mutually exclusive and exhaustive cases of the possibilities of the real world.

Again at Keynes' request, Sraffa wrote a second article on the subject, which was published in the *Economic Journal* of December 1926. In the first part of the article, Sraffa sums up the criticisms of the Marshallian theory of the firm developed in the Italian study of the previous year; in the second part, he suggests a way out by which the hypothesis of perfect competition is abandoned and an attempt is made to develop a theory of imperfect competition presented as a general case, of which perfect competition and monopoly are simply particular cases. The idea is that, as a result of the imperfections of real markets, in each industry every firm has before it a specific curve of decreasing demand, even when the firms in the industry form a large number, while, according to the traditional theory of competition, each firm in this case would be faced with a horizontal demand curve. This idea

attracted the attention of the Anglo-Saxon economists, and in the following years gave rise to a veritable flood of research in which the most systematic contributions were the works of Joan Robinson (1933), a pupil of Keynes (but also of Sraffa) at Cambridge (England) and of the American Joseph Chamberlin (1933).

However, Sraffa was from the start conscious of the limits of this line of analysis. And at the end of the article he emphasized that "in the foregoing the disturbing influence exercised by the competition of new firms attracted to an industry the conditions of which permit of high monopoly profits has been neglected", since "these are mainly aspects of the process of diffusion of the profits throughout all the industries of the country. Their influence on the formation of the prices of single commodities is relatively unimportant, and their consideration is therefore beyond the scope of this article" (Sraffa 1926, p. 549-50).

But it is precisely on this "relatively unimportant" element that Sraffa concentrates his attention in *Production of Commodities by Means of Commodities*, published in 1960, but started as far back as his arrival at Cambridge (so much so that, as early as 1928, as noted above, he was able to show Keynes "a draft of the opening propositions of this paper": Sraffa 1960, p.vi). In practice, the analysis of imperfect competition seems to us a detour which engages Sraffa for only a few months after the publication of his article in Italian. His attitude of head-on rejection of the Marshallian approach comes out extremely clearly in the third and last of his writings devoted to this problem, the interventions at the Symposium on "Increasing Returns and the Representative Firm" published in the *Economic Journal* of March 1930. On that occasion, Sraffa concluded that "Marshall's theory ... cannot be interpreted in a way which makes it logically self-consistent and, at the same time, reconciles it with the facts it sets out to explain". Therefore, "Marshall's theory ... should be discarded" (Sraffa 1930, p. 93).

The research project which engaged Sraffa for almost fifty years, after his transfer to Cambridge, appears therefore from the start as a profoundly radical one. The refusal of the Marshallian version soon becomes a sharp refusal of the marginalist approach in general, as emerges for example from the article on Hayek (Sraffa 1932). To this approach he opposes that of the classical economists, and in particular that of Ricardo (probably as early as the lectures on the theory of value, which Sraffa delivered at Cambridge from 1928 to 1931). The research proceeded right from the start along two parallel paths. On the one hand, Sraffa tried to retrieve from the misleading interpretations of the

marginalist economists the analytical nucleus of the "surplus approach", which was characteristic of the classical economists from Petty and Quesnay to Smith and Marx; on the other hand, he proceeds to elaborate a rigorous set of analytical propositions such as to constitute a logically consistent theoretical base for the classical approach, by showing how to overcome the difficulties faced by the classical economists which they had left unresolved. At the same time, Sraffa provided the analytical background for a fundamental criticism of the traditional marginalist theory of capital and distribution (a criticism which was independently developed, and set out with direct reference to the theories concerned, by Garegnani 1960; for a review of the subsequent debate, cf. Harcourt 1972).

The Sraffian Revolution

The first of the two lines of research mentioned, the one regarding the rediscovery of the conceptual framework and of the analytical structure of the classical approach, was followed by Sraffa in his critical edition of Ricardo's works. Sraffa toiled at this from 1930 on; the ten volumes came out from 1951 to 1955; an eleventh volume of indexes was published in 1973. Sraffa's objective was to show that the classical conception was founded on the concept of surplus, which could be defined as the proportion of the product which was available for division between the capitalist and land-owning classes, once the initial stocks of means of production and of means of subsistence of the workers employed had been reconstituted. This concept is common to Ricardo and his predecessors. Ricardo's contribution consists mainly of the attempt to construct around the concept of surplus a rigorous analytical structure on the basis of which it would be possible to tackle the problems of accumulation and of its relation to income distribution. On the hypothesis that profits are invested, that wages are devoted to subsistence consumption and rent to luxury consumption, the rate of accumulation is equal to the rate of profit. Once wages and the problem of rent is solved thanks to the Ricardian theory of differential rent (which in fact Ricardo took from Malthus, Torrens and West), profits are defined as a residual magnitude; and the rate of profit is therefore determinable as a ratio of profits to capital advanced. But here there arises a problem which Ricardo pins down and which was long to remain at the centre of economic discussion: how to measure capital

advanced in such a way as to be able to use it in determining the rate of profit? In reality, capital is composed of a set of heterogeneous commodities, and, in order to arrive at their total value, it is not possible to have recourse to their prices, because these depend on the rate of profit which is the unknown factor to be determined.

In a first phase, that of the "Essay on the Low Price of Corn" (1815), Ricardo skirts the problem by resorting to a simplified representation of the agricultural productive process, in which wheat is the only product and the only means of production (as seed and as food for the workers employed), so that profit and capital advanced are nothing but different amounts of one and the same commodity, and the problem of value (in the sense of the valuation of an aggregate of heterogeneous goods) does not arise at all.

In a second phase, that of the *Principles of Political Economy and Taxation* (1817), Ricardo gives up this simplification and has recourse on the contrary to the labour-contained theory of value, according to which the value of each commodity is proportionate to the amount of labour directly and indirectly needed to produce it. In this way, it is possible to measure product and capital advanced independently of the rate of profit, avoiding the circular logic implicit in the recourse to relative prices. However, as Ricardo himself is the first to underline, the theory of labour-value cannot be regarded as a perfect solution of the problem, since the relation between the amount of labour contained in two different commodities will differ systematically from their relative price whenever the productive processes of the two commodities differ as regards the length of the production period, the ratio of fixed to variable capital and the life of fixed capital, when there is a positive rate of profit. On this problem, and on the related one of how to distinguish the "absolute value" of the commodities from their "exchange value", Ricardo was to go on working for the rest of his life.

Parallel with the inquiry into the development of Ricardo's thinking, Sraffa proceeded, as we noted, with his theoretical research which culminated, in 1960, after over thirty years of work, in the publication of *Production of Commodities by Means of Commodities*. Here, Sraffa resolves Ricardo's problem (and that of the whole classical political economy) by the simultaneous determination of relative prices and the rate of profit. Continuity with the classical tradition is ensured by the fact that this result is obtained in the conceptual framework of the classical approach: technology and real wages are the necessary and sufficient data to determine the rate of profit (and relative prices),

and are themselves considered as belonging to distinct fields of analysis. As regards the rate of profit the explanation in terms of "competition of capital" proves wrong, that is, the idea developed by the marginalist tradition that the rate of profit tends to diminish as, with the progression of accumulation, the economic system can command larger amounts of capital — an idea whose analytical foundations are explicitly destroyed by Sraffa in his work.

In Sraffa's analysis as in that of Marx and the classical economists, the analytical assumption of equilibrium on which the determination of relative prices is based simply consists in the equality of the rate of profit in the various sectors. This analytical hypothesis corresponds to the idea, on which for example Smith and Marx dwell, that the unity of a capitalist economic system is ensured by the freedom of movement of capital in search of the most remunerative employment. In such a system, at the end of the productive process, each sector has to rebuild its own stocks of means of production in order to be able to start up a new cycle of production, and it does so by selling its own product to the other sectors and acquiring from them its own means of production. The relative prices of the various commodities must be such as to guarantee the "reproduction" of the economic system, that is, they must make it possible for each sector to replenish the capital advanced, at the same time supplying the necessary incentive to pursue productive activity in that sector (through, precisely, a uniform rate of profit in all sectors). Since the commodities are at the same time products and means of production, it is not possible to determine the price of an individual commodity independently of the others: given the interrelations between the various sectors of production, it is essential to consider the system in its entirety; and, in addition, as we have seen above, it is necessary to determine jointly relative prices and the residual distributive variable (the rate of profit, if we assume wages as given, or vice versa).

As will be seen, the relations of exchange are determined within what has been termed "the conceptual framework of reproducibility", that is, using the conditions necessary to guarantee the reproduction of a capitalist economic system. We are thus in a different conceptual framework from the one stressing the scarcity factor as is characteristic of the marginalist theory, which defines prices as indications of relative scarcity (for goods produced, of course, what is involved is obviously the relative scarcity of the "original factors of production" directly or indirectly needed: hence the importance of Sraffa's criticism of the marginalist concept of "capital" as one of such factors of production, besides labour and land).

The criticism of the marginalist approach and the revaluation of the approach of the classical economists and of Marx also implies a rejection of certain aspects of the marginalist methodology, in particular, the concept of economics as "the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (Robbins 1932, p. 16), and the idea that all economic theories can be reduced to the solution of problems of maximization (or minimization) which are subject to constraints (see Samuelson 1947, p. 5). Sraffa isolates *in vacuo* a specific problem, that of the relation between relative prices and distributive variables, and considers only the factors which are directly relevant to the problem being examined: the levels of production of the various sectors are among the data of the problem considered, so that the analysis concerns the "photograph" of an economic system at a given moment of its development. The specific problem considered is thus isolated from the other traditional problems of economic theory, such as that of the decisions as regards the levels of production or that of the sale of the amounts produced or that of technological change, and so on: it is implicitly suggested to us that these problems must be tackled separately (even if not along completely independent lines), on the basis of a different set of assumptions and possibly also with different analytical instruments.

An interpretation in this sense of Sraffa's methodological contribution (developed by Roncaglia 1978, Chapter 7) is suggested to us by, among other things, the influence of Sraffa on another outstanding figure of modern culture, the Austrian philosopher, Ludwig Wittgenstein, whom Sraffa got to know at Cambridge in 1929, and with whom he was great friends. The discussions with Sraffa exercised a decisive influence on the Austrian philosopher and on his transition from the logical atomism of the *Tractatus* (Wittgenstein 1922) to mature positions expressed in *Philosophical Investigations* published in 1953 after his death, as Wittgenstein himself recognizes in the Preface to the latter work (Wittgenstein 1953, p. viii). In the *Tractatus*, Wittgenstein argued for the possibility of a logical, axiomatic construction of propositions, each one of which described a "fact", and which, in their totality, would describe the world; or rather, if not the whole world, everything in the world which can be described in rational form; in short, the possibility — and hence the necessity — of a "general theory".

In the *Philosophical Investigations*, Wittgenstein abandons this position, and develops a theory of "linguistic games" or ideal models that concentrate on particular aspects of real language, each one of them

capable of being considered as a general language for a given group of people: that is, to continue with our comparison with the method implicitly proposed by Sraffa through his contribution in the field of economic theory, a specific analytical treatment for each field of analysis (even though — Sraffa would add — consistency in the basic conceptual framework is obviously required).

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Sraffa's influence, then, has been felt profoundly in different fields: not only that of economics, but also that of philosophy and politics. In his specific field of activity, his influence is enormous. The soundness of his criticisms of the Marshallian theory of the firm and the marginalist concept of capital as a factor of production has been recognized even by his opponents; in the field of the history of economic thought, one cannot dispense with his interpretation of Ricardo and with his reconstruction of the analytical conceptual nucleus of the "surplus approach"; in the field of the theory of value, the results of *Production of Commodities by Means of Commodities* constitute the point of departure for hundreds of works. His aim — to shunt the car of economic science from the marginalist to the classical path — has not yet been completed. Time is needed, as well as the efforts of a host of writers, to reverse a century-old tradition. But it is impressive how much Sraffa's devotion, drive and intelligence have contributed to the realization of such a grandiose objective.

Roma

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