Predictive Success and Non-Individualist Models in Social Science[[1]](#footnote-1)\*

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**1. Introduction**

Many charge the social sciences with predictive inadequacy. The 2008 financial crisis (Elster 2009; Epstein 2015), the phenomenon of preference reversals (Guala 2005; Lichtenstein and Slovic 1971), and the predictive failure of the Philips Curve (Rosenberg 1992) all suggest serious predictive shortcomings in the social sciences. Moreover, as Northcott (2015) notes in a discussion of election predictions, political science falls short of systematic predictive success. Even predictively successful electoral models apply no further than a particular election.

 However, Epstein (2015) proposes a strategy for improving the systematic predictive power of social scientific theories and models. We accomplish this by moving away from the anthropocentric foundations of the social sciences. In particular, Epstein argues that we should reject a prominent view about the nature of the social world adopted by many social scientists: ontological individualism. Epstein maintains that social scientific models fall systematically short of systematic predictive success because of their thoroughly anthropocentric foundations. We must include things other than individuals in social scientific models if social scientists expect to attain greater predictive success.[[2]](#footnote-2) I call this view, that incorporating non-individuals into social scientific theories and models leads to predictive success, ‘non-individualism’. I shall argue that non-individualism does not promise greater predictive power for the social sciences.

 In section 2, I present and criticize Epstein’s argument against anthropocentrism in the social sciences; I charge that (1) Epstein’s argument begs the question against certain proponents of ontological individualism and (2) Epstein’s argument is uncharitable to the ontological individualist. In section 3, I present a case of a non-individualist approach to social sciences, namely Edith Penrose (1959; 1960)’s theory of the growth of the firm. I conclude that the non-individualist approach Penrose takes speaks against the claim that pursuing non-individualist strategies guarantees improvement in the predictive power of social scientific theories and models. To bolster this position further, I argue that Penrose’s theory aims to provide retrodictive explanations. In this I follow the account given by Elster (2009).

**2. Anthropocentrism in Social Science**

As mentioned in the introduction, Epstein (2015) charges the social sciences with a problematic anthropocentrism. In particular, he charges that anthropocentrism accounts for the predictive shortcomings of the social sciences. He claims of the social sciences that they treat the social world as composed of individual people in the same way that we can treat ant colonies as composed of ants (p. 7-8) – social scientists have approached the world in a way that places too much stress on the role of people in producing social phenomena. A commitment to an austere picture of the social world informs what I will call anthropocentrism:

 (ANTH) Social scientific theories should commit only to the existence of individual people.

Furthermore, Epstein takes ANTH to be a consequence of ontological individualism, which expresses a view of the social world taken by many social scientists and philosophers. This is the thesis that all that facts about individual people exhaustively determine facts about the social world. For example, Schelling (1978)’s classic model of segregation describes the movement of individual agents according to their innocuous preferences to live around those like themselves (often represented using cellular automata). The resulting segregation seems explainable in terms of the actions the individuals take to satisfy their preferences. Game theoretic models of cooperation (Axelrod 1984) describe interactions between competing individuals that lead to cooperative behavior and, again, seem to yield explanations of the evolution of cooperation that appeal to the strategies individuals play against each other. Yet another example can be drawn from discussions of cultural evolution (Henrich and Boyd 2002) that use replicator dynamics to model cultural evolution in terms of changing beliefs, thus yielding explanations of cultural evolution that appeal to changes in the beliefs of individual people. So, the charge that the social sciences are anthropocentric is not baseless. There are salient examples of models that when used in the context of social scientific inquiry seem to be anthropocentric. These models yield potential explanations of social phenomena seemingly purely in terms of the behaviors of individual people.

 However, by and large, I shall argue that Epstein’s argument misses its mark. I begin by presenting his argument in Section 2.1. In Section 2.2, I then present some objections to that view. Section 3 then offers a case study that places further pressure on Epstein’s argument.

*2.1 Against Anthropocentrism*

Epstein’s argument relies on two premises. The first premise states that if ANTH is true, then social scientists should only use individualist theories for prediction. Consider Epstein’s appeal to Coleman (1990), who presents a useful model for illustrating how individualistic explanations proceed. Coleman presents figure 1, which uses Weber (1930)’s explanation of the transition of protestant Christianity to capitalism (the social level arrow moving from left to right). One explanation of the existence of capitalism appeals to a set of individualistic facts. These individual level facts concern, for example, the values of the individual Protestants and their economic behavior (arrows 1 and 2). The economic behaviors of the individuals then realize capitalist economic arrangements (arrow 3).

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**Figure 1 (from Epstein 2015)**

Individualism demands that arrows 1, 2, and 3 in figure 1 establish needed links between macro level and individual level variables so that the individual level facts predict the macro level phenomenon. For the individualist, these predictions must rely on individual people involved in producing the phenomenon of interest. The boat model gives a clear illustration of the first premise. If ANTH is true, then successful prediction of the emergence of capitalist economic arrangements demands specification of the information designated by arrows 1, 2, and 3, on pain of violating ANTH.

 The second premise of Epstein’s argument objects that social scientists should *not* only use individualist theories to predict. To express the shortcomings of individualism’s focus on facts about individual people, Epstein presents a very intuitive example (p. 47). Starbucks, already struggling and underinsured becomes insolvent. Why? Because one night, after its store employees return home, a number of stores suffer power spikes and consequently the loss of many assets, e.g. refrigerators break down, milk spoils, ice melts, etc. These events cause Starbucks’ liabilities to exceed its assets, and it therefore becomes insolvent. Now turn to figure 2. It presents everything that we can model on the assumption of individualism. Consequently, the individualist can provide no individual level mechanisms. After all, the relevant Starbucks’ employees were at home – they did not play a causal role in Starbucks’ overnight transition from solvency to insolvency. Instead, all of the causally salient facts concern Starbucks’ resources.

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**Figure 2 (Epstein 2015)**

As such, the individualist cannot predict Starbucks’ insolvency. Predictions relying only on individuals leave out important features of the causal story behind the occurrence of certain social phenomena. All anthropocentric theories or models should suffer from the same problem, i.e. they should leave out what in certain contexts constitutes predictively valuable information because they fail to incorporate extra-individualist information. Thus, the individualist, inasmuch as she cares about generating predictions that rely only on individual people, cannot predict Starbucks’ insolvency.

As presented, it seems ontological individualism bears the blame for predictive failure. If successful predictions of social scientific phenomena require positing non-individualist entities, then social scientific models or theories ought not commit only to the existence of individual people. i.e. social scientists should rely on a different conception of the social world. By dropping the commitment to a strict ontological individualism, we can broaden the space of possible social scientific models to those that include non-individualist models.

 In sum, Epstein’s argument against anthropocentrism appeals to a case in which mistaken assumptions about ontology (in this case, ontological individualism) lead to failures of prediction (p. 46-47). On this basis, we may conclude that ANTH is false and, moreover, that ontological individualism is false. Because predictive failure in the social sciences concerns the ontology of the social world, Epstein proposes that we use the tools of metaphysicians to address it. He proposes we make use of the metaphysical grounding relation to explicate the dependence of social facts on more fundamental facts (p. 98, 127) and argues that clarifying the grounds of social facts stands to improve our understanding of various aspects of the social world in a manner relevant to social scientific practice (p. 99, 127, 136-137, 166). In doing so, he takes an approach similar to Searle (2009) who argues for the methodological priority of ontology over methodology in the social sciences.[[3]](#footnote-3) Though Epstein does not express the priority of ontology as explicitly as Searle, his argument places special burden on ontology as the explanation for predictive failure.[[4]](#footnote-4) So, the argument against anthropocentrism suggests possible methodological improvement (namely, improvement in prediction) in deriving a clear metaphysical picture of the social world, i.e. one that goes beyond individualism.[[5]](#footnote-5) In this we have the upshot of the argument against anthropocentrism: ontological solutions for ontological problems.

 Now that we have considered Epstein’s argument, let us consider whether it succeeds.

*2.2. Does the argument succeed?*

In this section, two problems with Epstein’s argument concern me. First, the argument begs the question against his opponents. Second, the argument is not charitable to ontological individualists. Let us consider each criticism in turn.

 Consider the charge of circularity. There is a longstanding debate between *methodological* individualists and *methodological* holists (see Zahle 2016). I will not give the full dialectic here. Instead, we should note that Epstein’s argument presupposes that *ontological* individualism is relevant to predictions. However, prediction belongs to the realm of methodology. Hence, the ontological individualist may contend that Epstein’s argument presents a better challenge to methodological individualism than to ontological individualism, i.e. his argument demonstrates the methodological limits of individualism and does not raise problems with ontology. If social scientists are too focused on individual people, it may be that they should abandon individualism for methodological purposes, though their ontology may escape unscathed.

Moreover, philosophers and social scientists often pair *methodological* holism with *ontological* individualism (Kincaid 1996; List and Spiekermann 2013; Lukes 1968; Vromen 2010[[6]](#footnote-6)). Typically, these theses are rendered consistent by allowing that explanations can appeal to holist entities without taking on board the ontological commitments they suggest. Since explanation is but one facet of methodology, we may say something similar about prediction – successful prediction of social phenomena may require an appeal to holist entities even if no such things exist. The combination of methodological holism and ontological individualism belies the first premise of Epstein’s argument (that if ANTH is true, then social scientists should use only individualistic theories to predict). Claims like ANTH need not inform the use of holist information for the purposes of prediction, explanation, or any other aspect of scientific methodology. Someone who endorses such a position certainly does not believe that we should bring ontological individualism to predictive use as straightforwardly as Epstein suggests – methodological holists may argue that we need holist social entities for successful prediction. As such, methodological holists would not grant the first premise of Epstein’s argument.

Indeed, seen in this light, we can see that Epstein’s diagnostic story is rather implausible. Various defenses of methodological holism in the social sciences suggest that Epstein has exaggerated the individualistic nature of social scientific theories. This may indicate that ANTH does not carry much weight in social-scientific practice. For example, Kincaid (1996, p. 161) claims of game theoretic analyses of social phenomenon that they assume rules/institutional structure, demand information about more than individuals to settle issues about the presence of multiple Nash equilibria, assume pay-offs interpreted as monetary in nature, and often contain assumptions about distributions of resources. This suggests that social scientific theories, in particular those grounded in game theoretic analyses, quantify over more than individual people. Similar insights apply to agent-based models inspired by Schelling’s work (Muldoon, Smith, and Weisberg 2012; Centola, Willer, and Macy 2005). For example, such models contain assumptions about the composition of the population around an agent that enter into satisfaction of preferences or belief changes. Other assumptions are important, too, e.g. assumptions about the topological properties of social networks as well as relational properties that obtain between agents. Moreover, the notion of an “agent” in an agent- based model is quite general – agents are individual people, but they may also be firms, households, or other social entities. Thus, many social scientists are not committed to ANTH. Hence, it would appear that Epstein has misdiagnosed the source of the social sciences’ predictive failures.

 Turn now to the second problem with Epstein’s argument: its uncharitable construal of ontological individualism. The ontological individualism that ANTH assumes posits *only* individual people. Epstein’s argument opens the possibility that we need to consider how material, non-human entities (such as the Starbucks refrigerators) play a role in grounding social facts. But should we interpret this move as a rejection of individualism or an elaboration of individualism? Epstein considers the possibility of re-formulating individualism to meet his objection but likens this move to drawing epicycles (p.48). Even if we can divide some social phenomena into individual people and other non-person things like resources, this does not address the underlying issue, namely, that we cannot divide some social phenomena this way. So, expanding “individual” to incorporate individuals and other things may not address the underlying issue. Purportedly, the Starbucks example demonstrates this point.

But why must Epstein’s conclusion trouble the individualist? Even in the Starbucks case we cannot do without people. The mere fact that Starbucks loses certain assets, while certainly a salient cause, does not fully explain its insolvency. In fact, the foregoing version of the explanation loses out on an important part of the story behind why Starbucks goes insolvent. Namely, Starbucks goes insolvent because it loses resources needed to allow it to maintain solvency. In order to maintain solvency, its employees must engage in certain behaviors (like making coffee). The individualist only needs this much – we cannot explain Starbucks’ insolvency by appealing to just any material entities, we need to appeal to those entities that enter into important kinds of relationships with members of the organization. If we allow the individualist to posit material entities, even in cases where it seems these entities do the brunt of the explanatory work, individuals still seem to possess a valuable explanatory role. It remains unclear why we should restrict the individualist from using this strategy.

For these reasons, I conclude that Epstein’s argument is unsuccessful.

**3. Resource Based Theories of the Firm**

Thus far, I have challenged two of Epstein’s assumptions. First, I have challenged the claim that ANTH entails that scientists should use only individualistic theories to make predictions. Second, I have challenged the claim that ontological individualism requires a commitment to ANTH. To complete my argument against Epstein, I consider the last of his assumptions: that scientists should not only use individualistic theories for predictive purposes. A charitable reconstruction of his reasoning for this claim is as follows: (a) Some social facts (e.g. that Starbucks is insolvent) are not grounded only in facts about individual people, (b) if some social facts are not grounded in facts about individuals, then social scientists should not only use individualistic theories to predict. From this, we can then conclude that social scientists should not only use individualistic theories to predict. I shall argue that (b) is dubious, and hence that the last of Epstein’s assumptions is unfounded.

To do so, I shall appeal to resource based theories of the firm (RBTs). Though the literature on RBTs contains many theoretical and empirical studies, I shall focus on the work of Edith Penrose (1959; 1960), who pioneered the resource based approach.**[[7]](#footnote-7)** I focus on Penrose’s account not only because of its historical importance, but because her approach highlights the important role of resources in social scientific explanation, something stressed less in other theoretical work in the RBT literature. Moreover, I focus on Penrose’s theory and RBTs more generally because RBTs stress the importance of material, non-human entities in explaining social phenomena. Thus, we can test claim (b) against social scientific practice.

Of course, Penrose’s RBT only serves as a good test case if it comports well with Epstein’s discussion of non-individualism. I selected Penrose’s RBT because if *any* existingsocial scientific theory or model approximates an Epsteinian non-individualist model or theory, Penrose’s does. RBTs treat firm resources and managerial action as fundamental to explanations of firm behavior (Levinthal and Myatt 1994; Mahoney 2005; Penrose 1959; Teece, Pisano, and Shuen 1997) and in some contexts even seem to give preference to material entities over individuals to explain firm behavior.[[8]](#footnote-8) As such, RBTs present an interesting case study for the possibility of generating non-individualist theories and models in social science. However, such theories (particularly Penrose’s) lack predictive power, where we take predictive power to consist in the power to generate *novel* predictions of phenomena rather than the prediction of phenomena already known to exist. In fact, as I will discuss below, social scientists employ RBTs for the purpose of retrodiction (mechanistic explanation of past events). Consequently, claim (c) requires a better motivation.

*3.1 Penrose’s Theory*

The firm, as Penrose understands it, differs from the abstract entity that economists refer to as the ‘firm’ in neoclassical economics. This is important because Penrose wants to explain the growth of the firm – its evolution over time as it uses and re-uses its resources to profit against a shifting market environment. We cannot explain the kind of growth implicit in this concept of the firm (as a growing thing) using the neoclassical account.

 In fact, Penrose distinguishes the firm of neoclassical economics from the firm as it matters for her project. The neoclassical firm maximizes profits in the face of static market demand. The prices of a firm’s outputs, as well as the prices of inputs (financial and physical capital used to produce its outputs) are assumed to be fixed so that the firm’s decision about how to best maximize profits concerns using the best combination of inputs and outputs (considering both price and the number of inputs/outputs purchased/sold). Moreover, it is assumed that there is a particular output firms produce (some good or commodity, often referred to using variables as they appear in mathematical definitions of profit) (Varian 2010, p. 345-346).

By contrast, the concept of the firm that Penrose concerns herself with expands and develops multiple products. This firm maintains its identity over time despite the fact that it may shift to the production of new products. This stands in contrast to the neoclassical firm, for which, according to Penrose, “[i]t makes little difference … whether changes in the characteristics of the individual firm … are treated as causing changes in the size of a single firm or as causing the creation of a series of ‘new firms’.” (p. 12) So, the conception of the firm we need treats the firm as a growing and changing organization rather than a “‘price and output’ decision maker for given products …” (ibid.). However, we should note that this does not deny that the neoclassical firm can explain some types of firm growth. Nevertheless, the neoclassical conception explains growth that increases in the specified outputs of the firm and does not allow it to vary in the products it produces as it grows (p. 10). Penrose’s theory of the firm has a different target explanandum than the concept employed in neoclassical theory.

 Penrose conceives of firms as both collections of productive resources and administrative units. The resources comprising the firm are physical entities (plant equipment, land, natural resources raw materials, unsold stock of unfinished goods) as well as human and financial capital (and more abstract entities like knowledge). Productive resources are prized for their use in providing services. The services a firm can provide vary according to its physical and human resources. As such, the same bundle of resources may realize different sets of services (in light of the distinctive sets of specialized knowledge and managerial abilities possessed by firm members). The goal of a firm is to use its resources in conjunction with resources obtained from outside the firm to produce goods and maintain long-term profits (by way of using its services). However, this is different from the picture we receive from the neoclassical account. In that account, growth may occur through an increase in the number of outputs a firm generates. In this case, growth may occur through managerial action and effective use of firm resources to provide distinct services (which may change over time) against a changing market environment.

 Penrose explains growth of the firm both by appeal to the behavior of firm members and by appeal to firm resources. Regarding the former, consider the *Penrose Effect* (Mahoney 2005, p. 172). Penrose states that if a firm expands at a faster rate than individuals in the firm can obtain the experience needed for its operation, then the firm’s efficiency will decline. In other words, the fact that individuals have limited planning abilities sets an upper limit on the growth of firms. The Penrose Effect is consistent with claims like ANTH. But Penrose proposes alternative explanations of firm growth, namely explanations that appeal to “internal” and “external” inducements and obstacles (internal and external inducements are tied more closely to firm resources). Internal inducements to growth arise from unused productive resources (which Penrose claims are always present and serve as a source of innovation for firms), while internal obstacles arise from the unavailability of resources (and their corresponding services). External inducements to firm expansion include “backward integration” (or gaining control of resources needed for the production of goods, where these might otherwise be outsourced through the establishment of contracts with parties outside of the firm), while external obstacles to growth include factors like competitiveness within markets.

So, the resources the firm has access to constrain, in an important way, its ability to grow and offer up limits to firm growth or, as Penrose puts it, “A firm is not confined to “given” product, but the kind of activity it moves into is usually related in some way to its existing resources, for there is a close relationship between the various kinds of resources with which a firm works and the development of the ideas, experience, and knowledge of its managers and entrepreneurs.” (Penrose 1960, p. 2). That is, the firm’s resources determine how it approaches its market and the ideas firm members develop for expansion. This gives resources an important role to play in explaining firm behavior.[[9]](#footnote-9)

*3.2 RBTs and Starbucks*

The foregoing considerations, especially the final one, present contexts in which non-individualist entities (resources) play an important causal role in social scientific explanation in a way that de-emphasizes the importance of individual actions. Different resources lead to different ideas and strategies for interacting with a firm’s market. Individual actions alone do not determine firm behavior; the resources of the firm determine, in an important way, the array of strategic choices available to its members and thus its rate of growth. Consider this in the context of the Starbucks example. On Penrose’s account, the firm’s resources should serve an important role in the explanation of Starbucks’ insolvency – the loss of essential firm resources needed for the firm to generate revenue and remain solvent would count as an internal obstacle to its growth. Inasmuch as the Starbucks case challenges ANTH, Penrose’s ability to account for it suggests that we can classify her theory as non-individualist.

3.3 *Resource based theories offer Retrodictive Explanations*

Of course, none of the above says anything about how we should think about *prediction*. In fact, Penrose only offers a theory the purports to *explain* firm growth. If we define prediction in terms of *use-novelty* (Psillos 1999; Worall 2002), we can illustrate this point. A use-novel prediction is a prediction that was not used in the construction of a theory. This implies (1) that the predicted phenomenon was known before the proposal of the theory and (2) that the predicted phenomenon is *not* ad hoc, i.e. that a scientist neither used the phenomenon to construct the theory or that the theory only predicts the phenomenon only because the scientist amended the theory in a way that made the prediction possible (Psillos 199, 101). Penrose’s RBT fails to satisfy at least one of these conditions – she used it to explain (not predict) the behavior of the Hercules Powder company (Penrose 1960). She intended to use the Hercules Powder Company as an illustration of her theory. This suggests that it played a role in the construction of her account and not that she used her theoretical framework to predict its behavior.

Giving further support to the claim that she did not use her RBT for use-novel prediction, Penrose provides some pessimistic remarks about her theory’s predictive power. She writes, “One can easily state the necessary and sufficient conditions for successful growth, but how can one determine whether a given firm meets these conditions? In practice, one cannot determine it in advance; one must wait to see whether or not the firm grows” (p. 6). Penrose envisions her project as one that aims at *explanation* not prediction. The theory she offers provides an explanation for growth we have already observed rather than growth that has yet to happen – her theory, by her own admission, does not allow one to generate novel predictions. Her project aims at *retrodiction* rather than *prediction*, or so I will argue.

 She does not spell out her views on this very precisely, but they fit comfortably with Elster (2009)’s account of retrodiction. On Elster’s view, retrodictions (1) cite causal mechanisms, where a causal mechanism is a frequently occurring and easily recognizable causal pattern that is triggered under generally unknown conditions or with indeterminate consequences (Elster 2015, p. 27), and (2) target past events as the phenomena to be saved. So, strictly speaking, retrodiction just is (mechanistic) explanation of past events. This much sits well with Penrose’s statement that her theory only explains post hoc the growth of firms. She does not intend the framework she provides to tell us of any particular firm whether it will grow, but instead to tell us about a particular firm why it has grown.

If we should think of RBTs as retrodictive theories, this speaks against the primary motivation for thinking that social scientists should not only use individualistic theories to predict (given that some social facts are not grounded in individualistic facts). Recall, Epstein’s argument against anthropocentrism motivates this claim. The Starbucks case (purportedly) demonstrates certain failures in prediction that result from endorsing ontological individualism. But note that Penrose’s theory provides a plausible account of Starbucks’ insolvency by appealing to internal (i.e. material and non-human) obstacles to firm growth.

With respect to the preceding point, it remains unclear whether we should interpret the Starbucks case as one of predictive failure. Rather, we could treat it as an instance of explanatory failure, instead. Epstein never gives a clear reason for believing that his case counts as one or the other. Because Penrose’s RBT yields a plausible story about the Starbucks case, we at least have reason to treat it as an instance of explanation, to the exclusion of prediction. Granted, this may entail treating the Starbucks case as one in which we have retrodictive success, but systematic predictive success in the social sciences requires novel predictive success (plausibly captured by use-novelty). So, Epstein’s argument may do more to support explanatory failure rather than predictive failure.

Moreover, one may reply that Penrose’s theory only presents a challenge to the sufficiency of non-individualism for novel predictive success. In turn, Epstein may restrict his position so that non-individualism has something akin to heuristic value, i.e. we should use non-individualist theories because they *tend* to produce predictive success. However, given that we have no evidence that non-individualism facilitates novel predictive success and at least some (in form of Penrose’s theory) that non-individualism facilitates explanation but not necessarily prediction, the question of the heuristic value of non-individualism for prediction remains open to dispute.

In sum, claim (b), that if some social facts are not grounded in facts about individuals, then social scientists should not only use individualistic theories to predict, is not well motivated. Thus, even if the objections of the previous section are not sound, we still have reason to doubt the prospects of Epstein’s proposal.

**4. Conclusion**

 Epstein (2015) offers a prescription for improving the predictive power of the theories and models of the social sciences predicated on certain views about the methodological value of social ontology to social scientific practice. Yet my discussion implies that this prescription may not yield the results he desires. Let us consider some general issues with Epstein’s overall project that render it susceptible to criticisms like those I present here.

 First, one may construe my discussion as a plea for a more careful discussion of the relationship of methodology and ontology to problems of predictive success in the social sciences. Importantly, it seems to me that this kind of project should not present general lessons about the social sciences – there need not be any one reason that the social sciences fail. The social sciences are methodologically heterogeneous and concern numerous phenomena – I find it unlikely that we can diagnose failure in the social sciences by appealing to any one issue. As such, a better method, it seems to me, approaches things in a piecemeal fashion by identifying particular instances of predictive failure and uncovers why in particular contexts of inquiry, prediction fails. This bears a stronger similarity to Northcott’s (whom I referenced at the start of this paper) use of election predictions in political science, except that while Northcott focuses on explaining a particular case of success, I suggest that we might focus on explaining specific instances of failure. To do this avoids the trouble one lands in if in certain contexts of inquiry (like those identified in this paper) social scientists do not aim at predictive success. Moreover, this approach forces us to emphasize actual, concrete instances of predictive failure and *not* toy examples that illustrate how such failures may occur.

 Second, my discussion presents questions about the value of non-individualist approaches to improving predictive power in the social sciences. In particular, novel predictive success does not (necessarily) accompany non-individualism, and its heuristic value needs defense. A finer grained focus on social scientific practice and addressing the issue of predictive success in a more piecemeal fashion would address this problem. Again: we should not incline ourselves to make strong, sweeping claims about the social sciences. Perhaps, in certain contexts of inquiry, non-individualist approaches are fruitful for prediction. However, this alludes to precisely what we need to evaluate Epstein’s proposal: a concrete instance of social scientific research that generates successful novel predictions using non-individualist models or theories. We should not rely on a priori examples of predictive failure – if non-individualism really can improve the predictive capacities of the social sciences, it must demonstrate this with empirical success.

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1. \* This version contains a few typographical errors and some imprecisions not contained in the final proofed version. I encourage you to obtain the final version if you are interested in citing any material from this paper. [↑](#footnote-ref-1)
2. More precisely, Epstein proposes that we need to clarify the *grounds* of social facts – his overarching proposal is that the tools of contemporary analytic metaphysics are important for improving the foundations of the social sciences. [↑](#footnote-ref-2)
3. Some, like Kincaid (2015a; 2015b) seem to be pessimistic about a priori approaches like Searle’s and Epstein’s and take an alternative, empirically informed, approach to doing social ontology. Though I am skeptical of the a priori methodology employed by Searle and Epstein, I will not be concerned with this issue in this paper. [↑](#footnote-ref-3)
4. So, we need not conclude that Epstein believes in a wholesale priority thesis regarding ontology and methodology, but rather that in the case of the social sciences, we can best address certain methodological failures by addressing our social ontology. [↑](#footnote-ref-4)
5. That is, one that captures the “grounds” of social facts. [↑](#footnote-ref-5)
6. To be clear, Vromen does not endorse this thesis explicitly however he (1) argues against those who endorse individualist microfoundations for organizational science and (2) suggests that we may need holistic explanations despite the fact that the underlying mechanisms that produce organizational phenomena are individualist in character. For this reason, he seems to fit with those who explicitly endorse ontological individualism but accept methodological holism. [↑](#footnote-ref-6)
7. I will not give an exhaustive overview of the literature on resource based theories because this area is enormous and space constraints prevent an exhaustive discussion. However, there are good (thorough) discussions of this literature. In particular, I refer readers to Mahoney (2005). [↑](#footnote-ref-7)
8. RBTs have even been used to give accounts of the emergence of organizations (Conner and Prahalad 1996). [↑](#footnote-ref-8)
9. Consider this in the context of the Starbucks example. On Penrose’s account, the firm’s resources would be an important part of the explanation for Starbucks’ insolvency – the loss of essential firm resources that are needed for the firm to generate revenue and remain solvent would count as an internal obstacle to its growth. Inasmuch as this case presents a challenge to the anthropocentrist view, it suggests that Penrose’s theory is not anthropocentrist. [↑](#footnote-ref-9)