



## Post-Keynesian economics 50 years after the Eichner and Kregel paradigm article: Coherence or incoherence?

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### Abstract:

*This paper examines the coherence, or lack thereof, among the three major strands of post-Keynesian economics. Most claims of incoherence pertain to the Sraffian strand in relation to the Fundamentalist and Kaleckian strands. The first section highlights how some authors have exacerbated these claims by mischaracterizing the work of colleagues. The second section argues that many accusations of incoherence originate from methodologists, often justified by the distinction between open and closed systems. The third section addresses claims of incoherence that stem from divergent theoretical positions and the potential for internal contradictions. The final section concludes that young scholars, as well as those engaged in actual research in theory and modelling, tend to emphasize the commonalities among the three strands. Some examples of possible synthesis, old and new are provided.*

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In an article that provoked quite a stir about the coherence of post-Keynesian economics, or rather the lack thereof, Bernard Walters and David Young (1997) reminded their readers that Alfred Eichner and Jan Kregel (1975) had claimed that post-Keynesianism had the potential to become a coherent and comprehensive alternative paradigm in economics. This was more than 50 years ago. Over the years, post-Keynesian economics in its various incarnations, including more recently one of its extensions – Modern Monetary Theory (MMT) – has been subjected to harsh criticism. Most recently, a methodologist claimed that post-Keynesian economics is “a psychological phenomenon rather than a set of ideas” (Düppe, 2025, p. 517), a statement that resembles Robert Solow’s (1979, p. 344) early assessment when he wrote that “thus far so-called post-Keynesianism seems to be more a state of mind than a theory”, complaining about its apparent lack of unity and

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structure when comparing the writings of Davidson, Minsky, Kregel, Eichner and those of Cambridge authors. Over the years, observers – outsiders and insiders alike – have been particularly concerned about the apparent lack of coherence between the various strands of post-Keynesian economics, especially regarding the status of the Sraffian branch, previously known as neo-Ricardian economics.

This paper is thus devoted to the issue of coherence within post-Keynesian economics.<sup>1</sup> Before going any further, I ought to make a few preliminary remarks. First, when judging the coherence of a school of thought, attention ought to be on the contemporary actors of the research programme. In other words, the issue is not to find out whether the writings of Sraffa, Keynes, Kalecki, Minsky or Kaldor are compatible with each other. Rather the purpose is to check whether present-day post-Keynesians of various tendencies can communicate with and borrow ideas from each other. I first made this point in the introduction to a symposium on the possible synthesis of the various branches of post-Keynesian economics when I realized that some contributors focused on the writings of dead authors instead of those of modern authors (Lavoie, 1992a).<sup>2</sup>

Secondly, for some psychological reason, there is a tendency among researchers and students to focus on the writings of authors who express extreme views. Those who take eclectic positions do not seem to attract as many devoted followers. Coherence within post-Keynesian economics is difficult to achieve when considering only the views of participants who have a small-tent approach, for instance when it is claimed that authors such as Alfred Eichner or Hyman Minsky are not *bona fide* members of the post-Keynesian school (Davidson, 2003-04, pp. 252-254).<sup>3</sup> Other examples abound.

Finally, it seems that the perception that post-Keynesian economics is incoherent is primarily, though not exclusively, held by economists who specialize in methodology. In contrast, economists who actively create theories and models usually find sufficient coherence among the various strands of post-Keynesian economics. They often move fluidly between branches and identify enough commonalities to integrate aspects from different strands into their theories and models, so much that for some authors it is difficult to assign them to a specific strand. Thus, while some form of methodological coherence may be needed when discussing heterodox economics at large, sociological and substantive coherence may be more relevant when discussing a specific school of thought, here post-Keynesian economics.

I will proceed as follows: In the next section, I will show that some post-Keynesians have brought upon themselves the accusation of incoherence by making misleading comments or claims about their fellow post-Keynesians. This will be followed by a discussion of the allegations made by methodologists regarding the lack of coherence in post-Keynesian economics, particularly concerning the Sraffian branch. The third section will address accusations of incoherence arising from divergent substantive theoretical positions and the possibility of internal contradictions. The conclusion will examine new developments that demonstrate that a modified Sraffian approach is fully compatible with the rest of post-Keynesian economics.

Before I proceed, however, let me recapitulate some of the methodological claims about coherence that I have made in the past and which inform the rest of the paper (Lavoie, 1992b, pp.

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<sup>1</sup> Several papers or even books are devoted to the issue of coherence between the various heterodox schools of thought, the most recent being the book edited by Jo et al. (2026), but this is not the concern of the present paper.

<sup>2</sup> A recent example is Arne Heise (2025), who argues that post-Keynesian economics is made up of incommensurable branches: Kaleckian economics is incompatible with Davidsonian and Minskyan economics, on the methodological grounds that Kalecki's ontology would rely on closed systems whereas Keynes and Minsky exhibit open systems.

<sup>3</sup> In Lavoie (2020a), I have endeavoured to show that those claiming that Minsky was not part of post-Keynesianism are mistaken.

6-14; Lavoie, 2014, pp. 10-38 [2022, pp. 11-40]). At a very general level, I have argued that various heterodox schools of thought, including the post-Keynesian school, share a set of five metaphysical beliefs, the pre-analytical vision as Schumpeter would call it, or the presuppositions of a research tradition as Axel Leijonhufvud would have it. Briefly put, heterodox authors share an attraction to realism: realistic assumptions and empirically-grounded theories rather than counterfactual idealistic economies. They reject unbounded rationality or hyper-rationality, that is, they reject the assumption of omniscient utility-maximising agents. Heterodox authors also adopt a holistic methodology, taking as a starting point social classes as well as dominant and powerful institutions or organisations, paying much attention to conventions and macroeconomic paradoxes. Heterodox authors focus on production rather than exchange, rejecting the standard definition of economics as the study of the optimal allocation of scarce resources, adopting instead a definition based on the study of the production of a social surplus under conditions of reproducibility.<sup>4</sup> Finally, heterodox authors tend to believe that unfettered markets are likely to generate instability and disequilibria, and hence need to be tamed.

With regards to post-Keynesian economics specifically, five key characteristics can be identified, as also argued by Eckhard Hein (2023, p. 14). The most prominent one, shared by all, is the principle of effective demand, valid both in the short run and in the long run, which is also understood as the claim that investment determines saving rather than the converse. Second, comes the notion of a monetized economy, requiring a monetary theory of production, with the crucial role of banking, credit and liquidity preference. Third, is the notion of radical or fundamental uncertainty, where only the past is known and where the future is uncertain. Fourth, there is the concept of historical or irreversible time, which underlines path-dependence and hysteresis phenomena, as well as the impact of past contracted debts since production takes time. These three characteristics are obviously tricky to disentangle. Finally, the issue of income distribution is at the heart of post-Keynesian economics, playing a role for the determination of both inflation and economic activity. The various works of post-Keynesian authors encompass, in one way or another, most or all of these five key characteristics, in addition to being situated within the five general presuppositions outlined above.

Naturally, other post-Keynesian authors or methodologists analysing post-Keynesian economics may or have come up with a somewhat different set of fundamental features. Going back to the Eichner and Kregel (1975) article mentioned in the title, it underlined a mix of these suppositions and characteristics: the important role of income distribution between classes and within the firm; the need to explain the real world, with firms using cost-plus pricing and operating in imperfect markets, within an environment of secular growth but with cyclical patterns; the need to work within the theory of a monetized economy, where firms face constraints when financing production and investment, and where agents lack information and face fundamental uncertainty. 50 years or so later, we can certainly say that these features are still part of the core of post-Keynesian economics.

### Misleading statements

In his 2002 book on the history of post-Keynesian economics, John King devotes a chapter to the question of coherence among the various strands of post-Keynesianism. He presents a clear and symmetric overview, outlining the main critiques exchanged among the three strands identified

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<sup>4</sup> Mark Setterfield (2003), in his definition of the visions and methods of political economy, has these same four presuppositions.

by Hamouda and Harcourt (1988): Fundamentalists, Kaleckians and Sraffians. King also highlights the perspectives of those he terms 'synthesizers', primarily textbook writers of the time, including Heinrich Bortis, Peter Reynolds, Philip Arestis, Alfred Eichner, Edward Nell, Tom Palley, and myself, who emphasize the commonalities among the various strands. In her long review of King's book, Prue Kerr (2005) is surprised that King ultimately concludes that there is no coherent tradition. Similarly, in another review, Tymoigne and Lee (2003-04, p. 282) ask whether "rhetoric has clouded his [King's] judgment, as he implied that Sraffa/Sraffians are excluded" from a "possible emergent synthesis".

King had previously touched on this theme during his travels in 1992-1993, when he interviewed several post-Keynesians. To his surprise, upon reflecting on the written versions of these interviews, he noted that the divergences among authors from different strands were not as significant as he had first thought: "there is substantially more agreement among Post Keynesians than I had originally believed" (King, 1995, p. 244). However, he also suspected that "a divorce between Post Keynesian and Sraffian economics may be in progress" (King, 1995, p. 12). King recalls a round table discussion regarding my book, *Foundations of Post-Keynesian Economic Analysis* (Lavoie, 1992b), which took place at a small conference in Great Malvern in the summer of 1993. He notes that the book faced a "comprehensive roasting" from reviewers (King, 1995, p. 248). The intensity of the round table session left such an impression on King that he revisits the anecdote in his 2002 chapter on coherence, stating: "I still have vivid memories of the heat that was generated in the course of the debates between the rival factions" (King, 2002, p. 217).

The truth, or at least my recollection of the session, is that Paul Davidson, the first panel member, spent three minutes discussing my book, wrongly attributing to me a sentence that described the neoclassical view. He then used the remainder of his time to present his forthcoming book (Davidson, 1994).<sup>5</sup> Then Frederic Lee, who had just arrived in England, got lost in an *envolée* about his role within the Industrial Workers of the World, the lack of humanity in capitalism, and the need to refuse subjugation and exploitation.<sup>6</sup> The last panel member, Franklin Serrano, who was nearing the completion of his PhD dissertation at Cambridge, seemed to be the only one who had read the book. As King (1995, p. 248) points out, Serrano correctly identified the main weakness of the book: the potential contradictions between its micro and macro components.<sup>7</sup>

The issue of whether there is or not coherence within post-Keynesian economics is made more complicated by occasional lapses by post-Keynesian economists, for instance by relying on the views of others to make mistaken claims. King (2002, p. 205), basing himself on the opinion of his compatriot Robert Dixon, stated that "New Cambridge economics appears to have sunk without trace, probably for very good reasons". Well, New Cambridge, particularly but not only through the work of Wynne Godley and his stock-flow consistent (SFC) approach, as well as his three-

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<sup>5</sup> In turn, after apparently nearly a dozen post-Keynesians declined the offer by Steve Pressman to review Davidson's (1994) book, King and I agreed to do it when I visited John in Melbourne in 1995 (King and Lavoie, 1996).

<sup>6</sup> When Ric Holt and Steve Pressman (2001) presented their *New Guide to Post Keynesian Economics* to the students and staff of the 2002 post-Keynesian summer school held at the University of Missouri in Kansas City, Lee was his usual self, as he lambasted the book. However, he praised the chapter on pricing, which was of my own doing, relieving me of the fear that the chapter, which could or should have been written by Lee himself, would be the main target of his abuse!

<sup>7</sup> Hein and van Treeck (2010) have examined these in the context of a trade-off between profit rates and growth rates, deriving both instances of micro-macro identity and cases where fallacies of composition prevailed, meaning for instance that firms going for a higher profit rate would end up with a lower rate at the macroeconomic level – a paradox of profit.

balance equation, remains vibrant and influential, especially among advocates of Modern Monetary Theory (MMT).<sup>8</sup>

Another example is how the work of Alfred Eichner has been perceived by some fellow post-Keynesians. While Jo, Chester and D'Ippoliti (2026) underline the important institutional role that Eichner played, Geoff Harcourt remarked: "I don't think he was an absolutely top-line economist. I think he did a lot of harm to Post Keynesianism, first by claiming too much for it" (Harcourt in King, 1995, p. 181).<sup>9</sup> While everyone is entitled to their opinion, there are also facts. Although Eichner is often viewed as a man of one idea – specifically, that markup pricing depends on the internal funds necessary to finance capital accumulation – he also made original and significant contributions to post-Keynesian monetary theory, as I have explained on numerous occasions.<sup>10</sup> However, some colleagues have expressed a contrary view: "The paper that Paul Davidson wrote in the *Festschrift* for Alfred Eichner, for example, points out that Alfred Eichner had not incorporated any essential role for money in his analysis. Most, or maybe all, of Eichner's analysis doesn't really come to grips with the nature of money and the financial system. It essentially assumes that investment can be financed, and doesn't analyse the financial system at all" (Sawyer in King, 1995, p. 145).

Malcolm Sawyer appears to rely on an incomplete appraisal of Davidson's chapter. Davidson's (1992) *Festschrift* paper itself stems from a cursory reading of Eichner's unfinished 1987 textbook. Notably, all but one of the references to the book come from the first twelve pages of the 58-page chapter 12, titled "Money and Credit". In addition, Davidson (1992, p. 185) is unaware that Eichner devotes 30 pages to a detailed analysis of financial flows as early as Chapter 2 when he claims that "the monetary aspects of his book do not appear until chapter 12 – 800 pages into the volume". Davidson (1992, p. 189) nonetheless ended up praising Eichner who "almost alone among economists – recognized that the flow-of-funds approach provides a much more useful analytical tool for explaining economic processes than the national income accounts", thus concluding that "Eichner had opened the door of knowledge on the role of money in macrodynamics".

More recent writings are not free from misleading claims. In their celebration of the contributions of Brazilian economist Fernando Cardim de Carvalho, Gary Dymski and Danielle Guizzo (2021) examine how Carvalho's work fits within the classification of Hamouda and Harcourt (1988). They contend, and rightly so, that he belongs to the strand of Fundamentalist Keynesianism due to his emphasis on fundamental uncertainty, liquidity preference, foundational analysis, and a reluctance to model. Dymski and Guizzo compare this approach to my own, which they say aligns more closely with the Kaleckian strand. They state: "In turn, Lavoie's revised edition of his synthetic work on Post-Keynesian economics (2014) pays little attention to factors that were central to Carvalho's approach: uncertainty is discussed only in the section on the theory of choice; not in the later chapters on macroeconomic models; and real time, the long-run/short-run distinction, and the term 'liquidity' do not appear ('liquidity trap' appears once)"

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<sup>8</sup> By contrast, Victoria Chick (1995, p. 33) acknowledged the relevance of New Cambridge when she underlined the originality of the book by Godley and Cripps (1983) and linked its balance sheets with the work of Minsky. To their credit, Hamouda and Harcourt (1988) devoted a full page to Godley and his collaborators, without realizing however that they constituted a fourth strand – the Kaldorian strand.

<sup>9</sup> I have reported elsewhere that when I visited Cambridge for a few weeks in October 1985, asking Geoff Harcourt, who was my sponsor, to introduce me to Wynne Godley, his response was: "Don't you waste your time meeting this ignorant fool".

<sup>10</sup> His contributions to monetary theory, in particular his explanations of the defensive role of central banks, are detailed in three independent papers by Robert Guttman, Louis-Philippe Rochon and myself in Lavoie et al. (2010).

(Dymski and Guizzo, 2021, p. 518). This statement suggests that, despite being authored by “an eminent monetary macroeconomist” (ibid., p. 516), my book provides no connection to the “Wall Street (Davidson/Minsky)” strand endorsed by Carvalho. An outside observer might conclude that there is little coherence even between the Fundamentalist and Kaleckian strands. However, this claim is misleading: in reality, the word “uncertainty” appears no fewer than 79 times above and beyond the chapter devoted to the theory of choice, while the terms “liquidity” and “illiquidity” appear a total of 171 times in the book!<sup>11</sup>

A false claim that has had a significant impact pertains to the relationship between Sraffian economics and the rest of the post-Keynesian school. As will be examined in the next section, the incoherence within post-Keynesian economics is often attributed to the presence of Sraffian economics, which is perceived as overly focused on equilibrium and long-period analysis. Stephen Dunn (2000, p. 350), in his paper discussing the potential future and survival of post-Keynesian economics, contends that “Roncaglia (1995) has called for the abandonment of the project to integrate Sraffian and Post Keynesian analysis”.<sup>12</sup> One year later, Sheila Dow (2001, p. 18) repeats Dunn’s claim, stating, “it has even been suggested that attempts to identify the Sraffian approach with Post Keynesianism should be discontinued (Roncaglia, 1995)”. She reiterates this point soon after, asserting that “Roncaglia (1995), a neo-Ricardian, has in turn suggested that the Sraffian approach should not be considered part of post-Keynesianism” (Dow, 2002, p. 323).

Whether Sraffian economics should be excluded from the post-Keynesian school for the sake of consistency is a topic open to debate. However, Alessandro Roncaglia’s position on this matter is opposite to what is alleged by Dunn (2000) and Dow. To his credit, King (2002, p. 215) includes Roncaglia in his section on synthesizers, where he rightly belongs. Roncaglia challenges the *dominant* or *constituted* interpretation of Sraffian economics, as Richard Arena (1987) calls it, which is based on the idea of outputs as long-period centres of gravitation. He also rejects the Marshallian microfoundations sometimes associated with the Fundamentalist branch of post-Keynesianism. Instead, Roncaglia advocates for a *dissident* perspective, as Arena describes it, suggesting that “the compatibility between the Keynesian and the Sraffian perspective [...] could provide a sufficiently solid and wide foundation for a far-reaching non-neoclassical approach” (Roncaglia, 1995, p. 112).<sup>13</sup> Indeed, Roncaglia (1995, p. 120) concluded his paper by stating that “a solid stream of non-neoclassical economics is already available, integrating not only Keynes’s and Sraffa’s analyses, but also the contributions of a wide group of economists”, citing in particular the name of Tom Asimakopulos, which many would consider a representative originator of the Kaleckian branch.<sup>14</sup>

Enough gossip. I will now deliberate on the tensions that have arisen between Sraffians and economists from other branches of post-Keynesianism, focusing on methodological arguments.

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<sup>11</sup> Dymski (2020, p. xx) doubled down on this when he wrote: “Lavoie’s recent ‘bible’ of Post-Keynesian economics (Lavoie, 2014) focuses largely on elaborating formal models, especially the stock-flow consistent framework, and pays virtually no attention to the issues highlighted in Cardim’s theoretical work (uncertainty, liquidity, and so on)”.

<sup>12</sup> Dunn must have given a second look at Roncaglia’s paper because in Dunn (2008, p. 29) he acknowledges that only a specific interpretation of Sraffa’s output “should be abandoned”.

<sup>13</sup> The *dominant* approach was said by Arena (1987) to be that of Garegnani, whereas the *dissident* approaches were associated with Roncaglia and Pasinetti. See also Arena and Blankenburg (2013) for a more recent assessment of this distinction.

<sup>14</sup> Roncaglia (2019, p. 318) has recently reasserted that “there is no obstacle to considering the Keynesian analysis of financial markets, investment decisions, income and employment determination as compatible with determination of production prices based on the difficulty of producing the various commodities”. The Roncaglia approach is also endorsed by Andrew Trigg (2008).

## The methodological nightmare

The evolution of the relationship between Sraffian economics and post-Keynesian economics has been well summarized by Gary Mongiovi (2012, p. 499): “Sraffian economics was generally regarded not only as compatible with Post Keynesianism, but as an important branch of it. [...] By the end of the 1980s, however, this view had largely given way to the presumption that the two frameworks are distinct and, in at least some key respects, incompatible”. Mongiovi attributes this shift to the apparent failure of the Trieste summer schools of the 1980s to reach a consensus. The divergence, besides methodological and analytical differences, may also have been exacerbated by conflicts among strong personalities seeking to assert their influence over their followers.

As a result, some keen observers, such as John King (2012, p. 314), proclaimed that “almost no one today regards Post-Keynesian-Sraffian economics as a single coherent school”. This sentiment is reiterated in King’s *Advanced Introduction to Post-Keynesian Economics*, where Sraffian economics is relegated to the chapter dedicated to “Other schools of thought”, thus following the tracks of Holt and Pressman’s *New Guide to Post Keynesian Economics* (2001) in which Sraffian theory was nowhere to be found. King (2015, p. 116) argues that a case can be made that post-Keynesianism and Sraffian economics “now represent two very different strands of heterodox economics, which are fundamentally inconsistent”, noting that this inconsistency is “in part a methodological problem”. John Davis (in Morgan, 2025, p. 217) concurs with regrets, when he notes that “circa 2000 we had a debate among Post-Keynesians over whether Sraffian thinking was part of Post-Keynesianism or an altogether different approach. Now the debate seems to be over – most Post-Keynesians pay little attention to Sraffa (sadly I would say)”.

It certainly was not always like this. In his posthumous book, Frederic Lee (2018, p. xi) wrote that “the distinction between Post Keynesian and Sraffian economics, which much is made of today, simply did not exist for me or for those few others, such as the late Alfred Eichner (who was my dissertation advisor and mentor), working in Post Keynesian microeconomics”. In my view, besides the tensions that arose during the Trieste summer schools, the rift between Sraffians and other post-Keynesians widened due to the increasing emphasis on methodology within post-Keynesian economics, starting in the late 1980s and lasting for over a decade. Fontana and Gerrard (2006) refer to this period as the *Age of Uncertainty*, as post-Keynesians became increasingly doubtful that an alternative synthesis would ever be achievable or even desirable. During this time, methodologists and philosophers gained prominence in the field.<sup>15</sup> Generally, these methodologists tended to favour the perspective of Fundamentalist Keynesians, and either refrained from modelling altogether or relied on standard Marshallian supply and demand curves if they did use models. As Fontana and Gerrard (2006, p. 63) aptly noted, “the increasing concern with the methodological originality of Post Keynesian economics served to exacerbate the disputes between and within the different strands of Post Keynesian economics”. Similarly, Fernández-Huerga et al. (2023, p. 422) believe “that the expulsion of the Sraffians came more from the post-Keynesian methodologists than from the many other authors who undertook post-Keynesian theory”.

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<sup>15</sup> This shift was accompanied by a surge of studies on the history of economic thought among all strands of post-Keynesian analysis, as noted by Peter Reynolds (King, 1995, p. 131), a fad that did not spare Sraffian economics according to Nell (1998, p. 720). As Dunn (2000, p. 351) lamented: “Post Keynesians are seen to be more concerned with critique, methodology, and the history of economic thought, rather than with the development of economic theory and policy”. Dunn countered that this perception only applied to a subset of post-Keynesian economics, as I also argued then, making a reference to post-Keynesian empirical work and non-linear models (Lavoie, 1992b, p. 422).

An example of the proposed break comes from Gerrard himself. In his book, Gerrard (1989, p. 181) suggests an ABS synthesis, meaning an All-But-Sraffians synthesis. He states that “the neo-Ricardian influence has been an entirely negative one. [...] The neo-Ricardians have gone off on the completely wrong track, ignoring or dismissing much of Keynes’s concern with the implications of the dynamic and uncertain context of behaviour in the capitalist economy”. At the time, Dow (1988, p. 13) offered a similar yet more circumspect opinion, claiming that there was a methodological incompatibility between Sraffian economics and the rest of post-Keynesianism. She concluded that “it becomes doubtful as to whether much of neo-Ricardian analysis can be classified as Post Keynesianism”.

The influence of methodologists was eventually felt through the study group led by Tony Lawson at Cambridge. One of Lawson’s propositions is that proper economics should be grounded in critical or transcendental realism and “open” systems, while mainstream economics typically relies on closed-system modelling. In her assessment of post-Keynesian methodology, Dow (2001, p. 16) asserts that “Post Keynesians understand the economy as an open system”, meaning a system in which “one does not know all the relevant variables”. This opinion is fully endorsed by Stephen Dunn (2008, p. 42), who states that “the commitment to open-system theorising is the methodological glue that binds Post Keynesians together”, further emphasizing that “Post Keynesians are *committed to open-system theorising*” (ibid., p. 46). Similar assertions regarding the commitment to open-system theorizing appear repeatedly in Dunn (2000). Consequently, whether a model is open or closed serves as the litmus test to find out whether a model is compatible or not with post-Keynesian economics. According to Dunn (2000, p. 349), “the Sraffian strand openly adopts many of the precepts of a closed system modeling strategy”, leading to the conclusion that “it is this dawning realization, that Sraffians are methodologically incompatible with other traditions within Post Keynesianism, that has led to the exclusion of the Sraffians from the core of the Post Keynesian program [...] The time has come for Post Keynesianism to formally part company with the Sraffians” (ibid., p. 350).

Stephen Pratten (1996, p. 436) has devoted an entire article assessing whether Sraffian models are open systems, based on the assumption that post-Keynesian economics must have “a tacit commitment to something like critical realism”. After a review of the works of Garegnani, Eatwell and Bharadwaj, while acknowledging some doubts here and there, he determines that “neo-Ricardianism, in its method, remains tied to closed systems” (ibid., p. 437). In his conclusion, Pratten (1996, p. 439), despite being a former PhD student of Harcourt, declares that as a result of his methodological analysis, “if Post-Keynesianism is to be a consistent project its link with neo-Ricardianism appears to be untenable”. This statement clarified his previous findings, where he submitted that “if a particular branch previously classified as within the post-Keynesian perspective does not in fact share these broad perspectives, then it should be acknowledged as different in an essential way from the rest of post-Keynesianism” (Pratten, 1997, pp. 270-271).

The four-page single-line critical review that I sent as a referee to Tony Lawson, the editor responsible for Pratten’s 1996 paper, did not generate any substantial change in the published version. In the review, I argued that: i) several Sraffian strands exist; ii) the “dissident” strands are likely to be more eclectic than the “dominant” strand considered in the paper; iii) when addressing issues outside the “core”, Sraffians do not adopt a “deductivist” approach; iv) Sraffians, like other post-Keynesians, rely on effective demand; v) Bhaduri and Robinson (1980) demonstrated that a Sraffian model is compatible with the study of the problem of the realization of profits as emphasized by Marxists and Kaleckians; vi) since the rate of profit in Sraffian economics is regarded as a variable which is not determined within the core system, it is difficult to classify the typical Sraffian model as closed, a point also made earlier by Dutt and Amadeo (1990, p. 57) when

discussing the separate determination of prices and outputs in the Sraffian system;<sup>16</sup> vii) the criteria for defining “open systems” are so stringent that a lot of post-Keynesian economics would not pass the test.

My fear of the use of an “open systems” criterion, vague as it is, to determine whether a model should receive a post-Keynesian stamp of approval proved to be prescient. In his Lawson-influenced appraisal of post-Keynesian pricing theory, Paul Downward (2000, p. 218) concurred with Pratten that Sraffian pricing models “are inconsistent with an open-system perspective and a critical-realist-defined post-Keynesian economics”. Downward went even further, asserting that while the pricing theories of Kalecki, Andrews, Means, and Hall and Hitch should be acceptable to post-Keynesians as manifestations of a critical-realist approach, those of Asimakopulos, Cowling and Eichner “cannot form part of the core of post-Keynesian pricing theory. They share essential characteristics of the neoclassical approach through their assumptions. They present a closed-system view of pricing” (Downward, 2000, p. 214). By extension, this meant that, beyond Sraffian prices, the pricing theories of Fred Lee and those that I have advocated, as well as, also by extension, the historic normal-cost pricing view of Wynne Godley, Ken Coutts and Neville Norman, along with the target-return pricing formula of Lanzillotti, would be embedded in a closed-system framework, and therefore “cannot provide the constructive basis of an alternative account of pricing” (Downward, 2000, p. 222). Dunn (2008, pp. 152-153) explicitly endorsed Downward’s viewpoint that an “open systems” approach is required when discussing pricing theory.

Despite the valiant effort of Chick and Dow (2005) to redefine “open systems” and allow in the name of methodological pluralism the presence of some “closed” subparts based on mathematical relations, it would seem that no formal modelling can be associated with post-Keynesian economics if we are to listen to most methodologists or economists seduced by Lawson and his study group. While Lawson initially gave the impression that his opposition was limited to “the abuse of mathematical formalism” based on atomistic agents (Lawson, 2009, p. 190), it now seems that his criteria for useful formalization are so restrictive that, for all practical purposes, they end up excluding many post-Keynesians from the heterodox camp, just as Pratten (1996, p. 440) had earlier claimed that neo-Ricardian economics ran parallel to orthodoxy or even constituted a sub-strand of orthodoxy.

Lawson has become quite critical of the present developments in heterodox economics, saying that “people are now claiming the heterodox label for themselves whilst allocating much of their time to mathematical modelling [...]. So heterodox contributions have become increasingly weak and of little relevance to the real world” (Lawson in Mearman et al., 2019, p. 142), adding that their models are “worthless all the same because the methods are just irrelevant” since “modelling necessitates false assumptions” (ibid., p. 144).<sup>17</sup> When questioned about stock-flow consistent models *à la* Wynne Godley, Lawson (in Mearman et al., 2019, p. 143) responded that “if you’re using an inappropriate method to address claims rooted in reality, then it is all rather inconsistent, and the results can only be irrelevant”. This has led one of Lawson’s followers, supervised by Pratten, to make a distinction between consistent heterodox economists, who do not formalize,

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<sup>16</sup> In support of this view and in opposition to Pratten, Luigi Pasinetti (2005, p. 846) believed that the Sraffian model is an open theory that does not offer a unique solution, as it is comprised of objective relations that contain “many degrees of freedom that are left open”, thus allowing a second stage of investigation based on different institutional set-ups. Similarly, John Davis (2023) states that while production in Sraffian economics is part of a closed system, it is linked to income distribution, which remains open.

<sup>17</sup> Lawson’s (ibid, p. 142) critique that some economists are “claiming the heterodox label for themselves”, resembles Davidson’s (2005, p. 396) complaint “that various heterodox schools of thought crowded into the Post Keynesian tent”.

while those who do are said to be “confused, inconsistent, heterodox economists” (Slade-Caffarel, 2019, p. 534).

It would seem evident that methodologists have gone too far, as nearly all post-Keynesian models would qualify as inconsistent heterodox works!<sup>18</sup> The issue of consistency within post-Keynesian economics would then go beyond the status of Sraffian economics.

### Beyond pure methodology

In this section, I discuss two papers that question the coherence of post-Keynesian economics, but do so from a different perspective than the “open-systems” approach that dominated the previous debate.

#### Incoherence between strands

I begin with the paper of Walters and Young (1997), which argues that there is an irreducible lack of inner coherence within post-Keynesian economics. They claim that, for this reason, it cannot be considered “an alternative school of economic thought”, in contrast to neoclassical, Austrian or Marxian economics. Their article elicited both a brief and a lengthy response from Arestis, Dunn and Sawyer (1999a; 1999b), as well as an indirect response from Dunn (2000). Although these articles predate King’s book, they are barely mentioned in it (King, 2002, p. 218). Essentially, Walters and Young (1997; 1999) contend that efforts to seek convergence or synthesis among the various strands of post-Keynesianism, as suggested in the books of Arestis (1992) or Lavoie (1992b), or in the papers of Chick (1995) and Arestis (1996), are misguided; there is no agreed-upon foundation, and the differences are too significant. What sets the Walters and Young (1997) article apart is how three subjects – price theory, fundamental uncertainty, and endogenous money – are perceived across the different strands of post-Keynesian economics.

Walters and Young kindly provided me with a draft of their paper, but again, the seven-page single-spaced appraisal that I sent them had no influence whatsoever on the contents of the published paper. Besides learning from their paper the useful distinction between realism and realisticness, I made the following points: i) their focus should be on synthesizers (rather than on those espousing extreme views): Pasinetti, Roncaglia, Kurz, Nell, Earl, Arestis, Eichner, Sawyer, and Reynolds; ii) letting go of Marshallian micro-foundations will facilitate convergence among Sraffians and other post-Keynesians; iii) Kaleckian economics is compatible with the concept of fundamental uncertainty;<sup>19</sup> iv) there are various ways to express liquidity preference, either by examining interest rate differentials or by assessing desired ratios of assets in portfolios; v) differences in emphasis do not necessarily indicate differences in substance; vi) the greatest danger arises not from scholars attempting to build bridges, but rather from those who continually quote the Holy Scriptures; vii) the neo-Kaleckian model of growth and distribution has proven highly effective in enabling scholars from various strands, including Marxists, to develop variants that yield different results within a common framework; viii) would objectors be

<sup>18</sup> As D’Ippoliti and Roncaglia (2016, p. 27) point out, if Lawson’s position is accepted, many heterodox economists “would otherwise be relabeled as mainstream due to their adoption of closed systems and/or mathematical tools (e.g., some Sraffians and Post Keynesians)”.

<sup>19</sup> Indeed, Nobantu Mbeki (2023), whose doctoral thesis ironically was supervised by Young, has now devoted nearly an entire book to the link between Kalecki’s theories and fundamental uncertainty. Reynolds, three decades earlier was also arguing that “uncertainty is at the centre of the Kaleckian stage” (in King, 1995, p. 128). Why, otherwise, would Downward (2000) include Kalecki among the acceptable post-Keynesian illustrations of the critical-realist approach?

so insistent if the proposed synthesis had leaned less towards Kalecki and more towards Fundamental Keynesianism?

This question arose from a statement that was kept in Walters and Young (1997, p. 340): “This dominance of Kaleckian theory might be worrying however, if the outcome is the distortion of, presumably legitimate, alternative post-Keynesian views”. Broadly speaking, as argued by Arestis et al. (1999a; 1999b), Walters and Young (1997) highlighted disagreements while downplaying agreements. Instances of incoherence could easily be reframed as examples of coherence, as I myself maintained a few years later (Lavoie, 2006), giving examples around rationality, pricing and monetary theory, and as explored by Kerr (2005) when she reviewed the issue of coherence from the standpoint of King’s (2002) book.

Returning to the main feature of the previous section, Walters and Young’s (1999) reply noted that Sraffians were excluded from the definition of post-Keynesianism provided in the comment by Arestis et al. (1999a, p. 342). This exclusion reflected Arestis’s hesitations and possibly the views of Dunn. Earlier, Arestis and Sawyer (1993) had defined the political economy tradition to include Sraffian economics among one of its four strands (the fourth strand, alongside Keynes and Kalecki, being the Institutionalists).<sup>20</sup> However, in Arestis’s (1996) paper on the coherence of post-Keynesian economics, the Sraffian strand is gone. It is worth noting, however, that Sraffian economics is still significantly present in that article, as the section on pricing and production is mainly devoted to Leontief and Sraffian modelling.

### Incoherence within a strand

The second paper I wish to discuss regarding coherence – or lack thereof – is the article written by Christian Schoder (2017). I was much involved in the publication of this paper, having been asked twice to referee drafts and providing two lengthy reports. This time around, the author made substantial revisions based on both rounds of feedback, notably by adopting a more diplomatic approach and somewhat reducing the extent of his critique. An interesting feature of Schoder’s article is his focus on the internal coherence of a specific branch of post-Keynesian economics, the Kaleckian strand, particularly addressing one of my books (Lavoie, 2014) as well as articles by Engelbert Stockhammer and Eckhard Hein, a former co-author of Schoder.

Schoder’s general point, as illustrated by the title of his first draft, is that there are inconsistencies in the usual approach to the microfoundations of post-Keynesian theory. He appears to be concerned with the Lucas critique and would advocate for post-Keynesian theory to be based on deep parameters, utility functions, and optimization. There would be a kind of methodological inconsistency because while macroeconomic models are formalized, the microeconomic behaviour which justifies some of the macroeconomic equations of the model relies solely on verbal arguments or empirical stylized facts. Schoder (2017, p. 172) believes that “post-Keynesians should consider *modeling* the microstructure underlying their macroeconomic model”. Schoder further argues that it is essential to avoid theoretical inconsistencies, asserting that the microeconomic assumptions underlying the macroeconomic model should be explicit and comprehensive.

Schoder provides several examples of these contradictions between verbal rationales and formalized macroeconomic relations. In a world of optimizing entrepreneurs, as well as in the frameworks of Eichner, Wood, and Kaldor, the pricing and investment decisions should not be

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<sup>20</sup> Hart and Kriesler (2016) also include an Institutional branch. In Lavoie (2014), I introduce a fifth post-Keynesian branch, the Kaldorian strand.

independent of one another. Similarly, the dividend policy and investment decisions of firms should be interdependent. For households, the decision to supply labour should not be independent of the decision to consume. Furthermore, key variables, such as the normal rate of capacity utilization, the markup, and the propensities to consume out of income or out of wealth, should not be treated as constants. Within an optimizing framework, these variables depend on the evolution of some endogenous macroeconomic variables, such as sales, or on variables omitted from basic versions of the neo-Kaleckian model, such as the unemployment rate or interest rates. Consequently, these key variables should gradually adjust over time. If they are to remain constant, it is essential to specify the strong conditions under which this would occur.

All in all, are Schoder's critiques damning for post-Keynesian economics? A straightforward reply is that post-Keynesians assume that agents are *satisficers* – in the Herbert Simon meaning of the word – rather than optimizers.<sup>21</sup> Therefore, returning to the expansion and finance frontiers found in the chapters on the theory of the firm in Lavoie (1992b; 2014), it implies that firms are not necessarily operating at the intersection of these frontiers.<sup>22</sup> Additionally, firms, like all agents, face fundamental uncertainty. This environment provides a rationale for firms and households to act, as Schoder puts it, in a lethargic manner, as agents recognize that in such a world, satisficing is the best approach. The same reasoning applies to the other instances where Schoder questions the independence of decisions and to cases where key variables are assumed to be invariant.

Schoder devotes more than three pages to the labour supply of households and the consumption of rentiers, drawing on the sections devoted to labour supply in Lavoie (2014, ch. 5) and the consumption function of Godley and Lavoie (2007). From the former, he derives a set of equations, including a utility function that formalizes the verbal and graphical arguments presented in the book, notably the possibility of quasi-lexicographic choices. Ultimately, he recognizes that all of it can be made sense of, except that the usual assumption of a given supply of labour is necessarily a special case. Schoder regrets that a reservation wage is not included and that peer-group effects are not incorporated into the labour supply, since Lavoie (2014, ch. 2 and 5) emphasizes their importance as a crucial pillar of post-Keynesian economics. In response, it can be noted that peer-group effects are taken into account and modelled in more fancy versions of the neo-Kaleckian model or in SFC models, where the consumption of workers is a positive function of the consumption of capitalists and rentiers (see Kapeller and Schütz, 2015, as an early example, among many others). Regarding the consumption function found in Godley and Lavoie (2007), which depends on disposable income and wealth while implicitly assuming a target wealth-to-income ratio, Schoder argues that its parameters should depend on the (real) rate of interest since it affects wealth accumulation.<sup>23</sup> Similarly, Schoder contends that the markup

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<sup>21</sup> As Artinger et al. (2022, p. 600) put it, "These analyses are based on a satisficing agent and study the decision processes, routines and rules of thumb that agents and organizations actually use when complex and dynamic environments provide only limited information", that is, in a world of radical or fundamental uncertainty, meaning "that the problem is ill-defined, that the exhaustive set of states of the world and their consequences is not knowable or foreseeable at the point of decision-making" (ibid, p. 602). As a consequence, agents will satisfy themselves with some targeted aspiration level. Lavoie (2014, ch. 2), based notably on the work of Gerd Gigerenzer, a psychologist, explains how Simon's concept of bounded rationality has taken three forms – bounded optimization, cognitive illusions, environment-consistent rationality – with only the latter corresponding to old behavioural economics and being fully consistent with post-Keynesian economics.

<sup>22</sup> Moreover, despite the apparent logic of relating the targeted profit share to the planned accumulation rate, there is unfortunately little empirical evidence supporting the connection between the markup of firms and their growth rate (and neither is there between the markup and the degree of concentration), as Frederic Lee himself recognized on a number of occasions (see Lavoie, 2016b, pp. 179-182).

<sup>23</sup> It does in one variation of a model (Godley and Lavoie, 2007, p. 122), but not in the larger model that Schoder seems to have examined, which is the chapter 11 model.

should depend on the interest rate; however, this is already addressed in many of Hein's models (for instance, Hein, 2023).

Overall, Schoder raises interesting issues regarding the need for internal consistency between microeconomic verbal rationales and macroeconomic formalization. While post-Keynesians are also concerned about consistency, this has primarily been expressed through the SFC approach, which emphasizes that there should be no black holes in the accounting of a macroeconomic model. Perhaps for this reason, Schoder's paper did not attract as much attention as the earlier one by Walters and Young.<sup>24</sup>

## Conclusion

The question of coherence remains closely linked to the status of Sraffian economics within post-Keynesian economics. Besides methodologists, there are still theorists who argue that Sraffian economics is incompatible with the broader post-Keynesian tradition. Neil Hart and Peter Kriesler (2016, p. 198), the latter being a former co-author of mine, close their chapter by asserting that "Lavoie's conclusions that Sraffians and other Post Keynesians are brought together by their similarities in their positive contributions cannot be supported in the setting of the Post Keynesian perspective described in this chapter". Typically, the Sraffian version which they target is the *dominant* or *structured* version – the one tied to Garegnani, Eatwell and Milgate, and in the Australian context to Tony Aspromourgos (2004). This version closely aligns with the classical concept of free competition, a uniform profit rate, and the assumption that market prices converge towards equilibrium production prices at normal outputs. In contrast, Hart and Kriesler (2016, p. 197) highlight the Kaleckian perspective that posits that the long-run trend results from a series of short-run changes, thus introducing path-dependence. They add: "Until some coherent dynamic adjustment process can be specified which describes the 'traverse' from one equilibrium position to another in a manner that ensures that the traverse itself does not influence the final equilibrium point, the notion of a long-run equilibrium configuration that is determined independently from short-period adjustments and fluctuations will remain an elusive concept".

Well, there is now a significant tradition within Sraffian economics, particularly regarding one-sector macroeconomic models, as exemplified by Freitas and Serrano (2015) and their concept of the Sraffian supermultiplier, that provides a traverse towards a normal rate of capacity utilization, as also noted by Mongiovi (2012). These models, which depend on an autonomous non-capacity-creating demand component, closely resemble other post-Keynesian models, such as those developed by Fazzari et al. (2020) as well as various new neo-Kaleckian models, including those by Olivier Allain (2015), Lavoie (2016a) and several other prominent authors (Dutt, Hein, Palley). In these models, changes in certain parameters will induce a traverse back towards the normal rate of capacity utilization and the initial growth rate, albeit with output levels different from what they would have been without the changes.

*Dissident* Sraffian authors have demonstrated a long time ago that a multi-sector model based on full-cost pricing or target-return pricing – where prices are determined by normal unit costs that depend on the prices of other sectors – offered a valid alternative to the *dominant* Sraffian interpretation based on gravitation, which posits the long-run convergence of market prices toward equilibrium production prices. My interpretation of Sraffian prices aligns with that offered and formalized by Luciano Boggio (1990, p. 147): they are full-cost prices where "the price of each

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<sup>24</sup> Google Scholar lists only 7 citations for Schoder (including two self-citations), whereas Walters and Young (1997) collate over 80 cites.

commodity is simply determined by its production cost – measured at the normal level of utilization of capacity – plus a target rate of return”. A highly important book by Shiozawa, Morioka and Taniguchi (2019), grounded in this pricing perspective, demonstrates how a fully decentralized input-output production economy, with multiple firms in each industry, can avoid chaos and converge to a stable quantity structure. This happens while agents behave realistically in an environment of fundamental uncertainty, having access only to local information.

A fundamental principle of the study by Shiozawa et al. (2019), as previously suggested by Roncaglia (1995), is the separation of price and quantity adjustments. Prices are set by firms based on normal-cost pricing rather than by market forces; they change only when unit costs and technology change, not when demand or the distribution of demand among products shifts. As I argued in my book review (Lavoie, 2020b, p. 267): “Quantities reflect changes in demand. Prices provide the criterion to judge if a new production technique is better than previously existing ones. Prices are regulated by production costs, that is, the minimum cost for a given markup structure. What we have here is a classical or Sraffian theory of prices, slightly reinterpreted. The reinterpretation is based on three features: there is no uniform profit rate;<sup>25</sup> the normal price, based on the current normal unit cost, *is* the actual price, that is, cost-of-production prices are not prices achieved only in the long run; fixed capital is not associated with joint production”. Depreciation is allocated to the normal volume, ensuring that unit costs and production prices remain constant regardless of the actual rate of capacity utilization.

The analysis by Shiozawa et al. (2019) considers the complex network of production of commodities by means of commodities, based on a series of traverses tied to temporal sequences: production decisions and orders are made at time  $t$ ; firms acquire their inputs and produce their goods at time  $t + 1$ ; the outputs become available and are sold at time  $t + 2$ .<sup>26</sup> Adjustment to changes in demand or in the structure of demand at constant prices is made possible by the existence of excess capacity and sufficient inventories of both inputs and outputs. Their book is a significant achievement, demonstrating the compatibility of the *dissident* interpretation of Sraffian economics with the rest of post-Keynesian economics. The book prompted a symposium, where Shiozawa and his co-authors underlined the disequilibrium feature of their process analysis.<sup>27</sup>

Much more could be said about the potential coherence among the various strands of post-Keynesian economics beyond Arestis et al. (1999b). My initial efforts regarding the inclusion of the Sraffian branch were presented in Lavoie (1992c) and renewed in Lavoie (2011).<sup>28</sup> Along with others such as Kriesler, Sawyer and Julio Lopez, I have also attempted to demonstrate that

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<sup>25</sup> Arena and Blankenburg (2013, p. 94) also agree that “there is a clear analytical conceptual overlap of these approaches [those based on cost-plus price theories of post-Keynesian authors, such as Dutt, Harcourt, and Lavoie] with Sraffian authors who have replaced Sraffa’s original assumption of a uniform rate of profits with differential intra- and intersectoral rates of profits”, highlighting the work of Boggio (1990) while making a reference to the Sraffian snapshot analogy.

<sup>26</sup> Since Shiozawa et al. (2019) present their work and quasi-Sraffian model as the microfoundations of evolutionary economics, all this should please Hart and Kriesler (2024) who argue that synergies exist between Kaleckian-Kaldorian economics and evolutionary economics.

<sup>27</sup> The symposium appeared in *Metroeconomica* (2022 (1), pp. 2-48). I would submit that the proposed disequilibrium analysis would have pleased Frederic Lee (in King, 1995, pp. 194-195) as a dissident advocate of the surplus approach and of the input-output framework. By contrast, it seemed to displease one symposium participant, namely Tony Aspromourgos!

<sup>28</sup> In particular, regarding cost-plus prices and prices of production, section 3.7 of Lavoie (2014) examines their coherence (pp. 183-191 in the 2022 edition). This coherence within all the post-Keynesian strands, when the *dominant* Sraffian view is left out, was also systematically emphasized by Frederic Lee, as I have shown in my long tribute and analysis of his work (Lavoie, 2016b).

Davidson (2000; 2005) is mistaken in claiming that Kalecki and Kaleckian economics are incompatible with his own views or with the Fundamentalist branch of post-Keynesianism (Lavoie, 2015). Each strand possesses its own strengths, and a key objective for scholars should be to identify these strengths and explore how they can be coalesced in a meaningful synthesis. Of course, there are occasional or systemic theoretical or technical disagreements on many topics, just as there are in mainstream economics. However, as reflected in recent textbooks (Blecker and Setterfield, 2019; Lavoie, 2022; Hein, 2023), there is sufficient consensus to facilitate fruitful conversation and exchange among scholars from all strands of post-Keynesian economics. As Dow (in King, 1995, p. 162) used to say, the criterion for compatibility is “who talks to each other”.<sup>29</sup>

The current production of papers by Sraffians and other post-Keynesians illustrates this interdependence. Indeed, Edward Nell (2013, p. 382) noted more than ten years ago that “today the distinctions between these schools do not appear to be as sharp as they once did”, an assessment which I endorse.<sup>30</sup> In his latest writing on the topic, King (2023, pp. 1029-1030) does concede that “many of the younger scholars influenced by Sraffa do indeed take a more eclectic position on macroeconomic issues”. What counts is a general agreement on substantive issues rather than on methodology, which can be diverse.

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<sup>29</sup> To give just two examples an old one and a new one, think of the Sraffian Heinz Kurz (1991) who constructed a neo-Kaleckian model of growth and distribution, or of Sergio Cesaratto and Riccardo Pariboni (2022) who integrate the Sraffian approach to growth with the monetary theory of production *à la* Augusto Graziani.

<sup>30</sup> This opinion is not shared by everyone. A referee observed instead that “Post Keynesian economics (PKE) is moving toward fragmentation, rather than consolidation”, blaming the younger generation for this shift. Similarly, Tae-Hee Jo and Zdravka Todorova (2016, p. 10) write: “As we observed for the past decade or so [...] Post Keynesian economics has been divided into smaller groups—Fundamentalist Post Keynesians, Sraffians, Kaleckians, Kaldorians, among others (and growing discord between them)”. I suppose the assessment of this evolution depends on the sample of scholars that one meets or reads. It seems to me that several post-Keynesians, old and young, have made contributions to more than one of these four strands, not forgetting the Institutional strand, and sometimes to all of them.

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