

## The Clash of the Titans: Alternative Visions Underlying the *General Theory*<sup>1</sup>

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### Abstract

*It is argued that the analytical framework of Keynes' General Theory rests on two different and contradictory "prescientific visions" in the Schumpeterian sense. The dominant vision can be identified with its unwillingness to acknowledge the possibility that the market system can undergo periods of prolonged instability or even collapse due to its own functioning. The second, more latent, vision acknowledges the destabilizing consequences of the "coordination problem" in a long run framework. The clash between these visions prevents the book from tracing the long run effects of the coordination problem, due to instabilities introduced by money and investment. This clash causes the book to be confined within a comparative static analysis instead of a dynamic one.*

**Keywords:** *preanalytical vision, coordination problem, synchronic vs. diachronic, dynamic order, shifting equilibrium, comparative static analysis*

**JEL Classification:** B22, B31, E12

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*"We have to invent new wisdom for a new age."*

J. M. Keynes (1925a, p. 337)

### Introduction

The present paper suggests that the causality suggested in the closing chapter of Keynes' *General Theory* (Keynes, 1936), entitled as *Concluding Notes on the Social Philosophy towards which the General Theory Might Lead*, should be

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reversed. That is, the paper argues that it is the “social philosophy”, or the “pre-scientific vision” in the Schumpeterian sense (Schumpeter, 1954, p. 41), that informs the basic analytical structure of the book, rather than *vice versa*. Further, it is also argued in the paper that the analytical framework of the book is informed by two visions rather than one, each of which is in contradiction with the other. One vision, emphasized in the concluding chapter, dominates the book’s basic theoretical structure and policy recommendations. It can be identified with its unwillingness to acknowledge the possibility that the market system can undergo periods of prolonged instability or even collapse, due to its own functioning. The second, more latent, vision acknowledges the dynamic and destabilizing aspects of the “coordination” problem within a long run perspective concerning capital accumulation. The clash of these two “titans” prevents the book from tracing the dynamic, long run effects of the two crucial analytical problems, namely, the “coordination problem” due to the absence of the Walrasian “auctioneer”, and the tendency of instability created by the existence of money as an asset and by the fluctuations in the marginal efficiency of capital. In other words, this “clash” causes the book to be confined within a comparative static analysis, rather than a dynamic one.

The present paper is organized as follows: in the first section, the two alternative visions underlying the book and the “clash” between them are examined, by focusing on different aspects of the “coordination problem” in the market system. In this respect, three different definitions of the coordination problem are offered. In the first, the *Synchronic* definition, the coordination problem is viewed in a timeless, static framework, as in the equality between planned investment and planned savings. In the second, the *Diachronic* definition, the focus of the analysis is coordination in a changing setting, similar to that of money and the determination of investment in a “shifting equilibrium” framework. The third definition, the *Dynamic Order*, considers coordination in historical time, and the emergence of “order” in a dynamic setting that is characterized by capital accumulation and even disequilibria. On the basis of these definitions, the second section examines the three building blocks of the *General Theory*, namely effective demand, liquidity preference, and the marginal efficiency of capital theories, in relation to the alternative definitions of the coordination problem. In this respect, it is argued, although the book offers a really dynamic framework, the “social philosophy” that Keynes adopts prevents the book from fulfilling this promise and causes it to be confined within a comparative static framework instead. Last, but not least, in the concluding section it is asserted that such a classification of the underlying visions could also be helpful to distinguish among the diverse forms of Keynesianism derived from the *General Theory*.

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## 1. The Visions of the *General Theory*: Mark I

### 1.1. The Dominant “Social Philosophy that Might Have Led to the *General Theory*”

The importance of Keynes’ “vision” for the *General Theory* was first emphasized by Schumpeter, who believed that the book “stood his vision of England’s aging capitalism and his intuitive diagnosis of it (which he followed up without the slightest consideration of other possible diagnoses): the arteriosclerotic economy whose opportunities for rejuvenating venture decline while the old habits of saving formed in times of plentiful opportunity persist” (Schumpeter, 1954, p. 1171). Yet, in retrospect, the book seemed to have presented a cure for the problems not only of the “aging capitalism” of England, but of the whole world, and even of the very Western civilization that seemed to be at the verge of collapse at the time. Therefore, in order to understand the dominant vision<sup>2</sup> guiding the *General Theory*, one should start from the two policy recommendations that also involve an institutional transformation, namely, “a somewhat comprehensive socialization of investment” (Keynes, 1936, p. 378) in the *General Theory*, and the “deliberate control of the currency and of credit by a central institution”, in his *The End of Laissez Faire* (Keynes, 1926, p. 318). However, these recommendations should not be taken to mean the centralization or the socialization of the entire economy, for “apart from the necessity of central controls to bring about an adjustment between the propensity to consume and the inducement to invest, there is no more reason to socialise economic life than there was before” (Keynes, 1936, p. 379). For Keynes, the “problem is to work out a social organization which shall be as efficient as possible without offending our notions of satisfactory way of life” (Keynes, 1926, p. 321). As can be seen, the basic problem is not an economic, but a political one, for Keynes “still hopes and believes that the day is not far off when the Economic Problem will take the back seat where it belongs, and that the arena of the heart and head will be occupied, or re-occupied, by our real problems – the problems of life and of human relations, of creation and behaviour and religion” (Keynes, 1931, p. vii). For him, this is part and parcel of the human condition: “The political problem of mankind is to combine three things: Economic Efficiency, Social Justice, and Individual Liberty.” (Keynes 1926b, p. 344) In this regard, the basic advantage of capitalism lies in its ability to create economic efficiency and individual liberty, even if its record in creating justice is less than satisfactory (Keynes, 1936, pp. 379 – 380). In this respect, there is “no

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<sup>2</sup> For a detailed examination of Keynes’ general vision as presented in the entirety of his work, see Henry (2001).

reason to suppose that the existing system seriously misemploys the factors of production which are in use” (Keynes, 1936, p. 379). The advantages of the system are “the advantages of decentralisation and of the play of self-interest” (Keynes, 1936, p. 380). Individualism, “if it can be purged of its defects and its abuses, is the best safeguard of personal liberty in the sense that, compared with any other system, it greatly widens the field for the exercise of personal choice” (Keynes, 1936, p. 380). The basic problem with the authoritarian state systems, on the other hand, is that they “seem to solve the problem of unemployment at the expense of efficiency and of freedom” (Keynes, 1936, p. 380). Socialism can be no alternative either because Keynes is “not ready for a creed which does not care how much it destroys the liberty and security of daily life, which uses deliberately the weapons of persecution, destruction, and international strife” (Keynes, 1925b, p. 299). In respect of socialism, he makes himself clear that he cannot “accept a doctrine which sets up as its bible, above and beyond criticism, an obsolete economic textbook which I know to be not only scientifically erroneous but without interest or application for the modern world” (Keynes, 1925b, p. 300). The basic problem of socialism according to him is its inability to solve the problem of Economic Individualism and Social Liberty, even if it may have “an unselfish and enthusiastic spirit which loves the ordinary man” (Keynes, 1926b, p. 344). Then, since capitalism is the best system from both an economic and a humanitarian point of view, it is essential to find ways that could solve the problems of the system. These problems should not be attributed to the working of the system itself, but they emanate from some uncontrolled (or uncontrollable) factors such as psychological ones like expectations and the “animal spirit” that lead to fluctuations in consumption and investment, two important determinants of the effective demand and hence of employment. Thus, Keynes believes that the system is broken down “in determining the volume, not the direction, of actual employment” (Keynes, 1936, p. 379). Thus, “socialization of investment” and “central controls in money and credit” are sufficient to bring the system to its normal working, not for its replacement with a new institutional and social matrix. However, this vision promoted by the concluding chapter would have an important analytical consequence: it drives the book to employ more or less a static methodology, rather than a dynamic one, even if it also implicitly includes such a dynamic perspective. To see this, the analytical structure of the *General Theory* must be examined.

## **1.2. Analytical Structure of the *General Theory***

Schumpeter (1954, pp. 1174 – 1180), summarizes the properties of the analytical apparatus of the *General Theory* as follows: it is a static theory although not a static theory of the long run normal values, as in the Classical writers or

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Marshall; it is a short run analysis in which capital stock is kept constant; the book assumes “pure” or “free” competition; and, finally, labor supply is assumed to depend on money wages. Yet, two important and related methodological aspects of the theory are also important. First, more than one equilibrium method can be encountered throughout the *General Theory*, and, second, different equilibrium methods employed in the book are underpinned by three conceptual issues, or three varieties of the same problem; the problem of the coordination of decisions made by different units in the economy. The first variety is the “synchronic” coordination problem, which focusses on the equality between planned savings and planned investment at a specific point of time, and the corresponding analytical concept is static equilibrium. The second variety, the “diachronic” coordination problem, considers the time dimension of the equality between savings and investment. This stems from the fact that both money demand for speculation purposes and the marginal efficiency of capital depend on expectations regarding the future. The corresponding equilibrium analysis for this problem is comparative static, in the form of either “temporary equilibrium”, which is conceived as the sequence of static short period equilibria (Ertürk, 1996, p. 379), or “shifting equilibrium”, which is conceived as alternative equilibrium positions of the system when expectations and/or other “shift” variables affecting demand for money and marginal efficiency of capital change (Kregel, 1976, pp. 211 – 213; Mongiovi, 2001, p. 510). The last variety, which can also be dubbed as the “dynamic order” problem, is concerned with extending the notion of coordination to a dynamic or even an evolutionary framework, as Marshall called the “Mecca of the economist” (Marshall, 1920, p. 19). The system here is characterized by changes in the “norms” of the system itself in a way that “*this transition cannot be decomposed into infinitesimal steps*” (Schumpeter, 2005, p. 115), and by prolonged disequilibrium or even by “nonequilibrium” positions emanating from competition and capital accumulation processes.

Such a classification may help us to distinguish between two different and alternative visions that simultaneously run throughout *The General Theory*. The dominant vision (*Mark I*), which is reluctant to accept that capitalism tends to suffer from periodic fluctuations or even crises because of its “design”, deals mostly with the first two varieties of the coordination problem and thus limits itself mainly within a static or comparative static framework. On the other hand, a more dynamic vision (*Mark II*) also appears, especially when financial and capital markets behaviors are related to uncertainty and market psychology. This may give rise to sudden and drastic variations in both consumption and investment, leading to even some indeterminacy of effective demand itself. In what follows, these visions and corresponding equilibrium analyses will be examined

on the basis of the three basic theoretical blocks of the *General Theory*, namely, effective demand, money, and investment analyses.

Of course, the basic message of the *General Theory* is that “the economic system may find itself in stable equilibrium with  $N$  [employment] at a level below full employment” (Keynes, 1936, p. 30). This message is perhaps the most important critique of Say’s Law “that the aggregate demand price of output as a whole is equal to its aggregate supply price for all volumes of output” (Keynes, 1936, p. 26). In fact, the validity of Say’s Law seems to depend on two postulates: the assumptions that “money is neutral” (or the Classical dichotomy) and that profit is simply a form of cost of production (as the share of “entrepreneur”), rather than a “surplus” as in the Classical-Marxian position.<sup>3</sup> Yet in Keynesian theory, it is the first assumption that seems to be rejected: money is demanded not only as a medium of exchange, but also as a store of wealth. When the individuals in the economy prefer to keep some portion of their wealth in the form of money, the classical dichotomy is broken down. Thus, in a “monetary economy” (Keynes, 1936, p. vii), the equality between aggregate demand and aggregate supply (or between planned savings and investment) that corresponds to full employment can only be achieved by chance. That is to say, if the system is left to its own devices, it cannot solve the “coordination” problem. Thus, the “generality” of the theory does not rest merely on the real analysis that focusses on effective demand, but also on the marginal efficiency of capital and the rate of interest, both of which are determined by monetary factors (Keynes, 1936, pp. 31 – 32).

Therefore, the *General Theory* should be discussed at two distinct yet related levels: at a static level, in which the problem of the equality between planned investments and savings is examined in a timeless setting, and at a more “dynamic” one, in which historical time and diachronic coordination become crucial issues for the analyses of money and investment. An expression of such a dualistic structure is actually found in the opposition between two important Keynesian interpretations: the quantity-constrained models that focus on the “synchronic” coordination problem, and the “fundamentalist” Keynesianism that focus on the “diachronic” coordination problem.

According to the quantity-constrained models (Clower, 1965, 1988; Clower and Leijonhufvud, 1975; De Antoni, 2006), the basic problem in Keynes’ theory is the coordination problem due to the absence of a Walrasian “auctioneer”. Unlike Walrasian theory, which allows exchanges only at “notional”, that is, market clearing, prices, Keynesian theory allows exchanges at “wrong” (disequilibrium) prices as well. That is to say, Walras’ Law does not necessarily hold, that is, there may be unemployment in the labor market while all other markets

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<sup>3</sup> For Classical-Marxian position, see Garegnani (1984); Duménil and Lévy (1993).

are in equilibrium. The reason this difference between the “notional” and the “effective” demand arises is due to the inability to achieve mutual consistency among the optimal plans of individuals, as different decision units. But this coordination problem is viewed from more of a “Walrasian” than a Keynesian point of view, for two reasons. First, the coordination problem is reduced to the choice problems of individuals in a static setting (Coddington, 1976, p. 1269), and second, in this model money exists only as a medium of exchange, rather than as a store of wealth. Therefore, on both counts, one can conclude that the analysis of these “Walrasian Keynesians” (Ertürk, 1996, pp. 374n) is an example of an analysis of the “synchronic” coordination problem. It cannot deal with the importance of time, especially when money as an asset is introduced into the system.

As opposed to these models, “Fundamentalist” Keynesianism (Davidson, 1996; Shackle, 1967)<sup>4</sup> emphasizes uncertainty and hence the “nonergodic” property of economic reality. As outlined above, an emphasis on the synchronic aspect of coordination misses the importance of expectations regarding the future, and thus the time element involved in the determination of investment. Keynes himself emphasizes that the idea of uncertainty and the demand for and the supply of output “as a whole” are the two distinguishing characteristics of his theory (Keynes, 1973). Uncertainty according to Keynes is a situation in which quantitative probabilities or mathematical expectations are impossible to calculate (Keynes, 1936, p. 152). If “there is no scientific basis on which to form any calculable probability whatever” (Keynes, 1973, p. 114), it is always possible for individuals to experience drastic shifts and fluctuations in their expectations. The possibility of fluctuations in expectations due to uncertainty has important consequences with respect to money and investment because “our desire to hold money as a store of wealth is a barometer of the degree of our distrust of our own calculations and conventions concerning the future” (Keynes, 1973, p. 116). That is to say, changes in these conventions will affect the interest rate, and hence investment. On this conception, for every liquidity preference function there corresponds another level of expectations or convention, and when there is a change in these expectations, the liquidity preference schedule itself will shift, even to the degree that the rate of interest may become indeterminate.

On the other hand, the investment level, another important determinant of the effective demand, is also influenced by long term expectations because it is determined by the marginal efficiency of capital and the rate of interest. Since long term expectations depend on the market psychology (Keynes, 1936, pp. 148 – 149) that is formed by the individuals who attempt to conform with average

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<sup>4</sup> For the importance of uncertainty in Keynes, see, Lawson (1985, p. 915); Hamouda and Smithin (1988); for the contributions of Shackle, see Perlman (2005), and Vernengo (2001).

expectations in the market (Keynes, 1973, p. 114), market conventions become the basic determinant of investment. And this convention is based on the assumption that “the existing state of affairs will continue indefinitely, except in so far as we have specific reasons to expect a change” (Keynes, 1936, p. 152). However, this convention, which depends on mass psychology, is subject to sudden and drastic fluctuations (Keynes, 1936, p. 154). Then, because of uncertainty, both the rate of interest and the level of investment will fluctuate, thus making the level of effective demand that ensures full employment almost impossible to achieve. That is, Say’s Law becomes an empty phrase.

Nevertheless, even though this conception of uncertainty is useful in including historical time within the analysis, and also in explaining business fluctuations, it also brings about an important analytical problem. The fact that Keynes does not offer any mechanism regarding expectations other than individuals’ conformity to the business psychology, with his famous metaphor of the beauty contest (Keynes, 1936, p. 156), and that he takes expectations as formed by the individuals on the assumption that “the existing state of affairs will continue indefinitely”, simply means that expectations are taken as exogeneous to the theory. Even though such an assumption may be necessary to explain the principle of effective demand, it causes the analysis to lose its dynamic flavour. In this case, the analysis can only be conducted either in a framework of temporary equilibrium, or shifting equilibrium, when expectations are considered as a “shift” variable. In fact, with respect to short and long term expectations, one can distinguish among three equilibrium methods or models used in the *General Theory* (Kregel, 1976, pp. 211 – 213; Mongiovi, 2001, p. 510). In the first model, Keynes assumes that short term expectations are always realized and they are independent of the long term expectations. This assumption leads to the formulation of the principle of effective demand. In the second, even if short and long term expectations are still independent of each other, the main focus is the changes in the effective demand; and in the third, shifting equilibrium, or in what Harcourt calls “the-dog-chasing-its-tail” (Mongiovi, 2001, p. 510) model, these two expectations are not independent of each other; a change in one will necessarily change the other. However, in this model, the dog can never catch its tail! In each period, for every expectation level there corresponds a different money demand and marginal efficiency of capital schedules. A change in expectations will necessarily shift them in a way that neither the rate of interest, nor the level of investment becomes determined within the model. This on the other hand, limits the scope of the analysis, as emphasized by Kalecki in his review of the *General Theory* (Targetti and Kinda-Hass, 1982, pp. 251 – 253). If expectations fluctuate drastically, both investment and employment may become indeterminate,

especially when the shifts in expectations become more frequent. In order to prevent such a situation, the expectation levels must be taken as given in each period.

In fact, this possibility of indeterminacy forces one to recognize that the capitalist accumulation process is full of fluctuations, disequilibria, and even crises. In this way, one should even be ready to accept that the system creates the seeds of its own destruction, if it is left to its own devices. Keynes seems close to this position in his analysis of investment when he asserts that investment depends on investors' "animal spirits – of a spontaneous urge to action rather than inaction" (Keynes, 1936, p. 161). However, such a position is quite disturbing as far as the "generality" of the theory is concerned: "When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done." (Keynes, 1936, p. 159) In other words, Keynes seems to believe that such a situation is not due to the "design" of the system, but it should be attributed to some irrational elements and occurrences that prevent effective demand from ensuring full employment. According to him, such a "disturbing conclusion depends, of course, on the assumption that the propensity to consume and the rate of investment are not deliberately controlled in the social interest but are mainly left to the influences of *laissez-faire*" (Keynes, 1936, p. 219). When the capital accumulation process depends on psychological and institutional factors (through the propensity to consume and investment), the solution to the coordination problem is left only to the caprice of entrepreneurs. In this case, the best thing to do is to encourage an institutional transformation involving "socialisation of investment" and "control of money and credit". Such policy recommendations could not have been derived from a dynamic framework in which capital accumulation takes place as a turbulent process, full of disequilibria, fluctuations, and even indeterminacy. In short, the "social philosophy" that entrusts capitalism with the solution of the economic and political problem does not seem quite compatible with such a dynamic position.

## **2. Alternative "Social Philosophy towards which the *General Theory*" Might Lead: Mark II**

The shifting equilibrium model employed in the analysis of money and investment shows the importance of incorporating historical time into the analysis of effective demand. However, since time in this analysis is used only as a "shift" variable, it is hardly enough to handle the coordination problem in a setting in which capital accumulation takes place. That is to say, since the analytical framework of the *General Theory* is confined within the short run, it cannot handle

the dynamic issues raised by a capitalist accumulation process that is characterized by a Schumpeterian “creative destruction” (Schumpeter, 1943, p. 83) process. In other words, even if such a comparative static framework could be useful for handling the “diachronic” coordination problem, it cannot deal with the “dynamic order” problem in which the notion of “development” in the sense of Schumpeter (2005), which “is an emergent process with an unknown outcome” (Foster 2000, p. 323) is crucial. So defined, this notion refers to dynamic change or evolutionary change in the system, the end result of which cannot be known *a priori*. That is to say, the notion belongs to “economic biology”, which is the “Mecca of the economist”. In this regard, it is fair to say that the vision *Mark I* pushes the *General Theory* in the direction of the mechanical metaphors, rather than biological or evolutionary ones.

Nevertheless, even if the *General Theory* is dominated by the vision *Mark I*, there also emerges a more dynamic vision, especially from the discussion of the interplay between the financial markets and the capital markets. This vision, which can be dubbed as the vision *Mark II*, involves dynamic and nonlinear interactions between these two markets that eventually may lead to instability, disequilibria, bifurcations, and even indeterminacy.<sup>5</sup> According to this *Mark II* vision, equilibrium should be conceptualized, not in a “Newtonian” way as the balance of forces, but in a “Boltzmanian” way as the absence of structural change. In a nonequilibrium setting in which changes in the “norms” of the system are the rule rather than the exception, change must be adaptive, non-linear, and irreversible, involving ideas such as self-organization, complexity and dissipative structures (Foster, 2000). It is about the emergence of a “dynamic” order in a changing setting. The emergence, and/or dissipation, of such an order has been the most challenging task for economists for centuries, since at least Mandeville for whom Keynes himself cared to reserve some pages (Keynes, 1936, pp. 359 – 361).

The challenging question for economics has been to explain how such an order could emerge as a result of decentralized decisions of different units in the economy in such a changing setting. That is to say, the problem is to explain the “dynamic coordination” problem in the long run. Keynes seems keenly aware both of the existence of this problem and of the consequences of a dynamic analysis. In this respect, he seems to agree with both Classical-Marxist and, interestingly, Austrian economics in their quest to explain the emergence of a dynamic order through competition process. These approaches explore the possibility of competition among entrepreneurs that forces them to adopt new technologies

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<sup>5</sup> Of course, as long as the propensity to consume depends on psychological factors and expectations regarding future, there are such nonlinear dynamic effects of time in consumption as well.

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or new methods of production that change the very structure of the market or of the industry itself. Such a dynamic effect of competition had already been recognized by Adam Smith in his immortal discussion of the division of labor in the *Wealth of Nations* (Smith, 1776). Smith argues that developments in the division of labor and in the capital accumulation process lead the economy to internally created changes and even turbulence. These changes and disequilibria are both the causes and the results of the capital accumulation process that works on the basis of “free” competition. Competition among capital owners to produce more and cheaper and to have higher profit causes improvements in the technical conditions of production, and in the division of labor. Improvements in the division of labor, in turn, bring about new technologies, a fact that introduces a dynamic element in competition. In other words, in Adam Smith, and in the classical tradition as a whole, the long run equilibrium characterizing the “center of gravity” of the system is achieved through free competition that works by virtue of capital mobility among different sectors of the economy. Such free mobility creates the tendency of the equalization of profit rates among all the sectors of the economy. Yet, “free” competition, besides having the tendency to ensure long run equilibrium, also introduces new, revolutionary elements in the form of technical changes and innovations. This conception almost by definition takes competition as a dynamic process in which improvements in the production technology is a prevalent feature of competition. An important aspect of this, especially in Smith, is the possibility of increasing returns to scale that is made possible by technological improvements forced by competitive pressure to produce more and cheaper (Richardson, 1976).

A similar position regarding competition is also taken by the Austrian tradition represented by Menger, Mises, Hayek, and above all, Schumpeter. For Austrians, competition as conceptualized in the form of “perfect” competition implies a state of affairs rather than a *process*; even if competition is inherently capable of creating a self-sustained market structure, it actually refers to a *process* whose working may create disturbances and even turbulence. According to Hayek (1937, 1948, 1984), for example, the basic function of the market structure is to collect and coordinate the piecemeal information held by individual consumers and producers through market prices. Under these circumstances, the market acts as a coordinating agency that illustrates “how spontaneous actions of individuals will... bring about a distribution of resources which can be understood as if it were made according to a single plan, although nobody has planned it” (Hayek, 1937, p. 54). The market combines and conveys all the piecemeal information, through prices, without invoking any kind of conscious intervention.

An essential part of Hayek's argument is that the market, and its basic characterizing disposition, namely competition, should be understood as a *process*. What we call equilibrium is not just a state of rest of the system at a given point in time but it requires individual plans to be mutually compatible and, consequently, the emergence of "a conceivable set of external events which will allow all people to carry out their plans and not cause any disappointments" (Hayek, 1937, p. 40). These adjustments must be made continuously because the relevant information that individuals have constantly changes. Even in these conditions, however, the market can gather and coordinate this piecemeal information through competition, because the market prices formed in this process can reveal the information of the relative scarcities of the factors of production. It is actually this aspect of competition that makes the emergence of a self-sustained market structure, without any design, possible.

The Austrian approach, therefore, sees the market system as an information transmitting and economizing device, which works through a dynamic process, competition, rather than an idealized state of affairs. And this process causes time, change and capital formation to be important issues which all create the room for entrepreneurial activity (Caldwell, 2004, p. 326). That is to say, it is the existence of the entrepreneur that makes competition a dynamic process. As opposed to the static conception of competition in which the entrepreneur is merely seen as the organizer of the production process, the Austrian conception of the entrepreneur emphasizes the dynamic role played. This importance of the entrepreneur enables us to see the working of competition as a "discovery procedure" within which optimal plans of individuals are made consistent with each other through entrepreneurial activity (Hayek, 1984, p. 259). Nevertheless, there is a tension, if not a contradiction, between Hayek's view of competition as a dynamic process, and his notion of the "spontaneous order". In a dynamic process in which disequilibria also persist, how can such an efficient order arise? Unfortunately, Hayek does not explain the emergence of this order, but simply assumes that it emerges. That is, he uses the *explanandum* as an *explanan*.

On the other hand, Schumpeter, more than anybody else, emphasizes the turbulent aspect of competition and accumulation processes. For him, the market system must be seen as an inherently dynamic system displaying structural instability in which the accumulation of capital always requires discovery of new methods of production, new forms of industrial organization, new methods of transportation, and new markets (Schumpeter, 1943, p. 83). That is, the accumulation process is by definition a "creative destruction" process in which economic structure is revolutionized from within, in the form of the destruction of the old one so as to give rise to a new one (Schumpeter, 1943, p. 83). As is well known, the key for the creative destruction process is the notion of innovation.

The entrepreneur constantly seeks new profit opportunities through innovation and change in order to gain a competitive advantage over the rivals. The reward for the entrepreneur, profit, becomes a type of quasi-rent as a result of these innovations. In other words, profit is a reward for the temporary monopoly power enjoyed by the innovating entrepreneurs during the interval between the introduction of the innovation and the actions of competitors who either imitate this innovation or supersede it with another that is superior.

Therefore, both Classical-Marxian and Austrian approaches see the coordination problem in a dynamic setting and they consider the role of competition and accumulation both as equilibrating and disequilibrating processes. The recognition of both “centrifugal” and “centripetal” forces created by competition (Ertürk, 1994, pp. 373 – 374), requires an understanding of the capitalist accumulation process as a “hitchbound” one, as opposed to a “hitchless” analysis (Schumpeter, 1954, pp. 565 – 567). Hitchbound models assume that the economic system has an inherent tendency to create hitches, or some disturbances by design, that is, by its very working. Alternatively, hitchless models dictate that such disturbances should be attributed to external factors, thus securing the self-reproduction of the system indefinitely. Returning to the *General Theory*, it should be clear from the discussion of the interactions between monetary factors and the marginal efficiency of capital that the book put forward a potentially hitchbound model recognizing the emergence of disorder by “design”.

Thus, as shown in Table I, this alternative vision, vision *Mark II*, is a dynamic one. It is capable of recognizing hitches by virtue of the system itself and is potentially open to be extended in a long run framework in which the idea of “development” can be taken into account. However, the dominating vision, *Mark I*, represents a more static point of view, and it is concerned with equilibrium: It assumes a stable order and changes are conceived only as “shifts” in the appropriate functions.

Table 1

**Two Visions of the *General Theory***

	MARK I	MARK II
Analysis	“Hitchless”	“Hitchbound”
Method	Static & Comparative Static	Dynamic
Equilibrium	Temporary & “Shifting (Newtonian/Mechanic)	Absence of Structural Change (“Thermodynamic”)
Coordination	Synchronic & Diachronic	Dynamic
Order	Spontaneous Stable	Random/Self-organized & Unstable/Dissipative
Change	“Shifts” in Functions Functional, Linear, Reversible (Many-to-one-mapping)	“Development” / Novelty Adaptive, Non-linear, Irreversible (One-to-many-mapping/ Bifurcations)
Source of Instability	Money & Finance (“Market Psychology”)	Money, Investment & (Accumulation & Competition)

Source: Prepared by the author.

Nevertheless, in the end, the struggle between alternative visions seems to have been won by the vision *Mark I*, which is without any doubt more useful to develop important policy recommendations like “socialization of investment”, and “central controls in money and finance”. Another reason for such a “victory” might be that the dog-chasing-its-tail-type model is quite disturbing because the dog never catches its own tail in the vision *Mark II*. Actually, the appropriate question in this model is not whether a full employment equilibrium is achievable or not, but how the system evolves in the long run. In such a setting, to call for some appropriate policy measures for the disturbances in effective demand may not be relevant. Yet another reason for Keynes to bypass these dynamic problems, even if he is aware of them, could be explained by the developmental stage of the analytical tools at the disposal of the economist at the time. The ideas of complexity, self-organization, dissipative structures, bifurcations, among others, have arisen only very recently (Foster, 2000; Fagerberg, 2003; Melcalfe and Foster, 2004). Still, the relevant issue here is not of the formal toolbox at the economist’s disposal, but of the vision. Should one consider capitalism as incessantly changing, developing system which is full of instabilities and even turbulences? Evasion of this issue, as in the vision *Mark I* could be attributed to Keynes’ faith in capitalism as a system that is capable of ensuring a stable equilibrium path, albeit with carefully designed demand management policies. That is to say, the vision *Mark I* seems close to the IS-LM type Keynesianism that assumes the existence of a stable order in the long run. But such a position seems, again, the explanation of order by the order itself, without giving reasons for that. While the vision *Mark I* is not willing to trace the dynamic consequences of the existing hitches to the long run, the vision *Mark II* is closer in spirit to Classical-Marxist and Schumpeterian views.

## Conclusion

It is argued here that the *General Theory*, like Faust himself, is under the influence of two different and contradicting visions. Keynes’ “struggle from habitual modes of thought and expression” (Keynes, 1936, p. viii), it seems, represents an escape from “the dynamic development, as distinct from the instantaneous picture, [which] was left incomplete and extremely confused” (Keynes, 1936, p. vii) to a more static, and thus determinate theory. Otherwise, Keynes would have been led to recognize the impossibility of solving the dynamic coordination problem. In this respect, the legacy of the *General Theory* may lie in its creation of two “specters;” a static or comparative static one that prefers to deal with the “synchronic” and “diachronic” coordination problems, and a dynamic

one, which takes the problem of “dynamic” coordination, or “order”, as its main focus. Incidentally, the later developments in the “Keynesian” literature can also be distinguished, according to these two distinct challenges put forward by the *General Theory*.

Table 2  
Coordination Problem in “Keynesianisms”

	Effective Demand	Money	Investment
Synthesis	Synchronic	Diachronic	Synchronic
Quantity-Constrained	Synchronic	–	–
Fundamentalist	Synchronic	Diachronic	Diachronic
Neo-Ricardians	Potentially Diachronic (Surplus)	–	Potentially Dynamic (Surplus)
Cambridge/Kaleckian	Diachronic	Diachronic/ Potentially Dynamic	Potentially Dynamic

Source: Prepared by the author.

As shown in Table II below, while the “Synthesis” and the “Walrasian” Keynesianisms focus mostly on synchronic coordination issues, the three Post Keynesian approaches, namely the Fundamentalist, Kaleckian, and Neo-Ricardian Keynesians, to use Harcourt and Hamouda’s (1988) classification, focus more on the diachronic and dynamic coordination problems. They are aware of the importance of the tendency of instability created by the very functioning of the system. Nevertheless, despite the efforts of the “Post” Keynesians, the basic challenge to develop a really dynamic Keynesian framework with its own analytical structure still persists.

## References

- [1] CALDWELL, B. (2004): *Hayek’s Challenge: An Intellectual Biography*. Chicago: Chicago University Press.
- [2] CLOWER, R. (1965): *The Keynesian Counterrevolution: A Theoretical Appraisal*. In: HAHN, F. H. and BRECHLING, P. R. (eds.): *The Theory of Interest Rates*. London: Macmillan 1965, pp. 103 – 125.
- [3] CLOWER, R. (1988): *Keynes and the Classics Revisited*. In: HAMOUDA, O. F. and SMITHIN, J. N. (eds.): *Keynes and the Public Policy After Fifty Years*. Vol. I: *Economics and Policy*. New York: New York University Press, pp. 81 – 91.
- [4] CLOWER, R. – LEIJONHUFVUD, A. (1975): *The Coordination of Economic Activities: A Keynesian Perspective*. *American Economic Review*, 65, No. 2, s. 182 – 188.
- [5] CODDINGTON, A. (1976): *Keynesian Economics: The Search for First Principles*. *Journal of Economic Literature*, 14, December, pp. 1258 – 1273.
- [6] DAVIDSON, P. (1996): *Reality and Economic Theory*. *Journal of Post Keynesian Economics*, 18, Summer, No. 4, pp. 479 – 508.
- [7] DE ANTONI, E. (2006): *The Auctioneerless Economics of Axel Leijonhufvud: The ‘Dark Forces of Time and Ignorance’ and the Coordination of Economic Activity*. *Cambridge Journal of Economics*, 30, pp. 85 – 103.

- 
- [8] DUMÉNIL, G. – LÉVY, D. (1993): *The Economics of the Profit Rate: Competition, Crisis and Historical Tendencies in Capitalism*. Aldershot: Edward Elgar.
- [9] ERTÜRK, K. (1996): On the Keynesian Notion of Equilibrium and Dynamics. *Cambridge Journal of Economics*, 20, pp. 371 – 386.
- [10] FAGERBERG, J. (2003): Schumpeter and the Revival of Evolutionary Economics: An Appraisal of the Literature. *Journal of Evolutionary Economics*, 13, pp. 125 – 159
- [11] FOSTER, J. (2000): Competitive Selection, Self-organization, and Joseph A. Schumpeter. *Journal of Evolutionary Economics*, 10, pp. 311 – 328.
- [12] GAREGNANI, P. (1984): Value and Distribution in the Classical Economists and Marx. *Oxford Economic Papers*, 36, No. 2, pp. 291 – 325.
- [13] HAMOUDA, O. F. – SMITHIN, J. N. (1988): Some Remarks on ‘Uncertainty and Economic Analysis’. *Economic Journal*, 98, March, pp. 160 – 161.
- [14] HARCOURT, G. – HAMOUDA, O. F. (1988): Post-Keynesianism: From Criticism to Coherence? *Bulletin of Economic Research*, 40, No. 1, pp. 1 – 33.
- [15] HAYEK, F. A. (1937): *Economics and Knowledge*. *Economica*, 4. Reprinted in: *Individualism and Economic Order*. Chicago: The University of Chicago Press 1948, pp. 33 – 56.
- [16] HAYEK, F. A. (1948): *Individualism and Economic Order*. Chicago: The University of Chicago Press.
- [17] HAYEK, F. A. (1984): Competition as a Discovery Procedure. In: NISHIYAMA, C. and LEUBE, K.: *The Essence of Hayek*. Stanford, CA: Hoover Institution Press, pp. 254 – 265.
- [18] HENRY, J. F. (2001): Keynes’ Economic Program, Social Institutions, Ideology, and Property Rights. *Journal of Economic Issues*, 35, No. 13.
- [19] KEYNES, J. M. (1925a): Am I a Liberal? In: *Essays in Persuasion*. New York: W. W. Norton & Co. 1963, pp. 323 – 338.
- [20] KEYNES, J. M. (1925b): A Short View of Russia. In: *Essays in Persuasion*. New York: W. W. Norton & Co. 1963, pp. 297 – 311.
- [21] KEYNES, J. M. (1926a): The End of Laissez Faire. In: *Essays in Persuasion*. New York: W. W. Norton & Co. 1963, pp. 312 – 322.
- [22] KEYNES, J. M. (1926b): Liberalism and Labor. In: *Essays in Persuasion*. New York: W. W. Norton & Co. 1963, pp. 339 – 345.
- [23] KEYNES, J. M. (1931): *Essays in Persuasion*. [Paperback edition.] New York: W. W. Norton & Co. 1963.
- [24] KEYNES, J. M. (1936): *The General Theory of Employment, Interest and Money*. London: Harcourt, Brace and World Inc.
- [25] KEYNES, J. M. (1973): *The General Theory of Employment*. In: *The Collected Writings of John Maynard Keynes*. Vol. XIV: *The General Theory and After*. Part II: *Defence and Development*. Londra: Royal Economic Society, pp. 109 – 123.
- [26] KREGEL, J. (1976): Economic Methodology in the Face of Uncertainty: The Modelling Methods of Keynes and the Post-Keynesians. *Economic Journal*, 86, June, pp. 209 – 225.
- [27] LAWSON, T. (1985): Uncertainty and Economic Analysis. *Economic Journal*, 95, December, pp. 909 – 927.
- [28] MARSHALL, A. (1920): *Principles of Economics*. Eighth edition. London: Macmillan and Co., Ltd.
- [29] METCALFE, J. S. – FOSTER, J. (eds.) (2004): *Evolution and Economic Complexity*. Cheltenham: Edward Elgar.
- [30] MILGATE, M. (1982): *Capital and Employment*. London: Academic Press.
- [31] MONGIOVI, G. (2001): The Cambridge Tradition in Economics: An Interview with G. C. Harcourt. *Review of Political Economy*, 13, No. 4, pp. 503 – 522.
- [32] PERLMAN, M. (2005): Memorialising George L. S. Shackle: A Centennial Tribute. *Cambridge Journal of Economics*, 29, pp. 171 – 178.
- [33] RICHARDSON, G. B. (1976): Adam Smith on Competition and Increasing Returns. In: SKINNER, A. S. and WILSON, T. (eds.): *Essays on Smith*. Oxford: Oxford University Press.

- [34] SCHUMPETER, J. A. (1943): *Capitalism, Socialism and Democracy*. 5<sup>th</sup> edition. Londra: George Allen and Unwin 1976.
- [35] SCHUMPETER, J. A. (1954): *History of Economic Analysis*. New York: Oxford University Press.
- [36] SCHUMPETER, J. A. (2005): Development. *Journal of Economic Literature*, 43, March, pp. 104 – 116.
- [37] SHACKLE, G. (1967): *The Years of High Theory: Invention and Tradition in Economic Thought, 1926 – 1939*. Cambridge: Cambridge University Press.
- [38] SMITH, A. (1776): *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: Modern Library Edition 1937.
- [39] TARGETTI, F. and KINDA-HASS, B. (1982): Kalecki's Review of Keynes' General Theory. *Australian Economic Papers*, pp. 251 – 253.
- [40] VERNENGO, M. (2001): Sraffa, Keynes and 'The Years of High Theory'. *Review of Political Economy*, 13, No. 3, pp. 343 – 354.