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Compatibility and complementarity between institutional and post-Keynesian economics: a literature review with a particular focus on methodology

Eduardo Fernández-Huerga[1] · **Ana Pardo**[1] · **Ana Salvador**[1]

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Abstract
The objective of this article is to carry out a review of the links between institutional and post-Keynesian economics, in order to raise the possible compatibility and even complementarity between the two branches of economic thought. To this end, we first review the question of compatibility from the perspective of institutional economics and then from the post-keynesian standpoint. Next, methodological issues are addressed by presenting the essential elements that characterize post-keynesian and institutional methodology (and internal debates in this regard) and then by describing the areas of compatibility between the two. The final section presents the main conclusions and summarizes the basic elements that could constitute a theoretical framework of synthesis between institutional and post-keynesian economics.

Keywords Institutional economics · Post-Keynesian economics · Methodology · Critical realism · Babylonian approach

JEL classification B52 · B59 · B41

✉ Eduardo Fernández-Huerga
eduardo.fernandez@unileon.es

Ana Pardo
ana.pardo@unileon.es

Ana Salvador
ana.salvador@unileon.es

[1] Departamento de Economía y Estadística, Universidad de León, Campus de Vegazana, s/n, 24071 León, Spain

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1 Introduction

As is known, within heterodox economics, multiple theoretical approaches coexist that have different philosophical backgrounds and foundations. This diversity is a frequent source of debate and criticism between supporters of the different approaches, who are typically focused on noting differences between the approaches and ignoring (or leaving in the background) the elements that unite them. This panorama of fragmentation (if not confrontation) hinders the development of an alternative to orthodox economics.

In this context, this article attempts to overcome some of these problems by presenting a review of the connections between two of these theoretical approaches: institutional economics and post-Keynesian economics. Such connections can be traced to the research of J.M. Keynes and T. Veblen. Vining (1939) was perhaps the first to highlight that connection, and since then, many other authors have helped establish connections between these two schools of thought. Thus, Tauheed (2011) has reviewed the existing literature on this subject and found sixteen areas in which links between Keynes and Veblen have been identified[1]. Among these areas, we can mention the understanding of the economy as an open system (Foster, 1981a), the importance of historical time in contrast to logical time (Peterson, 1977), the role of expectations (Vining, 1939; Dillard, 1980) and uncertainty (Peterson, 1977), the existence of institutionally determined variables (Foster, 1989b), the recognition of the principle of effective demand (Vining, 1939; Dillard, 1980; Wray, 2007) and an understanding of money as an institution (Dillard, 1980).

Other authors have highlighted the links between the thinking of J.M. Keynes and J.R. Commons (Atkinson & Oleson, 1998; Tymoigne, 2003; Whalen, 2008a, b; Atkinson & Whalen, 2011). In effect, both economists shared a skeptical view of orthodox economic theory and its analytical tools, in particular the use of deterministic mathematical models (Atkinson & Oleson, 1998). In addition, both believed that time (conceived as irreversible) and expectations played crucial roles in the functioning of the economy (Atkinson & Oleson, 1998; Tymoigne, 2003; Atkinson & Whalen, 2011). They also recognized the need to incorporate the role of institutions and particularly of money in the body of economic theory (Atkinson & Oleson, 1998). Additionally, their concept of money displays a number of similarities, such as the importance awarded to liquidity and expectations, although Commons was unable to advance an analysis of this issue to the point that Keynes did (Tymoigne, 2003).

In addition to these initial connections, in later decades, various authors posited a bridge between the two approaches to greater or lesser extent, such that it is often possible to see them attached to both schools of thought, e.g., Gardiner Means (Samuels & Medema, 1990), Dudley Dillard (Thabet, 2006), Kurt Rothschild (King, 2002) and particularly John K. Galbraith, Alfred S. Eichner and Hyman P. Minsky (King, 2002; Thabet, 2006; O'Hara, 2007; Whalen, 2008b, 2011b).

[1] See also Hodgson (1999), who focused on philosophical considerations linked to the rejection of reductionism and the acceptance of an organicist ontology as well as the methodological consequences of these moves.

Despite these connections, some theorists commonly remain reluctant to build bridges between the two approaches, arguing that they constitute distinct theoretical traditions (Gruchy, 1987). In fact, the reaction of traditional institutionalists to Keynes was not enthusiastic in all cases (Rutherford & Desroches, 2008). In this sense, it is true that one can find differences between the two perspectives. We do not intend to ignore these differences. However, this rejection not only seems to overlook the existence of multiple common elements but occasionally also hampers research and prevents the development of the enormous potential of using the connections between the two approaches.

In any case, the discussion on the possible convergence between institutionalism and post-Keynesian economics is not independent of the debate on the very concept of school of thought and its limits. What is a school of thought? What are the elements that differentiate one from the other? Are the schools incommensurable or are their limits diffuse and porous? Is a convergence between schools possible? Some of these questions will be briefly addressed throughout the text. In this context, Dow (2013) argues, for example, that a school of thought is defined by its particular view of reality and, therefore, by its theory of knowledge and methodology. Since methodological issues—and associated with them, the ontological vision of reality— occupy a central role in the identification of schools, they will be object of special attention in this article.

Thus, this article's goal is to present a review of the compatibility between institutional and post-Keynesian economics. To this end, first, a historical review of this compatibility is conducted from the standpoint of institutional economists. Second, the same is done from the perspective of post-Keynesian economics. In the subsequent section, methodological issues are specifically addressed by first presenting the essential elements that characterize post-Keynesian and institutional methodology (and internal debates in this regard) and then by presenting the potential compatibility between the two. The article's final section presents the main conclusions and summarizes the basic elements that could constitute a theoretical framework of synthesis between institutional and post-Keynesian economics.

2 Compatibility from the institutional perspective

As is well known, institutionalism[2] emerged in the U.S. in the late nineteenth century, coinciding approximately with the emergence of the neoclassical approach. Until the early twentieth century, institutionalism was significantly developed by the research of economists such as Thorstein Veblen, John R. Commons and Wesley Mitchell and achieved significant influence in the economics and the socio-political environment

[2] We use the term 'institutionalism' in reference to "old institutionalism" or 'original institutionalism' as opposed to the 'neo-institutional' approach. A number of elements that differentiate the two approaches can be found in Mayhew (1989), Hodgson (2000) and de Aguilar Filho (2020). However, it is possible that several of these elements have tended to fade in importance in recent years, which makes it difficult to distinguish between the two schools of thought (Dequech, 2002). In any case, a review of the main elements that characterize institutional economics, its evolution and current situation can be found, for example, in Rutherford (1994), Samuels (1995), Hodgson (1998) or Hodgson (2000).

of the U.S. At the time, institutionalism represented perhaps the primary alternative to the dominant neoclassical paradigm. However, in the following decades (after the 1930s), this influence waned, and institutionalism entered a phase of decline amid accusations of being merely a descriptive approach unable to provide a solid, coherent theory (Hodgson, 1998).

Moreover, it is necessary to highlight that institutionalism is far from being a precise and unified theoretical body, but rather presents many internal differences (Hodgson, 2004a, 2014; Rutherford, 2011; Kaufman, 2017; Mayhew, 2018; Spithoven, 2019; De Aguilar Filho, 2020). These differences (which affect issues such as the identification of the main focus of this approach, the relationship between technology and institutional change, the use of quantitative methods, the role of Darwinian principles in institutional change, etc.) already date back to the contributions of the main figures that gave rise to American Institutionalism[3] and extend across the different institutions in which the early institutionalists worked –see, for example, Hodgson (2004a), Rutherford (2011), Kaufman (2017), or the entries on institutionalist schools included in Hodgson, Samuels and Tool (1994). This diversity is even greater if we consider the connection with evolutionary economics, depending on how it is defined[4].

However, this diversity does not preclude the identification of a set of common core ideas or principles within institutionalism (Hodgson, 1994, 2000; Samuels, 1995; Rutherford, 2004, 2011). Thus, institutionalists take as their starting point an open ontological conception of reality. Economic activity is therefore part of a dynamic and evolutionary process, which develops in historical time, in a context subject to the presence of fundamental uncertainty and within the broader natural and social environment. In this context, institutions play a key role in the functioning of the economy and in the behaviour of agents, so that they take on a central analytical role. Individuals are not hedonistic beings whose actions are guided by the maximization of utility; on the contrary, their motivation, knowledge and actions are conditioned by the institutional environment with which they (necessarily) interact. Through this interaction, individuals contribute to reproduce and/or transform institutions. The process of creation and change of institutions thus plays a central role in institutional economics. Related to this, institutionalists reject equilibrium theorizing and instead emphasize the processes of economic evolution and technological

[3] In Rutherford's words (2011, p. 4), 'Veblen is associated with an evolutionary approach based on efficient cause, a key distinction between pecuniary, or business, institutions and technological, or industrial, requirements, and a biting critique of both neoclassical theory and real-world business practices; Mitchell is known for quantitative methods and detailed research on business cycles, an approach he established at the National Bureau of Economic Research (NBER); and Commons is associated with trade union histories, labor legislation, public utility regulation, and an analytical scheme emphasizing the evolution of legal institutions and processes of dispute resolution. Matters are not improved if the discussion includes others such as J. M. Clark and Clarence Ayres.'

[4] As is known, Veblen (1898) was the first to use the term 'evolutionary economics' and on many occasions "old institutionalism" is referred to as "institutional and evolutionary economics" (Mayhew, 2018). However, this conception of evolutionary economics presents notable differences with the "contemporary" view of evolutionary economics (Brette, 2006) or "post-1982 evolutionary economics" (Hodgson & Stoelhorst, 2014), which is closer to new institutionalism.

change. Finally, they also stress the role of power and conflict on economic processes and their outcomes.

In any case, institutionalism seems to have undergone a remarkable revitalization since the late 1960s. This revitalization has been fuelled not only by a new generation of institutional economists in the U.S. but also by a number of researchers in Europe and other regions who were not trained directly under the tradition of U.S. institutionalism[5] (Samuels, 1995). Additionally, this revival has been accompanied –or even fuelled (Samuels, 1995)– by the proposal of connections between institutionalism and other currents of thought, such as social economics, radical political economics, the French regulation school and, primarily, post-Keynesian economics (Hodgson, 1988, 1998; Samuels, 1995).

In the late 1970s and early 1980s, several institutional authors began to expressly defend the compatibility and complementarity of the two approaches. Many consider a major milestone to have been reached in 1976 when Wallace C. Peterson focused his presidential address at the annual meeting of the *Association for Evolutionary Economics* (AFEE) on this topic. Peterson (1977) proposed a discussion on a set of fundamental ideas that he felt overlapped in institutionalism and the Keynesian view and that were essential to understanding global economic reality. For example, he mentioned the idea that human behaviour rests largely on conventions and expectations regarding an uncertain future, the recognition that economic activity is part of an ongoing and therefore dynamic process, the central role of money as a key institution of modern capitalism, the absence of an innate tendency towards equilibrium in the capitalist economy, the importance of conflict in economic life, the central role of the State and income distribution in the real world.

Similarly, Brazelton (1981) defended the compatibility between institutionalism and post-Keynesian economics, while recognizing that such compatibility could be of varying degrees and was susceptible to interpretation. Brazelton's argument was based in particular on several ideas of S. Weintraub, such as the emphasis on mark-up pricing, the attention paid to institutional determinants in setting wages and the rejection of the assumption that economic processes innately tend towards equilibrium.

Soon thereafter, Keller (1983) identified three broad areas in which the complementarity between the two approaches had expanded: the vision of the economy as a process that occurs in historical time, the importance of money and the development of a monetary theory of production and, finally, the recognition that modern capitalism had evolved into a structure characterized by the concentration of economic power.

Wilber and Jameson (1983) advanced an additional step and proposed the construction of a synthesis between institutionalism and post-Keynesian economics, which they termed post-Keynesian institutionalism. These authors suggested that a synthesis could be constructed on common foundations, including the following: a treatment of an economy as holistic and systemic that recognizes that economic relations are necessarily rooted in the social reality as a whole; an evolutionary analysis

[5] One element that decisively contributed to the revitalization of institutional economics and above all to its expansion and recognition outside the U.S. was the publication, in 1988, of the book *Economics and Institutions: A Manifesto for a Modern Institutional Economics*, by Geoffrey M. Hodgson.

approach, given that change is the essence of social reality; the recognition that the process of change is not merely mechanical but the result of complex interaction between intentional human activity and the conditioning of the socio-cultural environment; and the acceptance of the role of power and conflict in economic life and in the process of change.

Later, Hodgson (1989) investigated the complementarity between the two approaches and suggested that institutional economics could provide (microeconomic) foundations consistent with post-Keynesian (essentially macroeconomic) theory. Specifically, these foundations would use a number of the ideas and principles developed within institutionalism, such as its concept of human behaviour, the role of habits and institutions, the concept of markets and the price-formation process or the recognition of the impossibility of perfect competition. A few years later, Hodgson (1999) tried to supplement his previous research by adding a historical approach to the connections between the two approaches. Hodgson argued that those links could be established not only based on a similar understanding of human agency but also through the common rejection of reductionism and the recognition of the relative autonomy of macroeconomics. In this regard, Hodgson (1989) emphasized the role of institutions in connecting the microeconomic level of individual action, habit and choice with the macroeconomic sphere of impersonal structures. Hodgson recognized that although the micro and macro levels of analysis should be consistent with one another the macroeconomic environment maintained distinctive properties[6].

On the other hand, O'Hara (2007) asserts that a growing convergence among different heterodox schools has occurred in the institutional-evolutionary direction. Specifically, he identifies seven sub-schools within 'Institutional-Evolutionary Political Economy', which he defines as 'a realistic study of the dynamic structure, evolution and transformation of human action within socioeconomic systems, paying particular attention to the reproduction, functions, contradictions, and unstable dynamics of the institutions of production, distribution, and exchange of material and immaterial resources set within a social and ecological environment through historical time' (O'Hara, 2007, p. 6). One of these sub-schools consists of the "Post-Keynesian Institutionalists", among which he includes authors such as Hyman Minsky, Nicholas Kaldor, Philip Arestis, Malcom Sawyer, Fred Lee, John Harvey, Michael Radzicki and Randall Wray. Throughout, he asserts that it is possible to identify a series of "principles of convergence"[7] among these seven sub-schools, including the realism and complexity of the analysis, the recognition that individuals and structures interact through time in the determination of socioeconomic processes, the recognition of

[6] Other authors have noted the compatibility in the macroeconomic vision of the two approaches (Niggle, 2006). Specifically, Niggle (2006) argues that the macroeconomics of the first and second generation of institutional economists consisted largely of following Keynes in various ways, whereas recent contributions to institutional macroeconomics were primarily developed by researchers who followed the post-Keynesian approach, such as John Cornwall, Paul Davidson, Hyman Minsky, Basil Moore and Randy Wray. In short, it seems that institutionalism could potentially fill a number of the gaps in the post-Keynesian approach in the microeconomic field, whereas post-Keynesian economics could bring its macroeconomic view to institutionalism.

[7] O'Hara (2007) refers to these principles as "substantive principles" of institutional evolutionary inquiry. In previous work (O'Hara, 1993, 2000), the author had explored the "methodological principles" and the history of such principles.

historical specificity and the heterogeneity of agents, acceptance of the process of creative destruction, money and finance as endogenous processes, rejection of equilibrium analysis in favour of the complex interplay of endogenous forces operating through circular and cumulative causation,…

Finally, Tauheed (2011) has also asserted that the underlying assumptions on which post-Keynesianism is constructed fit with the fundamental principles of institutionalists. Nevertheless, his work is focused primarily on two aspects: the literature that has explored the connections between the thinking of Keynes and of Veblen and presenting a synthesis of institutionalist and post-Keynesian methodology, constructed with Dewey's instrumental logic as a base. The latter, which is Tauheed's primary focus, has been pursued with the objective overcoming weaknesses detected in the methods of analysis used by both schools.

3 Compatibility from the post-Keynesian perspective

From the post-Keynesian perspective, the recognition of the compatibility and existing connections with the institutional tradition began to be investigated somewhat later (Dunn, 2000). To understand this process, it is useful to present, however briefly, the evolution of post-Keynesian economics and to identify the heterogeneity of approaches within the field[8]. In fact, although it is difficult to name a precise date or event that would clearly mark the emergence of post-Keynesian economics, its origins may lie in the mid-1930s[9] (King, 2002). During the decades immediately following the 1930s, this approach was formulated and developed through the contributions of several authors who shared the goal of completing the unfinished revolution begun by Keynes (Eichner & Kregel, 1975; Arestis, 1996; King, 2002). Initially, these contributions constituted a set of relatively disconnected ideas. Thus, sufficient time had to elapse until a relatively coherent body of theory could be constructed that provided an alternative view on the functioning of the real economy (King, 2002; Kerr, 2005). Therefore, it is difficult to identify the existence of a post-Keynesian school of thought until the 1970s, which coincides with the time when this term became widespread (Lee, 2000; King, 2002). The first major review of post-Keynesian economics by Eichner and Kregel (1975) dates from this period. These authors identified four major features that characterize the new approach: (1) the concept of the economic system as a universe that evolves over time and in the context of history, with the result that importance was awarded to economic growth and dynamics;

[8] An extensive review of the post-Keynesian literature and its evolution exceeds the objectives of this section. For such a review, please consult the excellent study by King (2002) and the discussion that it generated (Davidson, 2003-04, 2005, Fontana, 2005; King 2005; Lavoie, 2005). In addition, see Hamouda and Harcourt (1988), Arestis (1996) or Kerr (2005).

[9] Obviously, the publication in 1936 of the *General Theory* was a key moment in the emergence of post-Keynesian economics. However, one can also find elements of this approach in the research of Michal Kalecki and Joan Robinson (King, 2002). In fact, as is well known, Kalecki had reached many of Keynes's conclusions before 1936 and had gone further than Keynes in many respects (King, 2002). In this context, some authors consider that what we now call post-Keynesian economics has two main branches: one that starts from Keynes and the other that has its origin in Kalecki (Dequech, 2012).

(2) the emphasis on income distribution and its consequences for economic activity; (3) the focus on the study of an economy of monetary production, which resulted in the recognition of the central role of financial institutions and the interdependence of money and real wages; (4) a microeconomic basis characterized by assuming that prices are not set by matching marginal revenues and marginal costs and that wages do not reflect the marginal productivity of labour.

Neither this review nor later studies could definitively end the debate regarding the theoretical and methodological elements that constitute the essence of the post-Keynesian approach[10] and, in particular, the identification of different visions or branches within post-Keynesian economics. Indeed, several years later and from a different perspective, Hamouda and Harcourt (1988) identified three different routes to post-Keynesian economics based on classical political economy. The first of these routes departs from Marshall, who directly influenced Keynes and other post-Keynesians, such as Weintraub, Davidson and to a lesser extent Kregel and Minsky. The second would depart from Marx and includes the approach revived by Sraffa and the recent addition (primarily by Garegnani) of Keynes's effective demand. Finally, the third route also departs from Marx and passes through the adaptation developed by Kalecki of Marx's reproduction schemes to address the problem of realization and culminates in Joan Robinson and her followers. Each of these three routes represents a separate approach within post-Keynesian economics: Keynesian fundamentalist, Sraffian (or neo-Ricardian) and Kaleckian.

This internal heterogeneity has been used by many mainstream economists as an argument to criticize the post-Keynesian approach by accusing it of inconsistency and an inability to construct a solid alternative to orthodox economics. However, these criticisms have been conclusively answered by several post-Keynesian

[10] For example, Arestis (1992) identified four basic propositions as constituent elements of post-Keynesian economics: the presence of uncertainty, the existence of irreversible or historical time (as opposed to logical time), the importance of money and contracts denominated in money and the special role of labour and the labour market. Thirlwall (1993) emphasizes the six key messages in the 'Keynesian view': production and employment are determined in the market for goods, not in the labour market; there is involuntary unemployment; increased savings do not necessarily generate a similar increase in investment; a monetary economy is essentially different from a barter economy; the quantity theory only holds in circumstances of full employment with constant circulation; finally, capitalist economies are motivated by the 'animal spirit' that determines the investment decisions of entrepreneurs. King (2003a) argues that the essential principles on which post-Keynesian economics rests are the follow: principle of effective demand, investment drives savings, there is no automatic mechanism for eliminating excess capacity and involuntary unemployment, interest rates depend on monetary considerations, and there is no natural rate of interest to equilibrate investment and savings. Harcourt & Kriesler (2013) assert that the consideration of historical time is the basis of post-Keynesian analysis, which in turn brings to the surface the importance of history, uncertainty, society, and institutions in understanding economic phenomena. Dequech (2012) highlights the principle of effective demand (associated, in turn, with the determination of income by expenditure, the determination of employment and output by producers' expectations of costs and proceeds, and the possibility of persistent involuntary unemployment), the recognition of the presence of fundamental uncertainty, and the emphasis on the role of institutions (including money) and conventions. Finally, Lavoie (2014) has attempted to summarize the assumptions and key characteristics of post-Keynesian economics, using the following concepts: realism, organicism, reasonable rationality, production, disequilibria and instability, the principle of effective demand, the statement that investment causes saving, the claim that institutions are important and make a difference, the idea of a monetized economy, the importance of historical and irreversible time, fundamental uncertainty and the concept of non-ergodicity, a specific microeconomic theory, power relations, income distribution, open system modelling and pluralism.

economists (Arestis, 1992, 1996; Lavoie, 1992; Lawson, 1994; Lee, 1998; Arestis, Dunn & Sawyer, 1999b; Dunn, 2000). For example, Lavoie (1992) argued that post-Keynesian economics could be presented as a coherent framework similar to the neoclassical framework. Specifically, Lavoie distinguished between neoclassical and post-classical research programmes. In this context, he argued that post-Keynesians, neo-Ricardians (or Sraffians), Marxists and radicals as well as institutionalists represented different currents of post-classical theory and that all of them were compatible and susceptible to a fruitful reconciliation process. In Lavoie's view, that process had already begun.

Arestis (1992) advanced an additional step when he not only defended the consistency between the three existing currents in post-Keynesian economics (Keynesian, Sraffian and Kaleckian) but also introduced a fourth approach, which emerged from the institutional tradition[11]. This idea was developed by the author a few years later in a review of the post-Keynesian literature (Arestis, 1996). In that study, he identified three traditions within post-Keynesian economics. The first one emerged from Marshall and was firmly rooted in *A Treatise on Money* and *General Theory*. The second tradition was fundamentally Kaleckian and included the contributions of Joan Robinson and her followers. Finally, the third was the institutional tradition inspired by Veblen and others, such as M.R. Tool. According to Arestis (1996, p. 113), this tradition 'is process and evolution oriented and emphasizes the dynamic and power/class structure of economic systems. These institutional and organizational structures provide the fundamental mechanism whereby resources are allocated'. Arestis (1996) also emphasized that this tradition helped strengthen two traditional weaknesses of post-Keynesian analysis. The first was the exogenous treatment of expectations, which this perspective would help correct by offering a theory of their endogenous formation. The second was gaps in the microeconomic analysis of the research of Keynes and Kalecki, which institutional economics would help complement[12]. Arestis (1996) argued that the three traditions within post-Keynesian economics were compatible with one another and had common elements, such as the analytical focus on real economic problems; the placement of issues of class, power and the distribution of income and wealth at the centre of the analysis; the recognition that the economy operates within a historical process of a world subject to uncertainty (which awards expectations a crucial role in economic performance); and the acceptance that social, political and conventional institutions shape economic events and should therefore be carefully studied. In short, the institutional tradition had replaced the

[11] See also Arestis, Dunn and Sawyer (1999b).

[12] This is not to say that microeconomic analysis was totally absent in the work of Keynes and, above all, Kalecki, much less in post-Keynesian economics as a whole. On the contrary, post-Keynesian economics has made important contributions in the field of microeconomic theory and policy (King, 2003a), from Kalecki to Lee and many others. For example, see the entries on agency, competition, consumer theory, or pricing and prices in *The Elgar Companion to Post Keynesian Economics* (King, 2003b). However, the most widespread view, even within pots-Keynesian economics, is that institutionalist economics, being more focused on the study of microeconomic aspects, can contribute to complement and enrich post-Keynesian theory in this area (Pressman, 2003).

Sraffians in the complex body of post-Keynesian economics[13]. However, the absence of the Sraffians in Arestis's (1996) taxonomy did not prevent this author from referring largely to Sraffian theory when, in a subsequent section, he attempts to describe the post-Keynesian perspective on 'production, prices and pricing'.

Finally, Lavoie (2014) has identified five branches within post-Keynesian economics, undertaking an important effort to identify the main themes addressed as well as classify some of the main contemporary authors within each of them. Specifically, Lavoie (2014) departs from the three branches proposed by Hamouda and Hartcourt (1988) –Fundamentalists, Kaleckians and Sraffians– and to these, he adds two additional branches: the Institutionalists (which would encompass authors who are particularly concerned with such topics as pricing, the theory of the firm, the analysis of monetary institutions, behavioural economics or labour economics) and the Kaldorians (focused on such issues as the existence of open economy constraints, productivity regimes, economic growth or the real-financial nexus). In any case, Lavoie (2014) makes clear that the identification of these branches and the classification of authors in terms of them are simply indicative, as it is possible to find many economists whose work goes beyond the bounds of one or more of these branches.

Apart from this, it should be noted that an important part of the post-Keynesian literature of the last decades, in different fields, shows clear connections with institutionalist economics or expressly relies on it. This is the case, for example, in the field of the study of the financialization of the economy (Zalewski & Whalen, 2010; Palley, 2013), financial instability and crises (Wray, 2009), money (Wray, 1998), financial markets (Raines & Leathers, 2011), pricing (Downward, 2004), the labour market (Spencer, 2009), ecological economics (Holt, Pressman & Spash, 2009; Vatdn, 2009), etc.

For the purposes of our discussion, the most important point is that these events imply an explicit acknowledgement by post-Keynesian economics of the connections with the institutional tradition and of the potential gains that could be obtained by exploiting the complementarity between the approaches. To varying degrees, this recognition is widespread among those who have adopted post-Keynesianism. In fact, King (2002) expressly addressed this complementarity in his analysis of the history of post-Keynesian economics. In King's view, the two schools are not the same but are also not incommensurable paradigms (in Kuhn's sense) or rival, competing research programmes in the manner of Lakatos. In contrast, King argues that the two approaches have much in common, although there have been points of disagreement between the two and occasionally mutual incomprehension. For King (2002, pp. 225–229), the two schools generally share methodology, fundamental theory and political economics. Additionally, he emphasizes that these ties have transcended intellectual limits and have been reflected in the personal and social relationships among the schools' members. These interactions are reflected, for example, through common participation in forums and associations such as the Association for Evolu-

[13] As discussed in the next section, the "expulsion" of the Sraffians was primarily based on methodological issues and a search for "greater internal coherence" within post-Keynesian economics. In this way, it could be asserted that the expulsion of the Sraffians came more from the post-Keynesian methodologists than from the many other authors who undertook post-Keynesian theory. In fact, it is also possible to find arguments in favour of retaining the Sraffians within post-Keynesian economics (Lavoie, 2014, pp. 39–40).

tionary Economics, European Association of Evolutionary Political Economy, Association for Evolutionary Economics, Association for Social Economics, Association for Heterodox Economics, among others, as well as through publication in academic journals that accept articles from both perspectives, such as the *Cambridge Journal of Economics*, *Journal of Economics Issues*, *Journal of Post Keynesian Economics*, *Review of Political Economy* or, more recently, *Review of Evolutionary Political Economy*[14].

4 Methodological issues

4.1 Methodological issues in post-Keynesian economics

In the discussions that emerged in recent decades regarding which features can be used to differentiate post-Keynesian economics, it has been common to encounter methodological issues. In fact, since the 1980s, post-Keynesian economists have displayed substantial interest in identifying and establishing the methodological and philosophical foundations on which to construct this approach (Dow, 1999; King, 2002). These circumstances were encouraged by criticism from other areas of the literature, which accused the post-Keynesian approach of being an amalgam of ideas and methods. In response, post-Keynesian economists argued that the criticisms were unfounded and that what might seem incoherent from the methodological perspective of the economic mainstream was coherent from the post-Keynesian perspective (Dow, 1990, 1999, 2013; Arestis, Dunn & Sawyer, 1999b; Dunn, 2000). In addition, a number of authors have argued that this school is fundamentally coherent at the methodological level and should be identified and defined in terms of method rather than its theoretical propositions or economic policy recommendations (Lawson, 1994; Dunn, 2000; Dow, 2013).

Post-Keynesian economists have proposed two main methodological lines on which to base their school: the Babylonian approach, which was initially proposed by Dow (1985), and critical realism, which was originally considered to be the basis for post-Keynesian economics by Lawson (1994)[15]. Dow (1985) presented a contrast between the Euclidean-Cartesian mode of thought and the Babylonian mode of thought. The former is characterized by the construction of a closed system of

[14] A more detailed analysis of these interactions between institutionalists and post-Keynesians and, in general, between the different schools of heterodox economics, can be found in Lee (2010).

[15] This is not to say that the Babylonian approach and critical realism are the only two methodological perspectives suggested within post-Keynesian economics. For example, some authors identify a third methodological approach: the generalized method associated with P. Davidson (Walters & Young, 1997; Arestis, Dunn & Sawyer, 1999b; Dow, 1999). However, this approach has received less attention in the literature. The most widespread view is that the approach is consistent with the open system of the Babylonian approach and critical realism but that it cannot be considered the methodological basis of post-Keynesian economics and represents instead a particular resource applicable in special cases and with operational purposes (Arestis et al., 1999b; Dow, 1999). In addition, two other methodological approaches should also be mentioned for their relevance: the "horses for courses" approach (Harcourt, 1995) and the empirically grounded theory approach (Lee, 2016). Both will be mentioned below in connection with the Babylonian approach and critical realism.

thought in which a number of obvious or certain axioms are established by definition. Deductive logic is applied to these axioms to achieve universally applicable conclusions. In contrast, Babylonian thought is based on a holistic view of the functioning of the system as a whole, and it recognizes that reality is complex, transmutable and composed of organically interdependent parts. The Babylonian approach assumes that it is impossible to establish a single set of basic axioms. Thus, the methodology used to achieve any type of knowledge must rest on the use of various lines of argument that reinforce one another (Dow, 2008, 2013). That is, the approach defends the utility of employing a variety of methods, each appropriate for particular circumstances. Therefore, the Babylonian methodology appears to be associated with an open system of thought. In this context, it is recognized that knowledge may be limited, 'uncertain' or subject to degrees, which transcends the dualistic concept of Euclidean-Cartesian knowledge (Dow, 1985, 1990).

The rationale for the use of different methods depending on the circumstances connects directly –as pointed out, for example, by Arestis (1992)– with the "horses for courses" approach advocated by Harcourt (1995). Indeed, Harcourt suggested that any attempt at appropriate theorizing should be based on the context of the situation under study, so there should be no single, uniform way of approaching the analysis of all issues.

Methodological pluralism has been gaining relevance not only within post-Keynesian economics but also within heterodox economics in general. The arguments in defense of pluralism within economic research are very diverse (Dow, 2008; Dobusch & Kapeller, 2012; King, 2013). From an ontological point of view, the recognition that the real world is an open, complex system subject to change leads to the justification that knowledge must be constructed from different reasoning and sources of evidence (Dow, 2008; King, 2013). From a methodological point of view, it can be argued that each research question is different and may require its own form of analysis; in other words, the question should determine the method, not the other way around (Dobusch & Kapeller, 2012).

On the other hand, critical realism was introduced in economics by T. Lawson in the late 1980s and early 1990s through an adaptation of the writings of Bhaskar (1975). Critical realism assumes that there exists an external reality independent of us (an intransitive dimension, or 'the object of knowledge') but at the same time recognizes that we can only know reality through our conceptual framework (the transitive dimension, or 'knowledge of the object'), so that our beliefs or knowledge about the world are created historically and are socially conditioned. In any case, this reality is not only constituted by events and our perception and experience of them but also by structures, relationships, trends and causal mechanisms that, although not directly observable, underlie and generate or govern the events (Lawson, 1994; Fleetwood, 1999, 2006). In this way, a stratified view of reality emerges in which reality is split into three domains: the empirical (formed by our experiences, perceptions and feelings), the actual (events, states and actions, i.e., the objects of direct experience) and the real, or the deep (i.e., structures, mechanisms, trends, powers, which are capable of generating actual events). The relationships between these different parts, or objects, that constitute social reality, which is governed by the mechanisms and underlying trends, are more organic than atomistic, such that each of them is what it is or does what it does at least in part because of its relationship with others. In addition, it is recognized that social reality is transformable or mutable, particularly as a result of human activity. In fact, intentionally or not, humans consciously or unconsciously reproduce and/or transform structures and underlying causal mechanisms. This statement does not mean that agents create or produce these social structures ab initio because (among other reasons) their action necessarily presupposes the prior existence of these social structures. It would be more correct to state that human performance, which is constructed on existing social structures, recreates, reproduces and/or transforms these structures (Lawson, 1994; Fleetwood, 1999, 2006). In short, 'social structure is neither created by nor independent of human agency […]. Structure and human agency, in sum, each presuppose, although neither can be reduced to, identified with, or explained completely in terms of, the other' (Lawson, 1994, p. 520).

This conception of the social world as a mutable, organically interdependent reality necessarily compels one to recognize that the world is not governed by inexorable laws of nature or society and not characterized by the widespread presence of constant conjunctions of events or Humean 'regularities', such as those events on which mainstream economics is based[16]. On the contrary, constant conjunctions only rarely occur in the real world, typically as a result of intentional human actions or by continuous interaction between human agency and surrounding structures. However, these constant conjunctions are always partial and geographically and temporally limited (Lawson, 1994; Arestis, Dunn & Sawyer 1999b). In short, reality is understood as an open system, such that to construct knowledge of this reality (certainly partial and temporarily specific), a methodology is required that is compatible with this worldview (Lawson, 1994; Fleetwood, 1999; Dow, 1999). In this context, the ontological concept of reality (in particular, the recognition that events are not typically constant conjunctions and the acceptance that there are mechanisms or structures that govern them) redirects the research focus to the "deep" area. In particular, the epistemology of critical realism asserts that these underlying structures and mechanisms are typically not directly observable but may be inferred from observed phenomena. The aim of theorizing is to identify these structures, mechanisms, relationships and powers that lie behind events and that rule them in an essentially open world[17]. To this end,

[16] In effect, as Lawson (1994, 1997) notes, orthodox economics appears tied to the philosophical system of positivism, which rests on two pillars: first, an ontological concept of reality as a closed system, according to which it is assumed that reality includes the constant conjunction of atomistic events; second, an epistemology marked by the application of the deductive method. In this context, theoretical explanations are ideally directed toward the search for generalized relations, such as 'whenever X happens, then one can safely expect that Y will follow'. The assumption of the constant conjunction of events enables mathematical modelling and the construction of functional relationships, which triggers the application of the deductive method and which, in turn, implies the need to close the system by imposing a series of conditions. The problem arises because systemic closure typically requires the use of false assumptions, which collide with reality and question the explanatory power of the theoretical construction (Caldwell, 1982; Fleetwood, 2006).

[17] As Fleetwood (2006, p. 80) observes, '[i]nvestigation switches from consequences – that is, from the outcomes or results (in the form of events and their patterns) of some particular human action, to the conditions that make that action possible. Because of the openness of socioeconomic systems, consequences cannot be induced, deduced or predicted. But the social structures that govern this human action can be "retroduced", and their operation illuminated and explained'.

the inference mode associated with critical realism is not induction or deduction but 'retroduction', or 'abduction', which consists of:

> the movement (on the basis of analogy and metaphor, amongst other things) from a conception of some phenomenon of interest to a conception of some totally different type of thing, mechanism, structure, or condition that is responsible for the given phenomenon. If deduction is, for example, to move from the general claim that all grass is green to the particular inference that the next lawn to be seen will be green, and induction is to move from the particular observations on green grass to the general claim that all grass is green, the retroduction or abduction is to move from the particular observations of green grass to a theory of a mechanism intrinsic to grass that disposes it to being green. It is the movement, paradigmatically, from 'surface' phenomena to some 'deeper' causal thing(s) (Lawson, 1994, p. 515).

To make this type of inference from critical realism, the utility of detecting 'demi-regularities' is recognized, understood as 'the occasional, but less than universal, actualization of a mechanism or tendency, over a definite region of time-space' (Lawson, 1997). These demi-regularities, which resemble the stylized facts of Kaldor, can play an important role in the process of identifying causal relationships and structures that connect different variables. However, they never enable one to develop the predictions of closed systems. In fact, theorizing is not oriented towards deduction and/or prediction but appears directed towards an explanation of reality. Thus, the deductive method of mainstream economics appears replaced by a 'causal-explanatory' method that attempts to explain and constitute reality while providing causal explanations to the extent that is possible[18] (Fleetwood, 2006, p. 80–81).

During the 1990s, critical realism generated increasing interest and gained support among post-Keynesian economists. Subsequently, many of these economists argued that this philosophical framework represented an appropriate methodology for the post-Keynesian approach and provided coherence for the entire school (Arestis, 1996; Lawson, 1997, 1999; Arestis, Dunn & Sawyer, 1999b; Dunn, 2000). This view has not been without controversy. One of the most important points of contention has been associated with the place and the potential importance of empirical research, particularly econometrics, within the scope of critical realism. In fact, for certain authors, econometrics occupied a difficult position within the methodology of critical realism because it required systemic closure or at best could only provide descriptive statistics on specific samples. The problem is that this view invalidated much of the research conducted by post-Keynesian economists in previous years. In contrast, various scholars argued that quantitative research had a role to play within the post-Keynesian approach, particularly in the identification of demi-regularities. In this regard, the crucial aspect in the use of this research was that it should be

[18] Recently, Lee (2016) has argued that to ensure that theories are causal explanations of reality it is necessary to adopt a grounded theory method (a process through which researchers create theory from data) combining it with the principles of critical realism (in particular, the search for the structures, mechanisms and causal relationships that govern real events). Consequently, he proposes a 'critical realist empirically grounded theory approach'.

applied to the explanation and not to the prediction of or search for universal laws (Arestis, 1996; Downward, 2000; Downward, Finch & Ramsay, 2002; Giannakouros & Chen, 2018).

In fact, the use of formal models and mathematical tools has been gaining weight within post-Keynesian economics in recent years. Methodological pluralism justifies the use of models and econometrics as one of the methods (among others) to build knowledge of an open reality. The key to its legitimacy lies, on the one hand, in the way these models are constructed (a model must be a simplification of reality, not a fiction or even falsification of reality) and, on the other hand, in the role played by the models or their empirical estimation within the discourse (Dow, 2013). Although models are by definition closed systems, closure is provisional and simplifications can be relaxed when judgment is applied to the interpretation of model output and estimates (Downward, 2000; Downward, Finch & Ramsay, 2002; Dow, 2013)[19].

Additionally, in the late 1990s, a number of authors –foremost Sheila Dow– began to defend the compatibility of the Babylonian approach and critical realism[20], arguing that the approaches shared, for example, an understanding of reality as an open, organic system and a non-dualistic vision of knowledge. For example, Dow (1999, pp. 22–23) stated:

> Both approaches stem from an emphasis on the foundations of methodology at the philosophical level, and specifically metaphysics. Both emphasize the significance of distinguishing between seeing reality as an open system rather than a closed system. Both approaches emphasize the organic complexity of human agency and social reality, which prevents the identification of causal laws; rather, the emphasis is on studying the various causal forces at work in the system, and their evolution, in order to build up knowledge that is as reliable as possible, with a view to action. […] In the same way as the Babylonian

[19] In this context, Dow (2013) implicitly refers to the Stock-Flow Consistent models that are gaining adherents within post-Keynesian economics during the last few years as a method of macroeconomic analysis, to the point of being considered as the main alternative to the orthodox Dynamic Stochastic General Equilibrium models. Interestingly, Lavoie (2022) has recently highlighted the connections that these models present with institutionalist economics. These models attempt to provide a general framework for the analysis of whole economic systems and became definitive after the publication of *Monetary Economics* (Godley & Lavoie, 2007). The central idea of this approach is to provide a framework for analysing both the financial and real spheres of an economy, as well as the interrelationships that occur between the two in the context of a monetary economy of production, trying to consistently account for the monetary flows that occur between the sectors and agents of an economy and their reflection in the background variables; in this sense, it can be conceived as an accounting approach to macroeconomic analysis (Dos Santos, 2006; Caverzasi & Godin, 2015; Nikiforos & Zezza, 2017). By construction, these models are empirically grounded in the real world and attempt to convert the causal structures and mechanisms that govern that reality into a system of mathematical equations. To this end, the closure of the system is usually based on the principles of pot-Keynesian economics. These closures may change in other specifications of the model and may be relaxed in the subsequent discussion and interpretation of the model. In this sense, these models exhibit various elements that, correctly used, can be compatible with critical realism, as Lainà (2018) seems to point out.

[20] The possible compatibility between the Babylonian approach and critical realism is a topic that is not exempt from debate. For example, Walters and Young (1997) asserted that both approaches were mutually incompatible in terms of methodology/mode of thought. Their arguments prompted a subsequent critical response from Arestis, Dunn and Sawyer (1999a, 1999b).

approach, critical realism seeks to avoid the duality of certain knowledge/no knowledge, aiming to establish the best means of building up knowledge that is useful for practical purposes (i.e., knowledge of cause) given the inherent difficulties of doing so with respect to social systems.

In short, despite the existing debates, it seemed possible to find a number of commonly shared methodological elements that could integrate and provide coherence to the post-Keynesian current. According to Arestis, Dunn and Sawyer (1999b, p. 534), '[w]hile some tension may still exist, a fundamental methodological vision that characterizes Post Keynesian economists can be discerned –a commitment to open-system theorizing, an approach that fundamentally emphasizes agency transformation, interdependence, and explanation. Coherence can be found at the methodological level'. Of course, the identification of common methodological elements, particularly the endorsement of an open system of thought, was not without internal costs because it involved the expulsion of the Sraffians from the core of post-Keynesian economics (Arestis, 1996; Arestis, Dunn & Sawyer, 1999b; Dunn, 2000).

4.2 Institutional methodology

Within the institutional approach, methodological and meta-methodological issues may have been relegated to the background, at least until the last two or three decades (Hodgson, 1998). In fact, institutional economics has often been accused of only being a descriptive approach and of not offering an alternative methodology[21]. However, other authors have rejected this view, arguing that it is possible to identify an institutional method and that this method is consistently applied by many researchers (Atkinson & Oleson, 1996). To understand the fundamental elements that characterize the institutional method, it is appropriate to first introduce the underlying ontological questions.

Institutionalists conceive of economic reality as part of the larger social system, with multiple dimensions and interrelationships (Brazelton & Whalen, 2011). As Hodgson (2000, p. 318) notes in a discussion of the five basic proposals that he considers to define the essence of institutionalism, '[t]he economy is an open and evolving system, situated in a natural environment, affected by technological changes, and embedded in a broader set of social, cultural, political, and power relationships'. This view of the economic system, which as we shall see necessarily results in a pluralistic epistemological approach –and according to which the knowledge of that system must be constructed by incorporating input from other sciences (Hodgson, 2000; Brazelton & Whalen, 2011)–, connects to and is accompanied by a holistic, organic vision of reality (Wilber & Harrison, 1978; Hutton, 1999). That is, using the terminology of Brazelton and Whalen (2011), the view is 'molecular' as opposed to the atomistic vision of mainstream economics. In fact, institutionalism is characterized by a rejection of reductionism and the recognition that the whole is more than

[21] Thus, for example, Lind (1993) argues that institutional economics does not use any method in particular but that its methodology is best defined negatively as the 'non-use' of the instruments of mainstream economics.

the sum of its parts and that these parts can only be understood, at least partially, in relation to the whole (Hodgson, 1999).

In contrast, one characteristic feature of institutional economics is its emphasis on the evolving nature of reality (Hodgson, 1998, 2000; Hutton, 1999; Brazelton & Whalen, 2011). In fact, institutionalism has made a remarkable effort, initially driven by Veblen (1919), to create its own approach to the process of change and transformation of socioeconomic reality over time, in which institutions and habits and their relationship with human agency play a prominent role. Thus, institutionalism recognizes that the process of social change is not purely mechanical but at least partly the result of human action. In addition, institutionalism emphasizes that human action is shaped and conditioned by the socio-institutional environment in which it originates (Wilber & Harrison, 1978).

To develop this view of the evolutionary process, institutional economists have frequently resorted to biological analogies, particularly the Darwinian principles of variation, selection and heredity (Veblen, 1919; Hamilton, 1953; Hodgson, 2003a). The application of Darwinism to socio-economic development has not proceeded without criticism. One criticism argues that Darwinism results in a deterministic view of change and excludes the role of human intentionality. This view has been contested by others, who consider it unfounded and part of a false understanding of Darwinism (Hodgson, 2002). Specifically, proponents of the Darwinian view recognize that the mechanisms that direct socio-economic developments differ from those of biological evolution, not least because the former affects social entities, such as customs, routines or institutions, but also because human intentionality is important in the social sphere. Thus, they argue that Darwinism provides a broad theoretical framework that is sufficient and necessary for the analysis of the evolution of all complex, open systems (including the socioeconomic system) (Hodgson, 2002, 2003a; Hodgson & Knudsen, 2006). Essentially, Darwinism is a philosophical commitment to the search for causal explanations. This statement does not mean that human intention, deliberation or choice is excluded. However, it recognizes that these factors also have causes and therefore should be subject to causal explanation (Hodgson, 2003a; Hodgson & Knudsen, 2006).

In short, as Wilber and Harrison (1978, pp. 71–72) state:

> [I]nstitutional economics can be characterized as holistic, systemic, and evolutionary. […] Thus, institutionalism is holistic because it focuses on the pattern of relations among parts and the whole. It is systemic because it believes that those parts make up a coherent whole and can be understood only in terms of the whole. It is evolutionary because changes in the pattern of relations are seen as the very essence of social reality. […] These characteristics of institutionalism –holistic, systemic, evolutionary– combined with the appreciation for the centrality of power and conflict and the recognition of the importance of nonrational human behaviour, differentiate institutionalism from standard economics.

Consistent with this ontological conception of reality, institutional economists have rejected the methodological apparatus of orthodox economics, which, based on an atomistic perspective and a closed system view of reality, rests primarily on the construction of functional connections between variables and mathematical modelling (which, in turn, makes possible the application of the deductive method). Instead, for example, Atkinson and Oleson (1996, p. 703) synthesize the methodological elements most commonly found in institutional analysis as follows:

> (1) The investigation should begin with a question and not an axiom. (2) Behaviour must be analysed and understood as purposeful. (3) All current situations are the result of historical process and cumulative change. (4) The particular institutional structure must be known to understand behaviour resulting from structure. (5) History and analysis must be amalgamated in a holistic approach. (6) Evolution is a process in which purposeful artificial selection of critical factors tends to modify habit. (7) Negotiation has an important role.

Subsequently, Hodgson (1998, p. 173) listed the following elements as characteristic of the institutional approach:

> First, there is a degree of emphasis on institutional and cultural factors that is not found in mainstream economic theory. Second, the analysis is openly interdisciplinary, in recognizing insights from politics, sociology, psychology, and other sciences. Third, there is no recourse to the model of the rational, utility-maximizing agent. In as much as a conception of the individual agent is involved, it is one which emphasizes both the prevalence of habit and the possibility of capricious novelty. Fourth, mathematical and statistical techniques are recognized as servants of, rather than the essence of, economic theory. Fifth, the analysis does not start by building mathematical models: it starts from stylized facts and theoretical conjectures concerning causal mechanisms. Sixth, extensive use is made of historical and comparative empirical material concerning socio-economic institutions.

That is, institutional economics argues that the goal of theorizing must be to understand and explain phenomena and circumstances of economic reality, not prediction (Wilber & Harrison, 1978). To this end, the method of analysis focuses on finding the stylized facts or 'ideal types'[22] that can characterize the essence of the observed phenomena and based on these 'types' to seek the underlying features and causal mechanisms that explain these results. In this task, special attention is paid to identifying

[22] According to Hodgson (1998, p. 174), 'a central problem is the identification of what may be termed 'ideal types'. These are abstract descriptions of situations, phenomena, or persons that indicate the general features on which a theorist will focus as crucial for purposes of explanation. It is impossible to include all details and all features in such a venture because socio-economic systems are too complex and are open in the sense in which they interact with their outside environment. A process of abstraction must occur where the essential structures and features of the system are identified. The crucial question, of course, is which ideal type is to be selected in the analysis of a given phenomenon. To answer this question requires a methodology to distinguish between the general and the specific aspects of any given phenomenon. By making this distinction, and perhaps by using comparative material from other socio-economic systems, it is possible to construct and develop hypotheses concerning the key causal linkages behind the observed phenomena'.

the institutional structure of this reality and to analysing the interactions between the structure and human agency (intentional). Consideration of dynamic interactions between agents and between them and the institutions that surround them is relevant because, among other things, it gives rise to the importance of power in its different dimensions[23] (Klein, 1987). In addition, the transformative or changing nature of reality is recognized. This recognition first leads to the admission that any phenomenon is the result of a specific historical development, which must be studied, and second to an emphasis on processes and the evolution of that reality and institutional framework. Finally, to perform such research, institutionalism applies the ideas and results of other scientific disciplines, such as psychology, sociology and anthropology (Hodgson, 2000; Brazelton & Whalen, 2011).

4.3 Methodological compatibility between institutional and post-Keynesian economics

Is there methodological compatibility between institutional and post-Keynesian economics? The answer to this question is not independent of the internal methodological debates that have developed in each of the two approaches, particularly within post-Keynesian economics. Because this approach is methodologically rooted in two different –although compatible– areas, it is useful to redirect the initial question and to consider whether there is compatibility between critical realism and the institutional methodology on the one hand and between the institutional methodology and the Babylonian focus on the other.

Beginning with this last issue, it seems evident that multiple connections exist between the institutional methodology (and ontology) and the methodology associated with the Babylonian approach. Both share a manner of open-system thinking and a holistic, organic understanding of economic reality. This understanding determines the form of research, for example, in the recognition of the value of using various methods and analytical approaches to increase our knowledge of reality. The approaches also share an emphasis on the role of human agency in the process of transforming reality.

And what can be said about the connection between institutionalist methodology and the methodology associated with critical realism? This issue becomes perhaps even more relevant because, as we have seen, in recent years critical realism appears to be establishing itself as the philosophical base of post-Keynesian economics. Furthermore, Lawson (1994) had already asserted, in seeking to characterize critical realism as the philosophical foundation (and, as a result, also the methodological foundation) of post-Keynesian economics, that the focus proposed by him was not very different from that of certain branches of the literature, such as institutional

[23] This is the case, among other reasons, because institutions condition the behaviour of agents at all stages (Hodgson, 2003b, 2004b; Fernández-Huerga, 2008), creating a whole series of rights, responsibilities, authorizations, rules, permits, norms…that constitute a structure of power (Searle, 2005). At the same time, both the emergence and transformation of the surrounding institutions are conditioned by—without being reducible to—the intervention (deliberate or not) of agents with whom they interact as well as the power of each of them (Hodgson, 2003b).

economics[24]. For that matter, what must be highlighted first is that, until recently, this possible connection has not been presented (at least not in a detailed and systematic manner). In fact, Wilson (2005) has recently claimed the usefulness of opening this debate and promoting critical discussion of the role that critical realism can play in institutional economics –see also de Aguilar Filho (2020)–. Nevertheless, although explicit references to the methodological compatibility between critical realism and institutional economics have been scarce (particularly from the institutional side), the fact that several authors who have defended that critical realism provides the methodological and meta-methodological framework appropriate for post-Keynesian economics have identified, simultaneously, an institutional approach within post-Keynesian literature (Arestis, 1996; Arestis, Dunn & Sawyer, 1999b; Dunn, 2000) assumes, implicitly, recognition that there is a methodological compatibility between the two approaches (unlike what occurs, for example, with Sraffian economics).

In any case, it is possible to find many elements common to both approaches, as has been shown in the two previous sections. Thus, both perspectives share many elements in their ontological understanding of reality (Tauheed, 2013a; de Aguilar Filho, 2020). In particular, reality is seen as an open system and as transmutable/evolutionary (Lawson, 1994; Fleetwood, 1999; Hodgson, 2000; Brazelton & Whalen, 2011), highlighting the role that human agency can play in that transformation. Furthermore, both approaches reject reductionism, recognizing that the whole is greater than the sum of its parts (Hodgson, 1999; Brazelton & Whalen, 2011). The relationship between those parts, which make up social reality, is organic, so that the essential characteristics of each entity are those that, at least in part, result from their relationship with other entities (Wilber & Harrison, 1978; Hodgson, 1999; Lawson, 1999). This organic interdependence among parts, with each element exhibiting 'emergent properties' that are irreducible to the individual parts that compose it, is one of the aspects that impedes the existence of the type of relentless causal laws that govern the world according to orthodox economics, based on the presence of constant conjunction of events (Lawson, 1994, 1997; Hodgson, 1999; de Aguilar Filho, 2020). Drawing from this ontological understanding of reality, both institutionalism (Hodgson, 1998) and critical realism (Lawson, 1994, 1997) highlight that the goal of theorizing is to find the causal mechanisms (not the universal laws) that underlie the observed phenomena and can explain their existence and evolution. In other words, for both perspectives (Wilber & Harrison, 1978; Lawson, 1994, 1997; Hodgson, 1998; Fleetwood, 2006), the method of analysis is causal-explanatory, focused on understanding reality and finding causal explanations instead of invested in prediction. That method of analysis rests, on the one hand, on the utility of finding 'demi-regularities' (Lawson, 1994, 1997) or stylized facts/'ideal types' (Hodgson, 1998) that characterize the essence of phenomena. It also rests, on the other hand, on developing conjectures or hypotheses (Bhaskar, 1975; Lawson, 1994, 1997; Hodgson, 1998; Tauheed, 2013a) about the structures, interactions, and (deep) underlying mechanisms that explain observed results. To do so, the inference model used is retroduction—in the most commonly used terminology of critical realism (Lawson, 1994, 1997)—or abduction—in the tradition of the pragmatism of Charles Sanders Peirce and John Dewey,

[24] See also Downward, Finch and Ramsay (2002).

associated with institutionalism (Mirowski, 1987). In the search for causal explanations, both perspectives pay special attention to the interaction between structures/institutions and human agency. In this respect, both approaches share a rejection of the model of individual behaviour (associated with a 'rational', utility-maximizing agent) of orthodox economics. Instead, institutional economics and critical realism share a similar conception of human behaviour and its interaction with surrounding structures/institutions (Fernández-Huerga, 2008). This idea was recently defended by Fleetwood (2008), in particular by comparing the vision of human agency in the research of Hodgson (1988, 1998, 2003b) with the morphogenetic approach of Archer (1995, 1998), although he has claimed the need for a more precise use of the concepts and basic terms (e.g., structures, institutions, habits) to make this compatibility comprehensible and fruitful[25].

In this context, the author who has undertaken the greatest effort in recent years to analyse (and develop) the compatibility between both perspectives has been Tauheed (2013a, b)[26]. Tauheed (2013a) has proposed a methodological focus that he calls 'critical institutionalism', understood as 'a synthesis of the OIE [Original Institutional Economics] in the tradition of the Veblen, Commons, and Foster, the pragmatism theory of Charles Sanders Peirce and John Dewey, the critical realist methodology of Margaret Archer, and the critical realism of Roy Bhaskar' (Tauheed. 2013a, p. 147). Subsequently, he has used this methodological focus in two ways: first, to try to reconcile three apparently contradictory traditional definitions of 'institution', put forth by Veblen, Commons, and Foster (Tauheed, 2013a); and second, to show the utility of this reconciliation of terminology in different areas (in particular, to differentiate the institutional definition of economics as 'the science of social provisioning' from the mainstream definition, and in modelling the interaction of non-economic social

[25] Recently, Fleetwood (2014, 2017) has proposed encompassing all of the social elements (or 'social stuff') with which human agents necessarily interact under the generic term of 'socioeconomic phenomena' (which would replace the generic terms 'institution' or 'structure') and subsequently making a conceptual and terminological effort to differentiate the different types of existing phenomena. Within these socioeconomic phenomena are included not only institutions (proper) but also norms, values, codes, conventions, laws, procedures, and mechanisms, for example. Accordingly, he uses the term 'institution' (proper) in a more specific and narrow way than the generic and broad use that institutional economists such as Hodgson (1998, 2006) tend to give it. Nevertheless, the discrepancies have more to do with terminology than with the essence of the interaction between human agency and structures/institutions (in the broad sense)/socioeconomic phenomena: (1) in order to develop their actions and interrelationships in the social world, agents must necessarily interact with, and lean upon, the socio-economic phenomena/institutions that are part of this social world (and that pre-dates them); (2) by drawing upon them, agents reproduce these socio-economic phenomena/institutions or transform them (consciously or unconsciously), and in doing so, they simultaneously reproduce or transform themselves as agents; (3) in this sense, socio-economic phenomena/institutions causally influence (but do not determine) the actions of individuals; (4) simultaneously, socio-economic phenomena/institutions are rooted in the actions of agents but are irreducible to them (Hodgson, 2003b, 2006; Fleetwood, 2011, 2014, 2017).

[26] Tauheed (2011) had already asserted, in an earlier article, the possibility of developing a methodological synthesis between institutionalism and post-Keynesian economics, one that would truly be 'holistic, systemic, and evolutionary' and that would recognize the existence of ontological uncertainty and non-ergodicity. Thus, the author presents a proposal for a methodological synthesis that would have as its basis the heuristic framework of Dewey's instrumental logic, combined with additional elements from 'institutional dynamics' (Radzicki, 1988, 1990) and with the PM/ST (pattern modelling and storytelling) analysis method that was highlighted by Wilber and Harrison (1978).

institutions with economic institutions) and in using the critical institutional analysis to build models of the historical institutional formations of communalism, feudalism, and industrial capitalism (Tauheed, 2013b).

In short, it is possible to find points of connection and compatibility between institutionalist and post-Keynesian methodology. This does not mean that some methodological differences may not persist (coherent from the point of view of an open system analysis, conducive to methodological pluralism) and even at the theoretical level. For example, among these differences (in many cases interrelated) we could mention the following—although these differences are not applicable to all institutionalists or to all post-Keynesians, as a result of their own internal differences—: institutionalism tends to focus on micro- (and meso-) aspects, while post-Keynesian economics, in general, places greater emphasis on the macro- level (King, 2002); institutionalists highlight the processual nature of social reality, while post-Keynesians emphasize the presence of fundamental uncertainty and its consequences, including its macroeconomic outcomes (Lawson, 2010); institutionalists are more focused on historical regularities, continuity and change, but as the fruit of a long-term process, while post-Keynesians focus more on discontinuities, instability and the short term (Dow, 1994, 2013); institutionalists tend to show a greater hostility towards modelling and formal analysis (Foster, 1994; King, 2002).

In any case, many of these differences are more a matter of "focus of attention", of concerns and emphasis or, if one prefers, of the type of central questions posed by each approach—the aspect that, for Lawson (2006), makes it possible to differentiate the different approaches within heterodox economics. In turn, these differences in questions can lead to methodological differences. Moreover, it is true, as Dow (2008) points out, that by focusing on different aspects of reality, different ways of understanding that reality may emerge (i.e., some ontological differences), but always within a general open-system ontology.

Does this mean, then, that there is no point in differentiating between institutionalist and post-Keynesian economics? Does the very existence of schools of thought, at least within the realm of heterodox economics (or those who share a general open-system ontological view), become meaningless? From our point of view, this is not the case. As Dow (2008) points out, schools of thought can be considered, to some extent, a kind of 'division of labour' within economic thought. In order to construct knowledge of reality in an open system, some kind of (provisional) 'closure' is necessary. That is, methodological pluralism does not require, nor can it sustain, complete openness. This leads to what Dow calls a 'structured pluralism'.

In this context, schools of thought constitute a segmentation of thought within an open system (Dow, 2008), which makes it possible to identify patterns of thought (Dow, 2013) and which are useful for the construction of knowledge and for its dissemination (Dow, 2008; Negru, 2013). For Dow (2008), this categorization of schools of thought should be seen as provisional and subject to change. Moreover, such segmentation takes the form of imprecise and porous boundaries, which enable communication rather than impede it (Dow, 2008; Negru, 2013). In the words of Negru (2013, p. 1003), '[s]chools of thought represent flexible, evolving entities or forms with diffuse boundaries that play a useful role in economics as they embody a place of dialogue and debate amongst its members and economists of all orientations'.

However, the fact that schools of thought—thus conceived—present porous and shifting boundaries opens the door to the emergence of 'connections' between them, based on compatibility and/or complementarity, which may lead to some kind of convergence. Waller (2010) points out that convergence occurs when two distinct strands of economic thought arrive at the same or very similar positions on issues of theory, practice and/or interpretations of observations; on the other hand, he states that the significance of convergence occurs when at least the members of one strand become aware of the convergence. Furthermore, Waller (2010) considers that convergence constitutes an opportunity for knowledge creation. In this sense, it seems evident that institutionalism and post-Keynesian economics meet these criteria[27], since they share common or very similar ontological, methodological and theoretical positions and their possible convergence has been the subject of study for decades, as we have seen, and from both approaches; moreover, several authors have worked or work 'under the umbrella' of both approaches, or have been recognized by others in such a position. This does not mean that there is a total convergence, affecting all topics and all authors of both schools, among other reasons because of their own internal differences. But it is certainly difficult to deny that there is such convergence between some institutionalists and some post-Keynesians (that is, a partial convergence)[28].

From another point of view, Negru (2013) has argued that a school of thought can be interpreted as an entity that encompasses a system of thought and its members practitioners and has proposed the use of two concepts to identify and delimit schools of thought: coherence and distinctiveness. The first of these refers to the internal homogeneity of the system of thought and the logic of the internal system of thought, and can present varying degrees. The second represents the quality of being particular and separable from others, and implies a certain degree of disagreement, dispute of ideas, potential dissension, and controversy. As we have seen, there is some level of coherence at different levels (ontological, methodological and theoretical) between institutionalist and post-Keynesian economics. On the other hand, although there may be some distinctiveness between the two schools on some issues or between some of their members or branches, it cannot be denied that at least between some institutionalists and post-Keynesians there is no deep controversy or dispute of ideas (at least no more than there is within any school and, in particular, within these two). Therefore, some kind of convergence or partial synthesis between them seems justifiable. In fact, many authors consider themselves to be working in this shared space, as we shall see in the following section.

[27] Waller (2010) himself briefly exemplifies the concept of convergence with the case of institutionalist and post-Keynesian economics.

[28] Starting from a conception of 'interested pluralism' as well as from the comparison at the level of theoretical statements between schools of thought, Dobusch and Kapeller (2012, p. 1051) claim that '[w]hen statements do not differ in substance and are thus (1) identical, or deal in a theoretically (2) convergent way with complementary phenomena, attempting (a) theoretical integration seems the logical strategy to follow'. Like Waller (2010), he exemplifies this case by reference to institutionalism and post-Keynesian economics.

5 Conclusion: towards a synthetic institutional and post-Keynesian approach?

As we have noted throughout this article, there are multiple links between institutional and post-Keynesian economics, both in terms of content and method. In fact, several authors who subscribe to the two approaches of thought have defended their compatibility and complementarity, and some have suggested the desirability of constructing a synthesis or are working within that space. For example, we have already pointed out that several post-Keynesians consider that there is an institutionalist branch within post-Keynesianism (Arestis, 1996; Lavoie, 2014). From the point of view of institutionalist economics, Wilber and Jameson (1983) coined the term "post-Keynesian institutionalism" (PKI) to refer to this synthesis –others, such as Cornwall and Cornwall (2001) or Niggle (2006), have referred to this synthesis as 'evolutionary Keynesianism'–. Charles J. Whalen, who has written and edited several works in this area over the last few years (Whalen, 2008b, 2011a, 2013, 2020, 2021, 2022; Zalewski & Whalen, 2020), is probably the author who is making the greatest effort to try to develop the PKI approach. Whalen (2020, p. 71) defines PKI as "a branch of institutional economics that draws on the common ground shared bay many institutionalist and post-Keynesians".

In the preceding sections, we have noted elements that could form the basis of PKI. For example, Wilber and Jameson (1983) argued that this branch of economic thought would be marked by the importance of (real) time and uncertainty; by an emphasis on evolution, power and conflict; and by recognition of the role of socio-economic institutions and intentional human action. Hodgson (1989) suggested that institutionalism would provide the microeconomic fundamentals for this theoretical synthesis (in reference, e.g., to the role of habits and institutions, the functioning of markets and the impossibility of perfect competition and price formation), whereas the post-Keynesian approach would address macroeconomic questions. This view is shared to varying degrees by other authors, such as Arestis (1996), Lee (1998) or Lavoie and Seccareccia (2013). More recently, Brazelton and Whalen (2011) attempted to identify, albeit schematically, several elements that can provide the basis for an analytical framework of post-Keynesian institutionalism –see also Whalen (2013, 2020)–: first, an economy exists in real time, which leads one to recognize the role of history and to focus on how socioeconomic reality evolves; second, institutions play a key role in an economy, linking the past, present and future and playing a relatively similar role to that of prices in conventional economics as a coordination mechanism; third, markets are essential institutions in capitalist economies and as such should be a priority of economic analysis although it remains necessary to redirect the focus to the study of their actual, not hypothetical, operation while recognizing that they rarely (or never) resemble the model of perfect competition; fourth, the study of the process of wage determination should become a crucial aspect of this framework and focus attention on the role of power relations and institutional aspects in this process; and fifth, the study of consumption should be a key element of post-Keynesian institutionalism and not only focus the analysis from the macroeconomic or traditional aggregate perspective but also integrate aspects of environmental sustainability and ecology.

In fact, this framework of analysis has already begun to be implemented expressly for the study of a range of specific topics. For example, Whalen (2011a) has recently published a collection of studies that seek to apply this perspective to the analysis of financial instability and the current economic crisis in a fundamental manner. Similarly, the *European Journal of Economics and Economic Policies: Intervention* published a special issue in 2013, titled ‘Post-Keynesian and Institutional Political Economy’, with the goal of more fully exploring the links between post-Keynesian and Institutional political economy and also their views on specific topics such as policy issues. In addition, Fung (2011) and Raines and Leathers (2011) have examined the connections between institutional and post-Keynesian economics and applied them to the study of financial markets. Zalewski and Whalen (2010) have used the framework of post-Keynesian institutionalism to analyse the recent increase in income inequality in the U.S. Fernández-Huerga (2008) has constructed a model of human behaviour that fits the post-Keynesian institutional perspective and characterized the concept and operation of markets (Fernández-Huerga, 2014) as well as the analysis of labour supply (Fernández-Huerga, García-Arias & Salvador, 2017) and demand (Fernández-Huerga, 2019). A few years earlier, Niggle (2006) described the basic features that characterize institutional and post-Keynesian macroeconomics, contrasting them with the neo-Keynesian paradigm and the new economics of endogenous growth. Even Seccareccia (1991) applied the theoretical framework offered by these two approaches to the analysis of the labour market, although only schematically. Finally, Whalen (2022) has recently edited a book that can serve as a thematic guide to the PKI approach.

In short, it seems that the possibility of constructing and applying the connections between post-Keynesian and institutional economics has opened a promising theoretical field.

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