



# The Ethical Embeddedness of the Economic Inequality Debate

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## Abstract

How do scholars formulate arguments about economic inequality? What is the role of empirical analysis? In what ways, if any, is the debate informed by ethical considerations? In this paper, we address these questions by evaluating one of the main arguments in Thomas Piketty's 2014 book *Capital in the Twenty-First Century*, along with its endorsements and rebuttals. Applying Stephen Toulmin's model of arguments to Piketty unearths a complex argument structure that must be understood for an evaluation to be possible. Of particular importance are the warrants that Piketty used to justify his conclusions from the empirical material. Our analysis revealed that the most influential rebuttals were targeted not at Piketty's empirical inferences but the way he used these inferences to justify his claims. We also found value judgments to be an essential part of the justification process, making Piketty's claims ultimately embedded in ethical considerations. We conclude that value judgments are intrinsic to scholarly arguments not only in economic inequality debates but also more broadly.

**Keywords** Argument structure · Economic inequality · Ethical embeddedness

## Introduction

In 2014, Thomas Piketty took the world by storm with his book *Capital in the Twenty-First Century* (Piketty, 2014a). It is hard to think of a more influential book by an academic: Not only was the book a bestseller in the New York Times and many others, but it also won the Financial Times and McKinsey Business Book of the Year awards and received endorsements from many leading economists. Nobel Laureate Robert Solow (2014, paragraph 20) described Piketty's work as a "new and powerful contribution to an old topic." Another Nobel Laureate, Paul Krugman (2014b, paragraph 48) praised Piketty for having "transformed our economic discourse."

But what exactly did Piketty claim, and how did he justify his assertions? What was his intellectual and theoretical foundation? On what specific points did Solow and Krugman agree with Piketty? What was so powerful and transformative about the book? How about those who disagreed with Piketty? What was their concern, and how did they justify their positions? What should I do if I wanted to formulate an informed position on Piketty's book or the economic inequality debate more generally?

In this paper, we analyze one of Piketty's (2014a) central arguments and its subsequent critical evaluations. Piketty's book is fascinating because it provoked strong positive and negative reactions, providing an excellent opportunity to examine why some found Piketty's arguments compelling and others did not. To be sure, the caliber of dissenting voices did not pale in comparison with the endorsements. Among the most vocal critics were Harvard economics professor Gregory Mankiw and MIT economics professor Daron Acemoglu. There are many others, but we mentioned Krugman, Solow, Mankiw, and Acemoglu because they are "on par" in the sense that they are, or were, economists in elite North American universities. We thus invite the reader to set aside the proposition that the disagreements stemmed

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from interdisciplinary differences.<sup>1</sup> Through our analysis of the structure of what we consider one of Piketty's main arguments regarding the concentration of wealth, we demonstrate that the central points of disagreement can be traced to Piketty's empirical inferences on the one hand and his background assumptions on the other. To establish this, we examine both Piketty's and his critics' arguments by applying Toulmin's (2003) model of argument structure.

Our aim in this paper is to contribute both to debates on economic inequality and academic debates more generally in four different ways. First, we demonstrate the importance of understanding how credible claims must rest on credible argument structures; without an understanding of argument structure, evaluating a claim is impossible. Second, we illustrate the importance of distinguishing between different kinds of premises on which claims are based. Third, we illuminate the importance of understanding the choices that scholars make in the process of constructing their arguments. Fourth, we maintain that scholarly arguments about economic inequality are ultimately *ethically embedded*: Intrinsic values not only guide the scholar in situations such as what to choose as a research topic, but they also have an essential role in legitimizing scholarly reasoning processes (Donaldson, 2021).

This paper is structured as follows. We first introduce Toulmin's model and discuss its six central elements. We then map one of Piketty's (2014a) arguments onto the Toulmin model. Having explicated the argument structure, we analyze the rebuttals that followed the publication of Piketty's book. We close by discussing the implications and directions for future research, conversations, and debates on economic inequality.

## Mapping the Structure of an Argument: The Toulmin Model

Different forms of scientific reasoning—deduction, induction, and abduction—stand at the methodological foundation of scholarly inquiry (Mantere & Ketokivi, 2013). This is hardly surprising because establishing the logical relationships between the premises and conclusions is foundational to scholarly work. However, the construction and evaluation of scholarly arguments extend beyond the nature of the logical relationships. The question of *which* elements are included in the first place is just as relevant as *how* the elements are related. This raises questions such as: What kinds of premises do we use in our reasoning? Where do they originate? How do we determine which ones are acceptable?

<sup>1</sup> In fact, Mankiw and Solow were contributors in a book (Mankiw and Romer 1991) on Keynesian perspectives on economics.

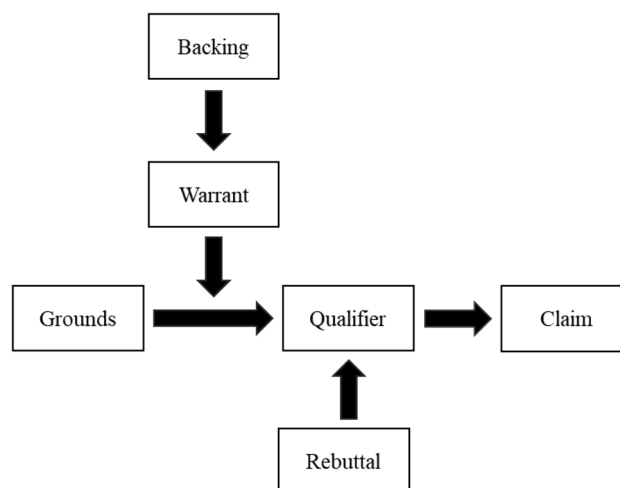


Fig. 1 Toulmin's (2003) model of argument structure

What guides our choice if we have to choose between two alternative premises that may lead us in different directions? Before we examine the logical connection between the premises and the conclusion, we must understand what is being connected to what and why. This is where argument structure becomes relevant. Ultimately, reasoning and argumentation are complementary activities.

Addressing the questions regarding the elements has compelled scholars to consider the structure of scholarly arguments in broader terms than just reasoning. To this end, organizational scholars (Harmon et al., 2015; Ketokivi & Mantere, 2010; Narayanan & Fahey, 2005) and philosophers (Hitchcock & Verheij, 2005) alike have rediscovered Toulmin's (2003, 1958 original) model of argument structure. In the following section, we describe Toulmin's model (Fig. 1) and show how it can be used to assess arguments regarding economic inequality.

## The Claim as the Conclusion

When we ask in a casual conversation what someone's argument is, we typically get in response what Toulmin labeled the *claim*: the ultimate assertion made. The claim is the first element we seek to identify in an argument and it often constitutes the starting point for argument analysis. The reason the argument is made in the first place is to convince the audience of the credibility of a claim.

Claiming that something is certain is different than claiming something is likely or plausible. To accommodate the fact that some claims are stronger than others, Toulmin suggested that various *qualifiers* establish the strength with which the claim is asserted. Qualifiers typically manifest themselves as adverbs or adverbial phrases: certainly, presumably, apparently, plausibly, et cetera (Toulmin et al., 1979, p. 86).

Both the claim and the qualifier must be asserted clearly, lest the interpretation of the claim becomes ambiguous. Ambiguous claims risk turning debate “into a confused string of disagreements” (Toulmin et al., 1979, p. 32).

### The Grounds and the Warrants as the Premises

Toulmin’s model distinguishes between two kinds of premises—*grounds* and *warrants*—which jointly justify the claim. As to the former, Toulmin maintained that for argumentation to be possible, there must be something that those involved in the process are “prepared to accept as not needing to be questioned” (Toulmin et al., 1979, p. 38). Toulmin (2003, p. 12) used the term *grounds* as a label for that which is not questioned. In scholarly arguments, grounds typically consist of empirical material, which is not to be confused with empirical *data*. In empirically based scholarly arguments, empirical data constitute merely the raw material for empirically more refined grounds. What ultimately enters the grounds is not data but *inferences* drawn from the data. For example, in research that uses statistical data, common inferences used in grounds range from elementary inferences, such as summary statistics and mean differences, to more sophisticated inferences, such as estimates of model parameters. Examining both *which* inferences are made and *how* they are made constitutes a critical part of evaluating the grounds.

Toulmin emphasized that *claims* are never supported by *grounds* alone. In empirically based research, this means that conclusions cannot be based exclusively on empirical inferences. This should not be too controversial, given that researchers routinely incorporate non-empirical material into their arguments. The widespread use of theoretical (non-empirical) terms in our arguments is an obvious example (Godfrey & Hill, 1995). We also incorporate into our arguments various assumptions about, say, the rationality of economic actors or the objective of the corporation; these assumptions are typically not subjected to empirical testing. Finally, we expect scholars to follow various methodological rules for their claims to be credible; for example, claims based on small statistical samples may not be credible.

Toulmin used the term *warrant* as a general label for all the assumptions, standards, rules, and principles that jointly grant the scholar the “license” (Toulmin et al., 1979, p. 48) to infer the claim from the grounds. There is no legitimate claim without a license.

Here, it is useful to connect to the philosophy of science literature, where the idea that scientific claims do not follow from empirical material alone has been discussed under the rubric of *underdetermination of theories by data*. Mill (1882, p. 617) stated the problem succinctly: “Most thinkers of any degree of sobriety allow, that an hypothesis [...] is not to be received as probably true because it accounts for

all the known phenomena, since this is a condition sometimes fulfilled tolerably well by two conflicting hypotheses.” Expressed in Toulmin’s terms: Depending on which warrants one invokes, it is possible to formulate multiple, even conflicting, claims from a given set of grounds.

### Justifying the Warrants: The Backings

A rigorous argument cannot simply declare its warrants, or, as Toulmin et al., (1979, p. 62) put it, “warrants are not self-validating.” Toulmin maintained that warrants require *backings*, which he described as general principles that specify why the “warrant should be accepted as having authority” (Toulmin, 2003, p. 95). Backings constitute the intellectual foundation of the argument because they justify the application of the selected warrants in specific arguments.

The role of backings becomes central when choosing between alternative warrants is relevant. When alternative warrants point us in different directions, we must be transparent about our choices. Because warrants do not justify themselves, the choice must follow from “going behind the warrant and looking to see on what basis its authority rests” (Toulmin et al., 1979, p. 66).

Backings are often taken-for-granted values, attitudes, and expectations; they are indeed *institutions* (Ketokivi et al., 2017). As institutions, backings are often only implicit in our arguments, potentially threatening transparency; we cannot fully understand a warrant unless we understand its backing. An explicit understanding of backings is crucial in inter-disciplinary debates where participants base their arguments on different intellectual foundations and, therefore, different backings. This observation applies forcefully in the case of conversations on economic inequality.

### Calling the Argument into Question: The Rebuttal

Scholarly claims are *claims to knowledge* and must be evaluated for their soundness. Symmetrically, for an objection to be convincing, it must constitute an explicit rebuttal. Toulmin emphasized that to be effective, the *rebuttal* must have a clear target in the structure of the original argument: Is it the grounds, warrants, the claim, or perhaps the qualifier of the claim? If it is a warrant, which specific warrant is of concern? Is the problem the way the warrant is applied or, more fundamentally, the concern that the warrant does not have a backing in the specific instance it is being used?

Toulmin (2003) suggested that the rebuttal ultimately tends to qualify the original claim, which is why, in his original model, he directed the rebuttal at the qualifier (Fig. 1). Acknowledging that rebuttals can target the qualifier, we propose that there may be other targets. As we will

demonstrate, rebuttals can also target the grounds and the warrants. Even though rebuttals targeted at other parts of the argument may ultimately call the qualifier into question, identifying the immediate target of the rebuttal is crucial for transparency. To be sure, calling into question a qualifier due to a problematic warrant must be distinguished from a situation in which the problem arises from the empirical material, that is, questionable grounds.

The persistent problem in argument evaluation is to focus merely on the claim and to ignore the broader argument structure. Morgan and Morton (1944, p. 39) expressed the problem succinctly: “A person is likely to accept a conclusion which expresses [his or her] convictions with little regard for the correctness or incorrectness of the inferences involved.” Indeed, how often do we disagree with a claim that expresses our deeply held beliefs or agree with one that challenges them? But by adopting a predisposition as the criterion, we fail in our evaluation task because we effectively appraise “the content of the conclusion, not the logical form of the argument” (Henle, 1962, p. 370). The evaluators’ task is not to determine whether they agree with the claim or not but whether the structure of the argument credibly supports the claim. Similarly, disagreement does not constitute a rebuttal unless it explicitly calls into question something essential about the structure of the argument. Throughout our exposition, we approach the credibility of a claim as an epistemological as opposed to a psychological construct.

### The Toulmin Model and the Economic Inequality Debate

In the following sections, we demonstrate the utility of the Toulmin model in the context of debates on economic inequality in four critical ways. First, we show that explicit claims are often challenging to identify and, consequently, at least some of the debate is best described, as Toulmin et al. (1979, p. 32) put it, as “a confused string of disagreements.” Second, we demonstrate how fundamentally the claims hinge on the choice of grounds and warrants. Third, we show how the rebuttals of different critics focus on different parts of Piketty’s argument: Some take issue with the grounds, others with the warrants. Finally, we submit that Piketty’s argument and arguments about economic inequality more generally are ultimately ethically embedded. The ethical embeddedness of inequality arguments unveils itself as we examine how specific warrants are selected and justified.

### Applying the Toulmin Model to Piketty (2014a)

Because Piketty did not make the structure of his argument explicit, what follows is our reconstruction of how we made sense of one of the arguments in Piketty (2014a). Figure 2 illustrates Piketty’s argument, viewed through the Toulmin lens.

#### The Claim and the Qualifiers

In his book, Piketty made several claims that can be divided into two general categories: knowledge claims and policy claims. The former are claims about what Piketty proposed we should accept as *something we know*, and the latter about *what should be done*. Since covering all of Piketty’s claims in one journal article is impossible, we focus on just one specific claim. Because Piketty ultimately used his knowledge claims to formulate policy claims (what we should do is informed by what we know), focusing on the knowledge claims first seems prudent.

Piketty’s knowledge claims in his nearly 700-page book are numerous, but the one that seems to rise above the rest is the *Central Contradiction of Capitalism*:

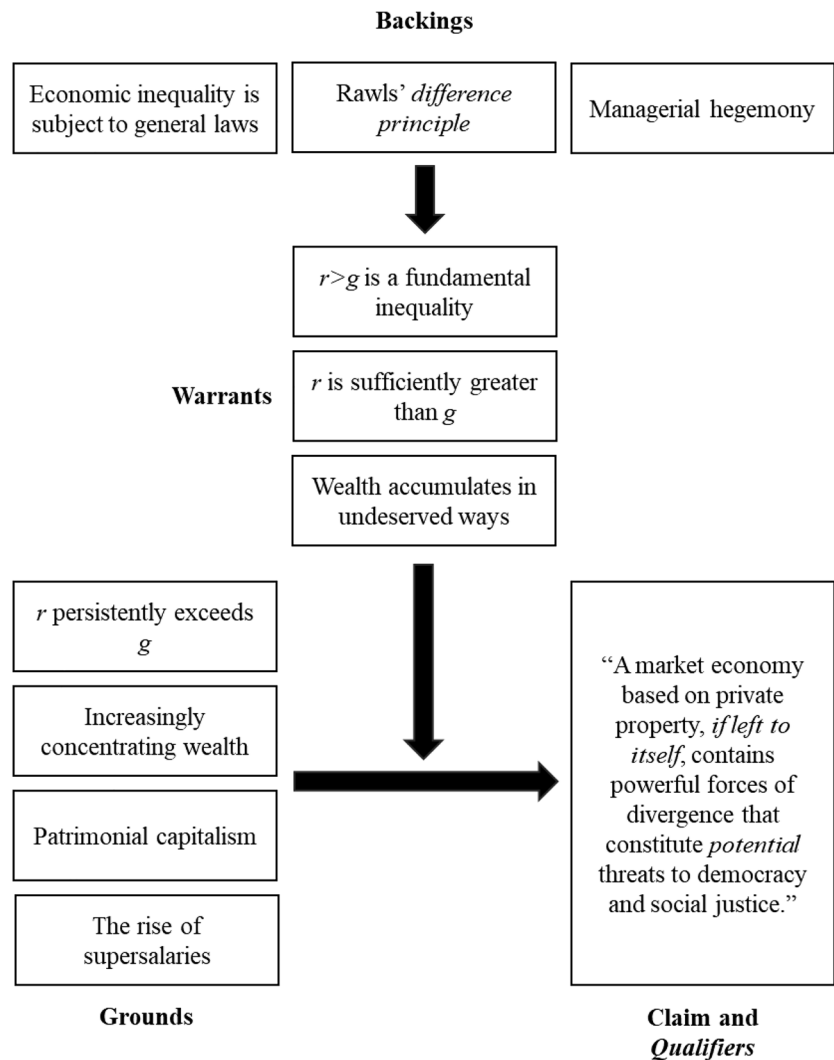
“[A] market economy based on private property, if left to itself, contains powerful forces of convergence, associated in particular with the diffusion of knowledge and skills; but it also contains powerful forces of divergence, which are potentially threatening to democratic societies and to the values of social justice on which they are based” (Piketty, 2014a, p. 571).

This claim consists of two sub-claims, one of convergence and the other of divergence. These two must be isolated for analysis one at a time for an explicit evaluation to be possible. Because divergence seemed more central both for Piketty and those who considered his message important, we focus in our analysis on what we label the *divergence sub-claim* (*Claim* henceforth), which we propose can be stated as follows:

“A market economy based on private property, *if left to itself*, contains powerful forces of divergence that constitute *potential* threats to democracy and social justice.”

The qualifiers (the italicized words) are noteworthy. The qualifier *potential* expresses Piketty’s explicit reluctance to draw definitive conclusions; the qualifier *if left to itself* anticipates Piketty’s prescription that policy measures are necessary. The latter qualifier also establishes how the *Claim* is ultimately used as a premise in Piketty’s subsequent policy claims.

**Fig. 2** Toulmin’s (2003) model applied to Piketty (2014a)



### The Grounds

Piketty (2014b, pp. 736–737) described his data as follows: “[W]e have been able to collect a relatively large historical database on the structure of national income and national wealth and the evolution of income and wealth distributions covering three centuries and over twenty countries.” However, while Piketty’s data are salient, the inferences he used in his grounds require explicit analysis. We concluded that Piketty incorporated four central inferences from his data into the grounds in the argument: (1) the private rate of return on capital,  $r$ , persistently exceeds the rate of growth of income and output,  $g$  (Piketty, 2014a, p. 25); (2) wealth has become increasingly concentrated (Piketty, 2014a, chapter 7); (3) there has been a rapid increase in private wealth that has led to what Piketty (2014a, p. 173) labeled “patrimonial capitalism;” and (4) disproportionately increasing executive compensation has led to “the rise of supersalaries” (Piketty, 2014a, p. 298). These are all the outcomes of

inductive inferences Piketty drew largely from his primary empirical data.<sup>2</sup>

The relevance of rates of return on capital, growth rates, wealth concentration, and increasing private wealth may seem salient, but why does Piketty focus specifically on executive compensation? Is increasing executive compensation really so significant that it affects economic inequality at the societal level? Piketty (2014a, p. 315, emphasis added) argued that this was indeed the case: “[I]n all the English-speaking countries, the *primary reason* for increased income inequality in recent decades is the rise of the supermanager.” Lazonick and Shin (2020, p. 86) concurred: “The largest

<sup>2</sup> Even though the term “patrimonial capitalism” may come across as value-laden, Piketty used it as a descriptive term for the increasing share (and influence) of private wealth. We found no empirical material in Piketty (2014a) to conclude that Piketty considered the increase in private wealth problematic per se. Problematization is, therefore, embedded in Piketty’s warrants, not his grounds.

component of the pay of the top 0.1% over the past quarter-century has been ‘salaries,’ supplemented by spikes in capital gains at the peaks of the stock-market booms in 2000 and 2007.”

## The Warrants

Even though Piketty did not explicitly state his grounds, we found it straightforward to identify them from his text. Identifying the warrants was more challenging: What are the premises, assumptions, and rules required for the grounds to become credibly bridged to the *Claim*?

Based on our analysis, we propose that three central warrants are required to justify the *Claim*: (1)  $r > g$  is a fundamental inequality; (2)  $r$  is sufficiently greater than  $g$ ; and (3) wealth accumulates in undeserved ways. Our reasoning for selecting these three followed by what we thought Piketty needed to infer the powerful force of divergence from the empirical grounds. We concluded that for the powerful force to become salient, Piketty needed premises regarding  $r$  and  $g$  as well as the premise that the process by which wealth accumulated was problematic.

The inequality  $r > g$  is part of the grounds, where it is stated as an empirical inference. However,  $r$  and  $g$  appear also in two different warrants. Piketty’s position is that  $r$  is not only persistently but also *sufficiently* greater than  $g$ . Given that Piketty’s empirical analysis established persistence but not sufficiency, the latter remains a non-empirical premise that belongs to the warrants. This is not simply a matter of semantics: One of the central rebuttals (Mankiw, 2015) accepted persistence as an empirical fact but called into question sufficiency. We return to this point in the discussion of the rebuttals.

There is also another aspect to  $r$  and  $g$  that effectively establishes their dual role as grounds and as a warrant. Piketty (2014a, p. 25) stated that  $r > g$  constituted a “fundamental inequality.” Like in the case of  $r$  being sufficiently greater than  $g$ , the notion that there is something *fundamental* about  $r$  being greater than  $g$  extends beyond the empirical inference that  $r$  persistently exceeds  $g$ . Piketty suggested that  $r > g$  is fundamental because it constitutes an antecedent of divergence and economic inequality. Another key rebuttal called into question whether  $r > g$  had the kinds of adverse consequences that Piketty predicted (Acemoglu & Robinson, 2015).

Another central warrant relates to the concentration of wealth, a concept which can also be found both in the grounds and the warrants of the argument. In the grounds, the concentration of wealth is offered as an empirical generalization: Piketty noted that in point of empirical fact, the share of wealth controlled by the top 1% had increased significantly in the previous sixty years, particularly in the U.S. However, the warrant introduces the idea that this

concentration is a cause for concern because it has occurred in *undeserved* ways, which extends beyond an empirical inference. The proposition that the concentration of wealth occurs in undeserved ways is, therefore, a warrant.

The point about undeservedness requires a closer look. Piketty (2014a, p. 24) started with the premise that executive salaries cannot be based on the economic value that executives create. This is uncontroversial as it simply restates a well-established position in economics: When value is created not by individuals but by a collective, “it is impossible to determine each person’s marginal productivity” (Alchian & Demsetz, 1972, p. 779). This is a general observation not limited to executives but applies to any context in which outputs are produced by a collective, or as economists put it, through “team production” (Alchian & Demsetz, 1972, p. 779). However, Piketty (2014a, p. 330) maintained that executives exploited “the illusion of marginal productivity” to seek disproportionately high, undeserved salaries for themselves. He further noted that because corporate governance practices and prevailing social norms fail to temper value expropriation in English-speaking<sup>3</sup> countries in particular, “extremely generous rewards meted out to top managers” ultimately become “a powerful force of divergence” (Piketty, 2014a, p. 330). Since Piketty did not establish expropriation empirically but largely inferred it from the disproportionately rising levels of executive compensation, the premise that supersalaries are undeserved constitutes a warrant.

## The Backings

Of all the potential drivers, manifestations, and consequences of inequality, what provides the justification for focusing specifically on  $r$  and  $g$ ,  $r > g$  as a fundamental inequality, the concentration of wealth, and the focus on executive compensation? Furthermore, how did Piketty justify the assertion that executives were not only powerful but also so dominant that they “by and large have the power to set their own remuneration” (Piketty, 2014a, p. 24)? In short, what is the intellectual foundation on which Piketty’s argument stands?

<sup>3</sup> Piketty used the term “English-speaking countries” in reference to the U.S., Great Britain, Canada, and Australia. He further described the rise of the supermanagers primarily as an “Anglo-Saxon phenomenon” (Piketty 2014a, p. 315). Piketty (2014a, p. 332) maintained that in other regions, such as continental Europe and Japan, social norms were more efficient in tempering executive compensation.

Unfortunately, this is where we find Piketty's argument to be the most opaque.<sup>4</sup> In a brief section entitled Theoretical and Conceptual Framework, Piketty (2014a, pp. 30–33) described his personal history and interests and then concluded that his approach to economic inequality applied a “minimal theoretical framework” (2014a, p. 33). While this leaves us with little to work with, we think that Piketty left some clues and that at least some of the backings can plausibly be inferred from the warrants themselves. Identifying the backings, however challenging, is important not only because they help us understand the foundation of Piketty's argument but also because they set the stage for understanding the rebuttals.

The general foundation underpinning Piketty's warrants is a sense of justice that resonates with Rawls' (1999, 1971 original) theory of justice, particularly its *difference principle*: Social and economic inequalities are acceptable only if they are “to the greatest benefit of the least-advantaged members of society” (Rawls, 2001, p. 43). Piketty (2014a, p. 480) echoed the sentiment by noting that “social inequalities are acceptable only if they are in the best interest of all and in particular of the most disadvantaged social groups.” Piketty also referenced the French Declaration of the Rights of Man and the Citizen of 1789 for the premise that for social inequalities (economic inequality as a special case) to be justified, they had to be based on “common utility” (Piketty, 2014a, p. 31) and “be just and useful to all” (Piketty, 2014a, p. 422). However, our reading of Piketty suggests that he eventually interpreted common utility from the point of view of the comparatively disadvantaged as opposed to the average utility, which is what the *principle of average utility* (Rawls, 1999, p. 107) would emphasize.

The distinction between the difference principle and the principle of average utility is important. Specifically, Piketty considered  $r$  exceeding  $g$  problematic because it predicted outcomes that did not, in his view, serve the disadvantaged. Similarly, disproportionately increasing executive compensation was problematic not only because Piketty viewed it as undeserved but also because, again, he saw it as privileging the advantaged at the expense of the disadvantaged. In this regard, Piketty's backings indeed appear largely consistent with Rawls' difference principle (see also O'Neill, 2017, p.

355). From the point of view of average utility, supersalaries might not be considered problematic.

Common ground with Rawls is also evident in the fact that both Rawls and Piketty linked problems of distributive justice to “the choice of the social system” (Rawls, 1999, p. 242). Throughout his book, Piketty focused on the public choices—most notably fiscal policy—that shape the structure of the social system. This is consistent with Rawls' (1999, p. 244) proposition that “the justice of distributive shares depends on the background institutions and how they allocate total income, wages and other income plus transfers.” Both Piketty and Rawls viewed distributive justice as a matter of institutional design.

Piketty's main concern with executive compensation was the excessive influence executives wielded over their own compensation. Piketty (2014a, p. 332) suggested that corporate governance rules were “generally ambiguous and weak” (Piketty, 2014a, p. 332), which enabled executives “to set their own remuneration, in some cases without limit” (Piketty, 2014a, p. 24). Note that Piketty's position is not that executive pay is high because executives use their bargaining power but because they control the decision-making process, effectively not having to bargain at all.<sup>5</sup>

In the corporate governance literature, Piketty's position is discussed under the rubric of *managerial entrenchment* (Berger et al., 1997) and more generally, *managerial power* (van Essen et al., 2015). However, by claiming that executives are so dominant that they succeed in expropriating value from their firms, Piketty's position echoes a more extreme variant, sometimes dubbed *managerial hegemony theory*: “Boards [of directors] help to perpetuate the power of the managerial elite by aiding management in the recruitment of friends and cronies onto the board” (Hermanson et al., 2012, p. 669). Identifying managerial hegemony as the implicit backing is important because it helps us understand the rebuttals from the management research community (Dunne et al., 2018). In short, critics suggest that corrupt boards enable CEOs to set their own pay in, at best, *poorly governed* firms (Bertrand & Mullainathan, 2001).

<sup>4</sup> The proposition that Piketty built on Marx is sufficiently widespread. Indeed, several commentators have interpreted the word “capital” in Piketty's book title as a nod to Marx whose main literary work (Marx 1887) is entitled *Capital*. However, when Piketty was asked about this in an interview (Chotiner 2014), he replied that he had found Marx's works “very difficult to read” and that Marx had not been “very influential” to him. In addition, Piketty and Saez (2014, p. 842) bluntly stated that Marx was “wrong” about the dynamics of inequality. Our analysis gave us no reasons to label Piketty a “Marxist”.

<sup>5</sup> The distinction between executive bargaining power and executive control is aptly illustrated by Delaware Court's January 30, 2024, decision to void Tesla CEO Elon Musk's \$56 billion compensation package. The Court's decision was significantly based on the conclusion that the board simply awarded Elon Musk the compensation package he requested—there was no authentic negotiation. The central driver of the ruling was not Musk's excessive bargaining power but the conclusion that the board had not acted independently of the CEO and in the best interest of the corporation. In her post-trial opinion, Chancellor McCormick (2024, p. 65) noted that Musk was so influential as CEO that he effectively “negotiate[d] against himself.” The Tesla ruling is an excellent illustration of Piketty's concern that executives set their own salaries.

Finally, even though Piketty acknowledged no specific theoretical framework, there is something to be said about the general theoretical nature of Piketty's warrants. Particularly the warrant " $r$  is sufficiently greater than  $g$ " suggests that in Piketty's view, economic inequality in particular and economic systems more generally are ultimately governed by *general laws*, most notably the First and the Second Fundamental Laws of Capitalism (Piketty, 2014a, pp. 52, 55). This is relevant because several rebuttals (Acemoglu & Robinson, 2015; Mankiw, 2015) question the application of general laws to our understanding of inequality.

## The Rebuttals

The reactions to Piketty (2014a) were markedly polarized; commentators seemed to either endorse or reject the book and its arguments. In this section, we focus on what we found to be the most influential rebuttals. Before presenting them, we first take stock of why Piketty's (2014a) book was found compelling. After all, had Piketty's book not been so influential, why bother analyzing its rebuttals?

One recurring observation among those who endorsed Piketty was his data. Krugman (2014b, paragraph 6) noted that before Piketty (2014a), "most of what we knew about income and wealth inequality came from surveys." In contrast, Piketty did not rely on surveys but on archival data, most notably, income and estate tax records (Piketty, 2014a, pp. 16–19). Savage (2014, p. 593) concurred: "Piketty profoundly shows the value of using tax data and national accounts and hence in showing how an extended methodological repertoire can reveal issues which survey data cannot, especially long-term change and the significance of outliers." In Toulmin's terms, those who endorsed Piketty found the grounds of the argument novel and compelling.

Another strong point identified by critics was Piketty's emphasis on income from capital: "[I]ncome from capital, not earnings, predominates the top of the income distribution" (Krugman, 2014b, paragraph 15). Krugman (2014b, paragraph 15) further pointed out that focusing on income from capital was important because most inequality researchers had presumed that "earned income, usually salaries, is where all the action is."

Overall, those who evaluated Piketty (2014a) positively noted that Piketty had offered an improved understanding of inequality. Solow (2014, paragraphs 15 and 16) suggested that the dynamics of "the functional distribution of income" (the proportion of national income that is due to labor versus capital) are "often not well understood." In an equally positive appraisal, Krugman (2014b, paragraph 2) noted that Piketty's book was "a revolution in our understanding of long-term trends in inequality" and that "[b]efore this revolution, most discussions of economic disparity more or

less ignored the very rich." Translated into Toulmin's terms, Piketty was praised for turning attention to grounds that had not been considered in previous research.

We now turn to what we consider the primary rebuttals of Piketty (2014a). In our analysis, we focused on the rebuttals that identified the exact target of the rebuttal and were consequential in the sense that they explicitly called into question Piketty's argument. Not all rebuttals cleared this hurdle in our view. For example, we came across several critiques that reported factual errors and historical inaccuracies. Magness and Murphy (2015, p. 6), for example, pointed out Piketty's inaccurate account of the history of the U.S. minimum wage: "[T]o claim that the minimum wage was frozen under George W. Bush until being raised under Obama is utter nonsense." Magness and Murphy are correct, Piketty's claim about U.S. minimum wage is factually incorrect. Factual errors are always a cause for concern and may erode the credibility of the researcher. However, for them to constitute rebuttals, the factual error must be consequential and call the argument into question. We are puzzled as to why Piketty did not fact-check himself on the U.S. minimum wage, however, we concluded that the factual error was ultimately inconsequential insofar as the claim we chose to analyze was concerned; of course, Magness and Murphy's points may be relevant for other purposes. Piketty (2014a, p. 310) noted that "the minimum wage has an impact at the bottom of the distribution but much less influence at the top, where other forces are at work." Not only the *Claim* but also Piketty's book more generally are about the upper tail of the wealth distribution and therefore, not even indirectly about poverty.

## The Rebuttals Aimed at the Grounds

Many of Piketty's grounds are matters of empirical fact or empirical generalizations (inductive inferences) made from the facts. Consequently, Piketty's grounds have largely gone unchallenged. For instance, very few have questioned whether  $r$  exceeds  $g$  or whether executive compensation has risen significantly. The only aspect of the grounds that has attracted both clarifications and rebuttals relates to the inference that wealth has become more concentrated. Some of Piketty's critics have suggested that inferring the concentration of wealth from tax records may lead to distortions.

Two issues require attention. First, Piketty's grounds are primarily about income (a *flow* measure), not wealth (a *stock* measure). This is understandable, given that salary data is readily available from tax records, but data on an individual's net worth can typically be obtained only through surveys. It is well known that income is generally not a good proxy for wealth, particularly in the case of the extremely wealthy (Keister & Moller, 2000,

p. 65). Piketty's use of estate tax records in his analyses (Piketty, 2014a, p. 18) meant that he was effectively using the wealth of the deceased to study the wealth of the living. While this does not constitute a rebuttal of Piketty's grounds per se, it serves as a reminder that while his empirical grounds related to income are based on direct measures of income, those related to wealth are indirect measures. Piketty's inductive inferences regarding income are stronger than those regarding wealth.

Second, and more importantly, a key rebuttal stems from Piketty's use of tax returns as the source of income data. Auten and Splinter (2023) noted that in so doing, Piketty abstracted out non-taxable income, most notably various government transfer payments and tax-exempt employer-provided benefits. In their empirical analysis of U.S. Treasury data from 1960 to 2020, Auten and Splinter found that once non-taxable sources of income were included in the analysis, the results showed that from 1960 to 2020, the after-tax income share of the top 1% in the U.S. had remained stable at about 8%. This result casts doubt on Piketty's grounds that income has become more concentrated—taxable household income, yes, but after-tax total household income, no.

The balancing effect of transfer payments does not invalidate Piketty's argument. However, the fact that unearned income seems to counter the concentration of earned income suggests that policies that address economic inequality have been in place in the U.S. (and likely in other countries as well) for decades. Assuming we are interested in the dynamics of economic inequality, not just earned-income inequality, incorporating wealth transfers seems relevant. Besides, Piketty's policy recommendations that called for increasing marginal tax rates on earned income and a global wealth tax constitute calls for more wealth transfers. For such prescriptions to be justified, Piketty would have to establish that current wealth transfers are insufficient. Auten and Splinter's findings suggest they might, in fact, be sufficient.

### The Rebuttals Aimed at the Warrants

There are two notable rebuttals related to  $r$  exceeding  $g$ . They do not challenge the empirical inference that  $r$  has persistently exceeded  $g$ , but they question whether this leads to the kinds of disconcerting outcomes that Piketty predicted. The rebuttals are, therefore, aimed at  $r > g$  as a warrant.

Acemoglu and Robinson (2015) analyzed whether the amount by which  $r$  exceeded  $g$  actually predicted wealth concentration. Noting that Piketty had not presented "even basic correlations between  $r-g$  and changes in inequality" (Acemoglu & Robinson, 2015, p. 12), they estimated a panel-data econometric model with the top 1% share as the dependent and  $r-g$  as the independent variable, using data from 27 countries spanning from 1870 to 2012. Acemoglu

and Robinson (2015, p. 15) found "no consistent evidence of an impact from  $r-g$  to inequality."

Mankiw (2015) made a related point about the  $r > g$  warrant by asking whether  $r$  was *sufficiently* greater than  $g$ . Piketty (2014a, p. 25) had acknowledged that the rate of return on capital had to be "significantly above the growth rate for an extended period of time" but had not explicated what he meant by "significantly." In his rebuttal, Mankiw noted that what was sufficient depended fundamentally on contextual factors, such as taxation. Mankiw (2015, p. 44) suggested that in the U.S. state of Massachusetts, for  $r-g$  to lead to the adverse effects Piketty had envisioned,  $r$  would have to exceed  $g$  by at least *seven* percentage points per year. Mankiw estimated the actual difference to be roughly *two* percentage points. Therefore, Mankiw took no issue with Piketty's grounds that  $r$  exceeded  $g$ ; his concern was with the use of  $r > g$  in the warrant. In his response to Mankiw and other critics, Piketty (2015, p. 49) acknowledged that " $r > g$  is certainly not a problem in itself." This is an important clarification given that Piketty (2014a, p. 25) had presented  $r > g$  as a "fundamental force for divergence [that played] a crucial role" in his argument.

Finally, there are some indirect rebuttals of the warrant that wealth accumulates in undeserved ways that merit attention. These rebuttals are based on the distinction between wealth categories and "flesh-and-blood" people. Piketty's (2014a, p. 284) suggestion that wealth concentrates "in the hands of" the top 1% may mislead us to think of a specific group of people, or perhaps families, who control the wealth. However, research in wealth dynamics reveals that the participation of specific individuals in specific wealth categories is fluid. U.S. Treasury data from 2007 indicates that of those in the top 0.01% (the top 1% of the top 1%) of income in 1996, only 25% were in the same category in 2006 (Sowell, 2010). While this does not invalidate Piketty's warrant, it does offer the important qualification that membership in the top income categories seems to be subject to competition and, therefore, high salaries may not necessarily be as undeserved as Piketty portrays them to be (Taleb, 2018). This is also where the distinction between wealth and income becomes crucial.

Mobility across income categories links to an observation some critics made about how Piketty defined capital. Piketty (2014a, p. 46) deliberately omitted *human capital* from his definition because it "cannot be owned by another person or traded on a market." In his review of Piketty (2014a), Piachaud (2014, p. 704) submitted that tradability was irrelevant and that the "distribution of human capital is fundamental to understanding the distribution of personal incomes." Without understanding human capital, our understanding of income distribution in general and income mobility in particular is severely limited. For example, the majority of those in the lowest income decile are 16–24 years old and,

in all likelihood, in the process of acquiring human capital (i.e., getting an education) to move to a higher income category (Sowell, 2010). To be sure, there are also those who are more or less permanently in the lowest decile due to issues such as chronic unemployment or disability, which speaks to the significant heterogeneity of the lowest income decile. In conclusion, the more fluid the membership in an income category and the more heterogeneous the category, the more critical it is not to think of the category in terms of a fixed set of individuals. In the U.S., only 5% of the working individuals who were in the lowest quintile (bottom 20%) of income in 1975 were in the same quintile in 1991 (Sowell, 2015, chapter 10).

### The Rebuttals Aimed at the Backings

Piketty's (2014a) position on executive compensation rests on the premise that top executives expropriate value from the corporation at the expense of all its other stakeholders. For Piketty, the primary manifestation of executive hegemony was the proposition that compensation committees were "chosen in a rather incestuous manner" to serve executive interests (Piketty, 2014a, p. 510). In Piketty's world, executives consistently succeed in compelling boards of directors to breach their legal fiduciary duties of loyalty and care to the corporation and effectively become agents of the executive.

Few critics challenge the idea that executives are powerful or that expropriation of wealth does not occur; they question the scale and scope of the problem. Are corporations really dominated by "incestuous" compensation committees that routinely violate corporate law, fiduciary law, stock market rules, and principles of good governance by merely pretending to be independent of the CEO? Furthermore, are board members so skilled in hiding their allegiance to the CEO that they fool even the most sophisticated and discerning shareholders who vote the same directors time and again to serve on the board? In a rebuttal of Piketty's position on executive compensation, Boudreaux (2015, p. 288) asked why shareholders would first vote against their own interests and then keep investing in companies that serve executive, not shareholder, interests. Boudreaux also wondered what explained the rising market value of corporations—the central source of returns on capital—in a world where corporate governance was so fundamentally corrupt.

In another rebuttal of the managerial hegemony backing, Dunne et al. (2018) took no issue with the inference of disproportionate increases in executive salaries. However, they questioned the way by which Piketty inferred the antecedent: "To suggest executive remuneration packages are at the root of economic inequality, in the way of Piketty, is only to [raise] a series of political questions *meted out at the organizational level*" (Dunne et al., 2018, p. 174, emphasis

added). The concern is that Piketty may have committed the fallacy of affirming the consequent by inferring the antecedent instead of engaging the questions the consequent had raised at the organizational level. Taking the rise in executive compensation as *prima facie* evidence of systematically corrupted boards is problematic. At the very least, we might give corporate boards the benefit of the doubt and consider the alternative that executive compensation is structured in a way that directs the executives' attention toward the best interest of the corporation and its shareholders; the position is well-established in the financial economics literature (Dunne et al., 2018, p. 174). This is where the importance of understanding Piketty's choice of warrants and their backings is most pressing.

As a final point about compensation, Mankiw (2015, p. 46) wondered why Piketty's concern about undeserved compensation was focused solely on executives. How about the high incomes of employees other than executives, entrepreneurs, movie stars, rock stars, professional athletes, celebrities, social media mega-influencers, prominent public speakers, and so on? In what way is the \$20 million annual salary of a professional football player, an employee of a football club, more deserved than the \$2 million salary of the football club's CEO? The highest-earning employees of football clubs, the players, indeed often make an order of magnitude more than the CEO does. Or, should a public university pay \$500,000 in annual salary to a professor? In general, if the concern is the undeserved accumulation of wealth *in society* due to exorbitant compensation, why focus on the exceptional salaries of just executives?

In addition to questioning whether  $r > g$  constituted a fundamental inequality, Acemoglu and Robinson (2015) also called into question the incorporation of general economic laws into the scholarly inquiry of economic inequality. They were concerned that relying on general laws led to a "sweeping account of inequality" that ultimately "ignores the key forces shaping how an economy functions: the endogenous evolution of technology and of the institutions and the political equilibrium that influence not only technology but also how markets function and how the gains from various different economic arrangements are distributed" (Acemoglu & Robinson, 2015, p. 3). Acemoglu and Robinson were concerned about the absence of economic and social institutions in Piketty's argument.

### Discussion

Based on an application of Toulmin's model of argument to Piketty (2014a) and its critics, we offer five general observations. We submit that these observations can lead to a more informed and transparent debate on topics that extend beyond economic inequality.

## First Observation: Argument Structures are Complex

How many of us have genuinely appreciated the complexity of Piketty's arguments? His book contains not only multiple claims but also claims of multiple *types*. Some claims are knowledge claims (things Piketty asserts we should accept as fact), and others are policy claims (things Piketty asserts we should do in light of what we know). We concluded that analyzing just one claim of just one type provided sufficient material for an entire journal article. Each of Piketty's (2014a) other claims would likely require a similar analysis to be illuminated. Furthermore, the claims are likely interrelated. For example, the knowledge claim we have analyzed in this paper likely appears as a premise in Piketty's policy claims. We predict that a comprehensive analysis of Piketty's arguments would unveil a complex network of interrelated claims, each with its distinct argument structure.

An analysis of merely one of Piketty's claims unearthed a complex interaction of premises—grounds and warrants—that are used to support the claim. Because Piketty did not make these premises explicit by placing them in the structure of the argument, our analysis was unavoidably based on what we thought Piketty would need in terms of empirical material and background assumptions. We therefore offer Fig. 2 not as a *description* of Piketty's argument but as a *reconstruction*, our way of making sense of the structure of Piketty's argument. To be sure, other analyses might result in different reconstructions. This is to be expected, given that the process of sensemaking is best described as a process of abductive, not inductive (let alone deductive), reasoning (Mantere & Ketokivi, 2013). Indeed, by asking, “What warrants do we think Piketty would need to bridge the grounds with the claim?” and then introducing the requisite warrants is *inferring an explanation*, which is the central characteristic of abductive reasoning (Niiniluoto, 1999, p. S437).

One particular characteristic that adds to the complexity of Piketty's argument is the fact that some of the central ideas appear, in slightly different forms, both in the grounds and the warrants. The inequality  $r > g$  is an illustrative example of an element that Piketty used both in the grounds and in the warrants of his argument. As part of the grounds,  $r > g$  is unproblematic, but as a warrant—“ $r$  is *sufficiently* greater than  $g$ ”—it has invited several rebuttals. This leads us to the second observation regarding underdetermination.

## Second Observation: Underdetermination is Fundamental

Piketty was explicit about not being concerned about the concentration of wealth per se. His concerns were the potentially adverse drivers and consequences, as well as the undeserved ways in which wealth had in his view accumulated. This echoes the crucial point that dispersion is not synonymous

with inequality. In Toulmin's terms, the empirical grounds are manifestations of dispersion, but to arrive at claims about inequality, one needs warrants. Therefore, to genuinely understand how and when ascribing inequality to observed dispersion is justified, one must understand the warrants. In epistemological terms, dispersion *underdetermines* inequality.<sup>6</sup>

Similarly, there is nothing in Piketty's empirical data or inferences that establishes the undeservedness of wealth accumulation as an empirical fact; the fact that salaries are high underdetermines the conclusion that they are undeserved. The claim that executives effectively set their own salaries calls for empirical examinations that establish the systematic corruption of board compensation committees. If these examinations revealed that compensation committee members indeed routinely breached their legal fiduciary duty of loyalty and care to the corporation, then Piketty could introduce powerful new grounds into his argument. But because Piketty does not cite any evidence in his book, the proposition of systematically corrupt compensation committees remains a warrant.

Our analysis offers several practical illustrations of underdetermination that stem from two sources. One is insufficient data. Mankiw (2015) demonstrated that whether  $r$  is sufficiently greater than  $g$  can be subjected to empirical analysis. Therefore, some of our beliefs are merely *transiently underdetermined* (Stanford, 2017, section 2, paragraph 4). The more profound reason for underdetermination is the possibility that we can never gather sufficient data; some beliefs remain *permanently underdetermined* (Stanford, 2017, section 2, paragraph 4). We surmise that dispersion might permanently underdetermine inequality. Specifically, while stronger inductive generalizations from income and wealth data provide a more accurate description of the facts, it is hard to see how a more accurate description could carry the argument to conclusions about inequality. The fundamental reason for this is that the data, no matter how voluminous and accurate, are always data about dispersion, not fairness. Assertions of inequality always have both a descriptive and a prescriptive component (Gosepath, 2021), and while empirical data can supply descriptive assertions, the latter requires the introduction of a comparative standard, effectively a warrant.

<sup>6</sup> If inequality is defined in a neutral, mathematical way as the condition of being unequal, then dispersion is synonymous with inequality, and there is no underdetermination. However, those concerned with increasing economic inequality effectively interpret inequality as a lack of fairness—inequality is *inequity*. Under this definition, dispersion underdetermines inequality. Using the term “economic inequity” (e.g., Lazonick and Shin 2020, p. 1) instead of “economic inequality” would avoid confusion. However, since the term “economic inequality” has become institutionalized as meaning specifically “income inequity,” we use the established term here. We thank the anonymous reviewer for pointing out the importance of distinguishing between inequality and inequity.

We propose that acknowledging both types of underdetermination is relevant in the analysis of arguments. Distinguishing between the two is particularly important in rebuttals that are aimed at the warrants. A case in point, as Acemoglu and Robinson (2015) illustrated, the question of whether  $r > g$  constituted a *fundamental* inequality could be subjected to empirical scrutiny, thus making the issue only transiently underdetermined.

At the same time, insofar as the evaluation of a specific argument is concerned, the two types of underdetermination have a similar consequence: They compel the scholar to take a side. Specifically, whether an untested premise is also untestable may be relevant in the long term, but in the evaluation of a specific argument, the only relevant issue is that the premise—testable or not—constitutes a warrant in the argument. This leads us to the third observation.

### Third Observation: Scholarly Claims Take Sides

Are we, as scholars, impartial, disinterested observers who merely supply the evidence to those appointed to make decisions? What will we do when the evidence is not there? Piketty (2014a, p. 2) himself acknowledged the limits of empirical material and that there are aspects of inequality “that no purportedly scientific analysis can alleviate.” We read this as an implicit acknowledgment of the importance of warrants.

When there is no empirical evidence to justify a warrant, what is the scholar to do? The standard response is to remain agnostic and to emphasize the scholar’s role as seeking explanations and understanding, not taking sides or prescribing action. At the same time, no matter how justified remaining agnostic may be in the epistemological sense, the agnostic ultimately endorses a specific type of action: inaction. In refusing to pick a side, the scholar ultimately takes a side. This must be acknowledged, if only for the sake of transparency.

Let us return to executive compensation. In one of the few studies examining compensation committee decisions empirically, Hermanson et al. (2012) quoted two compensation committee chairs. One noted that the compensation committee had “an obligation to the shareholders, but also to employees, customers, all stakeholders, and to the health of the organization” (Hermanson et al., 2012, p. 666). Another bluntly stated that “[t]op management compensation has gotten out of control” (Hermanson et al., 2012, p. 667).

Piketty’s position echoes the second chairperson’s experience. But how, why, and at what point, did he decide to effectively adopt the managerial hegemony theory as the backing? What led him to dismiss the comparatively moderate agency theory and institutional theory (Hermanson et al., 2012, p. 669) backings as alternatives? The transparency of

Piketty’s argument would be greatly improved if he opened up his decision process to his audience.

One cannot base an argument simultaneously on agency theory and managerial hegemony theory because the two are essentially incommensurate—the scholar must choose. Our recommendation is to be transparent by acknowledging the feasible alternatives and then making one’s choice explicit: “There are four feasible and incommensurate backings for the executive compensation warrant. Of these four, I chose managerial hegemony because...”

At the same time, “taking a side” should not be viewed as a personal commitment but simply as a part of a process where the scholar places an argument on a particular side of the debate—it is the argument, not the scholar, that takes a side. Scholarly debates are not issues of personal convictions but the construction and evaluation of credible arguments. In fact, we propose that scholars who have the expertise to place arguments on opposing sides of the debate can be immensely useful. We find great wisdom in the words of Herbert Simon, an interdisciplinary scholar well known for eschewing disciplinary loyalty: “‘If you see any one of these disciplines dominating you’, he said, ‘you join the opposition and you fight it for a while’” (Augier & March, 2002, p. 2).

### Fourth Observation: Every Participant’s Contribution is an Argument

Piketty (2014a) contains a series of arguments; so do the texts of all those who agree with him; so do all those who offer rebuttals; and so does this paper. Everyone who participates in scholarly conversations and debates is the author of an argument. And it is only fair that all arguments be subjected to critical scrutiny.

In casual conversations with colleagues who had taken a position on Piketty, many struggled to explain how and why they had adopted their specific positions. Those who agreed could not clearly articulate why they did so; those who disagreed did not fare any better. Some colleagues pointed out factual errors but were unable to explicate which specific claim the factual error called into question. Finding a factual error seemed to serve as a “gotcha moment” used to dismiss the entire 700-page book and all its claims.

One recurring observation in our analysis of the reactions to Piketty (2014a) was that those who endorsed Piketty were less explicit than those who called his argument into question. Why the asymmetry? Why do we expect rebuttals to be explicit when a mere “show of hands” seems to be sufficient in endorsements? To be sure, this was not always the case, but we found the difference sufficiently conspicuous. Why should rebuttals be held to a higher standard of scrutiny than endorsements?

The asymmetry is a cause for concern due to *uncertainty absorption*, described by March and Simon (1993, p. 186) as

a process in which “inferences are drawn from a body of evidence and the inferences, instead of the evidence itself, are then communicated.” For example, while both Solow and Krugman endorsed Piketty, we remain unsure about which specific claims they found compelling and why. Those who offered rebuttals were more explicit regarding the targets of their critique.

Debates on economic inequality would become more transparent if those who agreed with a given proposition felt compelled to be explicit about their agreement. Symmetrically, critics should feel compelled to be explicit not only about why they disagree but also about how and why their rebuttals are consequential and how they call the argument into question. We were encouraged to have identified several rebuttals that met both criteria.

### Fifth Observation: Knowledge Claims are Ethically Embedded

In their treatise on the relationship between economics and ethics, Hausman et al., (2017: 12) described the distinction between factual claims and evaluative claims as “maddeningly difficult to make precise.” Our analysis of Piketty’s argument structure may shed light on why the distinction is so labored. We suggest that Fig. 2 contains a mix of both factual and evaluative elements: The grounds are largely factual, but the warrants and their backings are a mix of factual and evaluative material. Because the *Claim* is ultimately supported by both factual and evaluative content, we conclude that the entire argument is informed by evaluative considerations. We call this the *ethical embeddedness* of the argument.

In his examination of how values enter our reasoning processes, Donaldson (2021, p. 1) noted that our reasoning is ultimately “legitimized by intrinsic values.” We believe that our analysis of Piketty’s argument structure offers an example of how this happens. Importantly, value judgments are not limited to the construction of policy claims (which is perhaps obvious) but also knowledge claims (which may be less obvious). Intrinsic values guide our choices regarding which grounds and which warrants to use. In the case of Piketty, we believe the *precautionary principle* can be used to illustrate ethical embeddedness.

In its 1992 Rio Declaration on Environment and Development, The United Nations General Assembly declared that “[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation” (United Nations, 1992, p. 3). In this statement, the UN called for action even when scientific evidence was not compelling; this is the essence of the precautionary principle. Foster et al., (2000, p. 979) noted that some formulations of the precautionary principle call for

action even in situations in which *no evidence* exists, citing the 1990 declaration on the protection of the North Sea as an example.<sup>7</sup>

In the *Claim*, Piketty noted that “if left to itself,” a market economy constituted a “potential threat” to democracy and social justice (Piketty, 2014a, p. 571). According to Piketty, the concentration of wealth required both attention and action specifically due to “the inexorable tendency for capital to accumulate and become concentrated in ever fewer hands” (Piketty, 2014a, p. 9). We see Piketty essentially applying the precautionary principle to serve as an intrinsic value that legitimizes the *Claim*. Piketty was ultimately not concerned about the past or the current situation (the facts), he worried about what might happen in the future if no actions were taken.

Understanding the implicit application of the precautionary principle sheds further light on the rebuttals as well. The common denominator we identified in Auten and Splinter’s (2023), Mankiw’s (2015), and Acemoglu and Robinson’s (2015) rebuttals was that they ultimately all questioned the legitimacy—in Donaldson’s meaning of the term—of Piketty’s (2014a, p. 361) concern for the “indefinite inegalitarian spiral.” Mankiw’s (2015, p. 44) conclusion that  $r$  would have to be *much greater* than  $g$  for Piketty’s projections to be disconcerting illustrates the concern with the potential lack of legitimacy of Piketty’s conclusions.

Our interpretation is that Mankiw and Piketty ultimately differed mainly on how forcefully their positions applied the precautionary principle. To be sure, nowhere in his rebuttal did Mankiw suggest that wealth inequality could not undermine democracy; he was simply less worried about it than Piketty was in the light of the evidence (Mankiw, 2015, p. 46). But worrying, or not worrying, about something is ultimately not a question of facts but how one applies the precautionary principle and what the evidential standards are. How high the bar is set is based on value judgments, not scientific principles.

We propose that acknowledging the ethical embeddedness of knowledge claims is a prerequisite to understanding the economic inequality debate. Foster et al., (2000, p. 979) noted that the application of the principle is subject to “extreme variability in interpretation.” The debate on economic inequality illustrates this variability.

Application of the precautionary principle is obviously not limited to the debate on economic inequality but applies more broadly to any domain of research and policy where a

<sup>7</sup> A straightforward way of describing the precautionary principle is by asking why we buy insurance. Even though we have no compelling evidence that our houses are subject to a fire hazard, most of us have taken the precautionary measure of obtaining a fire insurance policy. We choose the extent of the coverage based on how intensively we apply the precautionary principle.

lot is at stake: environmental issues, health care, and crime are illustrative examples. We venture to guess that just like in economic inequality debates, the main points of disagreement have more to do with the warrants than the grounds, although establishing this always requires explicit analysis.

## Conclusion

In this paper, we have analyzed Piketty's (2014a) proposition that the concentration of wealth constitutes a strong force for divergence in society. By applying Toulmin's (2003) model of argument structure, we have sought to illustrate the complexity of scholarly arguments and how this complexity poses challenges for scholarly debate. Viewed as a series of arguments, we found Piketty (2014a) extremely complex. Both the co-authoring and the peer-review processes of this paper have revealed that challenges started with identifying what Piketty's claims were and which were the central ones.

At the same time, we found that Toulmin's work provided an effective language to engage the complexity and to make sense of both Piketty's argument and the critical reactions it provoked. We are also encouraged that what we considered the key rebuttals constituted compelling and genuine attempts not to reject Piketty's arguments but to qualify them and to add nuance, thus moving the conversation on economic inequality forward. Not a single serious rebuttal suggested, even implicitly, that economic inequality and the upper tail of the wealth distribution did not warrant attention and monitoring. Moreover, the most important rebuttals we identified and included in our analysis clearly took Piketty's concerns seriously, as the scholar's duty compels.

Importantly, we chose to analyze both Piketty (2014a) and its critical commentaries as *scholarly arguments* aimed at convincing an audience, as opposed to merely rallying support for a cause. It became immediately obvious to us that many of the reasons for endorsing or dismissing Piketty were not based on the argument's credibility, or lack of it, but whether the claims resonated with the person's worldview or political identity. Many of the commentaries framed the debate as being between the left and the right ends of the political spectrum (Krugman, 2014a). That many readers seemed to view the book as a political statement was evident in numerous endorsements and critiques. We left all these out of this paper because we wanted to focus on evaluations that took Piketty's book as a scholarly argument. Our analysis suggests that Piketty's claims, while ethically embedded, are ultimately apolitical; or perhaps more modestly, we found much value in choosing to read and evaluate the book as a scholarly argument, not a political declaration.

That our predispositions condition the way we appraise claims is both well established and understandable—just like everyone else, scholars are subject to confirmation

bias. However, if we are genuinely interested in improving social systems, whether by reforming fiscal policy or the electoral system, we must seek credible arguments instead of simply rallying political support for our ideas. In his critique of Piketty (2014a), Piachaud (2014: 706) stated little more than the obvious by noting that a “clear explanation of what was driving changes in inequality is needed if policy is to be effective in altering the extent of inequality.” To this end, all claims must be made explicit and transparent so that they can be critically scrutinized. In the case of Piketty's (2014a) proposals for tightening income tax progression and wealth taxation, both scholarly communities and the public at large must understand what undesirable inequalities they are aimed at mitigating and, even more fundamentally, why the observed inequalities are undesirable in the first place. We agree with Piketty that while discussions on inequality should involve economists (among other experts), one need not be an economist to understand inequality.

The most influential endorsements and rebuttals were written by accomplished scholars generally viewed as top experts in their fields. While trusting expert opinions is as common as it is understandable, it constitutes uncertainty absorption: Our choice is limited to believing or not believing the expert, and evaluation is impossible (March & Simon, 1993, p. 187). This is disconcerting, particularly if we wish to endorse Piketty's (2014a, p. 2) vision of making economic inequality *everybody's business*. If we are to take Piketty's vision seriously, then the only option is to push ourselves to genuinely understand one another's claims and the argument structures that support them, lest economic inequality will remain the *experts' business*. To this end, not only the authors, evaluators, and audiences of arguments but also educators all have a critical role to play.

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