

# **Hyman P. Minsky's thinking: changes of course and updates\***

André L.C. Lourenço  
Federal University of the Rio Grande do Norte (UFRN)  
Natal – Brazil  
andre-lourenco@uol.com.br

May 2006

Abstract

The present paper proposes that, in spite of some fundamental invariant elements, the way in which Minsky's central concept is exposed, the Financial Instability Hypothesis, has varied significantly throughout his academic productive period; furthermore, it assesses that the traditional way such concept is exposed does not incorporate important elements from the author's latest and most mature contributions; it states that such canonic form is insufficient to deal with the phenomena of contemporary financial crises, due to the lack of updates that incorporate recent institutional changes.

Key Words: Hyman P. Minsky; Financial Instability Hypothesis; two prices model; financial crises; institutional changes.

**JEL CLASSIFICATION: B22, B31, B59.**

---

\* For presentation at The 2006 Annual Conference of the Association for Heterodox Economics, London, UK, July 14-16. I'm grateful to Foundation of Research Support of Rio de Janeiro State (FAPERJ) for research funding.

## Introduction

Hyman Philip Minsky (1919-1996) was one of the greatest specialists on monetary theory during the second half of the 20<sup>th</sup> century. In the collected works<sup>1</sup> organized in his honor, Dymski and Pollin (1992) made use of a comment by Isaiah Berlin in his essay about Tolstoy's theory of history to qualify him as a typical representative of the "hedgehogs" category -

*"those, on the one side, which relate everything to a single central vision, one sistem less or more coherent or articulate, in terms of which they understand, think and feel – a single, universal, organizing principle in terms of which alone all that they are and say has significance (Berlin, 1953: 1-2).*

This homage aimed at reinforcing that, during the development of his ideas concerning how the economy worked for a period of approximately fifty years, Hyman Minsky always kept as an underlying "organizing principle" a distinctive pre-analytical view<sup>2</sup>. Moreover, according to Dimsky and Pollin, such view consubstantiated with the so called "*Wall Street* paradigm".

Roughly speaking, such paradigm sustains the omnipresence and absolute centrality of monetary and financial phenomena in the interpretation of the *modus operandi* of capitalist economies qualified as "financially sophisticated", that is, economies with "two price levels, a complex of financial institutions and multiple connections among financial, labour and product markets and income flows" (Minsky, 1994b:22). Similarly to Keynes' concept of "monetary economy of production", the *Wall Street* paradigm opposes to the real exchange (barter) paradigm or the "Walrasian villager fair" – whose analytical representation would be the Arrow-Debreu model (1954) of general equilibrium, in its contemporary versions and extensions.

The centrality of this unique and organizing principle, however, presents a contrast with the multiplicity of its contributions, which include at least: a) a "financial" interpretation of the General Theory (Minsky 1975a: chap. 1) and a critique of its traditional interpretation (Minsky, 1975a: chap. 2 and 1986: chap. 6); b) a fundamental theoretical contribution, the Financial Instability Hypothesis (Minsky, 1975a: chaps. 4 to 6; 1982a: several chapters; and 1986: chaps. 7 to 9) and other subsidiary ones, such as his theory of inflation (Minsky, 1986: chap. 11); c) contributions on institutional dynamics, for instance, banking activity analysis (Minsky, 1986: chap. 10), financial innovations (Minsky, 1957a) and central banks (Minsky, 1980a); d) contributions to the historical reconstitution and interpretation of the American and global financial crises, from the Great Depression of the 30s to those from the beginning of the 90s (1986: chaps. 2 to 4); and e) normative contributions, encompassing both a very extensive proposal of economic and social policy reformulation (such as, Minsky, 1975a: chap. 9; 1986: chaps 12 and 13) and particular questions, such as banks' evaluation by regulatory authorities (Minsky, 1975b).

The present article, however, doesn't intend to encompass the full extension of the contributions above mentioned. Its object, considerably more restrict, consists only in the so-called Financial Instability Hypothesis, which, however, clearly sets the bounds for the other contributions. In particular, this essay aims at investigating: a) if and how the presentation of this central aspect in Minsky's work has varied throughout his extensive academic period; b) if the traditional manner in which the concept was

---

<sup>1</sup> Fazzari and Papadimitriou (1992).

<sup>2</sup> According to Schumpeter (1949), every scientist possesses a pre-analytical view over his object that precedes the study, and without which any scientific incursion is impossible

presented and popularized is sufficient for dealing with the phenomenon of contemporary financial crises.

## 1. The Financial Instability Hypothesis

According to Minsky himself (1994b: 21-2), the Financial Instability Hypothesis' (henceforth FIH) main propositions may be summarized as follows: 1) a capitalist economy that presents a sophisticated, complex and continuously evolving financial system ("Wall Street economy") alternates between periods of stable behaviour and turbulent/chaotic periods; 2) these kinds of behaviour are endogenous to the capitalist economy, once they are derived from the pursuit of each agent's own interests, and may be generated even within stable situations; 3) the turbulent/chaotic periods may assume the form of: interactive inflations, speculative bubbles or interrelated debt-deflations; 4) as these turbulences are established, they acquire a life of their own; nevertheless, such behaviour will sooner or later tend to be reverted, be it due to restrictions imposed by institutions or routines, to political interventions that affect the institutional structure or even to the self-organization properties of the markets; then, new conditions propitiating the rise of a new stability regime would emerge; 5) it is likely that the new stability regime is characterized by a low level of economic activity; nevertheless, the pursuit of the agents' own interests will end up generating a new expansive cycle, leading to a new speculative wave; as time passes, new incoherent expansion regimes and disastrous contractions would follow.

The way the FIH is presented varied throughout the whole of Minsky's lifework, since his pioneering article about financial innovations published in 1957<sup>3</sup> until the article co-written with Charles Whalen, posthumously published<sup>4</sup>. For almost forty years, the FIH was progressively refined and perfected in its details; the basic structure outlined above represents a version which is only adequate for a first contact with the concept.

## 2. The Institutional Mark of the Financial Instability Hypothesis

Opting to focus on the FIH in this article doesn't mean that other aspects of Minsky's contributions should be ignored or placed at a lower level. This observation is particularly relevant when dealing with questions of institutional character, because:

*"Serious economic theory cannot be so abstract that it ignores institutional characteristics, especially as a time dependent process endogenously generates a thrust towards incoherence and institutional rigidities and policy interventions constrain the system to a semblance of coherence "* (Minsky, 1982b: 393).

We may see here the role of institutions and economic environment in the constitution of the theory, which is fundamental to Minsky's thinking. In relation to this aspect, the author reports in his autobiographical notes the importance assumed by History and institutions after being introduced to the institutionalist thinking of John Commons, through his disciple David Saposs, in the occupied post-war Germany:

*" The experience on Germany – and the interactions with Saposs – impressed upon me the importance of the specific institutions and historical circumstances upon what happens in the world. From that time on*

---

<sup>3</sup> Minsky (1957a: item IV).

<sup>4</sup> Minsky & Whalen (1996/7).

*I think I understood that theoretical abstractions are necessary to focus thinking – but abstract theory is the beginning of serious economic analysis, not the end-product” (Minsky, 1985: 170).*

As an illustration of this perspective, one should notice that the institutional issue is already present at the self-restriction of the *Wall Street* paradigm’s application on financially sophisticated capitalist economies, questioning right from the start the legitimacy of hastily transposing elsewhere Minsky’s concepts, thought under the American financial sophistication.

Nonetheless, the same “importance of specific institutions and historical circumstances” referred by the author have clearly influenced the evolution of his own thinking, affecting its theoretical development. It’s not necessary to adopt a Kuhnian methodological approach in order to accept that every theory reflects, at some level, the economic environment and its surrounding institutional and historical specificities. In this sense, Victoria Chick pointed out to the weight these factors had over the configuration of economic theories, observing that the mere passage of time was capable of turning a theory, valid up till then, into something (dangerously) impertinent: “Good theories are pertinent abstractions, and the pertinence is altered as History evolves” (Chick, 1983: 3).

In this context, one may wonder: would the FIH, according to the author’s own perspective, a product of the circumstances within which it was developed, still be pertinent after everything that has changed in these same institutions and circumstances?

Minsky graduated in 1941, and, just like his generation of economists, was under the influence of the Great Depression’s intellectual impact during his study years. He lived the uncertainties of war and the “tranquil growth” of the Golden Years (1945-65). In the second half of the sixties, he saw financial fragility return to the macroeconomic scenario of the USA as well as the rest of the world, and, in the nineties, the consolidation of what he called “money manager capitalism”. However, the formative period of his basic thinking regarding financial instability seems to have happened between the end of the fifties and beginning of the seventies, chiefly reflecting the American experience of successive financial crises that occurred in the years of 66, 70 and 73-75, as well as, obviously, the ghost of the Great Depression.

Therefore, it’s no surprise that the FIH was developed having a closed economy as reference – a common approach to most economists of his generation. Besides, other aspects support the author’s choice. First of all, the relative stability of international transactions propitiated by the *Bretton Woods*<sup>5</sup> agreement; secondly, the fact that the American economy was relatively closed throughout the relevant period when the FIH was developed; and thirdly, the American economy’s differentiated status as “world bank”, on account of the dollar’s functioning as international currency. Minsky himself (1975a: x) justifies such choice as a problem of “expository convenience and necessity”.

Afterwards, Minsky incorporated some aspects of open economies into his analysis, such as the effect of the current account balance, through entrepreneurial profit, in the financial dynamics. Some works (for example, Minsky, 1994b) suggest that he was endeavoring to incorporate more of the open economies’ typical elements into his analysis. Nevertheless, it’s rather clear that his contributions as to this matter left a series of fundamental questions regarding the dynamics of this type of economy yet to be concluded (Dymski, 1998:75).

The long sequence of financial crises occurred since the breach of the *Bretton Woods* agreement rekindled the interest in studying the international aspects of finances.

---

<sup>5</sup> Davidson (1994: 264-5).

Although Kindleberger (1978) observed that financial crises are recurrent phenomena, the recent changes in the American and global financial structure seem to have caused crises to burst out more frequently. In face of such picture, the insufficiency of the Minskyan approach to international aspects, especially the interaction between financial and exchange crises, restricts significantly the FIH's capacity in terms of diagnosis and prophylaxis of contemporary economic problems.

A second aspect of the FIH that may be questioned is the institutional dynamics that works as its basis. It was initially conceived within the institutional environment that reflected Roosevelt's *New Deal* against the Great Depression, especially the threat of a collapse in the banking system. The reorganization imposed by the *Glass-Steagal Act* and other secondary legal instruments, besides remodeling all the financial policy's structure (Federal Reserve System, FDIC, deposits insurance and so on), promoted the segmentation of banks. From then on until recently, the American banking system was divided into commercial banks, which are legally apt to receive deposits from the public in general, and investment banks, specialized in subscribing and issuing shares and long-term papers in the assets market<sup>6</sup>.

However, since the fifties, the American financial structure was producing operational and product innovations that started to reduce the effectiveness of the institutional apparatus in charge of its regulation and inspection. The cumulative effect of these innovations caused, from the mid-sixties on, financial disturbance episodes to happen again, after the relatively calm post-war period. Around 1986, Minsky himself was already pointing out to this structure's virtual incapacity to prevent financial fragility from being aggravated and to maintain depositary and investment bank functions separated, as well as to keep the activities of banks and other non-banking financial intermediaries<sup>7</sup> separated. It's in this profoundly changing environment that the FIH acquires its canonic form.

The nineties, however, saw the consolidation of a process in which innovations became permanent weapons in the competition among financial institutions. In his final writings, Minsky (1992: 32) acknowledges that the modifications present in this period are deep enough so that it is possible to define the existence of a new capitalist stage as to what concerns financial relations, called "money manager" and characterized by the fact that:

*(...) the proximate owners of a very large proportion of the liabilities of business – especially of the largest business – are institutions that manage money on behalf of an array of claimants. The main money managing institutions are pension funds, mutual funds, and thrust departments of banks (...)* (Minsky, 1992: 28).

Therefore, the form by which financial intermediation occurs is fundamentally altered within this new institutional environment. Instead of occurring primarily through commercial banks, the financing of economic activity occurs increasingly through mutual and pension funds (Minsky, 1992: 31), in a process sometimes called "disintermediation".

Nevertheless, in the FIH version present in Minsky's book, the role of commercial banks both in intermediating and generating financial fragility is crucial. Due to its own nature, the banking activity of the time's institutional context was subject to pressure from the pursuit of opportunities of increasing profits, the elevation of banking leverage

---

<sup>6</sup> For a discussion regarding the adopted segmentation, see Carvalho *et al.* (2000: 298-300) and Minsky (1986: 223-4).

<sup>7</sup> Minsky (1986: 223).

and consequent erosion of safety margins. Under these conditions, banking activity wound up assuming an essential role in the destabilization of economic relations, or as the author put it, the role of “endogenous destabilizer” (Minsky, 1986: 250-3).

Besides the disintermediation process derived from the emergence of institutional investors, there’s also a set of structural financial changes apparently being incorporated into the American economy, which includes (for example, Carvalho *et al.*, 2000: 342-57): a) securitization, that is, secondary markets created to negotiate, by means of standard bonds, the liabilities issued in banking credit operations; b) an expressive expansion of derivative markets, that is, markets that negotiate several types of risks associated with a wide range of assets and financial operations; c) the tendency towards bank universalization, that is, the end of the segmentation of banking activity into commercial and investment banks, by revoking the Glass-Steagal Act; and, finally, d) the tendency towards financial deregulation and liberalization.

In face of the depth of the changes in question, and the importance of institutions in the Minskyan thinking, therefore it seems legitimate to question to what extent the FIH, in its traditional conception, is still capable of handling the financial dynamics in the contemporary institutional context, or, going even further, to what extent Minsky’s own approach, in his maturity, is sufficient for such purpose.

Furthermore, this author’s interpretation on the American economic history seemed to describe a process of an increasing weakening of financial relations during the period of 65-82, a process which could be expanded as to encompass the events of the 87 stock exchange crash and the recession of the early nineties. This weakening process, in the presence of a “big government capitalism”, seemed to direct towards an increasingly perverse trade off between recession and inflation<sup>8</sup>.

Nevertheless, in the period of 1993-2000, the American economy’s performance was characterized by the most continuous and robust expansive process of this economy since the “glorious thirties”, presenting a rather low inflation even at the pinnacle of the cycle, maintaining an ongoing process in spite of frequent exchange and financial crises bursting around the world. The interpretation of such phenomenon, therefore, seems to require an invigorated effort to rethink the FIH within our current context.

### **3. The Problem of Cyclical Reversion**

Another fundamental aspect to be taken into account, and without which any attempts to proceed with the Minskyan research program will be laid on fragile foundations, is the adequate formulation of the cyclical (Minsky, 1975a: 58-64) and nonlinear character of the FIH, and the associated “problem of endogenous reversion”, which seems to be featured prominently in the disagreements among its interpreters.

In the realm of cycle theory, Schumpeter (1952: 252) catalogued two preponderant forms of explaining its causes. The first one sees the economy’s endogenous behaviour as essentially coherent and balanced, being projected in time as a steady state growth. According to such viewpoint, the cycle would result essentially from exogenous shocks, random or induced by governmental intervention, and not from capitalist economic processes *per se*, always regarded as coherent.

The second interpretation concerning cycles sees them as an outcome of the economy’s endogenous workings. The agents’ pursuit of financial goals (profit, utility) itself would unleash cumulative movements, with a positive feedback, and that sooner or later would also be endogenously reverted.

---

<sup>8</sup> See, for example, Minsky (1986: 95).

Perhaps due to the need to simplify, or even to the limitation of the mathematical arsenal and the available IT capacity, in practice, theorists almost always wound up outlining the economy's endogenous behaviour in terms of second-order differential or differences equations, as in Samuelson's (1938) seminal accelerator-multiplier model. The behaviour of trajectories generated by equations of this sort, however, was considered "poor" or "excessively mechanic and regular" to describe the temporal series typical of nuclear variables of these models<sup>9</sup>. Indeed, these equations, depending on the parameters' values, are capable of generating four distinct types of trajectories: non-oscillatory and convergent; b) non-oscillatory and divergent; c) oscillatory and stable; d) oscillatory and explosive.

In practice, the demand for realism required that, in case the expected parameters generated solutions of type "a" or "c", it would be necessary to resort to continuous and frequent exogenous shocks, in order to prevent fluctuation from disappearing. In these cases, similarly to the first trend of economists, the essence of the cycle would be exogenous, although lags and frictions of all sorts tended to produce oscillations and delays in the convergence towards equilibrium.

When, however, parameters that produced solutions of types "b" or "d" were introduced, the same demand for realism imposed the need of *ad hoc* restrictions over the model, in order to limit the domain of solutions to what was suitable with the perception on "stylized facts" of the empiric behaviour<sup>10</sup>. Hence the famous "nonlinear" cycle models, where nonlinearities would normally assume the form of floor and/or ceiling (whose greatest example is Hicks', 1950), which restricted the domain of instability to the values empirically acceptable for real output. By that, we don't mean that economists who followed this approach necessarily denied the existence of exogenous shocks, be them random or derived from the economic policy itself; however, they were actually complementary factors in the explanation of the economy's cyclical behaviour, essentially endogenous.

In face of these possibilities, how to interpret Minsky's view on cycles? The author always insisted that the instability and incoherence of capitalist economies were endogenous<sup>11</sup>. Nonetheless, the interpretation of such endogeny has been disparate even among those who, in general, agree with his ideas.

According to Ferri (1992), for instance, an interpretation over Minsky's work based on chaotic dynamics, even without Hicksian discontinuities, allows the derivation of a completely endogenous cycle<sup>12</sup>. It naturally doesn't mean that exogenous shocks don't exist, but only that they are not a *sine qua non* condition for the occurrence of cyclical reversion. For this author, such position not only would allow the cycle to become completely endogenous, but also resolve the dilemma presented by explosive linear solutions, once fluctuations, due to their own nature, may lay on a limited region in chaotic systems.

Dimsky and Pollin (1992: 40-1), on the other hand, suggest a mixed interpretation of Minsky's stance on the debate over cyclical dynamics. These authors understand that the financial structure's process of destabilization admits two components. On the one hand, this structure's fragility would be really endogenous, reflecting the interaction between the economy's expansive movement and the exaggeratedly optimistic

---

<sup>9</sup> Minsky (1957b: 232).

<sup>10</sup> Such stylized facts have been defined, for instance, in Keynes (1936: 194-197).

<sup>11</sup> For an example, see Minsky (1980b: 85), among many others.

<sup>12</sup> Ferri (1992:12) prefers the term "fluctuations" instead of cycle, because a few sorts of nonlinearity present such complex dynamics that their movements don't present the necessary regularity to characterize them as such.

expectation of the economic agents, who would adopt financial attitudes increasingly speculative and leveraged<sup>13</sup>. On the other hand, the reversion of this trend would make its way through exogenous shocks, including herein changes in the economic policy, such as the Central Bank's raising the basic rate of interest.

#### **4. Minsky's thinking: changes in its course (1957-1996)**

The present item endeavors to verify how Minsky's thinking evolved historically in its utmost essential traces, throughout his academic activity (1957-96). Although this sort of analytical cut is always partly arbitrary, we deem helpful to distinguish here three periods in the author's evolution process concerning the behaviour of capitalist finances<sup>14</sup>.

##### **4.1 First Phase (1957-1965)**

The first phase, which may be roughly defined as encompassing the years of 1957-65, corresponds to the so-called post-war "tranquil growth"<sup>15</sup> period. The author's focus within this period is on the attempt to offer more realistic dynamics to the accelerator-multiplier models *a la* Samuelson. The tool employed in such effort is the introduction of financial aspects into investment determination.

For this purpose, it's assumed that, according to Hicks, the parametric values of the accelerator-multiplier model are such that, at first, the trajectory of real product is explosive and oscillatory, but it's restrained by the action of a set of nonlinearities, including: a) the imposition of ceilings and floors<sup>16</sup> that, once reached, would force the reversion of trajectory, so that the cyclical reversion would at least be potentially endogenous; b) the operation of "institutions and interventions [that] thwart the instability breeding dynamics that are natural to market economies by interrupting the endogenous process and "starting" the economy again with non market determined values as initial conditions"<sup>17</sup>; and c) the adoption of an accelerator coefficient that varies on a counter-cyclical direction due to the effects of monetary restriction<sup>18</sup>, which would operate through the rate of interest and the Kaleckian principle of increasing risk<sup>19</sup>.

Therefore, in this first moment, although the instability of capitalism has already been well established, and the importance of financial phenomena has already been emphasized, its centrality is still a little restricted in relation to later contributions. This fact seems to result from its almost *ad hoc* condition in determining investment as well as from the fact that, in the last instance, the key-variable in the model's dynamics, the accelerator coefficient, is essentially non-financial.

---

<sup>13</sup> But not necessarily aware, as Kregel (1997) points out.

<sup>14</sup> The interpretation of what follows owes a great deal to Ferri and Minsky (1991) and to Minsky (1996b).

<sup>15</sup> The most representative works from this period seems to be Minsky (1957b), Minsky (1959) and Minsky (1965).

<sup>16</sup> Exogenous or not, depending on the version of the model.

<sup>17</sup> Ferri and Minsky (1991: 4).

<sup>18</sup> Notice that, for the purpose of the analytical solution of the model, the accelerator coefficient's variance is treated in a non-algebraic form, by means of simulation and qualitative analysis.

<sup>19</sup> Refer to Kalecki (1937).



## 4.2 Second Phase (1965-1990)

A milestone in the author's viewpoint shift seems to have been the financial crisis of 1966 in the USA, which interrupted the post-war tranquil growth and characterized the emergence of instability after a period of increasingly weakening of that country's financial structures<sup>20</sup>.

In two publications from 1972, the new formulation seems to have been consolidated enough so that Minsky explicitly discards the use of the accelerator, financial restrictions notwithstanding, as an adequate representation of the process of investment determination:

*"In previous works, I have used an accelerator-multiplier cum constraining ceilings and floor model to represent the real economy. Within this model the periodic falling away from ceiling, which reflects parameter values and hence is an endogenous phenomenon, is not the unusual event that can trigger the "unstable" financial reaction – if a "proper" financial environment or structure exists. (...) This view neglects decision-making under uncertainty as a determinant of system behavior. A special type of uncertainty is inherent (...) due to the financial relations.(...) A model that recognizes the problems involved in decision-making in the face of the intrinsically irrational fact of uncertainty is needed if financial instability is to be understood"* (Minsky, 1972a: 118).

*"However, we have to face up the fact that we do not explicitly consider the accelerator in our formulation. Long ago I examined interrelations between accelerator effects and monetary (financial) behavior.(...) That formulation ignored the supply function for investment goods output and the pricing process for stocks of capital goods, which are central to the present exposition (...) [in which] the speculative element is introduced into the pricing of assets by way of the contingent cash flows by way of "sale"."* (Minsky, 1972b: 207-8)<sup>21</sup>.

As far as the texts mentioned are concerned, it is only in *John Maynard Keynes* (1975a) that the FIH's theoretical bases are better consolidated. Although agreeing with Keynes' view on the determination of the levels of income through the Principle of Effective Demand, as well as the central role of investment in this determination, Minsky intends to establish a new interpretation on investment, with a Keynesian inspiration, but placing greater emphasis on its determinants of financial character<sup>22</sup>.

Whether Minsky's evaluation of the accelerator principle is correct or not, the fact remains that, in later works, it was substituted by a formulation based in expected cash flows: the two-price model. The interaction between the two prices – of current output and capital goods – determined within distinct markets and reacting differently to several phenomena, would determine the pace of investment, and, hence, the aggregated income and employment.

In this new perspective, the greater cause of the transitory and cyclical nature of economy would be the instability of investment, caused by the instability in deciding assets' allocation in the portfolio, and the financial inter-relations of several agents.

---

<sup>20</sup> Minsky (1986: 68). One should notice, however, that in Minsky (1963: 7-8) "stability limits" may be distinguished, beyond which the system's fragility may make it susceptible to assets' spiral deflation.

<sup>21</sup> In *Stabilizing*, such stance is less absolute:

*"During periods in which financial markets operate smoothly (...) The technical demand for capacity, as determined by extrapolations of past behavior and the profitability of existing capacity, dominate in determining investment (...). In periods when the above does not rule, financial market conditions are of greater importance (...)"* (Minsky, 1986: 189).

<sup>22</sup> For a criticism on the original Keynesian formulation of the theory of investment, see Minsky (1972a:136-38).

Behind this instability would be the importance of uncertainty in decision-making, and its irreducibility to probabilistic calculation<sup>23</sup>.

Having discarded the accelerator theory, however, didn't imply the simultaneous dismissal of other important ideas from the original formulation, such as the endogenous incoherence and nonlinearity of the economic system. Still, the new position adopts a modified view on financial crisis burst, that is, the way the reversion of the cycle takes place, the passage from an ascendant to a descendant movement. In the author's words:

*"The model sketched here makes a debt-deflation process up to the triggering event an endogenous phenomena not in any deterministic sense but in the sense of creating an environment in which the likelihood of such an event taking place increases"* (Minsky, 1972b: 226).

It means that the financial crisis burst in this new phase is still endogenous, but in a different sense than that of the first phase. The endogyny is now present in the possibility that the domain of stability of the system is eroded by an endogenous process ("financial fragility")<sup>24</sup>. Still, the crisis would only burst in the event of an exogenous shock potent enough to push the system beyond that domain<sup>25</sup>. In this context, the advance of the endogenous fragility process is a necessary condition, but insufficient *per se* for the deflagration of a cyclical reversion<sup>26</sup>; the exogenous shock would be indispensable for the crisis burst<sup>27</sup>.

The nonlinear view on the economic system is still part of the new explanation to the process:

*"We are discussing a system that is not globally stable. The economy is best analyzed by assuming that there exist more than one stable equilibrium for the system. We are interested in the determinants of the domain of stability around the various stable equilibria"* (Minsky, 1972a: 143).

It's noticeable that in this case the author adopts a nonlinear model, which would generate multiple equilibria. If we interpret the exogenous shocks as *sunspots*, it would present a certain formal similarity to the contemporary description of exchange crises, particularly to the so-called models of second-generation speculative attack<sup>28</sup>.

### 4.3 Third Phase (1990-1996)

There seems to be enough elements to postulate that even this view, quite advanced for its time, doesn't yet constitute the definitive form assumed by the author. A third phase of the Minskyan interpretation on the financial matter seems to be precociously emerging around 1982:

---

<sup>23</sup> Minsky (1975a: 74-77).

<sup>24</sup> There are exogenous elements in the definition of the domain of stability, such as the government's size, and the disposition and capacity of the central bank to act as a lender of last resort.

<sup>25</sup> This view on crisis derives from Fisher (1933). Mitchell considers Veblen (1904: chap. 7) a sort of antecessor for Fisher as far as this interpretation is concerned – an original connection to institutionalism.

<sup>26</sup> According to Dymski and Pollin's (1992: 40-1) interpretation.

<sup>27</sup> It is possible, however, that the frequency and potency of the shocks are also correlated to endogenous processes.

<sup>28</sup> An essential difference in these models is the view that there are *fundamentals* that conduct economy's behavior, whereas in Minsky's view, the fundamentals are also expectational and subjective.

*"The system transits from paths that look like tranquil expansion to apparently well mannered cycles to time paths that are best described as chaotic. Furthermore, a type of behavior will appear and then disappear, i.e., order and tranquility will give way to chaos or turbulence only to be succeeded by a period in which order "reappears". (Minsky, 1982b: 378).*

In *Stabilizing* there are few specific references to the theme: "There is now ample evidence to indicate that almost all systems which are multidimensional, nonlinear and time dependent are endogenously unstable" (Minsky, 1986: 10). Nevertheless, one may already notice a reduction of the emphasis on the need for exogenous shocks as essential elements in the generation of a financial crisis, and a sort of restoration of the nonlinear interpretation on the cycles from the first phase, laid over new basis (Fazzari, 1992: 7).

The return of such view seems to be associated with the beginning of the incorporation process of the results of mathematical research on nonlinear dynamics – especially chaotic – to economic models<sup>29</sup>. An important aspect of this view for Minsky's discussion is that, in the presence of certain types of nonlinearities, even a perfectly deterministic system is capable of generating non-periodic endogenous fluctuations. It means that, for systems of the sort, exogenous shocks are no longer a *sine qua non* condition in the emergence of cyclical behaviors, and, thus, of financial crises<sup>30</sup>.

At the same time, the more diversified dynamics generated by certain types of nonlinearities allow a third stance on the cycle issue, non-existent in Schumpeter's classification of cycles, previously described: it specifies that it is possible to obtain "realistic" and non-mechanical fluctuations without resorting to discontinuities *a la* Hicks or exogenous shocks, through the mere use of certain types of nonlinear relations. This use, however, doesn't mean adopting an additional hypothesis, but, on the contrary, it represents the removal of a seriously restrictive hypothesis, that is, linearity.

Around 1990, a few of Minsky's articles already seem to reveal this perspective:

*"The ideas that events occur in calendar time and (...) that the world is not linear (...) are now the common property of all serious sciences (...). Economists need to think in terms of systems in which outcomes are path and initial condition dependent, and where government interventions and the operations of the regulatory system change the initial conditions for the future (...). In this way of looking at the economy the idea of equilibrium is of questionable relevance (...) Capitalist economies are quite clearly non linear time dependent systems which are prone to incoherence that is endogenous (...)" (Minsky, 1990: 1-2).*

*"(...) the knowledge that simple deterministic nonlinear relations can generate time series that are chaotic together with the results of computer simulations which explored the properties of mathematically intractable dynamic models (...) have shown economists that fully endogenous economic processes can generate complex patterns. These nonlinear models are not vulnerable to the criticism that endogenous business cycle models generate time series that are too regular. At the same time, these series are not necessarily explosive" (Ferri and Minsky, 1991: 8-9).*

*"The modelling leads to complex nonlinear and time dependent relations that, as the attempts to model and solve or simulate have shown, lead to complex time series which exhibit what can be regarded as chaotic behavior periods" (Minsky, 1996b: 84).*

It is important to realize that this view doesn't postulate the non-existence of exogenous shocks or a dismissal of their impact; the point is that they are no longer necessary to formalize the fluctuations of capitalist economies financially sophisticated.

---

<sup>29</sup> This movement constitutes a return to the research line started by the seminal work of Richard Goodwin (1967) in his predator-prey model.

<sup>30</sup> This is Ferri's (1992) interpretation.

Naturally, models which privilege realism should incorporate them. Nor does the fact that discontinuities of type floor/ceiling were dismissed implies the non-existence of mechanisms that restrict the full operation of the capitalist “endogenous incoherence”. On the contrary,

“(…) *the observed behavior of the economy is not the result of market mechanisms in isolation but is due to a combination of market behavior and the ability of institutions, conventions and policy interventions to contain and dominate the endogenous economic reactions that breed instability if left alone*” (Ferri and Minsky, 1991: 4-5).

Such institutions, conventions and political interventions are key-elements in the compatibility of a certain empirically observable stability of capitalism with the view that, in the absence of such elements, it will become unstable, turbulent and chaotic.

It’s no surprise that the way of thinking of a great author - one who devoted forty years to studying the financial issue - changes significantly, even though his profile is that of a “hedgehog”. Such changes, however, mustn’t be overrated; some important elements did remain unaltered throughout his journey, particularly the Keynesian perspective on instability and the historical-institutional view on economy.

Furthermore, the changes listed above have different weights over the final constitution of the theory. The first rupture – dismissing the accelerator theory – is certainly more important than the second change. While the first cleared the path for the financial phenomenon to acquire an absolutely unique importance – and, according to some, perhaps even exaggerated<sup>31</sup> – the latter, although important and carrying implications still unexplored, didn’t have as much repercussion.

The author’s thinking may have varied, but there are some unaltered elements throughout his work and that, as such, may be considered as cardinal, with a particular impact onto his approach.

## **5. The Fundamental Perspectives – Unchanging Elements**

On chapter 3 of the book *John Maynard Keynes (1975a)*, called *Fundamental Perspectives*, Minsky lists the elements considered by him as basilar in Keynes, and which may also be regarded as essential concepts for his own work: 1) time and uncertainty; 2) disequilibrium; and 3) the cyclical perspective and investment.

### **5.1 Time and uncertainty**

In order to vary a little the metaphors and associations commonly used by post-Keynesian authors when describing this theme, we should resort initially to the concepts developed by the theorist of complexity Ilya Prigogine (1996). In the field of Theoretical Physics, this author proposes a distinctive standpoint on the time subject, whose core is, initially, compatible with the pre-analytical view that underlies the Mynskian *Wall Street* paradigm and others with a Keynesian inspiration.

The concept of time employed by Classical Physics and even by contemporary Quantic Physics is that of reversible time, that is, one which is applicable to situations involving time symmetry. Reversible processes would normally be described by equations of invariant evolution in relation to the inversion of times, so that future and past may not be distinguished:

---

<sup>31</sup> For example, Dymski e Pollin (1992: 50-4), or Possas (1987: 37).

“... time, as was incorporated in Physics’ fundamental laws, from Newtonian classical dynamics but including Relativity and Quantic Physics, does not authorize any distinction between past and future. Even in current days, for many physicists, this is a true profession of faith: regarding the fundamental description of nature, there is no time arrow” (Prigogine, 1996: 10)<sup>32</sup>.

But as Alessandro Vercelli has insisted, conventional Economics shares with Physics and other classical disciplines the same reductionist way of regarding the world:

*“In all scientific knowledge subjects we can distinguish, in one side, a reductive approach, which intends to reduce a complex phenomenon to simple regularities, an irreversible time to a reversible one, dynamics to equilibrium, instability to stability, structural change to structural invariability, and, in the other side, a non-reductive and alternative approach, by which the aforesaid reductions ignore and distort important aspects from real phenomena. This second approach assigns a fundamental role to complexity, irreversibility, disequilibrium and to instability”* (Vercelli: 1994:4).

In the time issue, the *Wall Street* paradigm intends to distinguish itself from such “reductionist” view, without incurring in what Prigogine calls “the banalization of irreversibility”. For Minsky, the economic time isn’t reversible, and that generates extremely important impacts on how it is theorized:

*“An economic theory that is relevant to a capitalist economy cannot evade the issues involved in unidirectional historical time by assuming recontracting or the existence of universal systems of future, or contingent, contracts”* (Minsky, 1980b: 81).

*“Modelling an economic in which time is unidirectional – in that the past and views about the future affect the present and the outcomes of the present sets the parameters within which the future takes place – cannot be done without explicitly taking these intertemporal relations into account”* (Minsky, 1982b: 378).

The presence of the (irreversible) time arrow tears down the symmetry between past and future, so that a theory on economic decision-making must take them as distinct entities<sup>33</sup>. In this context, it’s impossible to adequately describe the future as a statistical extrapolation of the past, and, thus, make use of probabilistic calculation as an objective criterion to predict the future scenario in the decision-making process of the present<sup>34</sup>. Hence the celebrated viewpoint of Keynes: under these circumstances, decisions are guided by a “practical theory of the future” which, by acknowledging the non-existence or insufficiency of a reliable basis for probabilistic calculation, proposes the adoption of a variety of techniques<sup>35</sup> to support them. Yet, the fragility of these principles would subject the decisions to changes sometimes sudden and drastic.

The approach on time issues under this bias promotes *per se*, according to Minsky, the “reduction of the importance of production and stable preference functions as determinants of systemic behaviour”. At the same time, the presence of uncertainty strongly affects the determination of this behaviour in the agents’ deciding the allocation of assets, through expectations of capital assets yield, conditioning all the systemic dynamics.

However, when substantiating his approach onto these matters, Minsky performs a controversial reading of the Keynesian propositions. On the one hand, he rejects the

---

<sup>32</sup> Davidson (1994: 89-94) treats the question in terms of non-ergodicity, a concept developed in the 19<sup>th</sup> century by the Austrian physicist Ludwig Boltzmann, which also inspired Prigogine (1996:26).

<sup>33</sup> The view on temporal irreversibility would be banal if it were not the case that “*virtually all economic models implicitly assume that economic time series are time reversible*” (Ramsey, 1989).

<sup>34</sup> The basic references are Keynes (1936: cap. 12) and Knight (1921).

<sup>35</sup> See Keynes (1937b: 172).

possibility of employing “certainty equivalents” (actuarial certainty) to substitute the non-probabilistic uncertainty<sup>36</sup>. On the other hand, he proposes the following treatment of economic decision-making:

*“...in cases where no precise numerical value can be objectively assigned, decisions need to be made. They are made as if some objective assignment of probability could be made; we might call such assigned probabilities in the absence of sufficient knowledge “subjective probabilities” (Minsky, 1975a: 65).*

The acceptance of the clause “as if” seems to indicate the virtual acceptance of the theory of expected utility by Friedman-Savage (1948), disagreeing with the post-Keynesians’ usual interpretations on Keynes’ propositions in the *Treatise on Probability*, such as in Shackle (1952) or Davidson<sup>37</sup>:

*“Even though Keynes was skeptical of the validity of the Benthamite calculus when applied to incomes, the expected utility hypothesis is a useful expository device for Keynesian ideas if it is accepted that (1) the probabilities set on various alternatives are subjective and thus subject to sharp changes if appropriate triggering events take place, and (2) the curvature of the transformations between income or cash flows and utility – the aversion or attraction to risk of the various actors – is itself an endogenously determined relation and will undergo both slow and sharp changes depending upon what happens” (Minsky, 1972b: 209).*

This excerpt, however, points out to the existence of an additional element in the Minskyan description: a (subjective) degree of belief in the established probabilities, variable and, as a rule, different from one, characterizing the presence of non-probabilistic risk. Making both aspects compatible becomes possible through the adoption of a “dual decision schedule”:

*“Conceptually the problem of setting a value upon a particular long-term asset or a collection of such assets can be separated into two stages. In the first the subjective beliefs about the likelihood of alternative states of the economy in successive time periods are assumed to be held with confidence. A second stage assesses the degree of “belief” in the stated likelihood attached to the various alternatives” (Minsky, 1972a: 129).*

In this sense, Minsky’s interpretation on expectation formation constitutes an extension of Friedman-Savage’s theory of expected utility – at least as a “useful tool”. It is accepted, thus, only as an adequate description of economic conditions prevalent in an idealized world, where stability would justify the maintenance of total trust in the beliefs regarding the occurrence of several alternative states of nature. On the other hand, in the conditions prevalent in the real world, lacking the required stability, the endogenous variance of the degree of “belief” – the second stage of the process of expectation formation – differentiates the Minskyan interpretation from the theory of expected utility.

---

<sup>36</sup> Minsky (1975a: 66).

<sup>37</sup> Davidson (1994: 92) argues that in a non-ergodic environment, the ordination axiom of the theory of expected utility is violated, so that this could not constitute an adequate interpretation on the concepts proposed by Keynes. Nevertheless, one should realize that the Minskyan interpretation does not include any propositions over the convergence of subjective to objective probabilities. One should also be warned that non-ergodicity is not the only source of “fundamental uncertainty”: *“Indeed, one may have fundamental uncertainty without nonergodicity (...) nonlinear and complex dynamics provide a clear foundation for fundamental uncertainty that embraces cases not covered by nonergodicity. Furthermore, non-linearity is mathematically the general case of which linearity is the special case. Empirically there is almost no reason to believe that the world is linear” (Rosser Jr., 1997).*

Nevertheless, such interpretation is still different from traditional ones. Thus, Minsky (1975a: 65) considers even this one as dispensable, suggesting the possibility that an alternative “easier to handle” schedule – variable distributions of subjective probabilities associated with functions of mutable preferences in relation to uncertainty, for example – may be better didactically. Therefore, it seems that what really differentiates, in this particular, Minsky’s treatment from Tobin’s (1969), for instance, is the presence of coefficients of aversion to endogenous and pro-cyclical risks, instead of “genetically” and “once and for all” fixed coefficient, which would characterize this last contribution.

It is interesting to point out that even Minsky’s latest works, such as *Stabilizing an Unstable Economy* (1986), reveal that the same way of regarding this issue has remained, even if implicitly. The attempt to model financial postures present in Appendix A of the aforementioned work, for example, is perfectly compatible with the view on the formulation of expectations presented here. Now, the only thing left behind is seeing if this is, in fact, the most adequate form to model expectations formation.

## 5.2 Disequilibrium

Much has been argued in the realm of theoretical Economics about the concepts of equilibrium and disequilibrium, and it’s not our goal here to get back to such discussion<sup>38</sup>. On the contrary, this work’s focus is on directly restoring the form by which the concept of disequilibrium is regarded in Minsky’s work, and the important consequences that the use of such concept entails on the understanding of the economic system’s workings.

The perspective of disequilibrium present in the FIH is expressed at two levels. On a first approach, the possible convergence of the economy towards an eventual equilibrium isn’t denied. Nevertheless, the equilibrium in point is very specific. First of all, because of the explicit adoption<sup>39</sup> of the Keynesian idea that it may, in principle, be established at any level of production and employment, and not only at full employment. Thus, such as in Keynes, the concept of relevant equilibrium is that of the so-called “dynamic equilibrium”. According to this concept, a system is in equilibrium “whenever it’s not characterized by a dynamic endogenous process”<sup>40</sup>. Therefore, it doesn’t demand, as is the “semantic” concept, the equalization of demand and supply.

On a second approach, in face of the Knightian uncertainty, the fast modifications of expectation force changes in the equilibrium towards which the economic system is tending to, in a fast and even blunt manner. So, once the equilibrium in point is more virtual than effective, more of an implicit equilibrium than an effectively attained one<sup>41</sup>, it seems better to describe it in terms of “equilibrating tendencies” rather than equilibrium<sup>42</sup>.

Furthermore, the tendency towards a systemic disequilibrium is reinforced by the fact that, *a la* Joan Robinson, the equilibrium isn’t independent of the path leading to it, so that the “the act of moving throughout a certain path tends to move the equilibrium itself”. In author’s own words:

---

<sup>38</sup> For a detailed discussion, refer to Vercelli (1991: cap. 2).

<sup>39</sup> Minsky (1972a: 123).

<sup>40</sup> Vercelli (1991:12).

<sup>41</sup> Minsky (1978a:100).

<sup>42</sup> Minsky (1975a:68).

*“... as the economy moves toward (...) a set of system variables, endogenously determined changes occur which affect the set of system variables toward which the economy tends. The analogy is that a moving target, which is never achieved but for a fleeting instant, if it all”* (Minsky, 1975a: 61).

This characteristic of path dependence, typical of certain nonlinear systems, may be derived from several factors<sup>43</sup>. Minsky highlights a mechanism embedded in the process of expectation formation capable of leading to this result, independently from other factors.

As seen in the previous item, expectation formation in Minsky obeys a two-stage process, being the second conducted by the behaviour of the degree of belief. It would measure the subjective belief in the probabilities that the economic agent, in the first stage, attributed to the distinct states of nature that he deemed likely to happen, within a certain horizon of planning. The degree of belief, however, doesn't change random or unpredictably, but consistently as a response to events; besides, it also changes as a result of the accumulation of evidence of accuracy or error verified while attributing probabilities to the states of nature<sup>44</sup>. In these conditions, even if, by accident, equilibrium is attained and supported through a certain period, then endogenous forces will be set into motion and promote disequilibrium. The mere support of equilibrium will affect the agents' degree of belief in their predictions, which will feed back the expectation formation, consequently displacing the equilibrium elsewhere.

This omnipresence of disequilibrium generates fundamental consequences to the Minskyan view on the economic system's inner workings. Indeed, for Minsky (1986: 114) himself, perhaps the notion of disequilibrium and the way it's generated constitute the fundamental difference of the FIH in relation to other interpretations on the economic system's inner workings, in general, and, particularly, on the financial system.

First of all, such notion justifies the aphorism that states that the capitalist system is inherently unstable. Stability is not just an unattainable goal, but also whenever something similar to it is reached, then destabilizing process will be triggered. So, “stability is destabilizing, and carries the seeds of its own destruction”<sup>45</sup>.

The inherent instability attributed to capitalism means that, according to the Minskyan reading, this economic system is endogenously incoherent, that is, does not possess endogenous mechanisms capable of stabilizing the economy at the levels of full employment of available factors of production. Consequently, it is inherently flawed. We therefore obtain

*“... "Anti-Smithian" results: are common situations in which the decentralized search for own interests transforms initially unfavorable results in still worse ones. Consequentially, the invisible hand metaphor that leads to a benign result does not fit well to a modern capitalistic economy: markets' invisible hand may very well conduct to perverse results”* (Minsky, 1994b: 23)<sup>46</sup>.

Such results do not constitute any news from the Keynesian viewpoint. Still, we should point to the fact that, as in the General Theory, such results do not derive from imperfections of the markets, be them shaped as rigidities, asymmetries of information

---

<sup>43</sup> Minsky (1978a: 100).

<sup>44</sup> Minsky (1975a:65-6).

<sup>45</sup> Minsky (1975a:61).

<sup>46</sup> The principle of substitution, in particular, by which higher relative prices tend to discourage the purchase of a merchandise, whereas lower relative prices tend to encourage it, is not always strong enough to make the behaviour of agents compatible. This remark is particularly relevant for financial markets, where speculative and conjectural elements interfere by weakening or even reversing this principle (Minsky, 1986: 106).



or other frictional impeditives to the Pareto optimum; They are, however, intrinsically connected to the necessarily speculative nature of decision-making under strong uncertainty. Even the flexibility of the level of prices and monetary wages may, in this case, be counterproductive, as it reinforces the cumulative character of disequilibrium<sup>47</sup>.

Thus, contrarily to the common prescriptions of the *laissez-faire*, the attained results imply the necessity to employ policies and formation of economic institutions capable of hindering incoherent behaviour and refraining the cyclical tendencies that would result from the free operation of market forces. Nevertheless, it is important to emphasize, although the pursuit of satisfactory levels of employment kept on being an essential goal of the author's economic policy, the permanent equilibrium at full employment with stable prices isn't seen as something that could ever be reached by means of trivial manipulation of monetary and fiscal policies. The position of full employment is a *locus* of ordinary equilibrium, suffering from the same stabilization difficulties as other *loci*. The mere maintenance of full employment for a certain period of time, even if possible, would act over expectations so as to produce an excess of cumulative demands and inflationary pressure<sup>48</sup>.

Furthermore, the view on disequilibrium causes the possibility of fine tuning the economic system<sup>49</sup> to fall apart. The mere employment of fiscal and monetary tools, no matter how well designed, is not capable of leading the economy towards satisfactory results. The institutions in charge of executing such policies need to evolve in order to deal better with the agents' adaptations to changes, which tend to reduce the effectiveness of this same policies<sup>50</sup>.

Finally, the view on disequilibrium entails the non-existence of definitive solutions for the flaws of capitalist economy. Once instability cannot be fully eradicated<sup>51</sup>, every success attained by a program of reforms will be only temporary. As innovations arise, specially financial ones, instability will certainly reappear under a new form<sup>52</sup>. "The economics of disequilibrium is the economics of permanent disequilibrium"<sup>53</sup>.

As previously seen, the consideration of some stylized facts of the capitalist economy's empiric behaviour, when compared with the Mynskian description of its instability, will make the latter possible of being questioned as to possible exaggerations<sup>54</sup>. Nonetheless, we should realize that even this description was gradually softened. In some of the most mature works, for example, the expression "inherently unstable" was substituted by "intermittently unstable"<sup>55</sup> – that is, by the idea that capitalist economies would bear economic instability only "from time to time"<sup>56</sup>. Still arguing in favor of the author, however, we should remember that he observed that the behaviour of economy does not constitute the result of the isolate operation of market mechanisms, but the combination of these with the intervention of institutions,

---

<sup>47</sup> Minsky (1975a:54; 139).

<sup>48</sup> Minsky (1975a:140) and Minsky (1986:177-8).

<sup>49</sup> Minsky (1986:5; 140).

<sup>50</sup> Ferri and Minsky (1991:22).

<sup>51</sup> Minsky(1986:171).

<sup>52</sup> Minsky (1986:287).

<sup>53</sup> Minsky (1975a: 68).

<sup>54</sup> Such view granted Minsky the reputation of pessimistic and even somber in his emphasis on capitalism's financial fragility and its propensity to disaster (Kindleberger, 1978: 16), oppositely to Keynes' Edwardian optimism (Skidelsky, 1996: 15-6; Minsky, 1975a: 7).

<sup>55</sup> Minsky (1980b: 11).

<sup>56</sup> See also Ferri and Minsky (1991: 4).

conventions and policies which aim at restraining the endogenous reactions that, if freely operating, would feed instability<sup>57</sup>.

### 5.3 Investment and Cyclical Perspective

The considerations from the previous item on the expectation formation and instability served as a preparation so that the theme of investment could be focused in wider amplitude.

Although Minsky refused that consumption should be seen as a “passive amplifier”<sup>58</sup> of investment and admitted the importance of financial advances and their impact onto family consumption, and even its active role in amplifying the volatility of levels of income (due to, for instance, the effect of stock price variations over the consumption of stockholders), he never presented the question of the fall of consumption as a trigger of volatility: prices and stock dividends, level of employment and credit availability to the consumer did not constitute explaining variables of crises burst<sup>59</sup>. It seems, thus, that Minsky abode by the Keynesian view on investment variability as *causa causans* of income and aggregate employment variability; investment is the key-element to explain capitalist dynamics.

An important aspect in the Minskyan theory regarding pace of investment refers to, as seen, the denial of the value of states or paths of equilibrium/balanced growth: the presence of strong uncertainty makes the concept of equilibrium *per se* little relevant<sup>60</sup>. Hence the perception of economy as permanently subject to the endogenous fluctuation, due to the volatility of investment and which, on the other hand, is owed to the fleetingness of the state of long-term expectations.

In the mid-seventies, these fluctuations were referred to by the author as cycles. The capitalist economy was, up till then, considered “untreatably cyclical”, that is, as an economy that

*“...cannot, by its own processes sustain full employment, and each of a succession of cyclical states is transitory in the sense that relations are built up which transforms the way in which the economy will behave”* (Minsky, 1975a: 57).

The conception of cycle as the antithesis of equilibrium seems to lead to a false clue – mistaking the cycle for a mere synonym of fluctuation. Such conception, however, does not adequately reproduce the underlying concept, and drains it out of content. Nor is a more formalist reading justified, one which emphasized its aspects of regularity and symmetry, in an (improper) analogy to a sine curve or a limit-cycle.

For a more fruitful reading of Minsky’s concept of cycle, one should explore it as a succession of transitory states – boom, crisis, deflation, stagnation, expansion, recuperation – each of them characterized by the form and position of the different schedules of the model<sup>61</sup>. The emphasis is thus placed on transition, succession and reoccurrence of these states, and not on its temporal regularity and/or symmetry<sup>62</sup>, even because it explicitly proposes asymmetry: the recuperation phase tends to be characteristically slower than the crisis burst.

---

<sup>57</sup> Ferri and Minsky (1991:4-5).

<sup>58</sup> Minsky (1975a: 67).

<sup>59</sup> See, for example, Minsky (1980b: 16).

<sup>60</sup> Minsky (1975a: 68).

<sup>61</sup> Minsky (1975a: 62).

<sup>62</sup> Minsky (1975a: 60).

Some older versions of the concept seemed to aim at handling the temporality of the cycle, locating it within a period of 10-15 years<sup>63</sup>, besides disassociating it from a shorter-period cycle, guided by the accelerator-multiplier interaction<sup>64</sup>. It suggests, therefore, a much stricter view on the cyclical phenomenon than the one proposed above. As time passed, however, the emphasis of the argumentation was gradually shifted from this stricter concept to a view more attentive to “important unvarying configurations”, that is, a more qualitative and less mechanic view on the cyclical movement. Simultaneously, the distinction between the two cyclical processes was eclipsed.

The essential, however, no matter which is the specific form of interpretation manifestingly attributed to the cyclical dynamics of capitalism, is that it depends primarily on the behaviour of investment<sup>65</sup>. The latter constitutes, as Minsky put it, a “time-consuming process”<sup>66</sup>. As real time is unidirectional and irreversible, the decision to invest is crucial in the sense of Shackle (1952: 25). Thus, it is onto the determination of this strategic variable that the FIH’s foundation lies.

## 6. Conclusion

The present paper revealed that the Minskyan FIH, just like any other theory, as abstract as it may be, is inevitably permeated by historicity, once

*“The historical dimension has ascendance over theoretical one because it establishes in last instance the subject and the prerequisites of validity from own theory, but also because it establishes in each step the structural and institutional borders that theoretical time must subsume.” (Possas, 1987: 15).*

Such historicity, in the specific context of the FIH (item 1), is revealed in the author’s own changes of path, as they were also strongly conditioned by alterations in the performance of the capitalist economy in general and in its institutional outlines. Such changes allowed the text an initial proposition of periodization of the author’s thinking (item 4), whose division marks were set based on the performance and institutional changes of the American economy – which, incidentally, were not to be ignored by an author who, as seen (item 3), acknowledged the importance of institutions. Another perceptible conditional of the evolution of the author’s thinking seems to be the fertilizing process generated by the development of the mathematical theory on nonlinear or complex systems, essential for the consolidation of the so-called “third period” in the author’s evolution.

It was possible, however, to distinguish amongst the changes of theoretical placement, unvarying elements (item 5) which provide a theoretical support for the author’s thinking on the advanced capitalist economy: a) the treatment of time and uncertainty; b) the perspective of disequilibrium; c) the eminently cyclical systemic view and the nuclear role of investment as *causa causans* of the cycle. These elements, identified by the author as the fundamental perspectives of his work, act as the core of his thinking, connecting the pre-analytic and semi-metaphoric views of the *Wall Street* paradigm to the ever-changing grounds of the specific presentation forms of the FIH.

---

<sup>63</sup> Minsky (1965: 258-9).

<sup>64</sup> Minsky (1975a: 62). This would be less vigorous than the “financial” cycle: a parametric configuration is suggested, capable of generating oscillatory paths, though weakened, similarly to the proposition in chapter 18 of the General Theory.

<sup>65</sup> Minsky (1986: 171).

<sup>66</sup> Minsky (1986: 119).

Incidentally, one should notice that the form the unvarying elements were presented changed as well, without altering their essence, though.

It's quite perceptible that the robustness of the Minskyan theory derives from the FIH's plasticity and adaptability to the changes in the institutional marks that the capitalist economy went through - without losing its perspective-based coherence - transforming it into a mighty interpretative tool of its dynamics. But from its robustness derives its weakness: the theory's own sensitivity to institutional changes demands, under the risk of losing its relevance and pertinence, a continuous and vigorous effort to update and renew the form the FIH is presented. In this sense, three pending questions are posed to the followers of the Minskyan FIH, regarding the interpretation of recent economic and financial phenomena (items 2 and 3): a) its insufficient treatment of financial fragility/instability in the context of open economies<sup>67</sup>; idem, as to the validity of the arguments in the current historical and institutional context of the American financial system; (and, concomitantly, the questioning of its immediate applicability to countries that possess less sophisticated economic-financial institutions); and c) the unconcluded question of the type of dynamic path concerning the most adequate modeling of financial instability in the current context.

Finally, and as a compliment to the author and his magnificent work, we may perfectly argue that, at higher levels of abstraction, the argument is reversible: if the object (capitalist economy) is a contradiction in progress that ceaselessly revolutionizes its own basis, an adequate theory to such nature needs to be able to transform itself: plasticity, therefore, is robustness.

## Bibliography

Arrow, K. & Debreu, G. "Existence of an Equilibrium for a Competitive Economy", in Econometrica, 22, 1954.

Barnett, W. A., Gewecke, J. & Shell, K. (eds.) Economic Complexity: Chaos, Sunspots, Bubbles and Nonlinearities. Proceedings from the Fourth International Symposium in Economic Theory and Econometrics, 1989.

Berlin, I. The Hedgehog and the Fox. New York: Simon and Schuster, 1953.

Carvalho, F. *et alli* Economia Monetária e Financeira: Teoria e Política. Rio de Janeiro: Campus, 2000.

Chick, V. Macroeconomics After Keynes: a Reconsideration of the General Theory. Oxford: Philip Allan, 1983.

Davidson, P. "Post Keynesian Macroeconomic Theory: A Foundation for Successful Economic Policies for the Twenty-first Century". Aldershot: Edward Elgar, 1994.

De Paula, L.F. & Alves Jr., A. J. "Vulnerabilidade externa e ataques especulativos: a experiência brasileira recente". In: Ferrari Filho, F. & de Paula, L.F. (eds.) Globalização Financeira: Ensaio de macroeconomia aberta. Petropolis: Vozes, 2004.

Dymski, G. & Pollin, R. "Hyman Minsky as a Hedgehog: the Power of the Wall Street Paradigm", in Fazzari, S. & Papadimitriou, D. (eds.) Financial Conditions and Macroeconomic Performance: Essays in Honor of Hyman P. Minsky. London: M.E. Sharpe, 1992.

---

<sup>67</sup> It is convenient to observe that this effort, as far as the treatment of the issue of financial fragility in the context of open economies is concerned, has been made, more recently, by authors who follow the Minskyan line of research. For example, see Kregel (1998); Foley (2000); Porcile, Curado and Barhy (2003); De Paula and Alves Jr. (2004); among others.

Dymski, G. ““Economia de Bolha” e Crise Financeira no Leste Asiático e na Califórnia: uma Perspectiva Especializada de Minsky”, in Economia e Sociedade, no. 11, Dec. 1998.

Fazzari, S. “Introduction: Conversations with Hyman Minsky”, in Fazzari, S. & Papadimitriou, D. (eds.), Financial Conditions and Macroeconomic Performance: Essays in Honor of Hyman P. Minsky. London, M. E. Sharpe, 1992.

Fazzari, S. & Papadimitriou, D. (eds.) Financial Conditions and Macroeconomic Performance: Essays in Honor of Hyman P. Minsky. London: M.E. Sharpe, 1992.

Ferri, P. “From Business Cycles to the Economics of Instability”, in Fazzari, S. & Papadimitriou, D. (eds.), Financial Conditions and Macroeconomic Performance: Essays in Honor of Hyman P. Minsky. London, M. E. Sharpe, 1992.

Ferri, P. & Minsky, H. “Market Processes and Thwarting Systems”, in The Jerome Levy Economics Institute Working Papers, no. 64, 1991.

Fisher, I. “The Debt-Deflation Theory of the Great Depressions”, in Econometrica, 1, 1933.

Foley, D.K. Financial fragility in developing countries. New York: New School University, Jun 7, 2000.

Friedman, M. & Savage, L. “The Utility Analysis of Choices Involving Risk”, in The Review of Economic Studies, n. 2, 1948.

Goodwin, R. “A Growth Cycle”, in Feinstein, C. (org.), Socialism, Capitalism and Economic Growth. Cambridge: Cambridge University Press, 1967.

Hicks, J. Trade Cycle. Oxford: Clarendon Press, 1950.

Hicks, J. "Methods of Dynamic Analysis", in 25 Economic Essays in English, Germany and Scandinavian Languages. Stockolm: Ekonomisk Tidschrift, 1956. Republished in Hicks, J. Money, Interest and Wages: Collected Essays on Economic Theory, vol. 2. Oxford: Basil Blackwell, 1982.

Kalecki, M. “The Principle of Increasing Risk”, in Economica 4 (new series), 440-447, 1937.

Keynes, J. M. A Treatise on Probability, 1921, in Moggridge, D. (ed.) The Collected Writings of John Maynard Keynes . London, Macmillan, 1973, v. VIII, chap. I.

Keynes, J. M. The General Theory of Employment, Interest and Money. New York: Harcourt, Brace, 1936.

Keynes, J.M. “The General Theory of Employment”, in Quarterly Journal of Economics, 51, 1937.

Kindleberger, C. Manias, Panics and Crashes: a History of Financial Crises. New York, Basic Books, 1978. Reviewed edition, 1989.

Knight, F. Risk, Uncertainty and Profit. Boston: Houghton Mifflin, 1921.

Kregel, J. "Margins of Safety and Weight of the Argument in Generating Financial Fragility", in Journal of Economic Issues, vol. XXXI, no. 2, June, 1997.

Kregel, J. “Yes, ‘It’ did happen again: A Minsky crisis happened in Asia.”. Working Paper 235, Jerome Levy Institute, 1998.

Lorenz, H. W. Nonlinear Dynamical Economic and Chaotic Motion. New York: Springer-Verlag, 1989.

Minsky, H. “Central Banking and Money Market Changes”, in Quarterly Journal of Economics, n. 71, 1957a, May. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "Monetary Systems and Accelerator Models", in American Economic Review, n. 47, 1957b, December. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "A Linear Model of Cyclical Growth", in Review of Economic and Statistics, 61, 1959, May. Reprinted in Gordon & Klein (eds.) AEA Readings in Business Cycles, 10. Homewood: R.D. Irwin, 1965.

Minsky, H. "Can It Happen Again ?", in Carso, E. (ed.) Banking and Monetary Studies. Homewood: R.D. Irwin, 1963. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "The Integration of Simple Growth and Cycle Models", in Brennan, M. (ed.) Patterns of Market Behaviour, Essays in Honor of Philip Taft. Rhode Island: Brown University Press, 1965. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "Financial Instability Revisited: the Economics of Disaster", in Fundamental Reappraisal of the Federal Reserve Discount Mechanism. Board of Governors, Federal Reserve System, 1972a. Reprinted in Minsky, H. Can "It" Happen Again ?, Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "An Exposition of the Keynesian Theory of Investment", in Mathematical Methods in Investment and Finance. Amsterdam: Elsevier / North Holland, 1972b. Reprinted in Minsky, H. Can "It" Happen again ?. Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "The Modelling of Financial Instability: An Introduction", in Modelling and Simulation, vol. 5, 1974.

Minsky, H. John Maynard Keynes. New York: Columbia University Press, 1975a.

Minsky, H. "Suggestions for a Cash-Flow Oriented Bank Examinations", in Proceedings of a Conference on Bank Structure and Competition. Chicago: Federal Reserve Bank of Chicago, 1975b.

Minsky, H. "The Financial Instability Hypothesis: A Restatement.", in Thames Papers in Political Economy. North East London Polytechnic, 1978a. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "The Federal Reserve: Between a Rock and a Hard Place", in Challenge, n. 23, 1980a, May-June. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "Capitalist Financial Processes and the Instability of Capitalism", in Journal of Economic Issues, n. 14, 1980b, junho. Reprinted in Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. Can It Happen Again ? Essays on Instability and Finance. New York: M. E. Sharp, 1982a.

Minsky, H. "Debt Deflation Processes in Today's Institutional Environment", in Banca Nazionale del Lavoro Quarterly Review. No. 143, Dec. 1982b.

Minsky, H. "Beginnings", in Banca Nazionale del Lavoro Quarterly Review, no. 154, 1985, September.

Minsky, H. Stabilizing an Unstable Economy. New Haven: Yale University Press, 1986.

Minsky, H. "Financing Activities in the 1990's: The Impact of Financial Structure and Initial Conditions upon System Performance", text presented at the exhibition "Economic Problems of the 1990's: the America, Europe and Pacific", Knoxville, USA, 06/30/1990.

- Minsky, H. "Reconstituting the United States' Financial Structure: Some Fundamental Issues", in The Jerome Levy Economics Institute Working Papers, no. 69, 1992, January.
- Minsky, H. "Financial Instability and the Decline (?) of Banking: Public Policy Implications", in The Jerome Levy Economics Institute Working Papers, no. 127, 1994a, October.
- Minsky, H. "Integração financeira e política monetária", in Economia e Sociedade, n. 3, Dec. 1994b.
- Minsky, H. "The Essential Characteristics of Post Keynesian Economics", in Deleplace, G. & Nell, E.(eds.) Money in Motion: The Post Keynesian and the Circulation Approaches. London: Macmillan, 1996b.
- Minsky, H. & Whalen, C. "Economic Insecurity and the Institutional Prerequisites for Successful Capitalism", in "Journal of Post Keynesian Economics, 1996, vol. 19, n. 2, winter.
- Ormerod, P. Butterfly Economics. Londres: Farber and Farber, 1998.
- Porcile, G., Curado, M. & Barhy, R. "Crescimento com restrição no balanço de pagamentos e "fragilidade financeira" no sentido minskyano: uma abordagem macroeconômica para a América Latina". Economia e Sociedade, 20, vol. 12, no. 1, Jan/Jun 2003.
- Possas, M. L. Dinâmica da Economia Capitalista: Uma Abordagem Teórica. São Paulo, Brasiliense, 1987.
- Prigogine, I. L'Ordre par Fluctuations et le Système Social. Bruxelas, mimeo, 1974.
- Ramsey, J. "Economic and Financial Data as Nonlinear Processes", in Dwyer Jr., G. & Hafer, R. (eds.) The Stock Market: Bubbles, Volatility, and Chaos - Proceedings of the Thirteen Annual Economic Policy Conference of the Federal Reserve Bank of St. Louis, 1989.
- Rosser Jr., J. "Complex Dynamics in New Keynesian and Post Keynesian Economics", mimeo, 1997.
- Samuelson, P. "Interactions Between the Multiplier Analysis and the Principle of Acceleration", in Review of Economics and Statistics, 21, 1938.
- Schumpeter, J. "Science and Ideology", in American Economic Review, v. 39, n. 1, March, 1949.
- Schumpeter, J. Ten Great Economists: From Marx to Keynes. New York: Oxford University Press, 1951.
- Shackle, G. Expectations in Economics. Cambridge: Cambridge University Press, 1952.
- Tobin, J. "A General Equilibrium Approach to Monetary Theory". In The Journal of Money, Credit and Banking, n.1, 1969, February.
- Tobin, J. Asset Accumulation and Economic Activity. Oxford: Basil Blackwell, 1980.
- Veblen, T. "Theory of Business Enterprise". New York: Charles Scribner's Sons, 1904.
- Vercelli, A. Methodological Foundations of Macroeconomics: Keynes and Lucas. Cambridge: Cambridge University Press, 1991.
- Vercelli, A. "Por Uma Macroeconomia Não Reducionista: Uma Perspectiva de Longo Prazo", in Economia e Sociedade, n. 3, Dec. 1994.