2 Economy and Economics

The Twin Crises

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Introduction

The deep crisis of the world economy triggered by the US subprime crisis in 2007 (henceforth, the Great Recession) was accompanied by a crisis in economics, especially macroeconomics, of not inferior gravity. This was not just a coincidence but the most recent expression of a far-reaching interaction between the macroeconomic performance of industrialized economies and the evolution of macroeconomics (henceforth, the 'Interaction'). Although we can find earlier examples, the Interaction became systematic with the birth of industrial capitalism in the late eighteenth century and became progressively stronger henceforth. We may observe a recurrent general pattern. A major crisis of the economy typically produces a radical redirection in mainstream macroeconomics. In its turn, the new macroeconomic paradigm contributes to shape a phase of economic growth, although much more slowly and with a longer lag. The new growth regime, after a while, progressively betrays its shortcomings until a new major crisis emerges. We emphasize that the Interaction should not be understood as a mechanistic feedback. In particular, we stress that its specific features change significantly through time.

For lack of space, our analysis has to be very schematic and simplistic. We will focus on the US economy, the evolution of which has often set the pace for the evolution of most other developed countries. In fact 'the United States looks like the archetypical crisis country' (Reinhart and Rogoff, 2008, p. 2). This is not to say that the local differences would be without interest for our analysis, but we are compelled to ignore them in this paper.

The structure of this essay is as follows. In the second section we start from a bird's eye view of the Interaction since Adam Smith until the 'Great Stagflation' (1971–1980). In the third section we briefly examine to what extent the Keynesian mainstream macroeconomic paradigm contributed to triggering the Great Stagflation and to prolonging its persistence until the late 1970s. The fourth section examines the emergence of the neoliberal paradigm of New Classical economics as the prevailing response to the Great Stagflation. In the fifth section we examine the influence of New Classical economics on the fluctuating growth of the last thirty years until the outbreak of the subprime crisis. In the sixth section we briefly recall the salient features of the Great

Recession that are of particular interest for our argument. In the seventh section we summarize the main results of our analysis and we discuss briefly in which direction to proceed in order to give the correct response to the crisis.

The Interaction from Adam Smith to the Great Stagflation

The Interaction started to be particularly intense at the beginning of the Industrial Revolution of the late eighteenth century and the contemporaneous foundations of modern political economy by Adam Smith (1776). In a sense, the *Wealth of Nations* itself may be seen as a reaction to the crisis of mercantilism brought about by the first Industrial Revolution, a reaction that was in tune with the views and interests of the emerging bourgeoisie. The new Smithian view of the free market as a self-regulating mechanism managed by a providential (although invisible) hand, had a pervasive impact not only on economic thought but also on the evolution of emerging capitalism. In particular, the liberal policy implications of this new view acquired a growing influence with governments and public opinion, shaping the policy strategies of industrializing countries, particularly from the mid-nineteenth century. The mild but persistent recession that characterized the last thirty years of the nineteenth century, called the Great Depression by the economic historians, did not question the basic principle of Classical Liberalism but produced a new, more sophisticated, version of the liberal ideas, which we may call Updated Liberalism, a version that explicitly rejected *laissez-faire* and tried to clarify where exactly the boundaries between free market and collective action should be fixed. Marshall, Wicksell and Pigou gave important contributions in this spirit around the turn of the century. However, their ideas were insufficiently acknowledged by policy makers who persisted in a policy strategy essentially influenced by *laissez-faire* orientations. This contributed to the outbreak of the Great Contraction that started in 1929.[1]

The Great Contraction of the 1930s was a much deeper crisis that produced a radical change of direction in both history of facts and thought. The faith in self-regulating markets was sorely tried, favouring the emergence of approaches meant to explain the weakness of the invisible hand and to help it to restore full employment equilibrium. This set the terrain for the Keynesian revolution. In the *General Theory* the great Cambridge economist explained why free markets are unable to self-regulate themselves and why Classical economic theory is unable to cope with this basic problem (Keynes, 1936). The new general theory suggested by Keynes led to a new conception of economic policy in which the state had to play a broader role to help the market to maintain or restore full employment equilibrium. The new vision of macroeconomic theory and public policy was consolidated in the troubled 1940s, which required a public management of the war economy and of the post-war reconstruction. When the conditions for growth were restored in the early 1950s, the Keynesian theory became the mainstream macroeconomic theory, although in an edulcorated version that came to be called 'Neoclassical Synthesis' – that is, synthesis between Keynes's theory and Classical theory heavily criticized by him. In this view, the invisible hand has to be left unfettered as much as possible. It is recognized, however, that the existence of diffuse and sizeable microeconomic failures and of the huge macroeconomic failure of involuntary unemployment requires a strategy of policy interventions meant to internalize the negative externalities and to avoid involuntary unemployment. This policy strategy was synergic to the establishment of the so-called welfare state, aiming to sustain full employment and redistribute income in favour of the less advantaged citizens. This view underlay a period of rapid growth accompanied by a sizeable reduction in poverty and inequality (the 1950s and 1960s) but became increasingly vulnerable from two related points of view. First it favoured a hypertrophy of public expenditure that rapidly increased its share in the gross domestic product (GDP) of industrialized countries from about 10–20 per cent in the 1920s to 40–50 per cent in the 1970s. This process was accompanied by a progressive increase of bureaucracy, cronyism and corruption. Second, it exhibited a growing inflationary bias due to the growing strength of trade unions in a full employment regime. In the 1960s and early 1970s this translated into periodic bouts of wage increases meant to improve, or defend, the share of wages in GDP, leading to policy-induced fluctuations.

The Interaction during the Great Stagflation and the Neoliberal Response

The growing level and dispersion of inflation rates determined by the stop-and-go policies adopted in different countries brought the Bretton Woods monetary regime to an end. In 1971 the unilateral declaration by President Nixon of the inconvertibility of the dollar announced the end of the dollar-standard regime and opened the way to a process of systematic liberalization of other important macroeconomic magnitudes. This crucial decision marked the start of a period of transition characterized by persistent inflation and growing unemployment. The crisis was greatly aggravated by the two oil shocks in 1973 and 1979, which increased cost inflation in a significant way. The increase of public expenditure to counteract the growing unemployment resulted in accelerating inflation and unsustainable employment. Most governments sought a remedy in a new policy strategy, later called 'neoliberal', based on privatization and liberalization.[2] This radical shift in economic policy was claimed to be consistent with the anti-Keynesian counter-revolution that had occurred in the 1970s. The upheaval in macroeconomics was prepared in the late 1960s by the monetarists, led by Milton Friedman who blamed the increasing inflation on Keynesian policies based on a Phillips curve seen as a stable menu of policy choices (Friedman, 1968). This approach was criticized for generating bouts of accelerating inflation in the illusory hope of establishing a low but unsustainable level of unemployment. Friedman maintained that the sustainable rate, called the natural rate of unemployment, is the equilibrium level that would be attained by unfettered markets in the absence of distortional policies.

A crucial support came from the microfoundations research programme led by Phelps (1970). While Friedmanite monetarism was based on Marshallian partial equilibrium theory, Phelps's criticism blamed the weakness of Keynes's macroeconomic theory on its lack of rigorous microfoundations and claimed that sound macroeconomic theory had to be reconstructed on the basis of general equilibrium microfoundations. In the early 1970s Lucas suggested an influential synthesis of the two streams, adding a crucial ingredient: the assumption of rational expectations. Lucas's model of equilibrium business cycles rapidly became the prototype of a new macroeconomic theory soon called New Classical Economics (NCE; see Lucas, 1972, 1981). This theory aimed to recover and develop the basic insights of Classical economics heavily criticized by Keynes and his followers, by adopting a new methodological approach that may be called 'the pure equilibrium method' (Vercelli, 1991). In this approach the economy is assumed to be always in equilibrium and agents are conceived as fully rational, while unemployment is always voluntary. The fluctuations of the economy are thus seen as completely independent of alleged market failures and are assumed to depend exclusively on exogenous factors such as distortional state interventions and oil shocks. Counter-cyclical policy is seen as impossible, or unreliable, and in any case harmful. The way out from the crisis was sought in a mix of privatization and deregulation aimed to strengthen the scope of unfettered markets and curb the weight of state interference in the economy. These prescriptions provided the foundations for what has been later called 'Neoliberalism'. We will use this label since its use is now widespread, but we emphasize that this word is misleading, since classical and updated liberalism were much more aware of the limits of markets: a more appropriate wording would be 'New *Laissez-Faire*' (Borghesi and Vercelli, 2008).

The Neoliberal Era, or the 'New *Laissez-Faire*'

The early monetarist orientation of NCE in the 1970s gave a theoretical justification to the strict deflationary policies implemented in the early 1980s with the full support of the central banks following the Federal Reserve under the leadership of Paul Volker (chairman from 1979 to 1987). In the meantime, the NCE school abandoned the early monetarist approach while retaining the pure equilibrium method of Lucas. The new prototype model of mainstream macroeconomics became the model of the 'Real Business Cycle' suggested by Kydland and Prescott (1982) where the main shocks that explain economic fluctuations are not monetary impulses but technological shocks. This point of view was soon to be reflected in the monetary policy pursued by the very influential new chairman of the US Federal Reserve Board, Alan Greenspan (who served in this role from 1987 to 2006). The new monetary policy, often dubbed 'Greenspan put', was that of pumping liquidity into the real economic system whenever an excess supply emerged in financial markets, as after the 1987 stock market crash, the Gulf War, the Mexican crisis, the Asian crisis, the Long-Term Capital Management (LTCM) collapse,Y2K fears, the burst of the internet bubble and the 9/11 attack. This policy strategy had positive effects in the short period but devastating effects in the longer period. It helped thwart the emerging financial crises by greatly reducing their recessive effects, but introduced disruptive systemic effects into the financial system that culminated in the subprime crisis. To understand how this was possible we have to examine how the neoliberal reforms affected the structural characteristics of the real economy.

The conservative governments appointed in the early 1980s in many developed countries profited from the weakness of trade unions, in consequence of the severe depression induced by the monetarist policies implemented in that period, to introduce structural reforms in labour markets and industrial relations meant to increase their flexibility. The strategy pursued by the neoliberal governments (Thatcher, Reagan and many followers) in the early 1980s was twofold. On the one side they started a programme of deregulation of labour markets meant to curb the power of trade unions and to strengthen the power of employers to decide whom to hire and fire, remunerations, overtime and so on. On the other hand, they gave the example of a very tough attitude towards workers in highly spectacular disputes (such as the US air traffic controllers in 1981 and the UK coal mining dispute in 1984). The synergic policies of labour market deregulation and demonstrative actions against trade unions' resistance were soon pursued by most governments, deeply changing the behavioural rules of market economies. The unemployment rate diminished but many permanent jobs were substituted by precarious and badly paid jobs. The Phillips curve became almost horizontal so that the inflationary bias of the real economy was substituted by an attitude of 'Great Moderation' in the real markets (see, e.g., Iakova, 2007). We may now understand why the 'Greenspan put' policy became possible. The permissive liquidity policy did not translate into higher inflation in the real economy, as in the period of stop-and-go Keynesian policies, but in 'financial inflation' that in the short period increased the income of financiers and benefiting to some extent the whole economy. However, the 'trickle-down' doctrine worked only in part and the inequality of income distribution greatly increased. Also, the number of the poor increased in most countries. The widespread conviction of having found the recipe to control business cycles while sustaining growth proved to be an illusion. From the point of view of growth, the higher demand coming from the finance sector did not fully compensate the curtailed demand of workers constrained by lower and more insecure wages. On the whole the average rate of growth in the neoliberal era (1980–2009) has been lower than in the Keynesian period (1951–1971). The optimism spread during the roaring 1990s on the wings of the 'new economy' but petered out in the first decade of the new century, notwithstanding the vigorous but ephemeral boom in the period 2003–2006. Greenspan's lax monetary policy in a increasingly financialized economy had the effect of doping the economy: shorter and less painful recessions and a higher trend of growth were bought at the heavy cost of intoxicating the economy. The 'Greenspan put' encouraged speculation, a weakening of risk perception and growing moral hazard. These dire effects were much enhanced by the policy of bailing-out the virtually broke bank and non-bank financial institutions (FI) considered too big to fail (with the only arbitrary and devastating exception of Lehman Brothers in September 2008). In the absence of appropriate regulation, only fear can check excessive speculation. Greenspan's (and then Bernanke's) monetary and bail-out policy swept away fear and weakened the risk perception of the agents, particularly of big operators. In consequence of this dangerous combination, the financial cycles become progressively more frequent and profound. The way in which each crisis was overcome planted the seeds for a new, possibly worse, crisis to come.

It is ironic to observe that Neoliberalism, introduced to mend the inflationary bias in the real economy induced by Keynesism, favoured the progressive establishment of a different, but not less dangerous, inflationary bias, this time in the financial sector. The Fed policy introduced a floor to fluctuation in the price of financial assets, while the refusal to prick financial bubbles (because, as they maintained, 'the market knows better') was an abstention from establishing a ceiling. The rate of discount policy is too limited by heavy constraints in a highly indebted economy to provide reliable floors and ceilings. A situation characterized by a great moderation in the real sector and an inflationary bias in the financial sector distorts the relative prices of financial assets in terms of the price of real goods, inducing financial rather than real growth, and distorts the distribution of income in favour of financiers and top managers.

The Great Recession: Some Salient Features

The neoliberal policy regime and its confidence in market self-regulation started to accumulate tensions that became evident in the 1980s and 1990s. Of the eighteen bank-centred post-war financial crises, as identified by Kaminsky and Reinhart (1999) and Caprio *et al.* (2005), three were in the late 1970s, seven in the 1980s and eight in the 1990s. These financial crises were occasionally intense but circumscribed to a particular company (even if sometimes big and with huge systemic fall-outs, such as LTCM in 1998), a particular sector (US loan and investment banks in 1984) or a country (Italy, 1990; UK, 1991; Japan, 1992, and so on). The growing financial instability of the neoliberal era culminated in the two global crises of 2000–02 and 2007–2010. A significant warning of the last devastating recession came with the dotcom crisis in 2000–2002, as it hit in a serious way the main centres of the global financial system. However, its lessons were insufficiently understood to avoid the Great Recession.

The success obtained by the 'put' policy in rapidly aborting even a deep financial crisis such as the dotcom bubble further increased the reliance on the neoliberal paradigm. This widespread attitude of over-confidence in the self-regulating virtues of unfettered markets pushed the agents to take decisions that progressively increased the fragility of financial units to unprecedented levels. By the end of 2002 the speculators turned their main focus from the ICT sector's immaterial assets to brick-and-mortar assets. The dangers of this situation became apparent only when the housing bubble started to deflate in the middle of 2006. At the beginning, however, the rate of decrease of house prices was very slow and seemed temporary while the rate of interest, though slowly growing, was still sufficiently low to allow a not-too-onerous refinancing of subprime and adjustable-rate mortgages. Therefore, most observers expected a possible soft landing of house prices that would have produced not much more than controllable local effects. This hope was swept away by a sharp acceleration in energy (and raw materials) prices in 2007–2008. In particular, the price of oil more than doubled from $63 in December 2006 to $147 in July 2008. In consequence of this spike in the oil price, and a similar one in the price of other natural resources as well as food, in 2007 and much of 2008 there was a surge in price inflation. Notwithstanding the emerging financial crisis, the central banks reacted in the canonical way by increasing the discount rate. The Fed perceived earlier than the Bank of England (BoE) and European Central Bank (ECB) the dangers arising from such a policy in a period of increasing financial fragility, by reducing in a few rapid steps the discount rate from 5.75 per cent (17 August 2008) to 1.25 (29 October 2008) and finally to 0.50 per cent (16 December 2008). However, this sharp reduction of the discount rate occurred too late to avoid the collapse of the housing sector and the ensuing rapid acceleration of default rates on 'subprime' and adjustable rate mortgages (ARM). This accelerated the deflation of house prices and of the related mortgage-based securities (MBS). This process of contagion affected in sequence many other financial assets, then the companies whose net worth depended strictly on the most vulnerable assets, then their shares, and so on, triggering what many commentators called a 'Minsky moment' (see Vercelli, 2009a and b).

The housing bubble was the 'detonator' of the gravest financial crisis since the Great Contraction of the 1930s. What was really unexpected by most commentators was the catastrophic effect of the bubble's bursting. The contagion proved to be much deeper and broader than that of preceding similar events such as the bursting of the dotcom bubble in 2001. The explanation has to be found in the increasing instability of the financial system in the neoliberal era, which culminated in the second half of the first decade of the century. The intrinsic instability of a developed financial system has long been known, as witnessed by the analyses of far-sighted economists such as Wicksell, Hawtrey, Keynes and Minsky. In the neoliberal era the financial system underwent quantitative and qualitative modifications that progressively enhanced its vulnerability to unexpected destabilizing events and to contagion propagation.

From the quantitative point of view, the weight of finance on the economic system as a whole greatly increased in the neoliberal era. Goldsmith's Financial Interrelation Ratio (FIR), which measures the ratio between financial and real assets, increased from a value of about 1 to a value exceeding 3 in the most developed countries. In the US, the financial industry's share of GDP increased from about 4 per cent to more than 8 per cent (Philippon, 2007), the contribution of the finance, insurance and real estate (FIRE) sector to GDP rose from 15 per cent to 20 per cent (Palley, 2007), while the share of financial profits exceeded the 40 per cent of overall profits just before the crisis. In addition, the weight of finance greatly increased also in the non-finance business sector. The same is true with households, as the share of wealth detained in financial assets (including housing) steadily increased while pensions, after their privatization, were linked to the financial performance of pension funds.

This quantitative growth has been accompanied by very significant qualitative changes. The first and most important has been the development of shadow banking. Paul McCulley of PIMCO is reported to have introduced this neologism at the 2007 Jackson Hole conference where he defined 'the shadow banking system'as 'the whole alphabet soup of levered up non-bank investment conduits, vehicles and structures' (McCulley, 2007). These financial institutions are non-bank in the sense that they do not hold deposits like a commercial bank and are subject to different, much weaker, regulations. Within the 'alphabet soup' of the shadow banking system we have to distinguish on one side autonomous (from commercial banks) shadow FIs such as investment banks and hedge funds, on the other side shadow dependent FIs, such as structured investment vehicles (SIV) and conduits, directly or indirectly controlled by commercial banks. The autonomy of investment banks from commercial banks had been set by law in 1933 by the Glass-Steagall Act in order to prevent conflict of interest and fraud believed to be a factor of the 1929 financial breakdown, until Glass-Steagall was partially repealed by the Gramm-Leach-Bliley Act in 1999. Controlled shadow FIs, such as SIVs and conduits, were established by commercial banks in the last decade in order to fight back the competition of autonomous shadow FIs. To this end, commercial banks shifted part of their activity off balance sheets to earn higher profits by eluding the constraints of regulators. The development of shadow banking has greatly increased the instability of the financial system as its substantial freedom from regulation allowed it to pursue aggressive strategies characterized by very high leverage and incautious financial innovations. This produced high profits during the years of financial boom and huge losses and widespread defaults in critical years. The five big US investment banks have all been swept away by the crisis. Hedge funds underwent severe losses but most of them managed to survive, although downsized, and to recover, together with enduring shadow FIs, in the new wave of speculation that started in the middle of 2009.

The development of shadow FIs had a cause-and-effect relationship to the parallel development of shadow financial markets, which trade unregulated or weakly regulated securities, in particular over-the-counter (OTC) derivatives. The dimension of these markets swelled progressively in the neoliberal era, propelled by the process of securitization. This technique transforms non-traded assets and liabilities, or a combination of them, into tradable securities. This implies the transfer of the evaluation of expected cash flows from a few specialized analysts (in the originating FI) to the market – that is, to an undefined and variable set of traders. The first experiments in securitization were performed in the 1970s, but the process started to spread only in the 1980s, becoming important in the 1990s and crucial in the 2000s. Its outstanding value reached an estimated amount in the second quarter of 2008 of more than $10 trillion in the US, and more than $2 trillion in Europe. The systematic use of securitization transformed the model from the 'originate and hold' model of banking to the new 'originate and distribute' model. Two kinds of asset-backed securities (ABSs) played a crucial role in the subprime crisis: mortgage-backed securities that bundled mortgages of increasingly low quality and which transmitted the housing crisis to financial markets, and credit default swaps (CDSs) that greatly aggravated the crisis. The first were issued in order to avoid the risk of holding subprime mortgages and to increase liquidity. The CDSs were issued to insure the risk of credit from party A to party B by paying a premium to the insurer in exchange for a promise to pay money to A in the event B defaulted. Contrary to widespread expectations, the market proved to be unable to price these securities correctly. This should have been understood long before the crisis by taking account of their complexity, opacity and the systemic risk involved. In particular, the fundamental principle of commercial insurance asserting that it is not possible to insure a collective risk was ignored. The widespread faith in the market led market participants astray, also because they found a specific support in their beliefs in models of pricing based on the pure equilibrium methodology of NCE.

The Crisis of New Classical Economics

The Great Recession has triggered a hot debate concerning whether the financial crisis and its subsequent real consequences have been brought about by market failures or policy failures. Critics of the neoliberal paradigm typically tend to blame market failures neglected, or played down, by market fundamentalism, while most exponents of neoliberalism tend to defend the invisible hand by putting the blame on policy failures. We maintain that both markets and policymakers made substantial mistakes and that both categories of failure undermined the soundness of the neoliberal paradigm from the viewpoint of policy, macroeconomic theory (the New Classical view in all its versions including the most recent 'New Consensus' version), and facts (neoliberal or 'turbo' capitalism).

Real markets confirmed their well-known limits, long pointed out by economic theory, which henceforth no honest observer is authorized to underestimate. First, the neoliberal era confirmed that markets are unable to deal in a satisfactory way with income distribution. It is well known from pure theory (in particular that based on the General Equilibrium model) that, in a perfectly competitive market, income distribution evolves on the basis of the existing allocation of wealth and resources (given technology and preferences). Therefore, there is no reason why it should comply with a given distributive standard considered as desirable or at least acceptable. In the real markets, which are characterized by significant asymmetries in discretional economic power, in the absence of redistributive economic measures, the distribution of income tends to become more unequal as the most powerful decision makers eventually succeed in distorting the choices in their own favour. In addition, the increase of poverty and malnutrition in the last two decades, even in developed countries, shows that the trickle-down argument works only in part.

The policies pursued in the labour market were able to establish a flat Phillips curve, eliminating the inflationary bias of real Keynesism and establishing a regime of price stability (the so-called Great Moderation) but only at the cost of reducing the purchasing power of real wages and salaries, as well as the stability of jobs. This had negative implications not only for the wealth and well-being of a great part of society, but also for aggregate consumption to the extent that it is financed by current income. Effective demand had to be sustained by the increasing debt of households promoted by private financial firms (bank and non-bank companies) and public institutions (such as Fanny Mae and Freddy Mac in the mortgage sector). In this way, however, households also became very fragile finance units. This explains why the increase of cost inflation in 2007, due to the spike in the oil price and the consequent increase in the rate of interest, triggered the crisis in the subprime mortgages sector that started the financial crisis.

These examples of huge market failures are in blatant contradiction with the basic assumption of orthodox macroeconomics that markets are always in equilibrium. The rejection of this basic assumption implies the falsification of all the other characteristic assumptions of such a theory: that agents do not make systematic mistakes and have rational expectations, that uncertainty is weak and symmetric, and so on (Borghesi and Vercelli, 2008). The inability of these models to 'mimic' the empirical evidence has been often observed in the past. The method of calibration adopted for habilitating New Classical models to empirical research is often used in such a way to make impossible the falsification of the model. Moreover, in principle, as recognized by the founding father of the school himself (Lucas, 1981), these models are based on a crucial postulate of 'regularity' of economic phenomena that prevents sound application to irregular phenomena such as the subprime crisis. The possibility of an event of this kind was altogether outside the conceptual horizon of the theory, which was by definition unable to forecast, prevent and control it.

The new model of finance that emerged in the neoliberal era greatly increased the intrinsic instability of the financial system. The new 'originate and distribute' model of banking led to a generalized delegation of responsibilities about financial decisions to an inexistent, or very weak, invisible hand.

Shadow banking, being much less constrained by regulation and being protected by information opacity, greatly increased the attitude of relief of responsibilities in financial markets. Shadow markets approached the ideal model of unfettered markets that has always been dear to old and new exponents of *laissez-faire*. This did not strengthen the self-regulating virtues of markets and further clarified that the deregulation of real markets does not imply a better approximation to a perfectly competitive market. The way in which the regulation of financial markets was weakened or eluded greatly reduced the completeness and reliability of information, which is a crucial requirement of a competitive market.

Let's now consider the nature and effects of policy failures. The market failures that we have rapidly recalled have been induced or permitted by neoliberal policies. A crucial role has been played by central banks. They continued to react promptly to any danger of accelerating inflation as is clearly shown by their restrictive interventions in 2007 and the first half of 2008, although the financial crisis had already started. This is by itself questionable as it shows an undervaluation of the gravity of the emerging crisis. However, the crucial point is another one: the lack of reaction to financial inflation and the refusal to prick the bubbles. According to Greenspan the market knows better than any single individual (including himself) when it is the case of pricking the bubbles and deflating financial assets. This clarifies that the failures of monetary policy are strictly related to the market fundamentalism of NCE and neoliberalism. The same is true in terms of the lax supervisory controls that allowed extravagant leverage ratios, the development of huge derivatives markets outside any control and of an abnormal shadow banking sector. Also, the policy mix of privatization and deregulation did not reach its goals but produced unexpected devastating collateral effects. In the end, the declared crucial objective entertained by neoliberalism of reducing the share of public expenditure over GDP was not reached. The only success that may be claimed in a few countries is the stabilization of this share. On the contrary, in many countries there has been a radical change in the structure of public expenditure: fewer public services and more expenditure for security and defence. In any case, there is still no evidence of enhanced competition in markets. On the contrary, the vicious circle between the exponents of powerful private interests and policy makers in this period also deteriorated in the most developed countries. As for taxation, the progressive burden on personal incomes was weakened if not reversed, and this contributed to the growing inequality of income distribution.

As we see from these examples, the policy failures were the direct consequence of the same philosophy of market fundamentalism underlying orthodox macroeconomics and the neoliberal 'turbo' capitalism.

The Twin Crises: Concluding Remarks

As we have suggested, the Interaction followed a fairly regular pattern in the last century or so (see Figure 2.1). We had three major crises: the Great

Contraction in the 1930s, the Great Stagflation in the 1970s, and the Great Recession that started in 2007. In each of these cases the existing economic policy regime was considered as a crucial factor contributing to the outbreak and persistence of the state of crisis: *laissez-faire* in the Great Contraction, Keynesism in the Great Stagflation, and neoliberalism in the Great Recession. In each of these cases there was an immediate and radical reaction in macroeconomic theory: from the Classical to the Keynesian theory after the Great Contraction, from the Keynesian to the New Classical theory after the Great Stagflation. The new macroeconomic theory was meant to overcome the policy failures that caused the crisis and give apt foundations to a new policy strategy: Keynesism in the 1930s and Neoliberalism in the 1970s. This new policy strategy starts to be applied after a fairly long and variable lag time, required to allow it to percolate at the level of public opinion and policy makers. The new policy paradigm in its applied version is typically simplified and distorted to make it appealing and to serve better the specific interests of policy makers and their great electors and supporters. We have thus to distinguish between an 'ideal' policy paradigm as worked out by the intellectual leaders of the revolutions in macroeconomic theory, and its 'real' application, which depends on many other, often distorting, factors. As we learned to distinguish between socialism and real socialism, analogously we have to distinguish between liberalism and real liberalism or *laissez-faire*, between Keynesism and real Keynesism, between neoliberalism and real neoliberalism or 'new *laissez-faire*'. The real version of these policy paradigms tends to degenerate under the pressure of particular interests, contributing to the outbreak of a great crisis that determines a radical redirection of theory, policy and behavioural practices.

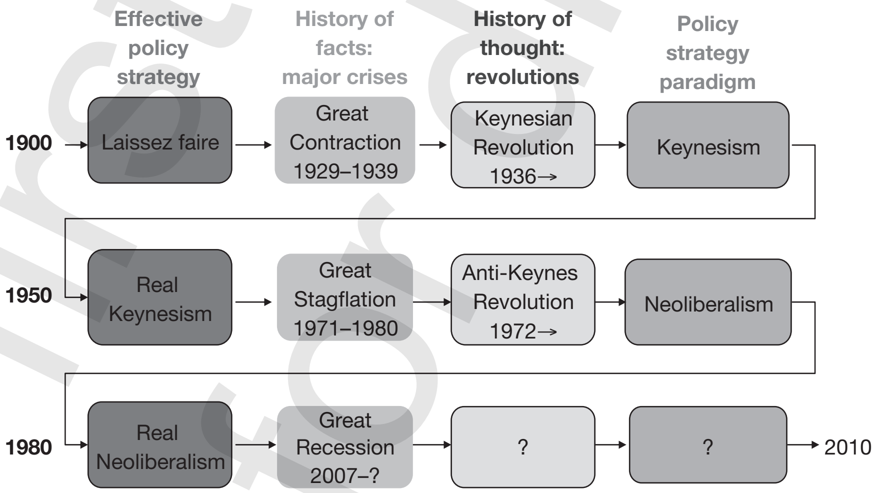

Figure 2.1 The spiral of Interaction, 1900–2010

The analogies that we have emphasized (as summarized in Figure 2.1) should not blur the differences in the historical episodes here rapidly reconstructed. In particular, we may notice that the reaction of macroeconomics to the Great Contraction of the 1930s went in the direction of a much enhanced realism. As Keynes maintained '. . . the classical theorists resemble Euclidean geometers in a non-Euclidean world . . . there is no remedy except to throw over the axiom of parallels and to work out a non-Euclidean geometry' (Keynes, 1936, p. 16). On the other hand, the reaction of macroeconomics to the Great Stagflation of the 1970s went in the opposite direction of systematic compliance with first principles believed to be universally true, regardless of their *prima facie* counterfactual nature. Also on this occasion there were serious attempts to redirect macroeconomic theory in a more realistic direction. Simon's theory of bounded rationality, Leyjonhufvud's theory of temporary equilibria and Minsky's theory of financial instability were some of the most serious attempts that attracted a great interest from many macroeconomists in the 1960s and early 1970s and seemed to point to a new revolution in the direction of enhanced realism. However, the New Classical counter-revolution succeeded in the 1970s to sweep away the alternative attempts to reform macroeconomics. The success of this theory derived from a host of factors such as the simplicity and elegance of its models, their suitability for quantitative analysis, and the feelings of reassurance that the theory succeeded in giving to a profession in deep crisis. The most recent version, the New Neoclassical Synthesis (Woodford, 2003), timidly moved in the direction of more realism by reintroducing the possibility of market imperfections, but this was insufficient to reduce significantly the gap with the real economy as shown by recent events. But none of these alleged advantages could have been reaped without a robust protective belt meant to isolate the theory from the falsifications stubbornly iterated by a rebel empirical evidence. This protective belt favoured the use, or abuse, of the New Classical mainstream as an ideology of market freedom that was much cherished by whomever believed, rightly or wrongly, that *laissez-faire* was in his own interest.

What will be on this occasion the reaction to the Great Recession? We believe that we cannot further postpone a systematic effort in the direction of more realism. Differently from the Great Stagflation, in the Great Recession it is much more difficult to blame exclusively policy mistakes and exogenous shocks for macroeconomic failures. The pathological inefficiency of the invisible hand in fully liberalized and weakly regulated financial markets questions all the basic postulates of mainstream macroeconomics: persistent equilibrium, systematic efficiency, unbounded rationality, and so on. The subprime crisis provided a particularly evident confirmation of a significant empirical regularity: the majority of financial crises are preceded by financial liberalization (Kaminsky and Reinhart, 1999; Reinhart and Rogoff, 2008). We need a different kind of macroeconomics that starts from assumptions consistent with the properties of real markets. We have to liberate macroeconomics from the straitjackets of classical microfoundations and of the pure equilibrium method.

Whatever are the merits of these two basic methodological features for the study of an ideal market of perfect competitions, macroeconomics has to address the problems of real markets. To study the latter we need a more realistic approach to microfoundations and awareness that in real markets disequilibrium and instability play a crucial role. Only a macroeconomics of this kind may guide us in understanding and controlling the behaviour of real markets, contributing to an avoidance or mitigation of major crises.

Notes

1 We call the crisis of the 1930s the Great Contraction to avoid confusion with the long stagnation of the last thirty years of the nineteenth century, which is often called the Great Depression by historians. The terminology here adopted has often been used in the recent past (see, e.g., Laidler, 1999).

2 The new policy strategy was inaugurated in the UK by Prime Minister Margaret Thatcher in 1979 and in the US by President Reagan in 1980. Their leadership was soon imitated by most other political leaders in the developed countries.

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