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Tony Lawson's Critique of Modern Economics and his Contribution to Heterodox Economics

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Abstract

With a career spanning over many decades, Tony Lawson has made important contributions ranging from the philosophy of social sciences, history economic thought, methodology of economics, political economy, monetary theory, to the theory of ethics. His work concerning ontology has had a remarkable impact on economic methodologists in promoting the discussion of social ontology. Similarly, his articulation of critical realism has strengthened the criticism of heterodox economists against the economics orthodoxy regarding its lack of realism. Although not identified with a specific heterodox strand, it can be argued that Lawson's work has promoted the development and the appeal of heterodox economics in many ways. A common feature of most heterodox economics relates to the criticism of mathematical formalism which is a core principle of orthodox economic theory. Another common characteristic is the heterodox emphasis on the crucial role of economic methodology for the discipline. Further, most heterodox economists call for a more realistic approach to the study of economic phenomena. This paper will discuss the facets of Lawson's work which have exerted considerable influence on above-mentioned common attributes of heterodox economics. In particular, it will focus on: A. the argumentation countering the negative stance of mainstream economics towards economic methodology and the support of its usefulness as a subject of study. B. the critique of mainstream economic methodology and especially its use of mathematics. C. the analysis of the nature of heterodox economics. Lawson's discourses on these themes have contributed towards a credible and coherent alternative to mainstream economics.

Keywords: Economic Methodology, Heterodox Economics, Tony Lawson

JEL Codes: B20, B40, B50

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1. Introduction

With a career spanning over many decades, Tony Lawson is a prominent academic who has made important contributions ranging from the philosophy of social sciences, history of economic thought, methodology of economics, political economy, monetary theory, to the theory of ethics. His work on the philosophical and methodological foundations of economics has had a remarkable impact not only on specialists, but also on a wider academic audience. Lawson is a leading proponent of critical realism within economics (i.e. Lawson, 1997). Critical realism attempts to understand the underlying causal mechanisms and structures that produce observable phenomena. In economics, this involves a focus on understanding the social structures and institutions that shape economic behavior and outcomes. In recent years a group of scholars have extended critical realism in a particular direction that has come to be systematised as social positioning theory (see Pratten, 2022). Lawson, with his involvement in the *Cambridge Social Ontology Group* has contributed significantly to the development of the theory especially in its applications to economic issues (i.e. Lawson, 2022).

Critical realism contrasts with the dominant positivist and empiricist methodologies in mainstream economics, which often prioritize mathematical modeling and econometric techniques. In his numerous publications, Lawson has argued that mainstream economics often fails to capture the complexity and open-system nature of real-world economic processes, leading to models that are overly simplistic and detached from reality (i.e. Lawson, 2003; 2017). Moreover, he has been a proponent for an "ontological turn" in economics, which involves shifting the focus of economic research from purely empirical

and formalistic methods to a deeper consideration of the nature of economic reality (i.e. Lawson, 2019a). Consequently, Lawson supports methodological pluralism, challenging the hegemony of neoclassical economics regarding the established methods and tools for studying economic phenomena (i.e. Lawson, 2015a).¹

A large body of Lawson's scholarly output relates to the philosophy and methodology of economics. Given his substantial criticism of mainstream economics, Lawson's work falls into what has been termed "heterodox" economics. It must be noted, however, that his work cannot be identified as belonging to a specific heterodox strand (Mearman et al, 2020). Apart from his important contributions towards the critical examination of economic orthodoxy, Lawson has provided vital intellectual support to the conceptual development of heterodox economics. In fact, his ideas have had a significant impact on shaping the philosophical and methodological underpinnings of heterodox economics. He has also contributed to the understanding of the nature of heterodox economics, and therefore towards the formation of an alternative approach to contemporary economics orthodoxy (i.e. Lawson, 2006b).

Lawson is a prolific author with an academic output of more than 250 publications, including papers, books and chapters to edited volumes. Starting in mid1970's, he continues to produce academic research, still providing valuable insights regarding the underlying assumptions and limitations of

¹ It must be noted that Lawson has serious reservations regarding the widespread usage of the label "neoclassical economics", given that it is used so inconsistently across contributors and thus hinders any critical assessments of the discipline (see Lawson 2013; 2021). Following Lawson, the text uses the terms "modern economics" and "mainstream economics". "Neoclassical economics" is used only in its historical dimension.

contemporary economic orthodoxy. Even today, he is actively involved in academic debates and conferences, challenging the dominance of mainstream economics and promoting a more pluralistic approach to economic research. Lawson's publications have influenced a wide range of economists and scholars who are critical of the central paradigm in economics. A relatively good indication of the impact of his academic writings is the number of citations to his works (more than 23.000 in Google scholar).

This paper will focus only on some selected dimensions of Lawson's work which are broadly related to his critique of orthodoxy and his contributions to heterodox economics. A common characteristic of most heterodox economics is the emphasis on the crucial role of economic methodology for the discipline. Consequently, the paper will start with the mainstream economics stance towards methodology, and Lawsons' arguments in defending the usefulness of the subfield of economic methodology. This dimension of Lawson's research is especially valuable, if one considers the persistent negative stance of mainstream economists against philosophical and methodological discourse (i.e. Hahn, 1992a). Another common feature of heterodox economics relates to the criticism of orthodox economic theory, mainly in terms of its core principle of mathematical formalism. Thus, the next section will discuss the main aspects of Lawson's critical analysis of the methodological foundations of mainstream economics. Finally, Lawson's pioneering insights on the nature of heterodox economics will be presented. A concluding section will close the paper.

2. Mainstream Economics against Economic Methodology

The need for the methodological foundations of economics has been realized by most major figures in the history of economic thought. The examples of specialist works by J.S. Mill, J.N. Keynes and L. Robbins are indicative (for a history of major methodological contributions, see Blaug, 1980; Hands, 2001a). In fact, the need for methodological discourse underlying the study of economic phenomena seems to go in tandem with economic theorizing. As Dan Hausman writes: “There have been reflections on economic methodology for as long as there have been reflections on economics itself” (Hausman, 2001, p.65). The field of economic methodology as a separate discipline was established in the early 1980’s. In the words of Lawrence Boland: “Since 1982 there has been the establishment of a small, non-mainstream group of would-be methodologists...” (Boland 2003, p. 4). Nowadays, economic methodology has the characteristics of a distinguishable subfield with its own dedicated specialist journals (see also Hands, 2001b, 2015; Davis, 2007; Düppe, 2011). The *Journal of Economic Methodology* and *Economics and Philosophy* among others, are established academic Journals exclusively dedicated to the study of economic methodology.

In spite of its disciplinary progress, the field of economic methodology remains clearly outside the corpus of mainstream economics. The negative stance of mainstream economics towards methodological discourse has its roots in its theoretical and methodological development. With the gradual establishment of neoclassical economics, the subject of economic methodology started to be relegated. The rise of formalism combined with the increasing appeal of the

physics epistemological ideal were the driving forces for the negative stance towards economic methodology. Economics strived to become a “hard science”, and therefore methodological discourse was deemed not to be necessary (Drakopoulos, 2016; 2023). One clear example of this stance can be found as early as in the 1930’s. The “futility” of economic methodology is clearly expressed in the following statement by leading early neoclassical theorist Irvin Fisher:

“It has long seemed to me that students of the social sciences, especially sociology and economics, have spent too much time in discussing what they call methodology. I have usually felt that the man who essays to tell the rest of us how to solve knotty problems would be more convincing if first he proved out his alleged method by solving a few himself. Apparently those would-be authorities who are forever telling others how to get results do not get any important results themselves.” (Fisher, 1932, p. 1).

The next major phase regarding the neoclassical stance towards economic methodology was Milton Friedman’s (1953) highly influential *The Methodology of Positive Economics* essay. The essay provided a methodological outline which effectively rejects any discourse concerning the role of assumptions in economics. To a large extent and similarly to other orthodox economists, Friedman employed examples from physics in order to support his methodological arguments (for the basic paper, see Mirowski, 1984). Further, most mainstream economists seem to feel content with the methodological outline provided by *the Essay* which became extremely popular among economists in general. In essence, Friedman’s arguments set the conceptual basis for denying any substantial role of economic methodology in economics discourse. As Till D ppe remarks:

“On the contrary, his [Friedman] slogan of Who-Cares-About-Assumptions expressed nothing but the futility of philosophical arguments about economic knowledge. And only in this respect could the article be successful. It excused the economists’ ignorance about methodology and provoked the philosopher of science.” (Düppe, 2011, p.169).

It seems that there is still a persisting and widespread methodological aversion among mainstream economists that has been identified by a number of authors (for a review, see Drakopoulos, 2016). In the early 1990’s Bruce Caldwell described this tendency as follows: “Lest there be any doubt, it should be stated at the outset that, at least in the US, most economists are indifferent towards methodology, and many of the rest are openly hostile to it” (Caldwell, 1990, p.64; see also Boland 1982, pp. 1-2). A few years later, Tony Lawson also identified the mainstream economics attitude:

“It is not, I think, contentious to observe that explicit methodological analysis and commentary are widely frowned upon in contemporary economics, especially by those working in the mainstream.” (Lawson, 1994, p.106).

The situation has not changed much in the last few decades. Although there are now established specialized journals, conferences and professional societies, economic methodology is still viewed as ‘inferior’. As Hands aptly remarks:

“Particularly in the United States, the economics profession still seems to have little or no interest in elevating economic methodology to the status of a legitimate field of inquiry within the discipline of economics.” (Hands, 2015, p.62).

As a consequence, the field of economic methodology is dominated by mainly heterodox economists (see also Boland 2003; Lawson, 2006a). Thus, as in many cases in the past, current dialogue on methodological questions originates mainly from non-mainstream schools.

3. Lawson and the Defence of Economic Methodology

The debate on the role of the discipline of economic methodology in neoclassical economics resurfaced in the early 1990's. The neoclassical negative stance was explicitly expressed and was given further backing by Frank Hahn in his renowned -among economic methodologists- articles published in the *Royal Economic Society Newsletter* in 1992. Hahn's position concerning methodology was not new, given that in a 1965 paper he had stated that "methodological arguments have nothing to teach us" (Hahn, 1965, p. xi; see also Boland, 1989). In the same spirit, Hahn's advice to young economists in his 1992 paper, was to urge them to 'avoid discussion of "mathematics in economics" like the plague', and to 'give no thought at all to methodology'. This attitude was reinforced when in the July 1992 issue of the same publication, Roger Backhouse put the question: 'Should we ignore methodology?', the heading of a response by Hahn is 'Answer to Backhouse: Yes'. (see Hahn, 1992a, 1992b; Backhouse, 1992).

The basic components of Hahn's argument were the following: 1. Economists are not philosophers of science and therefore these issues are best left to specialists. 2. Methodological discussions do not have considerable impact on how economics is practised. 3. Even when they make much difference, the

results are by no means unambiguously good (e.g. positivist proselytizing). 4. Economics foundations look after themselves as there is a process of selection whereby economics with good foundations prospers while economics with bad foundations withers (Hahn, 1992a; see also Hargreaves Heap, 2000, p.96).²

Hahn's articles provoked a number of academic papers attempting to justify the usefulness of economic methodology with main examples being: Backhouse, 1992; 2010; Lawson, 1992, 1994; Hoover, 1995; Hargreaves Heap, 2000. Most of these papers provided articulated arguments and specific examples in order to counter Hahn's anti-methodology stance. It seems though that the effect of these efforts was not very significant given that the attitude of mainstream economics towards economic methodology did not appear to have changed significantly (see also Davis, 2003).

Lawson was one of the first authors to challenge Hahn's position. His central argument in Lawson (1992) revolves around the enormous influence of positivist philosophy on mainstream economics (see also below). It is the prominence of positivism which explains Hahn's views and especially his contention that methodological discussions do not have considerable impact on how economics is practised. In Lawson's own words:

“...belief that methodology makes little difference in fact follows precisely from his own uncritical acceptance of the conclusions of a specific, if erroneous, methodological/philosophical position, namely positivism.”
(Lawson, 1992, p.2)

² It is worth mentioning that Hahn's anti-methodology stance does not prevent him in engaging to a methodological criticism of the theoretical, empirical and predictive success of mainstream economics (Hahn, 1992c).

Lawson continues by arguing that one of the merits of methodological discussion is that it might undermine the grip of positivism and therefore open economics to a potentially more fruitful realist scientific philosophy (1992; see also Hargreaves Heap, 2000).

A much more detailed response to Hahn's anti-methodology arguments can be found in Lawson 1994, where he offered an explanation based on the existing epistemological foundations of economic orthodoxy. As he writes: "...the dismissal or rejection of methodology in economics arises in part as a consequence of its perpetrators holding to ... a specific philosophical perspective, a perspective that underpins and conditions contemporary orthodox economics." (Lawson, 1994, p.105). His central thesis is that the prevailing influence of positivism is the main factor for the mainstream hostility towards methodological discussion. In fact, he argues that "orthodox economists do not just discourage methodology, they do so explicitly and boldly... Moreover, they do so without much explicit or cogent argument." (Lawson, 1994, p.107).

The explicit or implicit defence of the importance of methodological inquiry in economics can also be discerned in most of Lawson's subsequent works. For instance, his 1997 monograph titled *Economics and Reality*, also contains an extensive discussion regarding the phenomenon of modern economists repeatedly making assumptions known to be wildly false. One of the core

reasons has to do with the mathematical methods being employed where they do not fit (Lawson, 1997; see also next section).

Lawson focuses again on the subject of the defence of economic methodology in an unpublished manuscript written almost a decade later (Lawson 2006a). In this work, he reiterates his view that “there is a widespread hostility to methodology among economists, certainly as an explicit, systematic and sustained endeavour.” (Lawson, 2006a, p.1) He continues by arguing that “methodology is unavoidable in research because all research contributions carry methodological presuppositions.” (Lawson, 2006a, p.1). He proceeds further to identify the costs of ignoring methodological discourse:

“Leaving methodological presuppositions implicit and unexamined can lead to inconsistencies and limitations in research outcomes.” (Lawson, 2006a, p.1).

The central role of methodological discourse is also present in a series of papers where Lawson analyzes the role of mathematical modelling in mainstream economics (Lawson, 2006b, 2012, 2015b, 2019b; see also next section).

In reference to Lawson’s attempt to explain aversion towards methodological discourse exhibited by mainstream economics, Lawson identified the following reasons: ideological concerns, psychological motives, merely defensive responses through fear, or dislike, of criticism, the lack of any philosophical training, and sheer ignorance (Lawson, 1994, p.107). In more general terms, one may distinguish two broad approaches towards this important issue. The first category of explanation has to do with the internal and institutional structure

of the field. In this sense, it draws from a viewpoint on the sociological aspects of economics (see for example, Coats, 1993; Hands, 1994). The second category refers to the methodological framework of mainstream economics and therefore, to the philosophy of science. Similarly, one can employ the tools of the *Internal* and *External History of Science* approach in order to distinguish the two general lines of explanation relating to the above discussion. Internal history of science focuses on the ways in which evidence and argument lead to scientific change. External history of science concerns how social, technological, psychological, and even natural causal factors have influenced the course of science (Hausman, 2001, p.66). It must be noted that other authors on this topic such as Backhouse (1992; 2010), Hoover (1995), and Frey (2001) lean towards an “external” approach to the status of economic methodology.

Lawson’s argumentation concerning the role of positivism has a lot in common with the views expressed by Bruce Caldwell (1982, 1990). In particular, Caldwell also emphasizes the influence of positivism on mainstream economics, and he also seems to follow an “internal” explanation. In agreement with Caldwell, Lawson analyses the redundancy of positivism in economics and maintains that the new philosophies of science (and particularly realistic philosophy), will make economic methodology much more appealing. More generally, Lawson argues that the mainstream aversion to philosophy and methodology serves to prevent the discipline from identifying the obstacles that lie in the path of an emancipated economics. He continues by suggesting that “...the widespread opposition to methodology serves to prevent criticism of the

mainstream mathematical modelling emphasis, as well the development of alternatives (Lawson, 2015b, p.199).

4. Mainstream Economics: A Critical Appraisal

Positivism

Over the many years of his career, Lawson has written extensively on the criticism of mainstream economics. There are basically two central objections regarding the methodological foundations of mainstream economics that are interconnected: the dominance of positivism and the prevalence of mathematical modelling methods. Let us first begin with Lawson's elaboration on the notion of positivism. The influence of positivism and of logical positivism on economics has long been identified by economic methodologists (for a review, see Drakopoulos, 2024). In an early article, Seligman (1969) examined its influence on the development of mainstream economics. In the same vein, Bruce Caldwell (1982) also acknowledged the huge influence of positivism on mainstream economics, and he emphasized the redundancy of positivism by philosophers of science (see also Caldwell, 1990; 2013). Other specialists have criticized positivism (and logical positivism) as scientific philosophies, and their application to the field of economics (e.g. McCloskey, 1983; Redman, 1991; Milonakis and Fine, 2009).

In Lawson's view, the underlying framework of mainstream economics is a specific version of positivism rooted in the writings of David Hume (Lawson 1994). In this version of positivism, human agents are conceived as passive sensors of atomistic events and recorders of their constant conjunctions

(Lawson 1994, pp.111-12). This particular specification of the human agent is pervasive in contemporary orthodox economics, and just as the positivist conception of science, goes relatively unchallenged. He proceeds to criticize the traditional Humean conception, arguing that it is a special case wherein a single and stable (set of) aspect(s) or mechanism(s) is physically isolated and thereby empirically identified (Lawson 1994, pp.120-21).

Instead of the philosophical framework of positivism, Lawson suggests realism (more specifically, transcendental realism), as an alternative methodological foundation for economics. In this framework, the potential for scientific and methodological criticism and insight becomes undeniable (and the relevance of contemporary mainstream economics as a whole questionable) (Lawson 1994, pp.125-6). The clear implication of his arguments is that that positivism is untenable and this means that the resulting dismissal of methodology is unsustainable (Lawson, 1994, p.128). It follows that the abandonment of positivism will make methodological reasoning in economics highly desirable. As a conclusion, Lawson offers a statement connecting the mainstream aversion to methodology to the dominance of positivism:

“Methodological reasoning in economics, then, is non-optional and currently highly desirable. It just turns out that the specific theory of methodology associated with positivism (and its displacements) is uncritical of, and so unhelpful to, science including economics.” (Lawson 1994, p.129)

Mathematical Modelling

Lawson’s other central objection concerns the prevalence of mathematical modelling methods that characterize most mainstream economics. A number

of authors have also investigated the nature of formalist emphasis of modern mainstream economics. For instance, Mark Blaug has argued that the ultimate objective of formalist revolution of the late 1940s and 1950s, was to “emulate the notorious turn-of-the-century Hilbert program in mathematics by achieving the complete axiomatization of economic theories.” (Blaug, 2003, p.145). Bruno Frey has suggested a sociological explanation of the dominance of formalism, focusing on the formalism bias of top mainstream journals. As he points out: “There is considerable bias in the direction of formalistic papers making minor addition to accepted knowledge.” (Frey, 2001, p.43). In order to explain the rise of formalism, Dimitris Milonakis employs a contextualist approach involving social, economic and political developments, and the spirit of the age (*zeitgeist*), attempting to supplement “intellectual factors” (Milonakis, 2017).

Lawson also has focused extensively on the very problematic usage of mathematics and its important theoretical and methodological repercussions for the discipline.³ One of the starting points of his analysis is to discuss the process to mathematise the economics discipline. In his view, this process has been underway for over 200 years, and it is vitally connected to the wider influence of mathematics in the western culture (Lawson, 2003, p.249). This cultural characteristic means that most people believe (almost as a matter of faith), that if a field of study is to be scientific, it must take a mathematical form. This key feature can contribute to the explanation of the mathematising project in economics (Lawson 2001a,b).

³ Lawson’s treatment of formalism in mainstream economics is a theme of his work which has received wider publicity as the article in *Le Monde* newspaper indicates (Lawson, 2001c).

Lawson proceeds to an extensive discussion of the origins of mathematization of economics. Focusing on the French tradition, he starts from the Physiocrats and especially Quesnay (1694-1774), and continues to Turgot (1727-1781), Dupuit (1804-1866), to Cournot (1801-1877) who demonstrated how to apply functional analysis to economic phenomena (Lawson, 2001a). Consequently, he moves to Walras as the height of the application of the Newtonian model of physical and mathematical science to the social sciences (see also Ingrao and Israel, 1990, p. 142; Weintraub, 2002). In order to substantiate his thesis, he observes that “to most economists, mathematical formalism is simply essential to serious substantive theorizing.” (Lawson, 2003, p.249). It is also interesting that Lawson states that formalism is also followed by many of those who prefer to think of themselves as heterodox economists. Lawson refers to Alan Kirman and Amartya Sen as examples of theorists who are very critical of contemporary orthodoxy, but still not so when it comes to its formalist methodology (Lawson, 2003, p.249; see also next section).

Lawson proceeds to provide an explanation of the origins of the substantial impact of mathematical formalism. He borrows the biological evolutionary model as an explanatory framework. As he writes:

“...the rise to prominence of the mathematising project in economics conforms (or has aspects which conform) to a significant degree to the (Darwinian) evolutionary model, to the natural selection metaphor.” (Lawson, 2003, p.280).

Lawson’s detailed analysis of the role of mathematical formalism can also be found in a number of relatively recent papers and chapters which are focused

exclusively on this theme. In a paper published in 2012, Lawson tackles again the central role of mathematical modelling in the economics academy. He starts by analysing the nature of the concept of ideology in economics, and identifies two main viewpoints. As he writes:

“In sum, two competing interpretations of the nature of ideology and how it connects to the mainstream tradition of modern economics can be found. The first supposes that mainstream economics is the more or less unrecognised product of ideology, the second sees mainstream economics as itself the ideology perhaps intentionally promoting deception.” (Lawson, 2012, p.8).

The common point of both approaches is that they characterize the mainstream project as primarily concerned with producing theories that support free-market capitalism as an optimal and thus desirable system (Lawson, 2012, p.8). According to Lawson, many heterodox economists believe that mainstream economics is dominated by a political-economic ideology that portrays the market economy as a smoothly functioning system, which is inconsistent with social reality (e.g. Keen, 2011). Lawson critically examines the above contention and concludes that it does not fare well as an explanation for the failings of economics. More specifically, he suggests that the emphasis on mathematical modelling in economics is a form of ideology itself, rooted in the widespread belief that mathematics is essential to all science (Lawson, 2012, p.11). The author suggests that this ideology of mathematical modelling contributes to the irrelevance of mainstream economics and serves to sustain the status quo by deflecting criticism from the underlying economic system.

In addition, Lawson argues that even theorists such as Alan Kirman who critically examine the nature and poor performance of mainstream theorizing, do not question the central role of mathematical tools (Lawson, 2012, p. 12; see also Kirman, 1989). Similarly, Joseph Stiglitz attacks the many unrealistic assumptions of orthodox models, but he does not question the very emphasis on mathematical modelling itself (Lawson, 2012, p.13; see also Stiglitz, 2010). In fact, and as Bigo and Negru demonstrate, there is no serious questioning of the mathematical methods even by prominent theorists who take a very critical viewpoint towards mainstream economics and its methods (Bigo and Negru, 2014). Lawson's argument that in spite of the plethora of critical papers and points of view, there has been no systematic attempt to seriously examine and challenge the dominant methodological framework of mainstream economics, seems to be valid.

Further, the persistence of the mathematical modelling emphasis in economics is explained by the cultural belief in the importance of mathematics, which has been reinforced by its successes in other disciplines. Lawson's concluding comments are worth quoting at length:

“For now it does seem safe to conclude that the primary explanation of the numerous, long lived and continuing failings of modern academic economics is the (misplaced) emphasis on mathematical modelling. It is an emphasis underpinned by the cultural belief that a reliance on mathematical technique in science is somehow so normal or neutral or natural that any questioning of this emphasis can be ignored or swiftly dismissed as obviously far too radical if not nonsensical.” (Lawson, 2012, p.19).

In a subsequent paper (Lawson, 2015b) and in the aftermath of the financial crisis of 2008, Lawson elaborates further some of the previously mentioned ideas. He focuses on the central fallacies of modern economics in the form of twenty criticisms. The first important observation is that the failings of modern economics have been present for the past 50 years and are not limited to the recent economic crisis. The inability of economists to predict the timing of the crisis is not a failing of the discipline. This view is misguided in the sense that It has only encouraged economists in the idea that event prediction is the legitimate goal to pursue. Instead, social reality is open and specific manifestations are highly contingent (Lawson, 2015b, pp.192-4).

A summary of the main arguments in Lawson (2015b) is the following: A central factor for the poor performance of the discipline relates to the issue of mathematical methods that are employed extensively in economics. Lawson emphasizes again that the project of mathematizing economics is not a recent phenomenon. Although It has become more apparent in the post WWII decades, it has been ongoing for over 200 years and its dominance is not due to explanatory successes. The prevalence of mathematical modeling in economics is driven by a methodological ideology, not by right-wing or neo-liberal ideology as many heterodox economists claim. Mathematical models in economics do not generate new insights about social reality, but rather insights are incorporated into the models themselves. Further, they are not used in a neutral fashion and are inappropriate for the study of economic phenomena. Consequently, most problems in the discipline originate from the emphasis on mathematical modeling methods. These methods are not suitable for the conditions of economic and social reality, given that false assumptions and

questionable modeling methods cannot be justified or used if they generate agreeable conclusions. Thus, criticizing the unrealistic assumptions of mathematical models is not enough to make progress in economics, as the methods themselves are inappropriate for the subject matter of the discipline. In his view, the solution to making economics more relevant does not lie in revising assumptions or using more complex forms of mathematical modeling (Lawson, 2015b, pp.194-203).

Lawson's proposals for transforming the discipline of economics is first of all the emancipation from its methodological blinkers (especially the mathematical methods), in order to become relevant. Ethics, morality, and philosophy (particularly ontology), cannot be avoided and are essential for a transformed discipline and for the understanding of the nature of social reality. A transformed economics should address moral and ethical concerns in an explicit and systematic fashion (Lawson, 2015b, pp.205-206).⁴

In a subsequent chapter, Lawson (2019b) brings again the role of mathematics in modern economics, but he also discusses viewpoints expressed by some economic methodologists on this subject. His first important comment assesses the contribution of the mathematical modelling project in economics. Following his assessment in his previous works, Lawson re-emphasizes that this project has been poor at providing explanatory real-world insight. The main reason for this failure is that mathematical modelling is ill-suited to social analysis because

⁴ See Fleetwood (2006) for an example of a critical-realist analysis of labour markets that is close to Lawson's ideas.

social reality is open and mathematical modelling requires closures (see also Lawson, 2023).⁵

On an equally important theme, Lawson maintains that there is no justification for the principal role of mathematical economic modelling in the discipline, and he calls for more analysis and engagement in the debate regarding its character and value in economic theorizing. Consequently, he presents other arguments made by heterodox economic methodologists on the same topic, focusing on the position of Geoff Hodgson (2009; 2012) who has taken issue with Lawson's stance on the topic (Lawson, 2019b, pp.1-4).

Lawson attempts to respond to Hodgson's characterization that his arguments against mathematics place him at the "extreme", given the "moderate" view that the mathematical methods are not the main problem for mainstream economics. In his words:

"Even amongst heterodoxy, many just assume that the application of methods of mathematical modelling (in the context of an open social system) cannot itself be the problem, preferring to believe that the difficulties that currently characterise the discipline derive instead from specific modelling assumptions contingently employed." (Lawson, 2019b, p.11).

Lawson disagrees that specific modelling assumptions are the core of the problem. Nevertheless, he is open to a balanced and engaged discussion on

⁵ Sheila Dow's viewpoint seems to be close to Lawson. She is "...critical of reliance on formal mathematical axiomatic systems in economics, on the grounds that mathematics is insufficient to capture all that is important for us to understand in economic processes." (Dow, 2003, p.559).

the topic, and suggests that the lack of justification for mathematical modelling in economics is a significant issue (Lawson, 2019b).

Finally, a principal consequence of the of heavy reliance on mathematical deductivist modelling, is the very poor performance of contemporary mainstream economics to explain economic phenomena. In view of the 2008 financial crisis, Lawson states that: "The fundamental failing of modern economics, or at least of its dominant mainstream project, is not that it was unable successfully to predict the recent crisis but that it is ill-equipped to illuminate much that happens in the economy at any time." (Lawson, 2009a, p.122; see also Lawson, 2009c). As a final word, it must be noted that Lawson is not alone in his severe criticism of mathematical formalism in economics. The assessment of Mark Blaug, a major figure in economic methodology, is indicative:

"Modern economics is sick. Economics has increasingly become an intellectual game played for its own sake and not for its practical consequences for understanding the economic world. Economists have converted the subject into a sort of social mathematics in which analytical rigour is everything and practical relevance is nothing." (Blaug, 1997, p.3).

5. The Nature of Heterodox Economics

Another important dimension of Lawson's work is his contribution towards the understanding of the nature of heterodox economics. One can detect elements of his analysis on this topic in many of his papers (e.g. 2009b), but the core of Lawson's argumentation is to be found in his article in the *Cambridge Journal of Economics* (2006b). The first point of observation is that there are many

separate traditions and streams of thought that can be placed under the umbrella term of heterodox economics. The streams of thought include post-Keynesianism, (old) institutionalism, feminist, Marxian, Austrian and social economics, among others (Lawson, 2006b, p. 484). The various traditions within heterodox economics share common themes and emphases, but there is often disagreement on specific theories, policies, or methodological stances. It seems that Lawson agrees with other authors (e.g. Colander et al., 2004) that the only common unifying element of heterodox traditions is their rejection of economics orthodoxy. He employs the example of post Keynesians where the only definite point of agreement among them is that they stand opposed to the mainstream or 'neoclassical' contributions (Lawson, 2006b, p. 485).

Moreover, he contends that the main distinction between heterodoxy and orthodoxy lies in matters of ontology. With respect to heterodox economics, ontological orientation focuses on openness, processuality, and internal-relationality (Lawson, 2006b, p.497). In contrast, the mainstream project of modern economics is characterized by a reliance on mathematical-deductive methods and assumes closed systems and isolated atoms, which may not be appropriate for social analysis (Lawson, 2004; 2006b, pp.494-497).⁶ He proceeds to argue that the limitations of the mainstream project arise because its emphasis on mathematical-deductive reasoning does not align with the nature of social reality. The ontological presuppositions of the insistence on mathematical modelling include the restriction that the social domain is

⁶ For a detailed discussion of Lawson's conception of open and closed systems and their relationship to the mathematical formalism of mainstream economics, see Lawson, 2023. Chick and Dow (2005) examine the meaning of open systems including its interpretation by Lawson in 1997; 2003; 2004.

everywhere constituted by sets of isolated atoms (Lawson, 2006b, pp.494-495).

On the contrary:

“The dominant emphases of the separate heterodox traditions, in other words, are just manifestations of categories of social reality that conflict with the assumption that social life is everywhere composed of isolated atoms.” (Lawson, 2006b, p.497).

Lawson points out that that the basic distinction between orthodox and heterodox economics is the heterodox economists willingness to approach theory and method in a manner informed by available insights into the nature of social reality (Lawson, 2006b, p.502). As a result, heterodox economics offers a different approach to understanding and studying the social and economic world, focusing on the nature of social reality and the specific aspects of socio-economic life that each tradition finds important (Lawson, 2006b, p.499; for studies on the nature of heterodox economics, see also Dow, 2009; Hodgson, 2019).

In a subsequent chapter published in an edited book a few years later (Lawson, 2009b), Lawson reiterates and elaborates some of his main arguments concerning the nature of heterodox economics. He re-emphasizes his central point that current mainstream economics is characterized by its continuing insistence upon forms of mathematical deductivist reasoning. Consequently, the feature that unites the various contemporary heterodox projects is recognition that the mainstream mathematical-deductivist emphasis presupposes an ontology that is at odds with (or at best a very special case of)

our most sustainable account of the nature of social reality (Lawson, 2009b, p.101).

In Lawson's view, the real essence of the heterodox opposition is a particular ontological conception. As mentioned before, this particular conception is at odds with the implicit (closed-system and atomistic) ontology of mainstream deductivist reasoning. Thus, the differences in ontological conception can explain the heterodox stance against economics orthodoxy (Lawson, 2009b, p.99). In order to demonstrate the notion of ontological conception, Lawson uses examples of specific schools of heterodox economics. In the case of Post Keynesians, the idea of fundamental uncertainty is basic:

“Post Keynesians, for example, make fundamental uncertainty a central category. This clearly presupposes an ontology of openness as many post Keynesians have in recent years come increasingly to acknowledge.” (Lawson, 2009b, p.125).

According to Lawson, not all streams of thought which do not identify with mainstream economics, can be categorized as heterodox. He employs the case of contemporary behavioral economics in order to substantiate his arguments.

As he writes:

“Behavioural economics is a programme that claims to combine psychology and economics in investigating what happens in markets where people display (what economists seem to perceive as) ‘non-rational’ motivations or behaviours (such as fairness, envy, present-bias, and so forth). So conceived, the programme need not be formalistic at all. However, as it is being taken up in economics it seems still to be mostly a deductivist modelling endeavour, thus presupposing the usual systems of isolated atoms. In most cases, indeed, atomistic agents

continue to maximize a preference relation over some space of consequences where any solution typically involves standard equilibrium concepts.” (Lawson, 2009b, p.106).

Many specialists distinguish between “old” and “new” or “modern” behavioural economics. Herbert Simon’s work is placed at the centre of old behavioural economics (e.g. Sent, 2004; Frantz, 2020). The roots of new behavioural economics may be traced back to the 1970s, especially in the work of Daniel Kahneman and Amos Tversky (see also Heukelom, 2014). In agreement with Lawson, Kao and Velupillai also suggest that many leading modern behavioural economists do not reject the validity of the neoclassical analysis: “Though behavioural models do consider more realistic psychological or social effects, economic agents are still assumed to be optimizing agents whatever the objective functions may be.” (Kao and Velupillai, 2015, p. 246).⁷

Furthermore, Lawson assesses the relatively new field of Neuroeconomics using the same framework. He pinpoints to different stands with different characteristics (including a non-formalist one). However, “...an increasingly dominant strand of Neuroeconomics is a further form of mathematical-deductivist modelling closely allied to behavioural economic modelling.” (Lawson, 2009b, p.107).

Old institutionalist economics, rooted in the intellectual tradition of Veblen, and represented by contemporary economists such as Geoff Hodgson and Anne Mayhew, is another heterodox school that Lawson has discussed. Lawson

⁷ For further backing of this argument and for a discussion of the differences between old and new behavioral economics, see Drakopoulos and Katselidis, 2024, pp.93-98; Esposito and Mastromatteo, 2024.

agrees with Hodgson that the assertion that “Institutionalism treats individuals not as fixed utility maximizers, but shaped by their institutional and cultural situations.” (Lawson, 2005, p.8; Hodgson, 2000, p.38). He argues that this is a central characteristic of institutionalism which places it in opposition to mainstream economics. Further and in the same manner as other heterodox schools, this distinction can be sustained only on ontological rather than substantive or policy grounds (Lawson, 2005, p.11). As he writes: “It is a conception that is at odds with the implicit (closed-system and atomistic) ontology of mainstream deductivist reasoning, and so ultimately accounting for the heterodox oppositional stance.” (Lawson, 2009b, p.99). Thus, old institutionalism represents an example of the real essence of the heterodox opposition to mainstream in terms of an ontological conception.

6. Concluding Remarks

The main purpose of this paper was to discuss Tony Lawson’s critique of modern economics and his contributions to heterodox economics, by focusing on selected specific works from Lawson’s large scientific output directly connected to these two themes. The opening section investigated the negative mainstream economics stance towards the subfield of economic methodology. Apart from countering the mainstream stance, Lawson’s works have also attempted to demonstrate its usefulness as a subject of study for a number of reasons. The loosening of the grip of positivism and the opening of economics to a potentially more fruitful realist scientific philosophy, are two main reasons suggested by Lawson. The following section considered

Lawson's critique towards mainstream economics methodology. Lawson's arguments were categorized into two stands: an analysis of the influence of positivism and an analysis of the use of mathematics. Instead of the outdated scientific philosophy of positivism, Lawson suggests realism, as an alternative methodological framework for economics. Concerning the mainstream economics emphasis on mathematical modelling, Lawson claims that it is a form of ideology itself. In his view, most problems in the discipline originate from the emphasis on mathematical modeling methods, which are not suitable for the conditions of economic and social reality. A central factor for the poor performance of the discipline (especially in the wake of the financial crisis of 2008), relates to the issue of mathematical methods that are employed extensively in economics. The final section dealt with Lawson's investigation of the nature of heterodox economics. Lawson argues that the real essence of the heterodox opposition is a particular ontological conception that is at odds with the implicit (closed-system and atomistic) ontology of mainstream deductivist reasoning. Further, in his many works on this subject, he has provided an in-depth analysis of the different heterodox economics schools by utilizing the notion of ontological conception.

Without doubt, Lawson's discourses on the above issues are extremely valuable. The field of philosophy and methodology of economics has been enriched by his innovative ideas, substantiated criticism and meticulous argumentation. Apart from contributing to the understanding of the nature and the methodological foundations of mainstream economics, his work has also set the methodological agenda for an alternative approach to economic phenomena based on social ontology. The effort towards the formation of a

coherent, credible and more relevant alternative to mainstream economics has been greatly assisted by Lawson's intellectual endeavors.

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