

How to Craft Economic Policy: Values in Economics

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This article argues that all economic theory presupposes implicit political premises, and that these affect its scientific conclusions. More specifically, I will argue that neoclassical economics trades the epistemic values of predictive accuracy and explanatory strength for an image of the capitalist economy as sustainable, which renders it unequipped to analyze its crises. Echoing Anwar Shaikh's analysis, I will show that neoclassical economics, by constructing idealized settings and misleading metrics, obscures the inherent conflicts of capital accumulation. As this tendency leads to an incomplete understanding of the current system, I will argue that neoclassical economics cannot inform effective economic policy. To explain the difference between epistemic and non-epistemic values, I will begin with a brief historical overview of the role of values in science. I will then, by analyzing economic metrics and the basic assumption of perfect competition, proceed to show that neoclassical economics is both empirically and logically underdetermined. Once I have shown there is no epistemic argument in favor of neoclassical economics, I will argue that this choice of theoretical framework was mandated by underlying political concerns. I will end by discussing the relationship between engaged philosophy and public policy in times of crisis.

Keywords: Social epistemology, political epistemology, philosophy of economics, philosophy of science, objectivity.

This is, I believe, a serious problem throughout much of the contemporary world: erroneous policies based in erroneous theorizing are compounding the economic difficulties and exacerbating the social disruption and misery that result. (Harvey 2015: 10)

1. *Introduction*

As far as social sciences are concerned, economics is a unique case. Economics is everywhere. When economic theory goes awry, it fails to

predict crises and proposes policies that impair millions of lives. When it ignores reality, economic theory overlooks the urgency of what is now dubbed a climate crisis in favor of corporate interests and snubs necessary institutional revisions as radical and unrealistic. If what is at stake is the everyday survival of millions and the future survival of the natural world, then the task of crafting economic policy demands the utmost caution. Given our current success at tackling both poverty and environmental devastation, with temperatures soaring above the recommended maximums, and inequality, in the United States alone, reaching rates unseen since the Great Depression (Zucman 2019), several questions seem central. Is neoclassical economics, with its models and idealizations, at all equipped to deal with these existential threats? Should policy-makers reconsider heterodox economic approaches, browsing their toolkits for responses to pressing issues? Do the issues of welfare economics and climate policy require a new attitude towards the ethics of policy making, and where, if anywhere, does that place the ethical foundations of economic theory? Before answering these questions, we might want to explore how neoclassical economics rose to become the present orthodoxy. We might wonder, for starters, whether the reasons behind this theory choice were strictly scientific. Did neoclassical economics offer shrewder predictions and a simpler explanatory framework than its competitors? Maybe its models painted a particularly precise image of real economic interactions? Did competing theoretical approaches, deprived of the neoclassical vocabulary, fail to reach basic economic conclusions? If the rationale behind choosing neoclassical economics was not epistemic, and I will proceed to show that it was not, we will need to find a way to explain it without resorting to empty talk of ideology.

My central claim is that all economic theory presupposes implicit political premises, and that these determine its scientific conclusions. Closer to the point, I will argue that neoclassical economics trades predictive accuracy and explanatory strength for an image of the capitalist economy as fundamentally sustainable, which renders it ill-equipped to analyze its crises. At the most basic level, all economic theory implies specific beliefs about proper state action concerning individual wellbeing. Higher up, it presupposes beliefs on what constitutes a dignified human life, and on whether the state should have anything to do with the makings of such a life. Economic theories presuppose and justify entire economic systems. What we focus on when phrasing our theory determines whether an economic system will seem sustainable. Science is about inquiry. It is about seeking answers to questions and constructing frameworks for making sense of those answers. As Elizabeth Anderson pointed out in 1995, even the most neutral theories answer particularly worded questions, make particular classifications, and opt for particular ways of managing brute data, and it is these choices that inform economic theory with most of its implicit premises (Anderson

1995). Impartial economic theory is merely theory whose assumptions have, through its prevalence in public discourse, briefly become invisible. They are, however, still there, and are, as much as ever, pliant to philosophical analysis.

Much like Anderson, I will argue that contextual social values are not a hindrance to objectivity; on the contrary, they are an essential element of scientific work, and should be handled with care. If we are to manage modern capitalism or to propose its corrections, we must first understand how it works. In this task, neoclassical economics fails us twice. Epistemically, it fails as a framework for understanding the dynamics of modern capitalism. Ethically, because its premise that capitalism is inherently stabilizing weakens its predictive accuracy, it fails to inform effective policy, which, in turn, damages millions of lives.

To prove this point, I will, echoing Anwar Shaikh's excellent analysis, show that neoclassical economics offers a distorted image of real economic practices (Shaikh 2016). In doing so, it obscures the internal conflicts of capital accumulation. By constructing idealized settings and misleading metrics, neoclassical economics portrays capitalism's cyclical products, such as economic stagnation, downward pressures on wages, unemployment, and financial crises, as its unfortunate aberrations. Predictable social maladies, sidelined by the constructs of neoclassical economics, become difficult to detect before they have gotten out of hand. Since it, as such, informs erroneous policy, neoclassical economics is not only epistemically dubious but ethically problematic. Once the choice of neoclassical economics emerges as epistemically unjustified, I will argue that the decision to embrace this theoretical framework was mandated by political concerns, interested in its ability to depict market capitalism as inherently sustainable. As the practical consequences of this choice will often be at odds with the ethical demands of policy-making—which must concern itself with poverty, housing, healthcare, and environmental preservation—this will lead us to our final topic, a discussion about philosophy and public policy in times of crisis.

Within the next twenty pages, we will be taking a detour from epistemological debates about the role of values in theory choice to recent discussions about the applied ethics of public policy. In the first section, I will show how Thomas Kuhn legitimized values as an aid in appraising rival theories, but limited his proposal to neutral epistemic values, such as predictive accuracy, coherence, and fruitfulness (Kuhn 1977). Continuing with Elizabeth Anderson's argument about value-laden inquiry, I will attempt to clarify the distinction between epistemic and contextual values. Why does this matter? Why should the difference between epistemic and non-epistemic values at all interest us? Because I will, in the second section, proceed to show that the decision to embrace neoclassical economics was epistemically unjustified and hence guided by another kind of motivation. Instead of tackling the whole of

neoclassical economics, I will illustrate my argument by way of synecdoche, analyzing unemployment metrics, poverty limits, and the basic premise of perfect competition. I will close the article with a brief discussion about the relationship between philosophy and public policy.

If states want to craft effective economic policy, and we may assume they do, they must bring economic theory's implicit premises to the surface and assess their validity. At a time marked by rising inequality, precarious labor, insecure housing, and a looming climate crisis, there is little room for the pretense of impartial economics. Persisting with outdated poverty lines in the face of mounting disagreement is not an impartial decision. It is a claim about the relative weight of human hardship. Assessing economic health in terms of production and consumption while experts urge for circular economies is, rather than adherence with neutral scientific concepts, conscious insouciance to new research.

To sum up, my goal is to show that neoclassical economics presumes that capitalism is inherently stable and then builds its analyses upon this assumption, which makes it epistemically unfit to predict its crises. As long as clinging to the neoclassical toolkit continues hampering our efforts to resolve pressing issues, it will remain at odds with democratic standards and warrant an appropriate political response. If there is no decisive epistemic argument in favor of neoclassical economics, and I will show that there is none, we are invited to explore alternative approaches, those more apt at curbing inequality, restraining climate change and building a more fully just society for all. For the time being, we should do what we can. This point made, we can proceed to the first part of our discussion, a brief historical overview of values in science.

2. *Values in Science:*

From Epistemic Values to Implicit Premises

The struggle to recognize the role of values in science was a lengthy endeavor. This reluctance was largely due to the rationalist legacy left by the logical positivists. Unlike contemporary philosophy of science, which places theory choice at the heart of scientific inquiry, logical positivism focused on work within a fixed research program. This confinement allowed it to reduce scientific work to induction from general laws, and to effectively purge science of subjectivity. According to positivist orthodoxy, the scientist's role was to infer scientific laws from individual observations. And the observations themselves were, in turn, treated as the unproblematic starting points of inquiry. Since scientists made these generalizations by applying shared skills and procedures, methods pliant to mutual accountability, scientific agency was portrayed as an inherently rule-governed business, and subjectivity was condensed to the necessary minimum. In Carnap's view, values were a thing of emotion and personal preference, and, as such, entirely foreign to the language of science (Carnap 1959).

Although this rationalist image of science was surprisingly durable, it had one fatal flaw: it bore little resemblance to the way science—a cooperative project encompassing thousands of fallible individuals—is actually practiced. Thus construed, logical positivism paid little heed to two crucial facts. First, observation in science is theory dependent. Observations do not automatically turn into propositions: we are the ones who, with the aid of a chosen vocabulary, must render them intelligible. An observed particle does not instantly manifest as an electron; we must first recognize it as such. It is solely by way of theory we can communicate our findings to others. Because we will interpret all observations in the language of our chosen theoretical framework, theory choice is not a provisional one-off affair but the starting point of all further inquiry. Second, scientific theories are underdetermined by the available evidence. In other words, there is no direct logical necessity between our observations and the chosen theory.

When faced with the problem of choosing one among competing theories, Carnap invoked the famous distinction between “internal” scientific questions, which can be answered within a given theoretical framework, and “external” questions, which concern the legitimacy of the framework itself (Carnap 1950). The internal questions of science were to be resolved, unsurprisingly, by logical induction from laws. However, when wondering whether a given research program suits our purposes, we could appeal to pragmatic criteria such as “fruitfulness” or “efficiency.” These criteria were, of course, even if logical positivists did not yet recognize them as such, epistemic values. And theory-choice, which Carnap identified as “external” to science, was soon recognized as the most central of its activities: the choice of the framework which would inform the rest of our scientific agency.

It was Thomas Kuhn who, in his essay “Objectivity, Value Judgment, and Theory Choice,” officially introduced values to science (Kuhn 1977). The question Kuhn sought to answer was how we choose between equally appealing theories that account for the same empirical data. Historically speaking, scientific theories are seldom singularly determined by evidence: empirical findings fit snugly in different explanatory frameworks, the same sets of facts give way to different readings, and rival scientists offer equally tempting interpretations. Thus, when faced with several equally viable theories, none of which is decided by brute evidence, we must, if we are to make a choice, resort to something other than the evidence at hand. This point is precisely where values come into play. According to Kuhn, we should then allow for a dose of subjectivity, evaluating the theories in line with a specific set of epistemic values and choosing those best suited to our respective research program. Kuhn’s original scientific values were, as their name would have it, distinctly epistemic: they were meant to promote the epistemic quality of our scientific conclusions.

The upshot here is that scientific theories are often both logically and empirically underdetermined. Theory choice can thus seem like an arbitrary affair. Since we cannot fully justify our selection of either theory by referring to the available data, the fact it was more appealing than its competitor must lie in some external source of merit. Kuhn proposed five such epistemic values: predictive accuracy, internal coherence, external consistency, unifying power, and fertility (Kuhn 1977: 322). It is entirely clear why a physician researching vaccines might prioritize a more accurate theory over one that is, albeit greater in scope, more vulnerable to error. A theoretical physicist, whose field does not touch upon actual human lives, might, on the other hand, attribute greater weight to fertility, a theory's ability to overcome difficulties and stimulate further scientific research.

It is essential to note the extent to which Kuhn's values are already profoundly social. In employing different epistemic values, scientists must reflect upon the social configuration of their discipline and the social role of its scientific products. When evidence does not suffice, we fill it in with our metaphysical assumptions and practical interests. Is ours a branch that, as its results affect living human beings, must prevent errors and prioritize accuracy over loftier concerns? Are we dealing with a theoretical domain that profits from continuous disagreement and fruitful debate? If our scientific field partakes in policy-making, should it value correct predictions above thorough explanations? Simply put, when choosing our theory, we first ask what it is for. We ask what purposes it serves and what questions it is trying to answer. Inquiry is always driven by certain goals and interests. What Kuhn showed, albeit obliquely, was that theory choice *inherently* involves social factors, and that values cannot be purged from real scientific work. Furthermore, Kuhn saw that different scientists, guided by different practical interests, will attribute different weights to different epistemic values. Consider the following passage:

The criteria of [theory] choice function not as rules, which determine choice, but as values which influence it. Two men deeply committed to the same values may nevertheless, in particular situations, make different choices, as in fact they do. (Kuhn 1977: 324)

However, back in the seventies, the realization that these values were social was not yet fully present. Even philosophers amicable of value-laden inquiry, such as Kuhn, tended to include a telling disclaimer: they would only speak of values in the natural sciences, where it was easier to portray them as strictly epistemic. In his eponymous essay on values in science, Ernan McMullin drew a sharp line between epistemic and non-epistemic values, rooting the difference in the very nature of science as a truth-seeking enterprise. Epistemic values seek to improve the epistemic quality of our theories and, ultimately, lead to truth. Non-epistemic values do not. What is more, McMullin envisioned for the correct usage of epistemic values to cleanse (natural) sci-

ence of social and political influences, which can only detract from the final goal of our scientific efforts, objective truth (McMullin 1982: 20). The internal coherence of our theory, the fact it hangs well together, contributes to our quest for truth; its coherence with our political beliefs, on the other hand, does not. Our commitment to epistemic values will gradually lead to a better understanding of the world. The choice to indulge our ethical and political interests would only have us ignore all evidence inconsistent with a foreordained conclusion.

Our current topic owes far more to Elizabeth Anderson, who clarified the scientific role of values as we usually know them. Anderson's argument was not only that ethical and political values *can* play a decisive role in theory choice, but that they inevitably *do*. Our role, then, is to handle them with care. Unlike Kuhn and McMullin, Anderson did not limit her account to the natural sciences. This decision to include the social sciences, where the practical interests that inform theory choice are harder to distinguish from the content of the theory itself, enabled her to articulate a more faithful image of real scientific work. In defending the notion of feminist epistemology, she showed how contextual values could shape inquiry without falling into the trap of partial and irresponsible science. To do this, Anderson first had to dispel a common concern: that allowing moral values in science entails an immediate loss of objectivity to ideological pressures. In the eyes of rationalist philosophy of science, any defense of value-laden inquiry conjures images of Lysenko's biology, an infamous instance of totalitarian thought control uninterested in producing epistemically valuable results. Once we allow politics and morals to guide science, the argument goes, objective standards of excellence will quickly give way to a negligent scientific practice blind to facts that do not comply with the desired conclusion. Bad science will then degenerate into a muddle of rigged conclusions, and all scientific progress will, with mathematical certainty, come to a halt.

Anderson retorted that this is a misconstruction of the way science works. More importantly, she showed that the line separating epistemic and non-epistemic values is not as clear as might have seemed. Since theories are usually both logically and empirically underdetermined, underlying contextual values—metaphysical, ethical and political—jump in to take their place. Anderson illustrated this with a rich array of historical examples:

Thus, Einstein initially appealed to thought experiments grounded in empiricist epistemological norms to argue for the superiority of the theory of relativity over classical Newtonian mechanics. (...) Functionalist explanation in sociology was discredited partly because it was incompatible with the non-teleological metaphysical framework of modern science: for those who accept this framework, merely pointing out that a social phenomenon promotes social stability does not provide a satisfactory explanation for why it exists. (...) In these cases, normative considerations about the conduct of inquiry, normative constraints on the form of acceptable data and of satis-

factory explanations, and normative desiderata of calculative ease proved to be powerful arguments for theory choice. Where the data run out, values legitimately step in to take up the “slack” between observation and theory. (Anderson 1995: 29)

Don't these examples, though, still fall within Kuhn's epistemic values? Once we look beyond the content of epistemic values and focus on the reasons why we choose them, the distinction between epistemic and contextual values becomes blurry. Simply put, the choice of epistemic values is motivated by contextual social concerns. And our commitment to specific values will then proceed to shape our research program. The predictive accuracy of our theory is not only epistemically valuable but helps inform good public policy. Fertility, which motivates further research, looks to the future of our scientific community. As long as science continues taking place among real people, working in real scientific collectives and submitting their findings to real practical purposes, theory choice will inevitably hinge upon contextual values. Anderson thus proceeds with a series of examples where contextual values motivated theory choice to no epistemic detriment:

Functional explanation in sociology was discredited not just because it did not offer a satisfactory scheme of explanation but because, by representing phenomena as functional for the social order, it underplayed the significance of social conflict and discouraged criticism of the status quo. A humanist interest in acknowledging and promoting the dignity and freedom of persons has influenced many social scientists. An emerging methodological norm among interpretive anthropologists is to show one's research to the subjects of study and respond to their criticisms. This norm serves the moral interest of respecting the dignity of those one studies. (Anderson 1995: 31)

If we conceive of the aims of science as at all broader than the bare accumulation of truths, we cannot maintain the pretense of disinterested research. Most disciplines have some practical application. The aim of medicine is to promote health; the aim of economics, likewise, is to prevent crises and to inform good economic policy. Anderson's most interesting theoretical innovation lies in where she located these implicit practical interests. She identified two places where contextual values enter science. First, when beginning our inquiry and wording our questions, we do it by considering the social purpose of our scientific discipline. The decision what will count as an answer will depend on our contextual values. Second, our values will also affect the way we classify our data. When separating relevant and irrelevant facts and molding our statistical categories, we will shape them into responses to our initial questions. Anderson's argument here rests on the concept of scientific significance. In other words, no theory can include all imaginable evidence: some facts will simply not count as significant. (What were the subjects wearing? What was the weather like?) To decide what evidence to feature in our theory, we will need certain criteria, and these criteria will depend on our practical interests.

To guide her point home, Anderson used an example that leads us to our main topic. She considered American unemployment rates, which exclude the category of discouraged workers, people who want paid work but have, conceding it is futile, stopped actively seeking it (Anderson 1995: 45). To count as an unemployed person, one needs to have sought work within the last four weeks. In this reduced form, unemployment rates are often used to assess macroeconomic health: lower unemployment rates are supposed to denote a flourishing and self-stabilizing economy. The noteworthy aspect of these statistics on unemployment is that they are, in the relevant epistemic sense, incomplete. To be sure, there would be nothing spurious in offering a second metric, one listing only those jobless people still actively looking for work and, hence, still exerting downward pressure on wages. Yet positing an incomplete figure as the sole statistic on unemployment fails at its main goal: the task of informing readers about the number of jobless individuals in a given economy. If the figure included everyone who said they wanted a job but could not find one they could have subsisted on, the number would be nearly double (Kudlyak 2007). In this deflated form, however, unemployment metrics take on a new rhetorical function. With artificially decreased rates of unemployment, states can depict their economic systems as more sustainable than they indeed are. The social malady of joblessness is thus successfully pushed aside until it escalates to the point it can no longer be ignored. Even if we assume no such deception is at play, lower unemployment rates demotivate policy-makers from focusing on joblessness. Incomplete theorizing thus leads to incomplete policy-making, and incomplete policy-making entrenches existing social problems.

Consider another popular economic metric, the poverty line. Before his appearance at the World Economic Forum's meeting in Davos, Bill Gates lauded a graph which claimed that global poverty has, as a success of global neoliberalism, declined from 94% in 1820 to just 10% today. Similar statements, such as those made in Steven Pinker's *Enlightenment Now*, rest upon biased readings of economic data (Pinker 2018). These statistics are not untrue. Yet, thus presented, they do not offer enough background information for an adequate understanding of global poverty. In his retort to Gates' diagram, anthropologist Jason Hickel placed the data in the appropriate context (Hickel 2019). Instead of a vision of linear progress, he offered an image of enforced colonization and growing inequality, where masses of people trade rural living for a new place within the global proletariat. First, Hickel pointed out that data on poverty has only been collected since 1981, rendering any prior measurements either sketchy or meaningless. All that these numbers reveal, according to Hickel, is that people used to live in non-urban societies where very little actual money was required to survive. We have shifted from communities that subsisted by sharing abundant natural resources to a global market economy where millions of people,

in changed circumstances, have to struggle on microscopic amounts of money. Hickel then considered the poverty line itself:

But that's not all that's wrong here. The trend that the graph depicts is based on a poverty line of \$1.90 (£1.44) per day, which is the equivalent of what \$1.90 could buy in the US in 2011. It's obscenely low by any standard, and we now have piles of evidence that people living just above this line have terrible levels of malnutrition and mortality. Scholars have been calling for a more reasonable poverty line for many years. Most agree that people need a minimum of about \$7.40 per day to achieve basic nutrition and normal human life expectancy, plus a decent chance of seeing their kids survive their fifth birthday. And many scholars, including Harvard economist Lant Pritchett, insist that the poverty line should be set even higher, at \$10 to \$15 per day. (Hickel 2019)

If we were to adjust the figures to the more conservative suggestion, shifting the poverty line to seven dollars (Woodward 2015), we would end up with an inverse image of global hardship: Hickel closed the article by showing that the number of people living on less than seven dollars a day has, rather than dropped, rocketed since the oldest data in 1981. So, although the initial facts were not strictly *untrue*, the way they were framed did not amount to an adequate understanding of our social reality. Closer to our point, it traded an accurate image of global inequality for an image of market capitalism as inherently stabilizing. Again, even if this was not a case of conscious dishonesty, such artificially soothing tales of sustainability may derail policy-makers from pressing social problems.

Our initial skepticism, then, was not entirely unfounded: implicit political premises can impede our quest for the whole truth. If we refuse to acknowledge evidence that disagrees with our preordained conclusion, science is sure to suffer as a result. How did Anderson resolve this challenge? Good science, she stressed, possesses internal mechanisms that guard against such miscarriages of objectivity (Anderson 1995: 32). Standardized practices such as blind reviews, regulated methods, and strict regimes of mutual accountability prevent science from deteriorating into a state where we opt for theories whose political implications we hold particularly dear. Impartiality does not require we ask our questions pretending to be clean of all contextual interests. It requires that we, once we have begun our inquiry, fairly assess all incoming evidence, including that which might disagree with the solution we might have hoped for. Neoclassical economics, then, does not err when presupposing that market capitalism is self-regulating, but when it clings to that assumption in the face of opposing evidence. If the specific products of neoclassical economics, such as unemployment statistics and poverty lines, seem to forfeit completeness for a more sustainable image of the current system, it might be interesting to explore whether the same holds for its underlying theoretical assumptions. And this is the topic of our next section.

3. *Perfect Competition and the Lacking Epistemic Case for Neoclassical Economics*

Pre-classical and classical political economics, as championed by Adam Smith, Karl Marx, and David Ricardo, analyzed capitalist practices by observing actual business behavior. Inequality, class struggle, and power differentials were crucial in understanding how the system works. And yet, this empirical approach could not be more different from present economic orthodoxy. Today, what we have is neoclassical economics, an approach focused on determining goods, outputs, and income distributions through laws of supply and demand. Modern neoclassical economics, which has dominated economic discourse since the 1980s, when the American economy, with its professed aid, recovered from the recession, derives its macroeconomic models from idealized accounts of individual behavior (Keen 2011: 35). Namely, it imagines individuals as fully rational and self-interested agents seeking to maximize their utility. Neoclassical models hinge on the assumption that, as markets are by definition self-stabilizing, crises can only emerge from excessive government interventions in the market, rather than from the market itself.

Why was classical political economics, a narrative discipline grounded in historicized empirical analyses, abandoned in favor of the neoclassical paradigm? What epistemic advantages did its models offer? According to heterodox economist Anwar Shaikh, neoclassical economics met the added political requirement of depicting capitalism as an ideal system (Shaikh 2016: 340). To maintain this image, neoclassical economics shunned the former focus on production, marred with unequal starting positions and differential access to capital, for a focus on exchange between abstract individuals. Exchange could be portrayed as a moment of equality: when exchanging goods and services, we encounter each other as free and equal agents who can opt out of the transaction. Shaikh illustrates the weaknesses of neoclassical economics by criticizing its assumption of perfect competition. While political economists saw trade between firms as a struggle for dominance, neoclassical economics refurbished it as a benevolent interaction wherein all agents emerge better off than when they began. This vision, according to Shaikh, would not have been picked up had it not been for the changing politics.

In Shaikh's recounting, this gilded depiction of capitalism as a system that satisfies the interests of all parties was a political response to the protracted economic crisis between 1873 and 1896, known as the Long Depression (Shaikh 2016: 341). As this period of entrenched economic pessimism required a theory that would reinstate trust in capitalism's functioning, Leon Walras articulated a mathematical vision of a perfectly competitive market (Walras 1874). What kind of theory, then, did these demands generate? Where classical political economy, concerned with actual business behavior, described aggressive compa-

nies that monitored each other's behavior and violently cut prices to achieve a market advantage, Walras offered a model of static equilibrium, now complete with the notions of perfect knowledge and passive price taking. How did Walrasian perfect competition work? In a complete departure from empirical data, perfect competition presupposed an infinite number of identical tiny firms who "operated as traders in specific auction markets managed by all-seeing auctioneers." Shaikh briefly describes Walras' model of perfect competition:

Trading began with an announced market price that elicited buy or sell offers for quantities of individual commodities and labor power; this price being in accordance with the assumed utility-maximizing behavior of individual participants. If the resulting quantity demanded in the given market price was not equal to the offered supply, the price would be appropriately raised or lowered. The change in price would in turn elicit a fresh round of buy and sell offers, until each market "groped" its way to a balance at some particular price. (...) In the end, the only possible state of rest was one in which all markets were simultaneously in balance—general equilibrium. (Shaikh 2016: 342)

If we observed firms monitoring other firms to gather information about quality and pricing, it would be an aberration from perfect competition. If we observed firms lowering prices in response to the others' behavior, not to lose customers, we would, again, be dealing with imperfect competition, another departure from the modeled norm. The same scenario would occur if we witnessed firms struggling to automate or reducing wages to cut production costs. It would soon become evident that this model could not survive any empirical instance of trade. When faced with the temporal dimension of his theory, the fact that groping takes time, Walras assumed that individual firms would only act when the imagined auctioneer accepted their offer. The auctioneer himself would only accept offers when all markets were balanced, i.e., when supply was perfectly proportional to demand, and when all agents were guaranteed to have their wants satisfied. It is obvious how this model produced an image of market capitalism as inherently sustainable. Yet, if there is no imaginary auctioneer, who is setting the prices? Nobody. This is an acknowledged void in neoclassical economics: since firms are passively accepting market prices, they are not setting the price, and neither are the customers, who use prices to determine which product to purchase. This is not the only theoretical corollary of price taking. Because firms do not determine prices, neoclassical economics cannot explain conflicts between labor and companies that bring down wages to cut production costs.

The theory of perfect competition, nevertheless, held steadfastly. Although the model was soon condemned as empirically invalid (Kuenne 1954) and inoperable (Walker 1987) for analyzing actual capitalist economies, neoclassical economics continued using perfect competition as a methodological and pedagogical tool. Shaikh identifies eight telling similarities between Walras' early model of perfect competition and

modern neoclassical economics (Shaikh 2016: 343). Both accounts (i) offer an idealized image of market capitalism as inherently sustainable, (ii) reduce economic phenomena to individual choices, and (iii) generalize the principle of scarcity from land and agriculture to all factors of production. They, moreover, (iv) transform the notion of “cost” to include a normal profit range, which was entirely foreign to classical political economics, where firms often emerged, as they do in reality, as complete losers. More pertinent to our point, they (v) envision economic dynamics as an equilibrium that is automatically reinstated as soon as it is disturbed and (vi) assume that economic activities only take place in a state of equilibrium, which is a glaring deviation from empirical reality. Finally, they (vii) presuppose that full-employment always obtains as a result of the market functioning at equilibrium and (viii) that all firms passively accept set market prices. These idealizations obscure the contradictions of modern capitalism—such as the tendency towards monopoly and the conflict between labor and capital—and make it difficult to analyze its real, imperfect dynamics.

How can we relate this to Anderson’s notion of scientific significance? In purging competition of its empirical constituents, such as firms observing each other’s behavior and cutting production costs, neoclassical economics trades an accurate image of real business behavior for a depiction of market capitalism as self-regulating. By positing empirical data as irrelevant and presuming its conclusion, neoclassical economics limits itself to preordained results. As an alternative to perfect competition, Shaikh, renewing the legacy of classical political economics, develops the theory of real competition: competition as warfare, with individual firms seeking to undermine each other by bringing down prices and the cost of production (Shaikh 2016: 259). This methodological choice gives him a clearer picture of the market forces which drive down wages, encourage automation, shape prices, and, in the end, produce monopolies. In comparison with Shaikh’s approach, it is easy to see that the theory of perfect competition was empirically underdetermined. As the assumption of perfect knowledge, which would mean that each firm somehow knows what the others are doing, contradicts perfect competition, Shaikh proceeds to show it is also internally inconsistent (Shaikh 2016: 346). If there is no epistemic argument in favor of perfect competition, its choice must have been mandated by some external source of merit. In this case, it gratified contextual political values, the need to restore faith in capitalism’s sustainability. It succeeded at this feat by containing implicit premises—namely, that capitalism is self-stabilizing—most apparent in the empirical behavior it chose to exclude.

In 2002, aiming to show that the very foundations of neoclassical economics are intellectually unsound, heterodox economist Steve Keen came out with a thorough retort, aptly titled *Debunking Economics*. By way of basic calculus and plain language, Keen argues that neoclassi-

cal economics cannot derive a coherent theory of consumer demand, that the theory of supply and demand is fundamentally flawed, and that its conception of the labor market cannot explain actual social dynamics. After the financial crash in 2008, the book reappeared for a second edition, now two hundred pages longer and complete with an urgent plea for a new economic paradigm (Keen 2011: 49). The way economy is taught at universities is, according to Keen, unacceptable: one's initiation into economics is more akin to indoctrination than to education, and students, as the basic premises of their discipline, learn disputed claims devoid of intellectual validity. In Keen's view, knowing neoclassical economics is not only useless but actively dangerous:

The most important thing that the global financial crisis has done for economic theory is to show that neoclassical economics is not merely wrong, but dangerous. Neoclassical economics contributed directly to this crisis by promoting faith in the innate stability of a market economy, in a manner which in fact increased the tendency to instability of the financial system. With its false belief that all instability in the system can be traced to interventions in the market, rather than the market itself, it championed the deregulation of finance and a dramatic increase in income inequality. (Keen 2009)

The reasons why neoclassical economics has proven so durable despite its epistemic shortcomings are, according to Keen, twofold. First, neoclassical economics offers an idealized image of capitalism as a meritocratic and fundamentally sustainable system, and economists choose to believe it. As support for the neoclassical paradigm is often equated with support for capitalism itself, economists less eager to identify with the left wing of the political spectrum feel further reluctance to question its premises. Second, Keen argues that economic education stifles critical thinking and demotivates students from casting doubt on what they are taught. What, then, does Keen imply? Are all neoclassical economists just rampant ideologues, rigging the numbers in favor of an oligarchic status quo? Not at all. In fact, this dogmatism is not peculiar of economics. It is characteristic of inquiry within an established scientific paradigm, or within what Thomas Kuhn dubs "normal science" (Kuhn 1962).

In their study of scientific collectives, Margaret Gilbert and James Owen Weatherall show that a certain dose of dogmatism is not an aberration from normal scientific behavior (Gilbert and Weatherall 2016). On the contrary, it is essential in maintaining group cohesion. To stay on good terms with their colleagues, to advance their careers, and to prevent the corrosive incursion of cognitive dissonance, scientists will seldom look into the foundations of their discipline. Instead, assuming all is in order, they will follow what they have been instructed and apply the learned procedures. This obstinacy sometimes entails harmful epistemic consequences. The task of avoiding cognitive dissonance demands insouciance towards opposing evidence, and scientists are likely to dismiss criticisms coming from outside their group as threatening

or irrelevant. Critical voices within the group are likely to be silenced, and more inquisitive scientists will shy away from confronting their colleagues on contested theoretical issues. Although this kind of behavior does not obstruct scientific progress, it can impede the transition to a new paradigm. It is hardly surprising that some of the most lucid criticisms of neoclassical economics had to come from geographers (Harvey 2007) and anthropologists (Graber 2014), scientists who, belonging to different disciplines, were not constricted by the premises of their particular branch. To sum up, I have attempted to argue that the neoclassical notion of perfect competition sacrifices completeness and empirical adequacy for an image of market capitalism as inherently sustainable. Because it is both empirically and logically underdetermined, its choice seems to have been mandated by contextual political values: namely, by the political task of depicting capitalism as fundamentally self-regulating. Hoping that this discussion has sufficed to show that neoclassical economics is neither the only nor the best approach to our economic reality, we can now explore the relationship between philosophy and policy-making.

4. *Conclusion: How to Craft Economic Policy*

We have seen that, by presuming that capitalism is inherently sustainable, neoclassical economics trades accuracy and completeness for a contrived image of the present system. This self-imposed methodological limitation renders it unfit to predict economic crises and hampers us in detecting social problems before they have gotten out of hand. Now is the time to answer our introductory question. How to craft economic policy in times of crisis and growing inequality, when a new economic paradigm is nothing but a moralistic pedagogical proposal, and the orthodox approach provides no tools for managing modern capitalism? Finally, what is the role of engaged philosophy in guiding and overseeing this process? Shaikh and Keen's critiques of the neoclassical paradigm take after Elizabeth Anderson's good science: mutually accountable researchers hold each other to high epistemic standards and scrutinize the other's outputs, detecting intellectual weaknesses and demanding they be resolved. In calling for changes to the way economics is taught, Keen goes a step further, looking to the future of economics as a scientific discipline. As an alternative to neoclassical economics and standard heterodox approaches, Shaikh offers us an empirically grounded revival of classical political economics, a theory sensitive to unequal starting positions and power differentials (Shaikh 2016: 4). Keen, working in another tradition, gives us a fruitful methodological framework which, taking account of time and disequilibrium, manages to predict crises and model depressions (Keen 2011: 426). Although both economists approach their task from explicit ethical standpoints, they do not sacrifice empiricism and scientific standards to some pre-ordained conclusion.

However, while academic economics can play for time with its transition to a new scientific paradigm, testing different approaches and schools of thought, policy-makers do not enjoy this privilege. Similarly, unlike the lofty realm of epistemology, which benefits from unremitting debate, policy-makers cannot resolve the problem of dissenting experts by suspending their judgment and waiting for some calmer moment within economic discourse (Sosa 2010). What should we do? How can we, as comparative laypeople, choose the economic theory best suited to our social reality? According to Alvin Goldman, laypeople cannot discriminate between competing experts by evaluating the esoteric content of their claims (Goldman 2001). In other words, we lack both the knowledge and the time needed to study the internal propositions of some scientific discipline, which renders us unequipped to assess the expert's status within his branch. Policy-makers are just as unlikely to trudge through the margins of economic theory. What we can do, Goldman argues, is refer to the expert's track record of successfully solving problems. Translated into the language of economic policy, we should favor those economic approaches which have managed to foresee crises and have shown a commitment to human welfare. After the financial crash in 2008, Dutch economist Dirk Bezemer compiled a list of economists who, using heterodox methodological tools, predicted the supposedly unpredictable economic crisis (Bezemer 2009). What the twelve cataloged economists, Steve Keen included, had in common, was an empirical approach to the economy, a concern with debt, and a regard for the relationship between the financial and the real sector. As Keen points out, these features stand in stark opposition to neoclassical economics, which barely accounts for finance and which, due to its idealized assumptions, lacks the tools to model depressions (Keen 2011: 47).

In a recent article, Jonathan Wolff drew up the distinction between applied and engaged philosophy, the latter of which seeks issues of ethical interest and endeavors to resolve them through public policy (Wolff 2019). As philosophers, we have been granted the privilege of a life spent working through arguments, managing abstract concepts, justifying theories, and comparing information garnered from diverse sources. This fortunate position obliges us to put our tools to good use, applying them to unearth the implicit assumptions of modern society and to assess their validity. At a time marked by myriad social ailments—record rates of inequality, environmental degradation, racism, sexism, nationalism, and imperialism—we are obliged to understand and counter the forces that reproduce them. Engaged philosophy is much like Elizabeth Anderson's good science: conscious of its social role and willing to disclose its values, it addresses evidence and arguments with an open mind, browsing through historical lessons and studying policies in search of the most effective solution. Correctly understood, this engagement presupposes an interest in the economy, the material basis of all social life. Our shift towards a world where each person

will be able to pursue their goals and fulfill their potential demands a stable economic footing; to build it, we will need a theory that can grasp economic reality as it is. Neoclassical economics, in assuming that the current system is sustainable, presumes its foregone conclusion, hampering our efforts to shape a just world. I have attempted to show that, in heterodox economic approaches, there are viable alternatives at hand. Transitioning to a new economic paradigm will surely be a formidable task. Yet this is the task ahead of us.

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