

## Macroeconomics in crisis and macroeconomics in recovery

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### 1. The turning points in macroeconomics

The economic crisis we are now experiencing may entail radical changes in the directions taken by research and, above all, in macroeconomics. This is a fairly widespread opinion, based also on past experience (cf. for example Reati, 2010, or Kregel, 2011). Of course, the changes in economic culture may be slowed down or at any rate conditioned by the sheer force of the dominant economic interests. However, this is more likely to happen in a normal course of events, when periods of relatively regular economic evolution correspond to periods of “normal science” (as defined by Kuhn, 1962). On the other hand, we can hardly expect dramatic events with far-reaching consequences not to have repercussions on the theoretical debate, especially when – we might add – the current dominant theories are not particularly robust.<sup>1</sup>

In fact, we need only cast a brief glance back over developments in economic theory, with particular reference to macroeconomics, to see that

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<sup>1</sup> Only five years ago it would have been very difficult to find authoritative exponents of the academic and financial establishment expressing themselves in terms like those of Willem Buiter (2009): “The typical graduate macroeconomics and monetary economics training received at Anglo-Saxon universities during the past 30 years or so, may have set back by decades serious investigations of aggregate economic behaviour and economic policy-relevant understanding” (p.1).

the major turning points correspond to significant events that have left their mark on the course pursued by the world economy.

The connection most frequently referred to is the concomitance between the Great Crisis following on the stock market crash of 1929, with unemployment rates soaring over long years, and the groundbreaking rise of Keynes's theory, hypothesising the possibility – indeed, the plausibility – of lasting underemployment equilibria, the instability of monetary production economies and the need for active intervention by the authorities in charge of economic policy, in support of the economy. All this clashed with the traditional orthodoxy of the so-called Treasury View in Great Britain and of that supporting a budget balanced over the business cycle average in the United States, based on monetarist theory, as far as inflation is concerned, and on the thesis of public expenditure crowding out private investment.<sup>2</sup>

Rather less mention is made of the second issue we wish to mention, which is the heightening of international commercial tensions following upon the adoption of protectionist policies by various countries as a reaction to the Great Crisis. It can, in fact, reasonably be argued that the aspiration to create a system of international relations promoting peaceful cooperation and economic development served as the mainspring leading to approval of the Bretton Woods rules. These rules do not represent a complete vindication of Keynes's ideas, but rather a hybrid, with elements of Keynes grafted onto the "American dream." They represented an optimistic conception of the development potential inherent to market economies based on free private enterprise, but within a clear framework of rules (such as fixed exchange rates), sanctioned through recognition of the political and economic authority wielded by

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<sup>2</sup> Mainstream economists prefer to point to the Great Depression of the 1930s as "The problem that gave birth to our field," namely macroeconomics (Mankiw, 2006, p. 29). Actually, the birth of macroeconomics came about with the separation of analysis of value and distribution, on the one hand, and, on the other hand, analysis of monetary problems and cyclic fluctuations in employment and income (microeconomics and macroeconomics), utilised to keep the way clear for the predominance of the traditional marginalist theory of value and distribution in the field of microeconomics, in keeping with the neoclassical synthesis, which – as readers will be reminded in the following pages – prevailed in the aftermath of the Second World War.

the United States. We might even suggest, albeit very gingerly, that the macroeconomic conception predominating in the 1950s and 1960s – the so-called neoclassical synthesis – drew vital lymph from these events (and from the Cold War, with competition also at the ideological level between Western democracies and Communist countries, between market and planning). It is, in fact, a conception that disregards certain aspects central to Keynes's analysis, such as uncertainty or instability of market economies (thus requiring in particular an appropriately stringent and effective system of rules in the financial field). Rather, it focuses on the capacity of monetary and fiscal policy to stabilise the economy within the framework of the traditional marginalist theory of value and distribution, which rules out distributive conflict on the grounds that there are optimal equilibria towards which the market automatically directs the economy.<sup>3</sup>

A third turning point came about with two major events: the crisis of the international monetary system based on the Bretton Woods rules ensuing upon the abandonment of the dollar-gold convertibility on 15 August 1971, and the upsurge of inflation following upon the oil crises of 1973 and 1979.<sup>4</sup> Behind these events lay, in the former case, the cost of the war in Vietnam and, in the latter case, the growing market power of the oil-producing countries. The cultural reaction to the former was to be seen in the rise of monetarism, advocating price flexibility and favouring automatic market mechanisms, also in exchange rates, while response to the latter saw a revival of the ideology of scarcity, evoking the risk of a

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<sup>3</sup> Suffice it to quote Keynes himself to convey an idea of the distance that separated him from the neoclassical synthesis (from an article in *The Listener*, published in November 1934): "On the one side there are those that believe that the existing economic system is, in the long run, a self-adjusting system, though with crack and groans and jerks [...] On the other side of the gulf are those that reject the idea that the existing economic system is, in any significant sense, self-adjusting [...] I range myself with the heretics." (Keynes 1973, pp. 486-9). Exponents of the neoclassical synthesis went so far as to talk of fine tuning, the idea being that monetary and fiscal policies could exert precise control over trends in income and the other macroeconomic variables, offsetting with exactitude any departure of the economy from the optimal path.

<sup>4</sup> Many will remember that Friedman (1968) had foreseen the sharp rise in inflation that came about in the 1970s, but few seem to remember that he had also predicted a fall in the price of oil, deeming the market for that commodity a competitive one (*Newsweek*, 4 March 1974). What, we may wonder, would the trend of inflation have been, had the price of oil dropped significantly?

halt to the development process due to the depletion of natural resources (which is quite a different matter from the problems of environmental deterioration, in terms of both theory and the policies to be implemented).<sup>5</sup>

The doctrine of the invisible hand of the market intrinsic to the traditional marginalist theories was taken yet further at the level of theory with criticism of stabilising economic policies<sup>6</sup> and still greater stress being placed on the market's automatic rebalancing mechanisms. These analytic results were obtained with the use of simple aggregate models and resort to the assumption of rational expectations. The latter were not a simple matter of assuming that economic agents behave rationally, reflecting on the situations they are faced with and the likely prospects rather than mechanically extrapolating from past experience. Instead, in the technical sense attributed to them in these models, rational expectations correspond to the decidedly irrational assumption that there exists only one "true" model of the economy, upon which every agent bases his or her decisions, aware of the fact that all the others behave likewise. Set on these foundations, the theory of rational expectations denies the existence of even only temporary disequilibria;<sup>7</sup> moreover, the vertical Phillips curve theory<sup>8</sup> rules out any chances of success for union

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<sup>5</sup> Suffice it to recall the success of the book like *The limits to growth* (Meadows *et al.*, 1972), published just before the oil crisis, contributing to create the ideological climate that saw the adoption of decisions (e.g. abrupt abolition of the oil import quota by the United States) that played a part in determining the dimensions of the crisis: cf. Roncaglia (1983, pp. 127-9).

<sup>6</sup> In particular with the so-called Ricardian equivalence theorem of Barro (1974) and the time inconsistency theorem of Kydland and Prescott (1977).

<sup>7</sup> Consistently with this thesis, deviations from the growth trend determined by the quantities of factors of production available and technology are attributed to shocks brought in by unexpected fiscal and monetary policy measures (equilibrium business cycle theory, Lucas, 1972) or, in real business cycle theory (Kydland and Prescott, 1982), by the "surprises" of technological change. In this context, what appears as involuntary unemployment in statistical surveys is seen to be the response of rational economic agents to shocks based on intertemporal substitution between working today or resting today and working tomorrow, in relation to the current and expected level of real wage. This, we may presume, is the reason why Lucas (2003) deems the costs of the crises insignificant, concentrating on variations in per capita consumption and disregarding unemployment.

<sup>8</sup> The "Phillips curve" is a negative empirical relation between the rate of unemployment and the rate of growth in monetary wages, illustrated in a much quoted study (Phillips,

action to raise monetary wages, since any such increases would if anything translate – monetary policies permitting – into proportional increases in the rate of inflation, leaving the real wage and the rate of unemployment at its “natural” level. At the political level, these theoretical developments saw the rise of neoliberalism as vindicated by Reagan in the United States and Thatcher in Great Britain.

Relatively speaking, the more progressive theoretical strands favouring limited intervention in the market recognised the existence of involuntary unemployment but resorted to various sorts of frictions and rigidities to account for it (monetary wage rigidities; rigidities in the monetary prices of goods, due to imperfect competition; real wage rigidities – theory of implicit contracts and insiders-outsiders, incomplete information, efficiency wage theory –; theories of mismatch or qualitative misalignment between labour supply and demand; transaction cost theories, and so on, not to mention the theories on menu costs, i.e. the costs of updating price lists). All this was christened as *New Keynesian theory*, although any reference to Keynes was limited to recognition of the circumstance to be accounted for, namely involuntary unemployment, and not the theory applied to account for it, apart from its least valid aspect, namely resort to aggregate models often derived from Marshallian short-period partial equilibrium models.

In any case, both monetarism and the scarcity school represented paradoxical responses to the problems raised with the collapse of the Bretton Woods system and the oil crises. In the case of the former, the transition from monetary policy stabilising interest rates to a policy of

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1958) and subsequently incorporated in the theoretical apparatus of the neoclassical synthesis to argue the existence of a trade-off between the fight against inflation and the fight against unemployment. In two famous studies, Friedman (1968) and Phelps (1967) upheld the thesis of a vertical Phillips curve in the long period at the level of the natural unemployment rate, relegating to the short period the trade-off between inflation and unemployment. The exponents of rational expectations (Lucas, 1972) hold that the Phillips curve is also a vertical in the short period. Actually, the empirical evidence encapsulated in the Phillips curve can be accounted for by inverting the cause-effect link: as the classical economists – and in particular Smith and Marx – saw it, it was not growth in wages that brought about unemployment but, on the contrary, the latter that heavily affected the bargaining power of the unions, and with it the rate of growth in monetary wages (cf. Sylos Labini, 1967; 1974).

control of money supply, albeit not fully implemented in practice, nevertheless generated greater instability, above all in the currency markets.<sup>9</sup> And with instability came an explosive increase in use of financial derivatives in hedging and arbitrage operations, but also in speculative operations. All this, together with the deregulation that essentially eliminated the distinction between commercial banks and investment banks, led to the financialisation of the economy that played such a part in the recent crisis.<sup>10</sup>

By reducing the bargaining power of the unions, labour market liberalisation worked in the direction of increasing inequality in the distribution of income, as indeed did globalisation through the competition of countries with not only lower wages but also less stringent regulation on safety in the workplace, the environment and protection of the consumer. Redistribution of income in the direction of greater inequality constituted a further factor dragging on the expansive drive of the economy, contributing to opening the way to crisis.<sup>11</sup>

As regards the scarcity school, here we find a recurrence of the Malthusian error of failing to take technological progress into account, only to find glaring refutation in subsequent events.<sup>12</sup> What failed to

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<sup>9</sup> “The collapse of the stable demand for money function in the early 1980s proved to be very damaging to monetarism” (Snowdon and Vane, 2005, p. 196).

<sup>10</sup> Cf. Roncaglia (2010).

<sup>11</sup> Cf. Galbraith and Garcilazo (2004), Sylos Labini ([2003] 2009).

<sup>12</sup> To take but one example, consider the case of the oil reserves. According to Meadows *et al.* (1972, p. 66 in the second edition, 1975), the oil reserves would have dried up in the space of 20 years. Actually, this prediction – which was to prove glaringly wrong – was based on a serious conceptual error, namely confusion between the ultimately recoverable reserves of oil, which are very hard to quantify but nevertheless enormous, and the proven reserves, or in other words – according to the definition applied in assembling the statistical data – the quantity of crude oil that can be drawn upon with profit at current prices and with the current technology from oil fields already identified, whose location, extension and characteristics are known. The proven reserves have grown enormously over time thanks not only to the discovery of new oil fields but also, and above all, on the strength of progress in oil extraction technologies. On the whole, the proven reserves act much like reserve stocks in the manufacturing industries, maintaining a relatively stable ratio to the current levels of production over time: this stood at about 35 years of current production in 1970, 32 in 1985, 38 in 2000, and 41 (due partly to a fall in production resulting from the crisis) in 2009 (data obtained from ENI, *World Oil and Gas Review*, various years).

receive due attention was the real cause of the oil crisis, lying in an oligopolistic type of market controlled by the major international companies and the leading oil-producing countries. Given the importance of oil as a source of energy, this led to imbalances of various kinds that in their various ways exerted a negative influence on the trend of the world economy.<sup>13</sup> Moreover, the scarcity approach also helped propagate a Malthusian brand of environmentalism based on limits to growth, rather than the Millian brand, founded on sustainable development.<sup>14</sup>

The financial crisis that broke out in the October of 2008 with the collapse of Lehmann Brothers exposed – or at least should have – the economic policy errors of the so-called Washington Consensus and the underlying theoretical errors of what was labelled mainstream economics. Financial deregulation is little by little giving way to re-regulation:<sup>15</sup> under the pressure of the emergency, rescue operations and policies to favour monetary expansion and boost demand have been ousting policies to downsize the role of the public sector in the economy. As far as income redistribution is concerned, however, the situation shows yet little change.<sup>16</sup>

While the approach to economic policies has changed drastically and very rapidly (although they are now gradually finding their way back along the traditional lines),<sup>17</sup> takeoff in the theoretical debate is lagging

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<sup>13</sup> For an interpretation of the oil market as a “trilateral oligopoly” and its implications, cf. Roncaglia (1985; 2003). Oil prices greatly in excess of costs and with no justification in terms of difficulties of supply have aggravated the balance of payments imbalances of many countries; moreover, the extreme variability of oil prices has discouraged investment in alternative energy sources. The price-fixing methods, taking reference from the Brent spot market to index supply contracts, have themselves promoted the rule of financial speculation and the rampant instability it entails.

<sup>14</sup> For an idea of sustainable development, cf. the Brundtland Report (Brundtland, 1987).

<sup>15</sup> Cf. Maserà (2010) for discussion of the latest attempts to reform the American and European financial systems and Tonveronachi (2010) for a critique of the limits to the strategy of prudential regulation so far pursued.

<sup>16</sup> On the contrary, the need to address the huge deficits in wake of the crisis – to a considerable extent due to the cost of bank rescue operations, cf. Fratianni and Marchionne (2010) – has led a number of governments to bring in or propound cuts in social spending, with all the imaginable further negative effects in terms of social inequality. On this point, and in general for a critique of US fiscal policy, cf. Kregel (2011).

<sup>17</sup> Cf. Kregel (2011) on recent trends in US macroeconomic policy.

behind. Nevertheless, we seem to be seeing some signs of renewed interest in the original Keynesian approach, or developments of it looking to the elements of financial fragility and instability in capitalism, as proposed by Hyman Minsky (1975, 1982). Conversely, the mainstream theories have been coming in for criticism, and in particular the theory of efficient financial markets formulated in Chicago by Eugene Fama (1970), which has it that the prices of financial assets determined in the market incorporate all the available information, correctly assessed by rational economic agents, thereby ruling out *a priori* the possibility of speculative bubbles associated with that “irrational exuberance” which Keynes had warned of. And yet the category of economists as a whole has come to be discredited, with no distinction between the various theoretical strands. In particular, scant recognition has been accorded to the economists who marked themselves out, pointing up the elements of real and financial fragility in the economy at the dawn of the new millennium.<sup>18</sup>

## 2. Macroeconomics in crisis

As we have seen in the brief overview presented in the previous section, there are complex links of interaction between the vicissitudes of the economy and the rise or decline of the various theoretical paradigms. It is, however, also clear that the points emerging from the more strictly scientific debate have their own importance. We have already highlighted some of these aspects. Let us now focus on certain other aspects that may

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<sup>18</sup> The failure to accord due recognition to theoretical positions other than the mainstream has to do, among other things, with the methods of selection of researchers focusing on publication in the mainstream journals, which are taken to be the best on the basis of the number of citations appearing in journals of the same ilk (Corsi *et al.*, 2010). Thus, on the basis of such criteria, an article like the one by Lucas (2003) hailing the end of economic crises (“Macroeconomics [...] has succeeded: its central problem of depression prevention has been solved, for all practical purposes”, p. 1) turns out to be far “superior” to the contemporaneous article in which Sylos Labini ([2003] 2009) foresaw the crisis that has come upon us.

help us understand the points of strong or weak analytic force in the main lines of research in macroeconomics.<sup>19</sup>

Let us begin with the pre-Keynesian theory, which continues to stand as an important point of reference for the mainstream theories from the neoclassical synthesis on. The analytic structure of traditional marginalist theory rests on a fundamental mechanism of rebalancing between demand and supply, consisting in the variations in prices in response to the disequilibria and the consequent variations in demand and supply. This mechanism applies both to the markets for specific goods and services (microeconomics) and, in essentially the same way, to the aggregate markets of production and employment as a whole. Equilibrium between demand and supply implies full utilisation of the resources available; in the case of macroeconomic analysis, this means full employment of the labour force available and full utilisation of “capital,” however it might be defined or measured.

To obtain this result, given the original endowments of factors of production, the ratio between capital and labour employed must be flexible, i.e. the firms must be able to choose the most advantageous technology, and decreasing marginal productivity of the factors of production has to be assumed. This assumption ensures a direct relation between the real wage and the “capitalistic intensity” of productive processes, and thus an inverse relationship between real wage and employment. In turn, this relationship ensures equilibrium – the absence of any unemployment that is neither voluntary nor frictional – in the labour market. Indeed, unemployment (excess of labour supply) would bring about a fall in the price of labour, i.e. in the real wage, which would lead firms to substitute labour for capital in the production technology, bringing about an increase in labour demand; in a competitive labour market, falling wages and increasing labour demand will persist until full employment is reached.

Correspondingly, there is an inverse relationship between the interest rate and investments (or the demand for funds on credit), and a direct relationship between the interest rate and savings (or supply of funds on

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<sup>19</sup> Naturally, given the scope of this article we will limit our overview of lines of research to a few broad outlines, and we will also have to omit a number of lines of a certain importance, such as the so-called new political macroeconomics, the theory of endogenous growth and the macroeconometric models.

credit), which ensures continued full employment of the capital available in accordance with the equilibrium rate of interest, and indeed stability of the equilibrium in question.<sup>20</sup>

This mechanism, of fundamental importance if the thesis of the “invisible hand of the market” is to be valid, came in for criticism from Keynes and Sraffa along different lines, but with converging outcomes. With his theory of liquidity, Keynes demonstrated that the rate of interest is not determined by the flows of demand and supply of loans, or in other words by savings and investments (loanable funds theory), but by the preference of financial agents for a greater or lesser liquidity of assets according to their expectations – inevitably shrouded in fairly substantial uncertainty – regarding the future trend of the economy and, in particular, of the financial variables themselves.<sup>21</sup> Moreover, Keynes pointed out that the drop in monetary wages caused by unemployment would not necessarily mean a drop in real wages as prices may fall too, as is likely to happen in a phase of underemployment and under-utilisation of resources (obviously in a non-oligopolistic, competitive economy). If then the real wage falls, the loss, together with the state of crisis that led to the fall, can induce families to cut down on their consumption and, above all,<sup>22</sup> entrepreneurs to reduce their investments, thereby aggravating the crisis itself.

Sraffa and the debate of the 1960s on the theory of capital led to refutation of the general applicability of a direct relationship between the real wage and the capitalistic intensity of the productive processes, and so of the inverse relationship between the real wage and labour demand.<sup>23</sup>

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<sup>20</sup> For an illustration of this, cf. Snowdon and Vane (2005), pp. 37 ff.

<sup>21</sup> Thus we have a “bootstrap” theory of the rate of interest (cf. Kahn, 1972), in which the current rate of interest depends on the trend foreseen for the future rate of interest. Obviously, these brief notes hardly do justice to the complexity of the debate, which includes among other things the issue of transmission of the effects of monetary policy from the short-term rates to the long-term rates.

<sup>22</sup> In Keynesian theory, investments are considered an unstable component of demand, while for consumption various stabilising mechanisms can come into play (such as, in the permanent income theory, the idea that consumption depends not on the current income but on the average income over a certain span of time).

<sup>23</sup> It is beyond our scope here to go through the demonstrations of the theses briefly mentioned. For a review, readers are referred to Harcourt (1972).

We had long been familiar with the problems Wicksell ([1901] 1934) raised concerning aggregation of heterogeneous means of production in a one-dimensional variable called “capital”: we knew very well that when the distribution of income between wages and profits changes, the prices of the individual means of production change and can lead to upward or downward variations in the aggregate value of the capital. Thus were undermined the foundations of the aggregate function of production, though its adoption carried on anyways.

Sraffa (1960, ch. 12) also demonstrated the possibility of the reswitching of techniques: i.e. the phenomenon that the same technique, substituted by another when wages fell, could once again become the more advantageous if wages fall yet further. Consequently, it is not possible to order the various techniques available in a ranking of increasing capital intensity. This in turn puts an end to the thesis of a necessary direct relationship between the real wage and the capitalistic intensity of the productive processes, and with it to the thesis of the uniqueness and stability of the full employment equilibrium.

The criticisms recalled above apply not only to the traditional (pre-Keynesian) marginalist theories of value and distribution, but also to the revival of the theories attempted with the so-called neoclassical synthesis, which, as we have seen, was in vogue in the decades following on the Second World War. This theory, as pointed out above, takes up the Keynesian theses on the possibility of situations of underemployment, but only for the short period, while the traditional marginalist theory is held to apply for the long period, so that economic growth depends solely on the factors at work on the supply side. It was along these lines that a mainstream growth theory was developed, starting from the model proposed by Robert Solow in 1956, which is based on a simplified version of the traditional theory, centred as it is on the use of an aggregate production function.<sup>24</sup>

Thus, the eloquent demonstration of the limits of the aggregate concept of capital and the weak foundations of the inverse relationship

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<sup>24</sup> For a review of these strands of research cf. Solow (2000); for critical evaluation cf. Pasinetti (2000).

between the real wage and labour demand has been ignored, doing away with the findings emerging from a theoretical debate that had preoccupied leading economists over a considerable period of time and found publication in the major journals. For a time we saw all sorts of justifications raised for this behaviour, from “confidence” in the validity of the traditional model to the alleged unimportance in practical terms of the “perverse” phenomena (never convincingly demonstrated, and in any case irrelevant to a theoretical debate dedicated to the general validity of a particular theory), up until the need for “simplifications,” evaluated in terms of analytic convenience and not of the distortions they risked creating in the interpretation of reality. The frequent invocation of general economic equilibrium to exorcise these problems will be seen to be inappropriate if we take into account the fact that the models applied in the macroeconomic debate typically contain a single good and one single representative economic agent.<sup>25</sup> In the end, due to the conformism implied by the rules of publish or perish, we are left with the peevish reactions against anyone drawing attention to what are seen as decades-old seemingly theological debates long superseded, without any justification for such a contemptuous judgement.<sup>26</sup>

The neoclassical synthesis compromise was necessarily fragile. The underlying traditional theory of value and distribution, once accepted for the long period, was unavoidably led, little by little, to extend its

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<sup>25</sup> Just as in the case of the models with a number of goods (for a review cf. Harcourt 1972), so also for the models with a number of agents the problem again arises of the impossibility of determining monotonic relationships between the significant microeconomic and the corresponding macroeconomic variables, thereby nipping in the bud projects for micro-foundation of macroeconomics starting from the behaviour of individuals. (Cf. Forni and Lippi, 1997; D’Ippoliti, 2011).

<sup>26</sup> Indicative in this respect are the words of one of the major exponents of mainstream macroeconomics: “there are ways to think about the equilibrium for the whole economy, using simple functional forms and simplifying assumptions, and get some important conclusions out of that. [...] Remember that Solow and Samuelson had to engage in vicious trench warfare [...] to make the world safe for those of us who wanted to use the concept of a production function.” (Romer, 2005, p. 681). For his part, an exponent of the Austrian School speaks of a “protracted and, ultimately, sterile debate that attracted much attention a few decades ago” (Garrison, 2005, p. 478), and thus feels justified in proposing the traditional version of the Austrian theory based on the average period of production that had been demolished in the context of that very debate.

influence displacing the Keynesian elements that the neoclassical synthesis had sought to incorporate, albeit only to the short period. The process developed along various lines, and in particular with the debate that saw the hypothesis of static or extrapolative expectations forced to give way to the hypothesis of rational expectations. Once the traditional marginalist theory was accepted, one could hardly have imagined rational economic agents making their decisions without taking into account the basic trend towards full employment equilibrium posited by the theory, with all the implications indicated by the theory of rational expectations: hence the theses of an economic system in perennial equilibrium,<sup>27</sup> any deviations from the long-period trend resulting solely from shocks caused by surprise choices on the part of the economic policy authorities or by unforeseen technological innovations.

In these theories there is no room for phenomena of persisting involuntary unemployment. Faced with the undeniable existence of such phenomena in reality, various lines of research have sought to account for them, pointing out that in the real world there are various types of rigidities and frictions. Despite the well-meant touch of realism, however, these models also continued to make use of the assumption of a world with one single commodity and a sole representative economic agent.

As Sraffa pointed out, faced with Robertson's attempts to defend Marshallian theory from criticism of logical inconsistency and/or lack of realism (and replacing "Marshall's theory" with "mainstream theory" and "Robertson" with "the theoreticians who use an aggregate production function"): "We seem to be agreed that the theory cannot be interpreted in such a way which makes it logically self-consistent and, at the same time, reconciles it with the facts it sets out to explain. The remedy of the

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<sup>27</sup> What had been for the theoreticians of rational expectations a theoretically justified choice – concentrating the analysis on equilibrium, implying that non-equilibrium positions are not admitted by the theory – became widespread practice also among the other strands of mainstream research. However, the problem of stability cannot be ignored: in fact, it is decisive for the validity of the thesis of the invisible hand of the market. In this respect we may add that the theoreticians of general economic equilibrium arrived at the conclusion that it is impossible to demonstrate the unicity and stability of equilibrium without applying some, decidedly restrictive, *ad hoc* hypotheses like the convexity of sets of production, or in other words the lack of increasing returns (cf. Mas-Colell *et al.*, 1995, pp. 598 ff.).

theoreticians who use an aggregate production function is to jettison the mathematics; [...] in the circumstances, I think it is the mainstream theory that should be discarded.”<sup>28</sup>

### 3. Macroeconomics in recovery

The present economic crisis has highlighted certain phenomena that clash with one or the other thesis of mainstream microeconomics, from the persistence of involuntary, non-frictional unemployment to the formation and bursting of speculative bubbles, and from the effectiveness of the application of Keynesian-type fiscal and monetary policies to tackle the situation of crisis to the nonexistence (or at least feebleness) of automatic market mechanisms adjusting to optimal equilibrium. Indeed, even the theses on the usefulness of crises as “creative destruction”, proposed by Schumpeter on the basis of the assumption of full employment,<sup>29</sup> may be seen to be misleading if we consider the loss not only in production and well-being, but also in opportunities for progress involved, for example, in processes of learning by doing or incorporated technical progress.

Thus certain strands of research hitherto neglected are returning to the centre of attention, including the original Keynesian line; that of Hyman Minsky; the so-called balance-sheet macroeconomics of Steindl; Godley *et al.*; the approach based on oligopolistic market forms and the line deriving from Kalecki, which places the emphasis on income distribution. Integration of these contributions could give rise to a well-structured, albeit less rigidly compact, macroeconomics departing radically from the hitherto predominant mainstream.

Let me summarise, for each of these strands of research, the points that appear most interesting in the light of the events of the last few years.

In the case of Keynes’s original theory, there are a number of points to bear in mind, and they have been mentioned above: the monetary

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<sup>28</sup> Sraffa (1930), p. 93.

<sup>29</sup> For an outline exposition cf. Roncaglia (2005), pp. 422-31.

theory based on the concept of liquidity in a world characterised by uncertainty, the theory of entrepreneurial decisions (taken separately, those on levels of production and those on levels of investment),<sup>30</sup> and the consequent thesis of the need for policies in support of employment.

Kalecki's theory<sup>31</sup> is, of course, in certain respects similar to that of Keynes; it differs from it in dwelling less on monetary theory and more on non-competitive market forms (in a way that, with its references to the principle of full cost, anticipates the more fully developed theory of oligopoly by Sylos Labini, 1956 and 1984) and on income distribution in its influence on effective demand (more specifically, the influence of wages on consumption and of profits on investment).

Of the authors who have brought the focus to bear on points of systemic fragility in the economy, Steindl and Godley deserve special mention for their application of analysis of the macroeconomic balance sheets of aggregate agents – families, firms, the public sector, the rest of the world – in terms of a conception that takes up various points from Kaleckian theory (Steindl) and supplements them with Minskian elements (Godley) with regard to the identification of cause-and-effect links.<sup>32</sup> The disequilibria in the flows must sum to zero in the aggregate, as so must the credit and debit stocks that accumulate over time as a result of the disequilibria in the flows. Thus, for example, a simultaneous deficit in the public and private sectors must correspond to a surplus in the rest of the world (i.e. a current account deficit in the balance of payments) – a situation that has obtained for years in countries like the United States and Italy, with the result of simultaneous accumulation of private and public debt and of debt towards the rest of the world. Due to the financialisation of the world economy, debit stocks can be funded more readily than in the past, which has been a factor in the delay in

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<sup>30</sup> The distinction between decisions on levels of production and levels of investment is consistent with the importance Keynes attributed to uncertainty, which is of a different nature for choices regarding the short period and those regarding the long period. This aspect also accounts for Keynes's preference for a block-by-block structure of analysis rather than the general economic equilibrium method (cf. Roncaglia, 2009a). It is a choice of method much like that made by Sraffa (1960): cf. Roncaglia (2009b).

<sup>31</sup> Cf. the collection of writings he himself edited, Kalecki (1971).

<sup>32</sup> Cf. e.g. Steindl (1952; 1990); Godley and Lavoie (2007).

adopting policies to deal with disequilibria. Nevertheless, as soon as the markets arrive at the conviction that the growing debt is no longer sustainable, crisis is bound to break out. In fact, over and above the theoretical debate, the series of events leading to the present crisis has made it quite clear that there are no automatic rebalancing mechanisms: thus analysis of the macroeconomic balance sheets and their interactions constitutes an important element in reconstruction of macroeconomics.<sup>33</sup>

The endogenous formation of the conditions of crises is central to the analysis conducted by Minsky (1975, 1982), who integrates elements of financial analysis with elements involved in the analysis of the real economy, such as income distribution and financial balance sheet analysis. Minsky distinguishes between covered financial positions (in which current income can reasonably be expected to more than suffice to meet the flow of payments for interest and debt amortisation), speculative financial positions (in which in certain periods the debt amortisation instalments come above expected receipts, necessitating resort to operations for partial refinancing of the debt itself), and Ponzi finance (in which it is the increase in value of the asset acquired on credit that eventually allows for both repayment of the original debt and payment of the interest burden that has accumulated over time). When the situation is calm, the proportion of speculative and Ponzi finance operations increases due to endogenous mechanisms inducing underestimation of risks; the formation of speculative bubbles is a sign of this. Systemic financial fragility increases, and crisis becomes the inevitable outcome.

Essentially, the new macroeconomics – reconstruction of which may well be stimulated by the crisis – could bring together the various elements we have outlined, conceptually compatible among themselves but more readily analysed by blocks. Basically, then, we have: recognition of the absence of automatic mechanisms for macroeconomic rebalancing in the market economies and the consequent possibility of situations of persistent unemployment (Keynes, Sraffa); the importance

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<sup>33</sup> In itself, the analysis of macroeconomic balance sheets is compatible both with the mainstream theories and with the heterodox theories: the context within which it is applied determines the cause-and-effect links characterising the various interpretations of the economic events and the various strategies proposed in economic policy.

of income distribution, determined not by relative scarcity of factors of production but by socio-political as well as economic elements (such as the oligopolistic market form prevailing in many markets: Kalecki, Sylos Labini); analysis of the elements of systemic fragility associated with disequilibria in the macroeconomic balance sheets (Minsky, Steindl, Godley, Sylos Labini); and analysis of the elements of financial fragility and their endogenous variation over time (Minsky). Much still remains to be done, but the foundations for a new macroeconomics are already available.

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