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Methodology in *Capital in the twenty-first century:* a "new-historical" approach to political economy

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Abstract: This paper explores the methodological foundations of Thomas Piketty's recent book *Capital in the twenty-first century.* The current literature on Piketty's work lacks consensus as to which paradigm of economic thought *Capital* fits into (if any). In response to that literature, this paper argues that Piketty offers a new methodological direction for economic science in the form of an analytical 'new-historicism'. The central emphasis of this methodology is an analysis of general dynamic laws on three levels: distribution, institutions, and history. A new-historical methodological framework applies new analytical tools to old economic problems raised by Smith, Ricardo, Marx, and others. This distinguishes Piketty's framework from other contending paradigms or schools of economic thought, thereby alleviating confusion in the current literature surrounding Piketty's book.

Keywords: Thomas Piketty, capital, economic methodology, history of thought, political economy

JEL Classification: B25, B41, E25

I. INTRODUCTION

Thomas Piketty's (2014) *Capital in the twenty-first century* (from here on *Capital*) has been praised as "one of the watershed books in economic thinking" (Milanovic 2014, 519) and derided as a work whose conclusions "do not appear to be backed by the book's own sources" (Giles 2014, 1). However, for all that has been said about Piketty's book, it appears that more effort has been directed toward stating what *Capital* is not rather than what it is. Piketty's work is not easily pigeonholed; it provides economists with an array of sweeping insights

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backed by lengthy and comprehensive data sets. For its uniqueness, Piketty's work should be praised. However, the uniqueness of Piketty's methodology makes it difficult to classify his work. When trying to understand what exactly *Capital's* methodology consists in, the expansiveness of Piketty's analysis becomes problematic for those who wish to categorize the work within the history of economic thought. Institutionalist economists claim that *Capital* "ignores institutions" (Acemoglu and Robinson 2015, 1), Galbraith (2014a) critiques Piketty from a post-Keynesian perspective, Marxist economists do not support Piketty (Harvey 2014), while the Austrian school insists that Piketty is, in fact, a Marxist (Reisman 2014).

For all the disagreement about where Piketty's methodology locates *Capital* in the spectrum of economic thought, there seems to be little agreement about what the methodological pillars of *Capital* actually are. But, before there can be agreement or disagreement about what school of thought *Capital* belongs to, there must be a comprehensive analysis of its methodology. This paper seeks to provide that analysis. In Section II this paper gives a general overview of *Capital* and identifies the central characteristics of the methodological framework. Section III responds to the lack of consensus in the literature, arguing that Piketty's methodology offers a new direction for economic science in the form of a new-historical analysis. This is predicated on an interpretation of *Capital* that analyzes general, dynamic laws on three levels: the level of distributions, the level of institutions, and the level of history. Section IV identifies some sources of confusion about the fit of *Capital* in the history of economic thought. Section V offers some concluding remarks and suggestions for future inquiry.

II. *CAPITAL IN THE TWENTY-FIRST CENTURY*: AN OVERVIEW

The stated goal of *Capital* is a historical study of long-run distributional trends of wealth and income, rooted in "as complete and consistent a set of historical sources as possible" (Piketty 2014, 19). The text is structured according to three sections: an analysis of the capital/income ratio over time, an analysis of the structure of inequality (both wealth and income) over time, and policy recommendations based on those analyses. The historical analysis of *Capital* is woven into the framework of three "fundamental laws of capitalism", the formation of which is guided by three central methodological pillars: distributional analysis, historicism, and analysis of institutions. The following paragraphs will analyze the ways in which Piketty makes use of the three central methodological pillars of distributional analysis, historicism, and analysis of institutions in the context of the development of the three fundamental laws of capitalism.

First, it is necessary to discuss what exactly is meant by the term 'law'. While the word—as it is used by Piketty—echoes language used by Marx and Ricardo, the laws that Piketty cites are not strictly empirical propositions (as in laws of nature). The first two fundamental laws are analytic propositions, a priori truths. The third fundamental law combines an empirical proposition with an analytic one. As will be noted later, the fact that '$r > g$' holds is not a historical necessity (there may be economies where '$r < g$'), but it is necessarily true that if '$r > g$', then inequality will increase.[1] Given the nature of the fundamental laws, a better description might be to call them 'principles' (this fits with the tradition of the classical economists). Principles may be considered fundamental in the sense that they reflect relationships that influence the dynamics of *all* capitalist economies. In presuming that these relationships govern the dynamic properties of any (and all) capitalist economies, they have a law-like quality. For the sake of fidelity I will continue to use the term 'law' here, but it is used in the loose sense discussed above.

Piketty's first fundamental law is a distributional law, it says that the share of capital in national income is a function of the product of the rate of return on capital and the capital/income ratio. In Piketty's notation:

$$\boldsymbol{\alpha = r \; x \; \beta} \tag{1}$$

Where α = capital share in national income, r = rate of return on capital, and β = capital/income ratio.

This law, Piketty notes, "is a pure accounting identity. It can be applied to all societies in all periods of history, by definition" (2014, 52). Piketty's first general law gives two key insights into his methodological

[1] For those unfamiliar with Piketty, 'r' is the rate of return on capital and 'g' is the rate of growth of the economy. Piketty defines capital as "the sum total of nonhuman assets that can be owned and exchanged on some market" (Piketty 2014, 46). Growth is defined by Piketty as "the annual increase in income or output" (Piketty 2014, 25). It is a central contention of *Capital* that when '$r > g$' the distribution of wealth tends to become more unequal.

framework: the first concerns distributional analysis; the second concerns the formation of a general (or abstract) notion of capital.

The second methodological implication of Piketty's first fundamental law has shown itself to be problematic. Some authors (Galbraith 2014a; Fullbrook 2014) claim that Piketty has either no concept of capital at all, or at best a very confused understanding of capital. In order to fully address these critiques and explain the methodological implications of Piketty's first fundamental law, it is necessary to unpack the logic behind Piketty's formation of an abstract notion of capital.

The classical political economists understood that to describe the dynamics of an economic system over time, it is necessary to have an abstract notion of how its parts function (so as to properly conceptualize the dynamic movement of the economic system). With the first fundamental law of capitalism, Piketty reveals the influence of the classical economists on his project. He writes: "[T]o summarize I define 'national wealth' or 'national capital' as the total market value of everything owned by the residents and government of a given country at a given point in time, provided that it can be traded on a market" (2014, 48). While Piketty's notion of capital may not conform to the majority understanding of capital, this does not imply that he has no concept of capital at all (Fullbrook 2014). Although Piketty's understanding of capital is more abstract than definitions of physical capital, it is nowhere near as abstract as others—such as the Marxian notion of capital as a social relation, or Bohm-Bawerk's characterization of capital as a flow of dated labor quantities (Roncaglia 2005). In fact, Piketty's measure of capital is essentially a financial valuation of different stock variables—something Galbraith (2014a) notes (which Piketty does not deny)—amounting to an equivalency with wealth. Wealth may be abstract, but it is for the most part measurable. In a later article Galbraith appears to soften his position, conceding "nothing prevents us from measuring r [the rental rate of capital]—as Piketty defines it—from the observed profit flow and financial valuation of the capital stock" (2014b, 146).

Whether or not Piketty's understanding of capital is common, he argues that such an understanding is essential to engage in proper distributional analysis:

> The capital/income ratio for the country as a whole tells us nothing about inequalities within the country. But β does measure the overall

> importance of capital in a society, so analyzing this ratio is a necessary first step in the study of inequality (2014, 51).

Piketty's first fundamental law of capitalism aptly demonstrates the first of the three central methodological pillars present in *Capital*, that of distributional analysis. It is not surprising that distribution would play a central role in Piketty's methodology given his admiration for the classical project. For example, he states in *Capital*:

> The economists of the nineteenth century deserve immense credit for placing the distributional question at the heart of economic analysis and for seeking to study long-term trends […] It is long since passed the time when we should have put the question of inequality back at the center of economic analysis and begun asking questions first raised in the nineteenth century (2014, 16).

In turn, the second methodological pillar—evident in Piketty's second fundamental law of capitalism—highlights the general historical framework, in which the entirety of his analysis takes place. This emphasizes the importance of taking into account historical contingencies during the process of economic analysis.

Unlike his first law, Piketty's second fundamental law of capitalism is not an accounting identity (2014). Rather, as Milanovic (2014) points out, the second fundamental law of capitalism is a long-run equilibrium condition for the capital/income ratio in a given economy—Piketty calls it an asymptotic law (2014, 168). He expresses the law as follows:

$$\boldsymbol{\beta} = \frac{\boldsymbol{s}}{\boldsymbol{g}} \tag{2}$$

Where β = capital/income ratio, s = rate of savings, and g = rate of growth.

The long-run equilibrium condition does not address the historical factors that ultimately determine whether the capital/income ratio will be high or low (the third fundamental law does this), it simply tells what the long-run equilibrium capital/income ratio will be for a given rate of savings and growth. The establishment of long-run dynamic equilibrium conditions points to an important implication of Piketty's methodology. In the context of *Capital*, proper economic analysis requires long time-horizons, especially in developed economies. Capitalist economies with advanced financial markets may have extreme fluctuations in both growth and savings patterns in the short-run, subsequently affecting the distribution of income and wealth. In addition to fluctuations in asset prices that occur in the short run, it is also possible for structural adjustments or institutional shifts to occur that may hide long-run trends. Piketty's (2014) commentary on Simon Kuznets demonstrates the problem with short-run frameworks.

Piketty challenges the conclusions that are drawn from Kuznets's famous U-shaped curve, which shows the relationship between income and inequality. Piketty contends that "[n]o generalized structural process of inequality compression (and particularly wage inequality compression) seems to have operated over the long run" (2014, 274). Instead, it is the "budgetary and political shocks of two wars" (2014, 148) that proved to be the cause of the relationship observed by Kuznets. As Piketty extends his analysis, the data he incorporates appear to support his critique of Kuznets. The methodological implication that Piketty draws from this—simultaneously reflected in his second fundamental law—is that "a generation […] is the most relevant timescale for evaluating change in the society we live in" (2014, 74). Accurate economic analysis must pursue a long-run historical framework, or risk having insights obfuscated by short-run economic fluctuations rooted in historical contingencies.

Piketty's second law also reinforces the methodological principle of distributional analysis introduced in the first law: "A country that saves a lot and grows slowly will over the long run accumulate an enormous stock of capital (relative to its income), which can in turn have a significant effect on the social structure and distribution of wealth" (2014, 166). Historical processes contribute to present distributional arrangements, making it necessary to analyze the evolution of savings and growth patterns over time in order to understand the present distribution.

Piketty's third and final fundamental law of capitalism—the famous '$r > g$' inequality—represents a synthesis of the first two methodological pillars of *Capital*; it is the clearest demonstration of Piketty's third methodological pillar, the importance of the analysis of institutions.

Piketty introduces the inequality relation '$r > g$', citing it as "a historical fact, not a logical necessity" (2014, 353). The third fundamental law of capitalism states that so long as the inequality relation '$r > g$' occurs in an economy, "wealth originating in the past automatically grows more rapidly, even without labor, than wealth stemming from work, which can be saved" (2014, 378). As a result, distributional inequality skyrockets as ownership of wealth becomes more and more unequal. However, that '$r > g$' is regarded as historical fact and not logical necessity implies the following: "[I]ts truth depends, however, on the shocks to which capital is subject, as well as on what public polices and institutions are put in place to regulate the relationship between capital and labor" (Piketty 2014, 358). The methodological implication of interpreting '$r > g$' as a contingent historical fact is that the distribution of income—and thus long-run historical trends, of which '$r > g$' is one—can be altered by changes in public policy and institutional frameworks. Thus, institutions are key in determining economic outcomes. The prominent role of institutional analysis as a methodological tool is emphasized in Piketty's (2014) discussion of the manner in which 'r' is itself determined. Without an analysis of institutions one cannot come to a complete understanding of the process by which 'r' is determined.

For Piketty the rental rate of capital is determined by the available technology and the valuation (or amount) of total available capital (2014). Colander criticizes Piketty's model for "accepting marginal productivities [as given]" (Colander 2014, 162). This critique unfortunately misses the mark. Not only is Piketty critical of marginal productivity theory in general (a point to be revisited below), but the price of capital is only given insofar as the relevant technology and institutions remain unchanged. Piketty writes:

> The price of capital, leaving aside the perennial short and medium-term bubbles and possible long-term structural divergences, is always in part a social and political construct: it reflects each society's notion of property and depends on the many policies and institutions that regulate relations among different social groups, and especially between those who own capital and those who do not (2014, 188).

Piketty's third fundamental law thus clearly highlights the importance of institutionalism as a methodological pillar in his analysis.

III. A NEW-HISTORICAL FRAMEWORK

Given Piketty's use of distributional analysis, historicism, and institutionalism as the framework for his methodology, what can be said about where *Capital* falls in the history of economic thought? This paper contends that Piketty (2014) offers—or at least hints at—a new-historical way of thinking about economics. In what way then, does Piketty's work deserve this title?

First, the term 'new-historical' is intended to contrast with the moniker commonly applied to mainstream economics—i.e., 'neoclassical'. It is because of the disregard for distributional issues that this comparison with neoclassical economics is necessary. The new-historical label serves a dual purpose with reference to its neoclassical counterpart. The first purpose is that it draws attention to Piketty's methodology, viz. that it brings new insights to issues of historical import in the field of economics—e.g., Piketty's article "Putting distribution back at the center of economics" (2015). The second purpose is to point out the ways in which neoclassical economics has (for the most part) ignored the important role played by class and distribution in the history of economic thought.

The second reason Piketty's work deserves the title new-historical is because *Capital* marks a return to the tradition of economic thought—popular in both the classical political economy period and the pre-political economy period—that regards economics as both a scientific and a moral inquiry. Like many early economic thinkers, Piketty is concerned with the normative aspect of economic research. In some ways, the distributional analysis central to both the classical economists and Piketty is inherently normative. Piketty writes:

> It is essential to carefully distinguish these various aspects and components of inequality [or of the distribution], first for normative and moral reasons (the justification of inequality is quite different for income from labor, from inherited wealth, and from differential returns on capital), and second, because the economic, social, and political mechanisms capable of explaining the observed evolutions are totally distinct (2014, 243).

The source of a given distribution of wealth—be it just or unjust—has critical implications for the response to that distribution, including whether or not that distribution should be altered through policy. One cannot ignore the ethical implications of an inequitable distribution; placing distributional analysis at the center of the new-historical framework requires one to put moral inquiry alongside it. New-historical economics spurns the logical positivism advocated by Friedman (1953). Economic science cannot afford to be 'value-free' if it wishes to ask valuable questions.

Finally, *Capital* represents a new-historical methodology because it is not merely historical. Piketty is not simply picking up where the classical economists left off. The new-historical classification is intended not only to distinguish Piketty's (2014) work from the neoclassical paradigm, it is intended to show that Piketty's methodology—while still maintaining the spirit of the classical mode of analysis—differentiates itself from the historical project of the classical economists in various ways.

Perhaps *Capital*'s most significant departure from the classical school is Piketty's critique of marginal productivity theory—a theory originating in Ricardo's corn model.[2] While Piketty places himself in the classical tradition by developing a methodological framework of distributional analysis, historicism, and institutions, he diverges from the classical economists regarding the way in which the price of productive factors is determined relative to marginal productivity (and in turn, the way in which the price of those factors determines the distribution of income in an economy).

Piketty's critique targets marginal productivity theory as it appears in neoclassical economics (one of the few theoretical tools of classical political economy to appear in neoclassical economics, albeit in an altered form); but, it is important to note that the theory finds its origins in Ricardo's theory of differential rent, highlighting Piketty's uniqueness. Piketty writes:

> The main problem with marginal productivity theory is quite simply that it fails to explain the diversity of wage distributions we observe in different countries at different times. In order to understand the dynamics of wage inequality, we must introduce other factors, such as the institutions and rules that govern the operation of the labor market in each society (2014, 308).

For Piketty, it is not enough to take the marginal output of the factors of production as given by the level of technology. To conclude that the distribution of income is determined by the prices of production that result from those marginal productivities is unrealistic. Additionally, not only is the marginal productivity of a factor of production determined by more than technology (e.g., it can be

[2] Although some scholars dispute whether or not Ricardo's law of rent and the margin of production actually constitute the first instance of marginal productivity theory, at the very least one can say that it is here that the seeds for a future marginal productivity theory were sowed.

determined by human capital, availability of natural resources, etc.), but it is not marginal productivity alone that determines the prices of production. Piketty's third methodological pillar reminds us that institutions must be accounted for, and different institutional arrangements can affect the distribution of income in ways that do not necessarily reflect the marginal productivity of various inputs. Syll highlights the intuitive logic behind Piketty's rejection of marginal productivity theory: "put simply—highly paid workers and corporate managers are not always productive workers and corporate managers, and less highly paid workers and corporate managers are not always less productive" (Syll 2014, 40).

IV. RESPONSE TO THE LITERATURE

Much of the literature in response to *Capital* has taken a critical stance toward Piketty's work (this is undoubtedly necessary and justified). However, the body of work that criticizes Piketty's methodology—including the broader literature that seeks to evaluate *Capital* as a work from a particular school of thought—have been misguided. Once one views *Capital* as a new-historical work, many of the confusions found in the critical literature cease to exist. I have shown that the controversy surrounding Piketty's definition of capital (also see Galbraith 2014a; Galbraith 2014b; Fullbrook 2014) becomes diffused when it is viewed in context, i.e., as an abstract notion of capital *à la* Ricardo or Marx. While there may be other examples in the literature, Acemoglu and Robinson (2015) and Colander (2014) provide two further cases where proper identification of Piketty's methodological framework can clarify confusion.

Acemoglu and Robinson claim that "the question for general laws of capitalism is misguided because it ignores the key forces […] institutions and the political equilibrium" (2015, 1). Setting aside the emphasis that Piketty places on social and institutional factors in determining economic outcomes,[3] Acemoglu and Robinson's (2015) approach is flawed because it misinterprets Piketty's '$r > g$' inequality relation due to a lack of methodological context. Acemoglu and Robinson write, "$r > g$ cannot be taken as a primitive on which to make

[3] Note one particular portion of text here—Piketty writes: "the market is always embodied in specific institutions such as corporate hierarchies and compensation committees" (2014, 332). See pages 74-75, 140, 145-149, 188, 234, 237, 332, 356-358 of *Capital* for further discussion of the role of institutions.

future forecasts, as both the interest rate and the growth rate will adjust to changes in policy, technology and the capital stock" (2015, 11). The origin of this argument is unclear, because Piketty himself says just as much; recall his claim that '$r > g$' is "a historical fact, not a logical necessity" (2014, 353). Acemoglu and Robinson (2015) seem to misinterpret the meaning of Piketty's third fundamental law, due to a lack of proper understanding of the methodology of *Capital*. Once Piketty's historicism and institutionalism are made obvious, it becomes clear that he does not take the third fundamental law to be "a historical primitive" but rather a historically contingent fact, the occurrence of which leads to inequality (but whose occurrence is in no way necessary). Endogenously determined interest and growth rates do little to undermine Piketty's conclusions, given that the basis of the policy recommendations developed in the latter chapters of *Capital* depend on the premise that changes in institutions can prevent '$r > g$' from occurring (i.e., the conclusion that r and g are in fact endogenously determined).

Colander deserves credit for being (mostly) correct in his analysis of *Capital*—he writes:

> The problem with Piketty's discussion is that it is based in a Ricardian, not a Millian, framework in thinking about the distribution problem […] David Ricardo framed the income distribution question as a technical production issue. In Ricardo's model technology determines marginal products and marginal products determine income distribution (2014, 161).

Colander's analysis is correct insofar as Piketty's analysis is Ricardian in origin. However, Colander misses that Piketty's methodology is not merely classical, for Piketty's critique of marginal productivity theory—insofar as wages and rents are not strictly determined by marginal productivity—represents a break from the Ricardian canon. By overlooking this differentiation, Colander finds himself arguing against a Ricardian notion that does exist in Piketty's *Capital*.

V. CONCLUSION

Acemoglu and Robinson (2014), Colander (2014), and Galbraith (2014a; 2014b) offer three examples of interpretive confusion resulting from a lack of methodological classification of Piketty's work. In this paper, I have provided an analysis of the methodological foundations underlying Piketty's (2014) work in an attempt to clear up this confusion. I have shown how a new-historical framework—based on distributional analysis, historicism, and institutionalism—is developed within the pages of *Capital*. I have examined the way in which the new-historical methodology differentiates itself from other contemporary paradigms of economic thought, and suggested ways in which acknowledging this differentiation leads to a better interpretation of Piketty's work. Future research is needed to clarify and expound upon the principles of a new-historical system, and further, to address the ways in which a new-historical framework affects the mathematization of Piketty's theory (see the problematic adaptation of Piketty's (2014) theory to a Solow model by Acemoglu and Robinson (2015)).

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