1. Introduction

1. THE FINANCIAL INSTABILITY HYPOTHESIS, A SEMINAL IDEA

According to The Economist (July 23, 2016a), six seminal economic ideas dominate modern economic theory. They are:

1. Akerlof’s market for lemons;
2. Minsky’s financial cycle;
3. the Stolper–Samuelson theorem;
4. the Keynesian multiplier;
5. the Nash equilibrium;
6. the Mundell–Fleming trilemma.

As with all hit parades, this list is neither perennial nor fully accepted by the economic community. However, it is important to stress that Minsky’s contribution, above all in the aftermath of the Great Recession, would hardly be contested.

These seminal ideas represent analytical insights. They are often counterintuitive, sometimes irreverent, but surely interesting. Most of their originators have been rewarded with a Nobel Prize – all except Minsky and Keynes. Yet, many of them had difficulty getting their ideas published in mainstream journals (i.e. 1, 2 and 3). The insights refer both to micro, 1 and 5, and macro aspects and touch upon different subjects. Akerlof’s main contribution is the foundation stone of information economics, where the agents are not supposed to share the same set of information. This principle has had an important impact on the theory of the labor market, the credit market, the firm and the insurance market. The Stolper–Samuelson theorem tried to challenge Ricardo on international trade and shed new light on the relationship between tariffs and wages. The Keynesian multiplier dealt with the paradox of saving and with the role of fiscal policy in the economy. The Nash equilibrium gave economics a way to make real-world predictions based on information about each person’s incentives. Finally, Mundell–Fleming faced the trilemma represented by fixed exchange rate, monetary autonomy and free flow of capital and found their incompatibility.
Only 1, 4 and 5 have a relationship with the Minskyan financial instability hypothesis, which is a cornerstone for the interpretation of the Great Recession.

2. A POSTHUMOUS STAR

Economics, as happens in all other disciplines, makes progress under the combined pressure of internal analytical and methodological developments along with the emergence of new stylized facts in search for an interpretation. In the case of Minsky, it took the occurrence of the Great Recession to raise him to the upper echelons of the most important economists. Thirty years after his famous book *Can “It” Happen Again?* (1982), where “it” stands for the “Great Depression”, it really happened again in the form of the “Great Recession”, also named “The Global Financial Crisis” (see Wray, 2016).

As *The Economist* puts it:

From the start of his academic career in 1950 until 1996, when he died, Hyman Minsky laboured in relative obscurity. His research about financial crises and their causes attracted a few devoted admirers but little mainstream attention . . . So it remained until 2007, when the subprime-mortgage crisis erupted in America. Suddenly, it seemed that everyone was turning to his writings as they tried to make sense of the mayhem. Brokers wrote notes to clients about the “Minsky moment” engulfing financial markets . . . And he became a posthumous star. (*The Economist*, July 30, 2016b)

In this sense the age of the Great Recession and its aftermath can be labeled as Minsky’s moment, when his work eventually became well known to both academia and the business and financial milieu.

3. MINSKY MOMENTS

“Minsky moment”, however, also means something more pregnant than mere fame in the media. In fact, it is nowadays used as an indicator of financial crises. It was Paul McCulley of PIMCO, a fund management group, who coined the term “Minsky moment”, using it to describe the Russian financial crisis of 1998, and so it existed long before the Great Recession. It signifies the capability of Minsky’s financial instability hypothesis to interpret – and in a sense to anticipate the possibility of – “great turbulences”, characterized by debt levels reaching breaking point and asset prices starting to plunge.
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It might seem reductive to consider Minsky’s contributions as if they were epitomized by the so-called Minsky moment, in either of the two meanings that this term has been assigned. In fact, his fame could risk mimicking that of the Great Recession: as soon as the economy recovers to its pre-crisis levels, Minsky moments will disappear and so will the author.

However, this forecast is too pessimistic because it does not consider the dominance of the financialization of the economy, run by the so-called money managers. It represents a new structural characteristic of the economy that is bound to last, and this circumstance increases the likelihood of new turbulences being generated and therefore new Minsky moments occurring. *The Economist* (May 2, 2018), for instance, writes: “The genesis of the next crisis is probably lurking in the corporate debt. Investors are getting less reward for the same amount of risk. Consider this with the declining liquidity . . . and you have a recipe for the next crisis.”

As one can see, the fundamentals are represented by yields, risk and liquidity. Furthermore, *The Economist* makes it clear which ingredients must be present to generate a financial crisis:

1. excessive borrowing;
2. concentrated bet;
3. mismatch between assets and liabilities.

However, one precautionary adjective is lacking: potential. In fact, when all these factors are present, there is only the possibility of a crisis. A crisis actually takes place only if it succeeds in defeating the thwarting forces that try to counter it.

In this perspective, Minsky’s contribution assumes a deeper relevance. It becomes urgent to better define the Minsky moments and to identify their relationships with Minsky’s economics. This is the precise task of the present book.

4. THE AIM OF THE BOOK

The aim of this book is different from that of Leijonhufvud (1968), who in writing about Keynes juxtaposed Keynesian economics to the economics of Keynes. The hiatus between what Keynes actually wrote and the successive interpretations had become so wide that a critical re-examination was needed. The integrity of the original message was in danger and had to be restored.

Instead, this book on Minsky does not imply that the vast literature existing on the so-called Minsky moment is necessarily a misrepresentation
of his original thought; it only stresses the necessity of inserting what has been recently discovered about Minsky’s analysis during the Great Recession into his lifelong research program in order to obtain a more complete picture of both his vision and his analytical apparatus.

In this perspective, the task is not simply to re-propose Minsky’s original ideas but to verify how they are capable of meeting the challenges deriving from the evolution of both the economy and the discipline. It follows that the deep purpose of the book is more to broaden the perspective of the debate than to develop a “destruens” approach with respect to the current literature. In particular, it does not intend to participate in the debate as to whether Minsky would have been known much earlier had he not encapsulated his financial instability analysis within a heterodox framework.

These questions, although very important and fascinating, will not be directly tackled in this book. Rather, its ambition is to try to present the financial instability hypothesis as a particular case of his general vision about the evolution of complex dynamic systems. The thesis put forward is that the financial instability hypothesis can be better understood within a theoretical framework marked by three fundamental characteristics:

1. an interdependence between monetary and real aspects;
2. the presence of endogenous destabilizing market forces countered by thwarting devices;
3. the existence of complex dynamics where these opposite forces stimulate an evolution of the economic system that is far from being a mechanical process.

These characteristics must be jointly considered and analyzed through their evolution over time in order to obtain a satisfactory picture of the economics of Minsky. However, to meet the challenges deriving both from the presence of new stylized facts and from the developments of the discipline, one must enter Minsky’s black box in order to deepen and broaden his analysis.

5. BUILDING BLOCKS

To pursue these objectives, different strategic choices have been put forward. Even though some of them will be introduced later, it is important to underline now that Minsky’s contribution will be analyzed by focusing almost exclusively on his books. Minsky wrote two groups of books that can be easily categorized. While he was still alive, he published the following three books:
Post-mortem, the Levy Economics Institute supported the publication of two more:


Book 4 is simply Hyman’s dissertation (1954), while book 5 is a collection of essays on the labor market written in the 1960s.

All the listed books will be considered in the following analysis, though with different degrees of attention. The main emphasis will be put on books 2 and 3. The reason is simple: the main attempt of this book is to try to reconcile these two books; or, to put it differently, to insert the financial instability hypothesis developed in book 3 within his dynamic apparatus put forward in book 2.

The reasons behind my strategic choice are at least twofold. On the one hand, some of these books are simply collections of papers, and this simplifies the analysis. On the other, they allow one to capture the evolution of his ideas in a compact way. Since the present analysis is not a research on the history of economic thought but, on the contrary, has the ambition to follow the methodological strategy suggested by Hicks in his *Capital and Growth* (1965), the decision to focus on the main books is particularly fruitful. In fact, Hicks (1965) suggested that in order to grasp the fundamental contributions of the most important authors it is necessary to study ideas vis-à-vis the technicalities with which they are expressed. Within his perspective, very close to a Kantian approach, it is legitimate to wonder whether there are discontinuities between the various contributions of Minsky or whether evolution is the more appropriate answer. I refrain from anticipating any detailed answer at this stage of the analysis. It is sufficient to state that there is a substantial continuity in the vision and differences in the analytical apparatus.

6. **AN INTERPRETATIVE GRID**

One of the suggestions contained in Hicks’s book (1965) is to refer to the following canonical triptych in order to reveal the backbone of the various contributions:
1. the temporal dimension;
2. the transaction structure;
3. the aggregation strategy.

These categories have been used amply, for instance by Leijonhufvud (1968), and they may also help to characterize Minsky’s various contributions. Furthermore, they are also useful to understand the successive attempts at developing his analysis. In this perspective, while Minsky’s (1982) *Can “It” Happen Again?* underlies point 1, his *Stabilizing an Unstable Economy* (1986a) refers mainly to the transaction structure of the economy. Finally, *John Maynard Keynes* (1975) has implications for the aggregation strategy, a subject also discussed in his dissertation (Minsky, 1954/2004).

The objective is to try to link the various contributions and therefore the various dimensions. In particular, as has been already mentioned, it is worth considering whether the financial instability hypothesis, which was mainly developed in *Stabilizing an Unstable Economy*, can be analyzed within the dynamic perspective suggested by *Can “It” Happen Again?*

The challenge is twofold. On the one hand, it is important to understand whether the financial instability hypothesis is already present “in nuce” in these early writings. On the other, one has to understand whether these early writings offer suggestions in order to develop it and cast it in dynamic terms, a priority for both modern macroeconomics and Minsky.

### 7. THE TEMPORAL DIMENSION

There is no doubt that Minsky’s vision (to use a familiar Schumpeterian term) was cast in dynamic terms, as is shown in *Can “It” Happen Again?* (1982). This is also evidenced by the following sentence that we co-authored:

> . . .we argue that the current state of economic theory as well as the performance of capitalist recent years support the view that the path through time of a capitalist economy is best described as the result of the interaction between the system’s endogenous dynamics, which if unconstrained would lead to complex paths that include periods of apparent growth, business cycles and economic instability, and the impact of institutions and interventions which, if apt, constrain the outcomes of capitalist market processes to viable or acceptable outcomes. We call these institutions and interventions thwarting systems. (Ferri and Minsky, 1992, p.79, reproduced in Chapter 7).

From the above quotation, it follows that Minsky was neither a doomster nor a Panglossian believing in the self-adjusting capability of the market
process (see also Ferri and Minsky, 1989, reproduced in Chapter 6). He believed that policies and institutional changes could be of the utmost importance in checking the endogenous instability tendencies.

This complex vision is present “in nuce” in his initial papers collected in the volume *Can “It” Happen Again?* As stressed by Ferri (1992 and 2011), there are three analytical characteristics that are worth considering:

1. the model, based upon the interaction between the accelerator and the multiplier, tends to generate instability if unconstrained;
2. the presence of ceilings and floors can constrain the dynamics;
3. these constraints need not necessarily represent physical barriers but they may imply changes in policy and institutions triggering the presence of new initial conditions that allow the dynamic system to make a new start.

These characteristics are not confined to the initial accelerator–multiplier models considered by Minsky. They are robust to changes in the model and therefore can be utilized for more complex kinds of analysis that deserve to be considered.

8. THE TRANSACTIVE STRUCTURE

Even though there is no doubt that Minsky always had it in mind to operate within a monetary economy of production, it is not straightforward to find a point of contact between his early analysis and the so-called financial instability hypothesis. A possible and fruitful strategy is to understand where the financial aspects are hidden in his early approaches. The answer is to be found in his dissertation (Minsky, 1954/2004), which also offers some insights on his aggregation strategy.

According to Minsky, finance can have an important impact on the values of the parameters of the investment function that may reflect, *ceteris paribus*, different financial conditions. There are three main implications of this analysis. The first one is that real and financial aspects are always interconnected. In this perspective, neither the Modigliani–Miller (1958) approach nor purely monetary approaches seem to hold. The second implication is that the parameters of the (real) equations are subject to change when the financial conditions are different. It follows that, and this is the third implication, the working of the system is not necessarily a mechanical succession of numbers but the result of the interaction between complex forces.

According to Minsky: “Money matters most of the time, at some rare but important time it is all that matters, and sometimes money hardly
Minsky’s moment

matters at all” (1969, p. 228). The main methodological implication of this insight is that, within a monetary economy of production, money matters even though a financial sector is not specifically formalized. This does not imply that its presence is redundant. On the contrary, it allows the capturing of further processes of interdependence that cannot be generated in its absence. This is the value added of the financial instability hypothesis with respect to the early writings and to all those contributions that insist more on the financial nature of investment than on the presence of a fully specified financial system.

9. MICRO–MACRO

There is a widespread view that Minsky did not trouble himself to explain methodology in detail in his publications, even though his writings have stimulated observations on his methodological choices. Ferri (1992), for instance, has insisted on detailing the methodological problems faced in his dynamic analysis, while Vercelli (2001) has stressed the difference between dynamic and structural instability, the latter characterizing Minsky’s analysis but absent in Keynes’s work.

The posthumous publication of Minsky’s PhD dissertation (see Minsky, 1954/2004) has certainly contributed to challenging the view of a supposed neglect of methodological problems, and this has stirred further discussions (see Toporowski, 2008, p. 726).

Among the various topics considered in the dissertation, micro–macro relationships deserve special attention. As is well known, Minsky has been accused of being too macro oriented and, at the same time, laying himself open to fallacies of composition. In fact, according to some authors, he seemed to have relied mainly on national account identities. On the contrary, Lavoie and Seccareccia (2001) claim that his analysis is micro oriented so that fallacies of composition are inevitable when he tries to reach macro conclusions from micro analyses.

While the lack of microfoundations would assimilate Minsky to the neoclassical synthesis authors, the second kind of criticism includes Minsky among the supporters of the representative agent strategy. However, from a deeper analysis, Minsky is not reducible to either of these two alternatives. In fact, he offered many solutions to the micro–macro problems that will be considered in detail later on (see Chapter 8). At this stage of the analysis it is important to stress that they are suitable to be developed according to the new methodologies put forward in recent times.
10. SPECIAL LENSES

“The insider’s view” qualifying the title of the book represents the second strategic choice followed in getting to the core of Minsky’s economics, after the supremacy allowed to his books. The insider’s view means that priority is given to the ideas that I learned directly from Minsky. These were developed through three different channels. The first one consists of the works that we co-authored during a two-decade period. The jointly published work is represented by three articles:

1. “Prices, employment, and profits” (1984);
2. “The breakdown of the IS–LM synthesis: implications for post-Keynesian economic theory” (1989);

These articles have a strong correspondence with the first three books quoted earlier, even though they do not respect their chronology and do not correspond one to one. The reasons behind the first peculiarity lie mainly in the idiosyncrasy that Hyman had not so much in writing papers as in publishing them, so that the official chronology does not fully reflect the dates of actual writing. The second peculiarity is a result of the fact that we tried to reach a unitary vision, so there was an overlap between the various contributions.

The three articles are reproduced in Part II of the book to provide a glimpse of our collaboration. They constitute the starting point of the book. Successively, they are updated and then, eventually, extended. The aim is to not so much to show the fruitfulness of that collaboration as to use them as a vehicle to get to the core of Minsky’s contributions.

Along with the channel of published work, I have to mention a particular approach that I have called “Socratic colloquiums”. These colloquiums consist in a series of questions raised by me and answered by Hyman. Both questions and answers were written on computers. A few of them have been published in the book just to provide a glimpse of our intense interactions. Someday they might be made available in full if the appropriate technology and the available human capital can be found.

The third channel is represented by book projects that were never finished. Whenever possible they will also be quoted, because they are important for understanding the background of the research agenda.

These three channels do not exhaust all the possibilities for grasping Minsky’s ideas. A special mention must be reserved for conferences. Some of them were held while he was alive, and a subset of them were published (see, for instance, the Festschrift edited by Fazzari and Papadimitriou,
1992). Others were organized post-mortem. In this case, I learned Minsky’s ideas from the lessons of others (see Bellofiore and Ferri, 2001a, 2001b). The remaining were collected in books (Papadimitriou and Wray, 2010) or in journals (e.g. *International Journal of Political Economy*, vol. 39, 2010).

11. THE VISION

The vision underlying Minsky’s analysis is clearly stated in our joint work “Market processes and thwarting systems”. This was the last paper that we wrote together, and it represents the pinnacle of our collaboration, at least from my point of view. Although dated 1992, it reads as though it was written after the Great Recession and not almost 20 years before.

It is worth reproducing it for at least three different reasons. First, it clearly states our common vision, even though we came from different intellectual backgrounds. Second, it indicates the main driving forces of a complex dynamic system. They are a mixture of endogenous tendencies countered by thwarting systems. And finally, it fixes a research agenda for future developments that I tried to follow as much as possible.

These elements are at the root of Minsky’s interpretation suggested in this book as well as of the attempts at further developing his analysis – in particular, the efforts to insert his financial instability analysis into a broader complex dynamic framework. To achieve this insertion, I have to enter his black box of tools in a deeper way than he himself tried to do.

12. INSTABILITY, INTEGRATION AND THE ROLE OF INSTITUTIONS

A complex dynamic system is not simply a mechanical sequence of events but represents a struggle between endogenous destabilizing forces thwarted by the adoption of suitable policies and the presence of adapting institutions. This vision creates a distance from those views that underline the exogenous nature of fluctuations. At the same time, it does necessarily lead to the conclusion that the system will inevitably experience runaway situations.

These endogenous destabilizing forces need not necessarily originate in the financial system, even though when this circumstance happens the turbulence tends to become particularly severe. This circumstance, however, does not dispense with considering what happens in the other markets, that is, the so-called real economy. In this perspective, the Minskyan financial instability hypothesis is deeply conceived within a monetary economy of...
production, where the role of the labor market and the nature of institutions are important. They must be integrated with the financial analysis, and this is why these aspects will be considered in this book.

The emphasis on the labor market represents my value added in the collaboration with Minsky. This does not imply that Hyman neglected this field, as his posthumous book *Ending Poverty: Jobs, Not Welfare* (2013) clearly shows. His expertise was really broad. In a sense, he was a classical economist.

13. THE STRUCTURE OF THE BOOK

Beyond the present introductory chapter, the structure of the book is characterized by five parts, each containing three chapters. In more detail, Part I, called “‘It’ happened again”, describes the characteristics of the Minsky moment vis-à-vis Minsky's economics (Chapter 2), while Chapter 3 presents a synoptic view of the financial instability hypothesis. Chapter 4 illustrates the implications of an insider's view for both understanding Minsky's analysis and putting forward a research agenda.

Part II includes the three articles that Hyman and I co-authored. On the one hand, this inclusion serves the practical function of making them available in a unitary way since they are rather old articles. On the other, they represent the backbone of the book. They not only bear witness to the deepness of our collaboration, but are used to interpret and develop Minsky's analysis. Specifically, these articles are updated, deepened and broadened in order to meet the challenges that the new stylized facts of the economy and the developments of the discipline put forward.

Part III starts updating and deepening some methodological aspects present both in these three articles and in Minsky’s works. Specifically, the triple classification suggested by Hicks will be followed. Chapter 8 deals with the micro–macro relationship in Minsky's analysis. Chapter 9 deals with the foundations of dynamics not only to compare Minsky with the so-called DSGE (discrete stochastic general equilibrium) literature (which was not yet put forward when the article reproduced in Chapter 6 was written) but also to fix the tenets of an endogenous dynamics. Chapter 10 updates the 1984 article on prices and profits. In so doing, it presents new tools for producing nonlinear dynamics.

Part IV enters the so-called black box of instruments used by Minsky. It is aimed at broadening Minsky's analysis in order to consider phenomena such as income distribution, inequality and productivity. In other words, it does not only consider the dynamic suggestions contained in his 1982 book, but tries to link growth and the labor market in a medium-run
perspective. Chapter 11 develops a model where drivers, adapters and constraints coexist and where unemployment is generated by both aggregate demand and aggregate supply. Chapter 12 introduces the role of technical change and its implications for unemployment. Chapter 13 underlines the structural properties of the labor market. The results of the three chapters are compared with Minsky’s ideas put forward in his 2013 posthumous book.

Part V utilizes this analytical apparatus in order to revisit the financial instability hypothesis in the dynamic setting put forward in Part IV. Chapter 14 stresses the novelty of the Great Recession and its analytical challenges. Chapter 15 develops a meta-model encapsulating the financial instability hypothesis in a broader context. Chapter 16 concludes by stressing the results achieved and the work that remains to be done.

NOTES

1. A full list of the publications of Minsky is to be found in Wray (2016).
2. For instance, we organized a conference on Keynes and Schumpeter at Washington University in 1983. On the contrary, with Riccardo Leoni we were preparing a conference on unemployment, but because of Hyman’s sickness it never took place.