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The Future of Heterodox Economics

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Abstract:

We assess economics research and teaching frameworks in the United States by examining how knowledge is produced and ranked, the flaws and strengths of heterodox economic theory; and how students are trained, especially for careers in economic policy. We challenge the meaning of established terminology such as 'heterodoxy' and 'mainstream' by investigating their utility as a marker and to illuminate major barriers to the successful adoption of alternative economic theories in academia and the public discourse. Based on interviews with experienced economists working with heterodox paradigms in both mainstream and heterodox institutions, we identify three barriers 1) Neoclassical hegemony, 2) Weakness of heterodox theory, and 3) Pedagogy and training in economics.

Keywords: Heterodox economics; pedagogy and training; cross discipline synthesis

JEL Codes: A12, A14, A20, B5

In this paper we explore the diversity in theoretical frameworks of economics research and teaching in the United States by examining how knowledge is produced and ranked, the flaws and strengths of heterodox economic theory; how students are trained, especially for careers in economic policy.

Based on interviews with 10 economists who have a particularly important role in heterodox economics, we formulate 3 major findings:

1. The intellectual project of political economy needs expanding.

Heterodox economics today is a diverse set of theories built on insights from Marx, Keynes and Kalecki to contemporary thought in feminism, post-Keynesianism, stratification, institutionalism and neo-Marxism. Expanding this ongoing intellectual project would demand deeper connection to other social sciences, history and law as well as interdisciplinary fields like gender studies, black studies, environmental studies social innovation, and urban studies. An important motivation for elevating heterodox economics is to gain insights from these fields and build a narrative of capitalist dynamics that is useful across disciplines and to a more diverse population.

2. Teaching needs improvements.

There is no coherent set of materials for all levels on the heterodox approach to understanding capitalism, including accessible syllabi, teaching materials, and curated interactive discussions among scholars about new approaches and needs. A new, high-quality "text book" (perhaps free) for case study analysis and problem solving is needed. An element of this effort could focus on policy analysis, to build practical skills for putting heterodox ideas into practice.

3: Heterodox economists do not interact enough with mainstream economics

Heterodox or pluralist economists have not engaged sufficiently with the mainstream, even though there are many organizations with the potential to do so, including NEA, IAFFE, LERA, AFEE, AERE, URPE, HES, and others. There needs to be more self-conscious coordination, communication, and presence among these organizations, through workshops, shared funding, coordinated panels at meetings, listing of employment opportunities, and sharing of curriculum and pedagogy. This engagement will require new resources. One issue for consideration is dropping the term "heterodox." A common theme emerged in our interviews: many economists do not like to self-marginalize by calling themselves "heterodox" economists.

Introduction and Goals

This paper considers how the field of economics has developed to help the public understand capitalism. Challenges to orthodox theory need to be analytically sound and many economists, in and out of the so-called mainstream, want their work to be the basis for economic justice, democracy, and environmental sustainability. Despite a record length of economic recovery since the trough of the Great Recession in 2008, there is concern about a repeat of the financial crisis. All of this angst is reflected in a wave of nationalism, xenophobia, protectionism and a deep political divide. Stiglitz (2019) has argued that this divide has itself exacerbated existing economic inequities. Economics should be a tool both to understand and address these problems, but in spite of successful individual analyses around issues like minimum wage, climate change, trade, inequality, and discrimination, the methodological core of modern economics is relatively untouched. Alternative or "heterodox" visions have achieved little traction in most economic departments, and modern economics is isolated from other social sciences and fields of inquiry.

Given the inadequacies of mainstream economics, understanding why alternative visions have not been more successful is paramount. We approach this ambitious project by focusing on what we perceive to be barriers to the success of existing alternative economic theories and policies. We consider three types of barriers: (1) the hegemony of neoclassical economics within the economics profession; (2) limits of heterodox economics itself; and (3) weaknesses in pedagogical practices of heterodox economics from high school and community college teaching through graduate training.

The Great Recession, which threatened a worldwide depression, along with a historic rise in income and wealth inequality, a stagnation of median incomes, ongoing race and gender discrimination, growing vulnerability in areas of health, economic security in aging and the cost of education, and the growing threats from climate change, has led to a wave of public questioning of the relevance of neoclassical economics and a renewed attention to the systemic nature of the economy, thus an interest in "capitalism". There has been a backlash against the classical liberalism that is so fundamental to neoclassical economics and its notion of social welfare, contributing to the emergence of illiberal, anti-democratic, nationalistic regimes around the world (Rodrik 2018).

The economics profession, embedded in the deeply liberal traditions of Smith, Bentham and the Pareto Principle, has ignored the limits of its liberal lens and in the process blinded itself to the economic trends and social forces that have brought an *illiberal* turn in politics. Dani Rodrik sees economists as partly responsible for this turn today, commenting that

> There was a curious disjunction between what economists know and the way they represented the discipline to the rest of the world...[E]conomists, who thought that freer trade was a direction that was worth moving in and were happy, by and large, to act as cheerleaders for the kind of globalization that we have experienced. Economists lent their expertise and their prestige to particular interest groups [financial interests and exporters], who used economists to advance their case. (Swanson, 2017)

It would be easy to dismiss the problem as one of ideology. Critics of neoclassical economics have referred to it variously as "bourgeois economics" and "vulgar economics," to signal its role in legitimating the status quo. But the real point is that the "operating manual" of capitalism – economics – has stopped working to generate more just and secure economic outcomes.

In the runup to the 2007-2008 financial crisis, economics had turned inward, no longer seeing capitalism as a system. As Krugman wrote in 2009 about the financial collapse:

> Few economists saw our current crisis coming, but this predictive failure was the least of the field's problems. More important was the profession's blindness to the very possibility of catastrophic failures in a market economy... *There was nothing in the prevailing models suggesting the possibility of the kind of collapse that happened last year*. (Krugman 2009, emphasis added)

The failure of neoclassical economics to identify the warning signs of the financial crisis of 2007-2008 and the subsequent Great Recession has led to little change in the way economists think about markets and states and almost no change in the way economics is taught in high schools and universities, from the introductory economics class all the way to the training of new PhDs. Certainly there has been no fundamental rethinking along the lines that Keynes provided in the 1930s in response to the Great Depression (Spiegler/Milberg 2013).

In the face of this questioning of the value of neoclassical economics in recent years, and the substantial institutional support for alternatives we must ask, why hasn't heterodox economics been more successful in providing a coherent alternative to neoclassicism and visibility for its policy conclusions? And what can we learn from this lack of success to make economics both analytically stronger and more relevant to addressing the major problems facing us now and in the future? Answering these questions will help build an economic framework that supports a policy agenda for shared prosperity, greater social equality, and a sustainable planet, while avoiding past errors that often diverted critical economists into isolated, self-referential conversations that did not engage either mainstream economics or the critical policy issues.

It is easy to blame a powerful opponent – in this case neoclassical economics – and its apologies for free-market capitalism. Any sociology of economic knowledge must indeed take this into account. But in our view this is too narrow an answer. We want to cast a critical eye on the practices of heterodox economics as well. We focus on three challenges or barriers to the success of heterodox economics.

> Barrier 1: the hegemonic position of neoclassical economics.
>
> Barrier 2: weaknesses in heterodox economics itself.

Barrier 3: the teaching of heterodox economics, both textbooks and the strategy to reproduce and mentor future generations of economic thinkers and policy advocates.

Barrier 1: Neoclassical hegemony

The first challenge is the hegemony of neoclassical economics within the economics profession. This hegemony is also reflected in the influence of neoclassical thought into other social sciences and law.

The hegemony manifests itself in the leading research journals of the profession, in the way economics is taught, the way the economy is described in the popular media, and the way that political leaders think about policy alternatives.

Economics' protective belt

Neoclassical economics has been the dominant paradigm in economics since the late 19th century and certainly since the emergence of mathematical general equilibrium theory in the 1950s and 1960s. Philosopher Thomas Kuhn noted that it is the formation of a dominant paradigm that allows for the progress of "normal science," the "technical and puzzle-solving" (Backhouse 1998) which involves the use of widely accepted norms and beliefs in research. Normal science need not explain everything, Kuhn notes. "Anomalies" often arise, and as long as they are minor or side issues, they can be ignored and normal science can continue. A shift in paradigm requires that anomalies are broadly recognized as important, that they remain unexplained except in ad hoc ways, and if an alternative paradigm is available that can explain the anomalies.

One reason for persistence of the dominant paradigm was explained by philosophers of science Imre Lakatos, who proposed that scientific research programs often have a "protective belt," whereby anomalies can be ignored for long periods of time if the theoretical core of the paradigm continued to generate useful findings.

The protective belt of the post-War era in economics promoted the hyper-mathematization that became normal economics and this was associated with an insularity from broader social and institutional forces. For Paul Krugman, "the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth."

One might have imagined that the surprising, and enormously consequential, financial collapse would itself have triggered a shift in economic theory. There were some efforts to bring the analysis of finance more closely into the picture, and there was homage paid to the Keynesian economist Hyman Minsky who, twenty years prior, had elaborated a theory of "financial fragility" that seemed to accurately theorize the system-wide and endogenous nature of the risks.

But most of the economics profession has not yet recognized that the anomalies of our era strike at the very heart of our understanding of capitalism. Not surprisingly, then, there has not been an effort to reformulate economics in any way similar to that which occurred in the 1930s. Keynes's General Theory of Employment, Interest and Money, published in 1936, challenged the dominant paradigm of the day at its core. It was not individual choice or individual frugality (saving) that created full employment, but their opposites: spending by business, households and governments created employment and these were driven in part by the "animal spirits" of businesses operating in a fundamentally uncertain world, where the future is not knowable.

The protective belt also protects the way economics is taught. So it is not surprising that the teaching of economics has not changed with the financial crisis and the Great Recession, largely because there was too much at stake in overturning the status quo. Even Minsky's financial fragility thesis **(** Minsky 1992 **)** was never integrated into the canonical thinking and certainly did not filter down into the undergraduate economics textbooks. This stasis in the profession – its departmental rankings, its teaching style and substance, and its methodology – was noted by a number of people in our recent interviews. According to **Suresh Naidu,** Professor in Economics and International and Public Affairs:

> *The ability to maintain a high intellectual culture is where it is really vibrant – having new ideas, producing stuff, and publishing all take second place to just preserving your status as a department and keeping resources. I think because American universities are grinding down their departments and are not willing to just let it happen. They worry about rankings, about revenue and about all of this stuff.*

David Colander, Professor of Economics at Middlebury College and author of a major economics principles textbook summed it up succinctly, noting that **,**

> *Changing the conversation is difficult. There is a group of people at the top ten schools who think they are the profession, the complete profession, and that isn't going to change.*

Michael Jacobs, Professorial Research Fellow in the Sheffield Political Economy Research Institute (SPERI) at the University of Sheffield and former Director of the IPPR Commission on Economic Justice, spoke explicitly about institutional barriers to change:

> *Yes the institutional barriers are huge and you will include in your report just how huge – and I think it's worse in the US, as I can see in the UK – just how institutionally inert academic institutions are [regarding] promotion, career promotion criteria, journal*

> *publications. And so the obstacles are enormous. I completely agree with that. One can only hope that if ideas seem to be good in effect they will catch on, but sociological barriers have got to be enormous.*

More critical views were expressed by **Omari Swinton,** Chair of Economics at Howard University, who spoke about professional power and influence:

> *I'm saying there's this tendency for mainstream economists to become marketing commodities for wealth and power that rebounds to their benefit in government positions, chairs, research consultancies etc.*

And **William Lazonick,** Professor of Economics at the University of Massachusetts-Lowell, the hegemony of neoclassical economics has even influenced the opponents of neoclassicism, indicating the need for a truly alternative economics paradigm. **Lazonick** told us that,

> *Within academia,I think the bad has pushed out the good. Neoclassical economics, which in my view is almost total bullshit, just dominates. And it's not just the United States. You take someone in France, with Tirole, becomes a professor and totally dominates and they give him the stupid Nobel Prize....the deeper problem is that liberals have not challenged neoclassical economics. They've taken this myth of the market economy, this notion of the market ideal seriously, they have, what you might call 'trained incapacity' to think otherwise. And even when they start seeing inequality all over the place, and want to do something about it, they don't have a way of addressing it.*

There are nuances in this narrative of hegemony that should be identified if we are to honestly assess the divide between orthodox and heterodox approaches. One is that it could be argued that standard Keynesian economics "worked" in the Great Recession and that it simply wasn't applied with appropriate strength and speed. It is in the lead-up to the 2007-2008 crisis and in its aftermath of rising inequality and unshared gains that neoclassicism failed.

A second caveat is that neoclassical economics is less and less a homogeneous theoretical framework, as shown by the rise of behavioral economics, the increasing use of monopsony theory in labor, and the debates over macroeconomic "secular stagnation" and the role of monetary policy with extremely low interest rates (Chetty 2015, Ashenfelter et al. 2010, Summers 2014).

A third nuance is that theoretical modeling has taken on a chameleon-like quality. With the introduction of asymmetric information, increasing returns to scale and strategic (game theoretic) and stochastic considerations to the models, a new degree of flexibility has entered, that, while at times *ad hoc* , has permitted a broader array of outcomes to be modeled. This has been prominent in industrial organization and international trade theory, but also to some extent in macroeconomics and econometrics. This has involved a move away from traditional notions of greater mathematical generality as a criterion for theoretical advance, but it has given the mainstream an ability to explain a wider variety of economic outcomes.

A related development in mainstream economics is a turn away from theory entirely, what Milberg (2004) calls a "pragmatist turn." It is an empirical turn, leading to an ability to study the impact of tax and labor market policies, for example, that have traditionally not been in the purview of the mainstream and which are of great relevance to heterodox economics.

Nancy Folbre, Professor Emeritus at the University of Massachusetts, noted the nuance in the terrain of mainstream economics, providing some examples:

> *David Autor is a good example of somebody who is totally methodologically conventional but he chooses research topics and explores issues that matter, as does David Card. You especially see this among labor economists and that's one reason that LERA (Labor and Employment Relations Association) is a very strong organization. It's also important to note that the "mainstream" is not nearly as unitary as it once was, it's divided into strains and that is important because it's no longer a left versus right or heterodox versus Orthodox. It's more fragmented and de-centered. And in that sense I agree [that] if you focus entirely on the heterodox label you miss a big part of the story – the field is becoming more differentiated methodologically.*

Finally, one of our interviewees (who has asked to remain anonymous) described the damage that neoclassical hegemony can have on the ability of heterodox economists to build a more interdisciplinary approach to understanding capitalism. They noted that:

> *Economics is of course, as we all know, one of the only disciplines where there is a large mainstream that is of one ideological bent and there's no real debate...You have all of these other disciplines where scholars are frustrated with economists, and they think that all economists are neoclassical "homo-economotons." And they are just frustrated that economists aren't useful. And yet there is this rich alternative set of ideas, and you're kind of sitting there going "Well that's not what economists do, we do this..." I think what could be useful is more of that, being able to connect heterodox economics to these other disciplines.*

Barrier 2: Weaknesses of heterodox economics

Neoclassical economics continues to dominate the profession and the public's narrative about capitalism, despite its failures around the financial crisis, the Great Recession and the historic rise in inequality. Kuhn's notion of a paradigm shift has one very stiff requirement beyond the recognition of anomalies: the presence of a viable alternative paradigm that can account for the anomalies and provide a general and operational approach to the scientific project. Heterodox economics has not been able to provide that alternative. Neoclassical hegemony certainly is an important reason. But in its current state heterodox economics may not provide the full Kuhnian alternative paradigm.

We propose that heterodox economics is challenged in three ways. First, the term "heterodox" represents a wide variety of approaches to understanding the economy. **Deirdre McCloskey** , Professor Emeritus from the University of Illinois-Chicago defines heterodoxy as *"anything outside the orthodoxy, itself being Samuelsonian economics, micro and macro – so anything except Samuelsonian."* But it appears that the very term "heterodox" signals a separation and disengagement from economics, with some heterodox scholars perhaps preferring not to engage with the mainstream.

Second, although there are many critiques of mainstream economics, heterodox theorizing is uneven and sometimes weak, relying on stock concepts without always working through the details. De-emphasizing empirical work and policy applications and debates has further isolated heterodox economics.

Third, it is a major intellectual project to develop and combine theories of institutions, power, racism, sexism, both within economics and in cooperation with other fields. And that often is coupled with a weak capacity to speak and teach and collaborate across disciplines

Should we drop the term "heterodox"?

More than half of the people we interviewed objected vehemently to the marginalization that the name heterodox evokes. We quote some of them here:

David Colander:

> *I strongly discourage the use of the term "heterodox" economics – it undermines the sale of heterodox ideas – you're attacking it instead of trying to change it from within. They're not heterodox [ideas], they're ideas that all good economists should be having and thinking about at all times.*

Omari Swinton:

> *[The term 'heterodox'] lumps together a lot of things that don't necessarily go together in a group... a lot of people do research in a unique, different way and they approach questions from different angles. [For instance] some people might bring things in from sociology and psychology – do they become heterodox then? I think people who come up*

with interesting and testable [ideas] that you can validate, and ways of solving the problem is what we should be looking for and not sticking to these rigid rules in economics.

Anonymous interviewee:

I actually never use the word, quite honestly, I never use it to describe myself. I don't know that by calling people that think about the economy "heterodox economists" helps because people out there in the world think that economists know something about the economy. And if we know something about the economy then we are economists, and that's just it.

Kate Bahn, Director of Labor Market Policy And Economist At the Washington Center for Equitable Growth:

I disapprove and [think] the term signals weakness, "heterodox" defines itself by what it is not. That is weak. I just call myself an economist. But it depends on who I'm talking to.

Nancy Folbre:

I generally describe myself as a heterodox economist. But I think it's sort of like defining yourself as a socialist. It means a lot of different things. It means something different now than it meant five years ago. And I also think there is a real analogy with politics that is: part of the goal of heterodox economics is to move the center. And so you can't look at it just like "How successful is it on its own, in terms of its numbers?" You have to look at it in terms of how it's changing the distribution of kinds of identification in the profession. I think the mainstream – it's also really important to note that the "mainstream" is not nearly as unitary as it once was – is also very divided into strains and that is really important because it's no longer kind of left versus right or heterodox versus orthodox. It's much more fragmented and de-centered. And in that sense, I sort of agree that if you focus entirely on the heterodox label you miss a big part of the story, that the field is becoming more differentiated methodologically.

The Institute for New Economic Thinking (INET) conducted a series of meetings around the country in 2017 on alternative economics curricula and teaching, and their final report did not use the term "heterodoxy." They instead used the term "pluralism" to indicate exposure to multiple views of economics including, at times, interdisciplinary work. "Heterodox" was used more narrowly to indicate "fields of economics that are absent or marginalized from most introductory economics textbooks."

Barrier 3: Pedagogy and training in heterodox economics

The third barrier to the success of heterodox economics is its academic strategy. We are very critical here. First, heterodox economists insufficiently developed pedagogy and curriculum that would help millions of students better understand systemic tendencies and power asymmetries in American capitalism. In short, heterodox economists have neglected Economics 101 – the first and last college economics course millions of Americans have taken and will take. Heterodox economists also painfully ignored high school curriculums or the AP test.

Second, Ph.D. training by heterodox economics departments often fails to consciously train scholars in policy analysis and for policy making. This would help lead graduates to potentially influential but non-academic careers, although many graduates from those departments even today go on to productive policy careers. But the flow could be increased if departments were more intentional and supportive of such career pathways.

Third, heterodox economics faculty have largely ignored the empirical revolution in economics research, where big data has become more useful, at times more so even than standard econometric methods based on limited samples. We should support more creative approaches to the use and visualization of data.

These problems are compounded by the continuing lack of diversity in economics, summarized by one of our interviewees, "Economics is the [discipline] women, minorities, and Americans don't want to be in." One of the stunning aspects of economics is the lack of diversity. The president of the National Economics Association (2019) told us the discipline is in real trouble because Americans, minorities and women don't want to take an economics class.

The percentage of undergraduate economics degrees awarded to women peaked at 35 percent in 2003 and has since hovered between 30 and 33 percent (Siegfried 2014). Although the share of female college and university students has surged over recent decades, rising from 39 percent in 1960 to 57 percent today (Goldin et al. 2006), in economics the percentage has fallen to 33%.

Economics teaching does not connect to the lived lives and real teaching conditions of the modern college economics teacher. Nor does it include a strategy for students who take one course (high school and college) and want to understand the relationship among politics, law, sociology, anthropology, psychology, philosophy and history.

The way economics is taught in our high schools, colleges, and universities shapes visions of what level of wealth, security, and growth is possible. Economics is the framework policy makers use to decide the role of government and that regular people use to understand their possibilities – who and what generates opportunities and obstacles to their economic success. Today's students are tomorrow's policy makers – and more importantly, citizens and political actors. Economic knowledge produced from high school courses can influence how economics is discussed at the Supreme Court. This is disturbing because economics training leaves out many voices and citizens.

Economics is now a subject taught not only in college, but in high school. The numbers of high school students taking the advanced placement economics test in micro and macro economics reveal its popularity. About 3.6 million students are expected to graduate from high school and in the 2017-18 academic year 236,705 took an AP Economics exam. We do not have independent data, but Paul Krugman has stated that his textbook, co-authored with Paula Wells, is the most popular AP textbook in the US. *Freakonomics* became the dominant extra book in high school classes as a "gateway" book into Economics.

One of the appealing parts of *Freakonomics* , in contrast to *The Worldly Philosophers,* is that it introduces undergraduates to relatable paradoxes and solves them with economic analysis. For example: monetary incentives explain why young men would rather deal in drugs than be a manager at McDonalds. What seems irrational on the surface can be explained by economic incentives. *The Worldly Philosophers* had been popular because it described economists throughout history as people who dealt with economic freedom, productivity, and redistribution.

College

Post secondary education in the U.S is in three tiers: community college, non-research colleges eg. liberal arts undergraduate colleges; and research universities. The students are about equally divided between the three groups with 5.9 – 7 million in each. About 1.7% of bachelor's degrees are for Economics, averaging 26,500 per year. Second majors have soared, increasing by 75%, from 55,000 in 2001 to 96,000 in 2014. But the overall "Business" major for BAs, which usually includes at least one economics course, was the largest major in 2015-16, comprising 19.4 % of all majors.

The major is not where all of the action is. Millions of students take one course in economics. About 40 percent of all undergraduates take at least a principles course and a large fraction enroll in other economics courses. However, the main goal in these courses is to make students learn to "think like an economist," not to learn about the economy and economics. In our interview, **Suresh Naidu** noted that the focus should also be on raising the large questions and problematics. He stated:

> *So [this was] my first year [teaching basic economics] but it's a blast and I think the students really like it in the sense that they get to see the high stakes questions in economics, which I think are not distinctively heterodox or mainstream. There's a set of classic questions that has always animated economics and the tools for answering them change with time and in different places but you know they're kind of always there.*

Undergraduate economics is stadial – one must progress through sequences of courses with increasingly more mathematics. At selective liberal arts colleges, the introduction to the principles of economics class is more likely to be a one-semester introductory course that combines micro and macro. Courses in moral philosophy or public utility or economic history or the history of economic thought, have disappeared. Courses on the economics of race and gender are rare. Economics is taught today in large classes on college campuses with a standard textbook, with pre-designed problem sets that can be graded by graduate assistants or machines. Often there is more math than students feel comfortable with and Economics 101 is hardly ever a student's favorite course. Very few go on to be economics majors, although they do get degrees in Business. Calculus and real analysis was required for an economics major.

College textbooks

Economics textbook market share data are not provided by publishers but "The Principles of Economics Textbook" by Jane S. Lopus & Lynn Paringer cited a survey of 26 textbooks to find that 2 textbooks – McConnell/Brue/Flynn and Mankiw – far outsell others and represent over 40 percent of total sales in 2009. They conclude the other 24 titles are well below five percent of market share. (According to one website for resale of textbooks, the most re-sold economics text by students was *Essentials of Economics* by Schiller and Gebhardt. It was the seventh most re-sold textbook of any subject, but it was topped by *Understanding Business* by William Nickels, James McHugh and Susan McHugh, which came in at number four .)

Doing meta analysis of the textbooks we judged them according to five dimensions. Below is a table that describes the treatment of various topics where one would expect sharp differences between alternative economics. We compared the treatment of the firm's supply curve since most heterodox economics view power stemming from the dominance of large firms that have downward supply curves, (see Lazonick 2017) but yet that key insight was not demonstrated in the alternative textbooks. Every textbook, pluralist or heterodox wrote almost exactly the same thing – there is no distinction between alternative and mainstream text books on the treatment of a supply curve.

The definitions of the corporation are varied and fascinating. Mankiw writes:

> *[Corporations] are guided in their decisions by the objective of profit maximization... The separation of ownership and control creates a principal-agent problem* (Mankiw/Taylor 2017: 485).

If we had to use one definition it would be from Colander:

> *A growth-compatible [legal] institution... that gives owners limited liability and thereby encourages large enterprises (because people are more willing to invest their savings when their potential losses are limited)* (Colander 2013: 602).

Sherman et. al. is a bit polemical:

> *The United States is a political democracy in which everyone has a single vote. Yet large*

corporations are able to use their immense wealth to influence the political process and set obstacles to the public interest (Sherman et al. 2018: 337).

Krugman and Wells provide no definition of the corporation or business enterprise.

The concept of automatic stabilizers, a key feature in Keynesian economics, are defined and discussed as politically controversial. For Colander,

> *[M]ost economists believe that automatic stabilizers have played an important pole in reducing normal fluctuations in our economy... Other economists argue both that the apparent decrease in fluctuations is an optical illusion... The jury is still out (Colander 2013: 741).*

Sherman's description is similar:

> *Several other spending items also rise automatically in every recession. For example, welfare spending must rise if more people are living in poverty...These types of spending result from long-established laws called automatic stabilizers or non-discretionary fiscal policy..These types of discretionary spending policies in a recession used to be supported by both Republican and Democratic administrations...recently, however, such discretionary spending has become very controversial politically (Sherman et al. 2018: 186).*

The theory of the minimum wage is one of the indicators of an unorthodox approach because the theory would conclude that minimum wages lower demand and the empirical work shows the opposite effect. How do these textbooks deal with the tension between orthodox theory and empirical work? Standard economics teaches an imposed minimum or union wage must lower demand for workers. But decades of empirical work shows that minimum wage hikes are associated with little or no employment loss. How do these textbooks deal with the tension between orthodox theory and now broadly-accepted empirical work? They don't.

Mankiw stresses the theory that minimum wages have negative consequences:

> *Above-equilibrium wages, whether caused by minimum wage laws, unions, or efficiency wages... raises the quantity of labor supplied and reduces the quantity of labor demanded. The result is a surplus of labor, or unemployment (Mankiw/Taylor 2017: 422).*

Colander focuses on the incidence on consumers, producers, and workers:

> *A minimum wage above equilibrium wage helps those who are able to find work, but hurts those who would have been employed at the equilibrium wage but can no longer*

find employment. A minimum wage also hurts producers who have higher costs of production and consumers who may face higher product prices (Colander 2013: 106).

Bowles et al.'s treatment is unique because it frames the analysis as a wage-led phenomenon, which may be too esoteric for some professors teaching a basic textbook.

Last, we examine, a key concept underlying almost all international policy and trade regulation – free trade will increase world output because of efficiency gains from specialization and trade. Mankiw's definition is clear but hints at no controversy:

> *When each person specializes in producing the good for which he or she has a comparative advantage, total production in the economy rises. This increase in the size of the economic pie can be used to make everyone better off (Mankiw/Taylor 2017: 54).*

Bowles and Sherman both do not define comparative advantage.

Goodwin et. al. provide a critical view:

> *Ricardo's simple example of two countries and two good... neglects issues of political, social, and environmental context that can sometimes offset gains from trade or eliminate them altogether* (Goodwin et al. 2009: 203).

Colander and Krugman and Wells are not critical and have their own elegant ways of describing comparative advantage hinting at institutional contingencies.

In Colander's text:

> *On a global perspective, if one believes in global income equality, trade is the way it comes about. Trade also leads to greater world economic growth... Trade expands the total pie, and even when a country gets a smaller proportion of the new total pie, the absolute amount it gets can increase* (Colander 2013: 192)

Krugman and Wells:

> *It's to the advantage of both countries if the poorer, lower-wage country exports goods in which it has a comparative advantage, even if its cost advantage in these goods depends on low wages. That is, both countries are able to achieve a higher standard of living through trade* (Krugman/Wells 2018: 224).

We asked all of our interviewees how they would teach a principles class of 100 students. Most of the interviewees said they have always taught very large classes. Many of our readings and interviews identified that what teachers were trying to do in their Economics 101 classes is to teach "thinking like an economist." The aim is to admit that economists don’t have definitive answers, but it can supply tools needed to discuss opportunity cost – which is a particular embodiment of the idea of trade-offs – with the idea of following the money, smoking out predators and economic self interest, with the liberal democratic ideals of showing who wins and gains from a particular course of action.

College course content

After World War II the role of government to steward an unstable capitalism was widely accepted. Activist fiscal and monetary policy was non-controversial. The science of economics was consumption, investment, and government spending could be calibrated so that prices would be stable and every adult who wanted a job (under 65) would have one. Alongside widespread acceptance of Keynesian economics in the 1950s and 1960s arose neoclassical economics, with the libertarian, free-market views of Hayek and Friedman being connected to big (and to many people more important and exciting) issues of democracy and freedom. To illustrate that economic systems are entwined with history and politics, economists added Robert Heilbroner's *The Worldly Philosophers* to the reading list alongside Milton Friedman’s *Capitalism and Freedom.*

The modern economics curriculum starts with John Maynard Keynes 1936 *General Theory* . Most of the debate in macroeconomics is how conservatively one implements lessons of *The General Theory* – a George W. Bush response to a downturn where the stimulus is targeted, temporary and timely or a Modern Monetary Theory direction for job guarantees. Keynesianism is a large tent under which all of macroeconomics gets taught. Samuelson and Friedman debated the issues of the speed and size of fiscal and monetary policy not about what firms and workers wanted and how they acted. Lazonick has made a thorough examination of Samuelson's 19 editions, which consistently claim that policies about firms means the smaller the better. But small is often unproductive. A search of current textbooks, heterodox or mainstream, found nothing more extensive about the source of productivity arises.

What is taught is that economics is a science and guide to policy that can and should be used to calibrate a fairly decent economy for all. The idea of calibration is evident in one of the most popular books for lay readers and college students. Arthur Okun’s 1975 book, *Equality and Efficiency: The Big Tradeoff,* laid the groundwork for austerity economics that was nurtured in the 1970s, stressing that if society wants price stability, it has to trade off jobs.

Economics was a set of grim tradeoffs, if you wanted equity you sacrificed efficiency. Jason Furman in 2016 writes that, “Okun used a metaphor to illustrate the tradeoff in transferring money from the rich to the poor ...the money must be carried from the rich to the poor in a leaky bucket. Some of it will simply disappear in transit, so the poor will not receive all the money that is taken from the rich.”

The message was clear from Okun that if you wanted to redistribute wealth from the top 1% (who now own 30% of the wealth) the economy would have to suffer lower growth. In one economics class one of the authors (TG) had in the mid 1970s, students had to jump on big felt squares on the floor about what we cared about most: growth, productivity, efficiency, and equity to vote for what we wanted first, because there would be tradeoffs. She guessed right, jumping on to productivity got approving nods from the teacher.

Even after the financial crisis, economics curriculum did not change. In an undergraduate macro class taught at an elite university in the Spring of 2009 when the global economy was in near meltdown, the professor started the first day with one equation in the far left corner of the blackboard and ended in May with 43 equations blanketing the board – the post-WWII economy and the financial crisis was reduced to a dynamic programming problem. Blindness to the dynamics of financial collapse, income stagnation, social decline and historic increases in inequality signaled a deeper failure of economic thought and in teaching.

Conclusion

After a disappointing evolution in the propagation of pluralist economic theories among academic institutions, the broader public, and a new generation of economists, the difficult and necessary introspection of this paper is just a first step. Utilizing collective decades of valuable experience from our interviewees, we found that the major barriers of 'heterodox' success at supplanting the neoclassical paradigm have been tripartite (can you use this word like this?). Neoclassical hegemony, weakness in heterodox theory, and pedagogy and training in economics. A profoundly embedded neoclassical paradigm within the discipline is not enough to explain the failure of alternative theories to supercede it when it is most vulnerable, such as after the Great Recession. It is essential to encourage engagement with the mainstream, strengthen heterodox theory, encourage the use of large data and policy work, and combine theories of institutions, power, racism, sexism, within economics and in cooperation with other fields. Finally, economists have neglected Economics 101 for too long. There has also been a lack of conscious training of PhD students in policy analysis and policy making, as well as supporting more creative approaches to the use and visualization of data. The combined effect of the above could influence a broader attraction of economics students, especially those who are underrepresented in the discipline. We hope that these reflections and insights can serve as a catalyst for further reflection on the shortcomings and potential success of interjecting alternative economic theory into the mainstream in the project of ultimately replacing the paradigm.

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