Life without Virtue: Economists Rule. Review essay of Dani Rodrik's *Economics Rules*

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Abstract

This review essay of Economics Rules *situates Dani Rodrik's contribution with respect to the 2007–2008 global economic crisis. This financial meltdown, which the eurozone did not fully recover from before the Covid-19 pandemic, led to soul-searching among economists as well as a call for heterodox economic approaches. Yet, over the past decade, instead the economics profession has maintained its orthodoxy. Rodrik's* Economics Rules *offers a critique of the economics profession that is castigating but mild. It calls for economists to use more and diverse models without becoming wedded to any single model or an overarching vision. Yet Rodrik ratifies many of the benchmark models standard to orthodox economics and provides little ground for a fundamental rethinking of the discipline. This essay analyses the conservatism underlying Rodrik's approach, which upholds general equilibrium theory and rational expectations underlying the efficient market hypothesis. It argues that the economics discipline's scope-creep to maintain its applicability to all human decision-making, and its acceptance of all-inclusive utility functions, crowds out moral sentiments and civic virtue. Thus. it argues that rather than urging economists simply to be more cautious in their application of models to address particular social concerns, instead economists must recognise their discipline's inherent limitations.*

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> The crowning achievement of economics, the Invisible Hand Theorem, perhaps does make economists somewhat more nonchalant and permissive toward displays of self-interest. After all, its key insight is that self-interest can be yoked to public purpose. A collection of selfish people need not produce economic and social chaos. From society's standpoint, the antidote to the pursuit of material advantage by some is the pursuit of material advantage by many others. Free and unhindered market competition neutralises pathologies that might otherwise have arisen.
>
> (Dani Rodrik 2015 p 186-187)

> Economics has, over time, tried to produce a coherent model to underpin the dominant laissez-faire liberal approach.
>
> (Alan Kirman 2016 p 534)

> Even had there been very close integration between macroeconomic forecasting and financial stability analysis units, however, the latter were not ringing alarm bells sufficiently far in advance of the crisis for monetary or prudential policies to take adequate steps to forestall or significantly reverse the buildup of systemic vulnerabilities. Consequently, it is not obvious that macroeconomic analyses and forecasts, and the associated policy recommendations, would have been substantially different. This suggests that it was not only the workhorse central bank forecasting and analysis models that were lacking, but also those of the financial stability units.
>
> (Roger and Vlcek 2012 p 4)

In *Economics Rules: The Rights and Wrongs of the Dismal Science* (2015), Dani Rodrik strives to steer between the two extremes of lauding economists, and treating them as scapegoats for the 2007 financial crisis and the subsequent failure of austerity policies. Consider the fact that the 45th president of the United States elected Jerome Powell Chair of the US Federal Reserve, although he only has a bachelor's degree in political science, and a JD in law. Trump's choice stresses ideological commitment over confidence that economists can help us to understand an effective role for government in fostering economic growth. Of even more concern, the president initially latched on to the Laffer curve to advocate cutting corporate tax from 30 per cent to 15 per cent, mimicking Ronald Reagan's tax cut from 70 per cent to 28 per cent for the highest income bracket (Shiller 2017 p 281-282). Nobel laureate economist Robert J. Shiller (2017 p 979) refers to the earlier fixation on Arthur Laffer's curve, and the urban legend that grew up around its origins, as a 'narrative epidemic…of economic theories'. By this he refers to 'the spread and dynamics of popular narratives, the stories, particularly those of human interest and emotion, and how these change through time, to understand economic fluctuations' (Shiller 2017 p 967). According to Shiller, Laffer's curve fits this assessment because Laffer is immortalised as having introduced the model to Dick Cheney and Donald Rumsfeld by drawing it on a napkin at a well-known Washington DC restaurant (Shiller 2017 p 981). Shiller's point is that Laffer's curve can either be used to mobilise an argument for lowering tax rates, or to explain the reasoning underlying Reagan's tax policy—but that the critical analysis offered by the curve itself is slim without a great deal of development and contextualisation of the model (see also Morgan 2020).

Shiller's chiding of the *narrative* use of economic models dovetails with Rodrik's overall message in *Economics Rules* (Rodrik 2015 p 174). Both economists express confidence in the solid foundations of their discipline, and only challenge the over-ebullient or miss-employment of models (*ibid*). Thus, when it comes to explaining economists' culpability in either missing the

extreme structural insolvency of the global banking system in 2006–2007, or even potentially contributing to its instability, Rodrik's message is that these errors of omission or commission can be avoided if economic models are understood to be inherently limited. Thus, 'mischief occurs when economists begin to treat a model as *the* model…then the narrative takes on a life of its own and becomes dislodged from the setting that produced it.'

This leads the singular model to become 'an all-purpose explanation that obscures alternative, and potentially more useful, story lines' (Rodrik 2015 p 174-75). The corrective is for the economics discipline to encourage approaches that are better exemplified by foxes, who favour pluralism over a grand vision, instead of hedgehogs, who favour a bold idea such as 'markets work best, governments are corrupt, intervention backfires' (Rodrik 2015 p 175). Specifically when it comes to public debate, Rodrik's sharp conclusion is that '[e]conomics needs fewer hedgehogs and more foxes' (*ibid*).

The prime example of errors of omission that Rodrik addresses is the 2007 financial crisis triggered by the US mortgage crisis. In his evaluation, economists 'became overconfident in their preferred models of the moment: markets are efficient, financial innovation improves the risk-return trade-off, self-regulation works best, and government intervention is ineffective and harmful' (Rodrik 2015 p 159). Many ills developed, in Rodrik's view, simply by being blindsided, hence failing to see potential hazards by looking in the wrong direction. The banking sector was under-regulated because economists had argued successfully that risk would be accounted for within market exchange. Thus, observers in crucial roles failed to contemplate the implications of executive compensation of bank managers being directly linked to excessive risk-taking. Credit ratings services were not actually an independent source of information because their patrons were precisely those seeking top grade triple-A appraisal.

Throughout the time period leading up to the 2007 crisis, the favoured models accepted the efficient market hypothesis. This model, referred to as the EMH, was the brainchild of Eugene Fama, who received the Sveriges Riksbank Prize in Economic Sciences for his research on asset pricing in 2013. In Fama's words, 'I take the market efficiency hypothesis to be the simple statement that security prices fully reflect all available information' (Fama 1991 p 1575). Thus, in an efficient market, prices should accurately reflect the relative value of assets given all the information on hand. As a result, if a freak event were to hit tomorrow, this would not be reflected in prices today. However, given that no new information was revealed to trigger the collapse of the mortgaged assets at the centre of the credit crisis, Fama's model was in this instance proven to be invalid: asset prices did not reflect their actual value. According to Rodrik, overreliance on the EMH underlay the late twentieth-century transfer of social trust from governance to free markets to be 'the engine of social progress' (Rodrik 2015 p 158) and hence paved the way for the financial meltdown.

The primary example of commission Rodrik discusses is the Washington Consensus, a phrase coined by the Washington think tank economist John

Williamson in 1989 to refer to a free market policy platform introduced into developing countries (see e.g. Fine and Saad-Filho 2014; see also Palley 2005). This policy agenda privatised public assets and turned to free market competition to allocate scarce resources efficiently (Rodrik 2015 p 161). Here, Rodrik blames the now generally recognised failure of liberalisation policies (Rodrik 2015 p 167) on 'excessive zeal for a universal approach that oversold the benefits of unfettered markets' (*ibid*). Where economic development failed in the Latin American countries on which Washington Consensus policies were imposed by the World Bank and the International Monetary Fund, it took off in Asian countries that used 'unorthodox' policies (Rodrik 2015 p 164) that could be understood using alternative economic models.

The question I will explore is whether Rodrik's gentle castigation of economists is sufficient to get at the heart of the discipline's early twenty-first century crisis of confidence, on a par with political scientists' failure to predict the fall of the Berlin Wall in 1989 and collapse of the USSR in 1991. I divide my observations into three sections. First, I question whether Rodrik's view of the content of economics as the practice of modelling is adequate to grasp its historical significance and uniqueness as a discipline.

Second, given Rodrik's almost reluctant acceptance that 'the crowning achievement of economics' is the 'Invisible Hand Theorem', it may be that his diagnosis that hedgehog economists had a predilection for bold universal models is insufficient to achieve his goal of saving the economics profession. Rodrik argues that if only economists thought through the 'conditions under which their models are useful', there would be suitable correctives internal to economics to prevent future catastrophic failures of economic policies (Rodrik 2015 p 172). Thus I explore the possibility that the background assumptions that Rodrik agrees characterise economists' benchmark models, namely rational self-interest and efficient markets, are so interwoven throughout their standard methodology that a more searching review is necessary to avoid future errors of omission and commission.

Finally, I focus on the critique of economics proposed by ethicists who question whether the discipline's default understanding, that humans are primarily motivated by incentives, can address the theoretical challenge they raise satisfactorily. This is because the denial of non-instrumental action characterising the virtues of truth-telling and keeping promises, elementary in Enlightenment natural philosophy (Driver 2003) and vital to Adam Smith's *Theory of Moral Sentiments* (1759/1982), cannot be reduced to incentives without destroying their nature. Thus a better corrective for the ills of an overdependence on economic models that mainly 'tried to produce a coherent model to underpin the dominant *laissez-faire* liberal approach' (Kirman 2016 p 534), may be to recognise the categorical limitations of reducing all human decision-making and interactions to economic rationality. The following discussion follows Rodrik's account of orthodox economic theory, although there have been important debates concerning the relationship between so-called orthodox and heterodox theories (e.g. Colander 2000; Davis 2006, 2008).

The Scope and Nature of Economic Science

Prior to the rational choice revolution, which made it possible to conceive of containing all considerations impinging on action in a single, fungible, monetarily measurable utility function and therefore to attempt to model all human interactions, economics had a restricted domain of inquiry. In antiquity, Aristotle used the concept *Oikonomia* to refer to provisioning a household (see Cendejas Bueno 2017). Since Adam Smith, for its first two centuries of systematic economic inquiry the field of study has pertained to markets in which goods and services were traded in precise ratios that determined their prices. Rodrik's *Economics Rules* is striking for nowhere discussing the content of economic theory, other than that of modelling social phenomena that extend beyond markets to include all manner of interactions formerly designated as 'political', or 'social'. In becoming the science of all interactions, economics faces the danger of becoming a science of everything social. Thus the discipline loses the particularity of being focused on the investigation of providing remedies for poverty, and showing how to achieve sustainable economic growth and to generate inclusive prosperity.

The economic studies of the ancients and Enlightenment theorists pivoted on the question of how to achieve sufficient provisions for populations to be without deprivation, specifically insufficient food to survive, and how to generate the prosperity to be powerful city states or nation state actors. Adam Smith was acutely aware of how the price for labour must be at, or above, the cost of subsistence to maintain the worker's survival (on supply and demand in Smith, see Aspromourgos 2007). Moreover, his project as a political economist was circumscribed by the need to provide forward looking remedies for the recurrent problem of famine that led to starvation and grain riots. Notoriously, given the 1700s famines and grain riots, Smith argued that leaving the price of grain to fluctuate in the open market is the best means of solving the long-term problem of insufficiency, because this will lead to lowering the cost of living for all members of society (Hont and Ignatiev 1983). A century later Karl Marx argued that this vision is flawed, so long as there are vast numbers of unemployed labourers who are willing to work at the cost of subsistence.

The neoclassical economists, who provided a formal treatment of exchange and price, and invented the general equilibrium concept of perfect competition matching supply with demand across the market for a set of market clearing prices for all goods, shifted attention away from the challenges that Marx raised for political economy. They argued that there can be no interpersonal comparisons of utility, and thus no argument for redistribution of resources based on the justification that less well-off people gain more utility from food and additional units of cash than wealthy individuals. Lionel Robbins was clear about the limited scope of economic science to the markets for goods that are traded in precise ratios (Robbins 1932). He argued that economics studies scarce means to achieve given ends: whilst the distribution of goods subject to cash valuation falls within its domain, selecting ends is external to economic

analysis. The classical and neoclassical economists drew a tight boundary around their discipline that helped it achieve professional standing as a unique field of inquiry.

Thus, in considering post-World War II economics and its subject matter, which remains elusive in reading *Economics Rules*, the scope of its domain seems limitless. Rodrik himself notes that economists study everything under the sun, including credibility, commitment, deterrence and bargaining, in addition to typical economic questions of how to counter inflation, maintain economic solvency of financial institutions, and explain the rise in economic inequality in the US after the 1970s. In its current orthodox form, postulating that incentives and scarcity motivate human action, economic science can only do injustice to domains of human agency that are animated by non-scarce goods including appreciation, aesthetics and fulfilment, and by non-instrumental considerations including logics of appropriateness.

From General Equilibrium and the Efficient Market Hypothesis to Dynamic Stochastic General Equilibrium

The general equilibrium model proves that under conditions of perfect competition, the market not only will achieve a market clearing equilibrium in which supply and demand match, but also that this equilibrium outcome is optimal. Following Vilfredo Pareto, the definition of optimal is that under this allocation of resources, it is impossible to make any single agent better off without making any other individual worse off. The neoclassical economist Léon Walras had formalised the mathematics attempting to demonstrate the existence of a general equilibrium. Subsequently Kenneth Arrow and Gerard Debreu, independently and together, demonstrated the theoretical 'viability and efficiency of the market system' (Geanakoplos 2004 p 116), but only by using the mathematics developed in game theory which departed from the diminishing marginal utility analysis of the neoclassical economists (Duffie and Sonnenschein 1989 p 576-578). The latter point is crucial because the expected utility functions used in game theory assume that actors' preferences are complete and consistent over all possible outcomes. Thus, in principle all actors' every desire is accommodated within the Arrow-Debreu equilibrium model, which treats every preference-satisfying interaction as a potential transaction.

Following Arrow and Debreu, by analytic definition it appears that, 'the total quantity of any good sold is necessarily the total quantity purchased, [and thus] the prices we observe in the actual world are equilibrium prices' (Duffie and Sonnenschein 1989 p 568). However, there is a gap between theoretical market clearing prices and observed prices, which are not necessarily market clearing. Thus, general equilibrium theory needs to be supplemented with the efficient market hypothesis (EMH), which specifies the conditions under which real market prices are actually efficient. Actors are assumed to have rational expectations which lead them, on average, to make sound economic decisions

based on pertinent publicly available information. In an efficient market, comprised of numerous transactions resulting from individuals' rational expectations, prices reflect all relevant information pertaining to the worth of goods, including risks associated with their future valuation (see Guerrien and Gun 2011). General equilibrium theory and efficient market theory are heralded as 'the greatest achievements of economic theory' insofar as they 'concern the determination of value in competitive markets and the extent to which competitive markets lead to an efficient allocation of resources' (Duffie and Sonnenschein 1989 p 565). These theories together, for which their inventors were in part awarded recognition with Nobel prizes, underlie the economic policy from the 1980s to 2007, a period known as the Great Moderation (Bernanke 2004; Baker 2007).

The Great Moderation refers to the significant reduction of financial volatility which has been attributed to the changing structure of the US economy, good luck, and sound monetary policy (Hakkio 2013). This period was characterised by a widespread consensus that markets are both the best way to achieve economic growth and self-discipline; political intervention is necessarily either arbitrary or reflective of organised interest groups. This monetary policy was handled in the US and the United Kingdom by politically independent central banks which, using general equilibrium models, manipulated interest rates in order to achieve price stability. However, even though this worked throughout almost three decades, systemic harmony was abruptly shattered in 2007. The looming problem was that, apparently and counter to the EMH grounding the applicability of general equilibrium theory, crisis asset prices had failed to exhibit crucial information about risk in the prior time period. The market price of assets had reflected a weaker 'no free lunch', fair game, reality, and not a stronger concept of a 'right price' reflecting perfect information and grounding a general economic equilibrium (Guerrien and Gun 2011).

Now we see that in the wake of the financial crisis, and its remedy in the reassignment of resources from the financial winners to publics that absorbed the countermeasure of debt, central banks are returning to relying on general equilibrium models to calibrate their monetary policy (Tovar 2009; Roger and Vlcek 2012). Thus it behoves us to investigate the assumptions underlying these benchmark models and their role in either encouraging confidence in, or justifying our ongoing commitment to, free market economics as the superior means to allocate resources.

We are invited to examine the Arrow-Debreu general equilibrium model. It anchored the ensuing proofs of the first and second fundamental theorems of classical welfare economics that (i) a free market achieves an optimal distribution of resources; and (ii), a politically more preferred final allocation of resources is best achieved via a lump sum redistribution in an initial period (rather than provision of services, or subsidies for purchases). Two points become apparent. First, when bolstered by the EMH, Arrow-Debreu general equilibrium theory sustains confidence in the ability of the free market to achieve an optimal

resource allocation independent from political intervention. Second, the model's background assumptions are precisely those that are consistent with accepting that economics is an encompassing science of all decision-making, and all interactions, throughout society. The fact that many economists find its underlying assumptions 'economically interpretable' (Hands 2016), and therefore plausible, is a point I re-examine below. The plausibility of the assumptions is coincident with economists' bias toward accepting that rational self-interest is typical, and that the unfettered exercise of individual choice under conditions of perfect competition leads to a Pareto optimal allocation of resources.

The centrality of general equilibrium theory as an indispensable and favoured model that relies on the microeconomic analysis of individual rational choice resonates with Alan Kirman's identification of its role in rationalising the economics profession's advocacy of unregulated markets. He argues that, 'what we now refer to as our benchmark model, the general equilibrium model, was not just being improved to make it more "scientific"'. Instead, 'it was being systematically developed to be consistent with the underlying liberal philosophy [of *laissez faire*] as possible' (Kirman 2016 p 539). Kirman's overall point is to recommend considering complexity theory, as opposed to general equilibrium theory (GET) or its most recent version in dynamic stochastic general equilibrium theory, as a superior means to inform monetary policy at the central banks (Kirman 2016 p 547).

In so arguing, he encourages us to question that 'perfect competition…[is] the appropriate idealisation of the economy' (*ibid*). According to Kirman, GET's justification of perfect competition, which in turn depends on perfect information being reflected in prices, permits central bank leadership to concentrate on maintaining price stability to service the smooth functioning of the free market. Instead, he argues, economists should directly control the evolution of the economy, hence playing a directional role. Kirman's exploratory advice would encourage economists to drop what Rodrik refers to as their crowning achievement, 'the invisible hand theorem' (Rodrik 2015 p 186). This is because in Kirman's view, economics is compromised by 'the lack of a sound theoretical basis for the 'invisible hand' story, coupled with the persistent evidence for the emergence of relatively frequent endogenous crises' which should 'make us rethink the whole theoretic structure' (Kirman 2016 p 566). Where Rodrik may argue that all that is required is either new, or diverse, model development and selection, Kirman's set of challenges digs to a deeper level. What remains of orthodox economics without the invisible hand theorem that Rodrik refers to as its definitive achievement? Rodrik (2015 p 187) observes that:

> The crowning achievement of economics, the Invisible Hand Theorem, perhaps does make economists somewhat more nonchalant and permissive toward displays of self-interest. After all, its key insight is that self-interest can be yoked to public purpose. A collection of selfish people need not produce economic and social chaos. From society's standpoint, the antidote to the pursuit of material advantage by some is the pursuit of material advantage by

> many others. Free and unhindered competition neutralizes pathologies that might otherwise have arisen.

Beyond members of the economics profession's intense attraction to the free market narrative, we can also examine their commitment to the set of theoretical assumptions that buttress the endorsement of spontaneous and optimal coordination resulting from individual rational self-interest. The fulcrum of this analysis is methodological individualism, or the hypothesis that 'the only way to understand the functioning of the whole is to build on the foundations of the behavior of the individual human beings who make it up' (Kirman 2016 p 539; see also Arnsperger and Varoufakis 2006). In addition to their innovation in proving that ideal market competition achieves one of potentially many optimal equilibrium outcomes, Arrow and Debreu also succeeded in providing an argument for macro-level economic stability as a function of individual decision-making. Their analysis of individuals' consumption and production decisions in turn depends on rational actor theory. To this day rational choice maintains its status as the orthodox statement of instrumental rationality (Myerson 1991; Hargreaves Heap and Varoufakis 2004; Hausman 2011; Bicchieri 2016).

When we see that rational actor theory maintains the cogency of orthodox economics and simultaneously grounds Arrow and Debreu's general equilibrium theory, then we can understand how economics seems borderless because it has been applied to all human decisions and social interactions. There seems to be no boundary to economic analysis because rational actor theory pertains to every rational decision made by individuals throughout their lifetimes in all contexts. Furthermore general equilibrium theory was originally designed to encompass each consumer's every desire, its satisfaction, and the producer's cost and profit function to satisfy that desire; 'every desire of each consumer, no matter how whimsical, is met precisely by the voluntary supply of some producer' (Geanakoplos 2004 p 119).

Rational choice assumes that individuals have all-inclusive preference functions that rank all conceivable outcomes completely and consistently, as well as lotteries of outcomes. No consideration impinging on choice is outside actors' preference functions. Moreover, every satisfaction of a desire is met by an act of production that requires the input of a producer. Thus, as a function of the all-inclusive preference rankings which support the individualistic model of the macroscopic phenomenon of general equilibrium, *in principle every single act of satisfying individual demand falls under economic analysis* according to this model. This model is all-inclusive at the individual and the aggregate level.

According to Arrow's analysis of the general equilibrium, every consumer is subject to the assumption of rational expectations. This means that in order to accommodate perfect information, a condition required for perfect competition, 'Arrow makes the first explicit use of the so-called perfect foresight assumptions regarding equilibrium price expectations' (Duffie and Sonnenschein 1989 p 589). Arrow's research in particular sustains the free market vision by means

of a formal, axiomatic method 'for passing from individual preferences to social goals and the study of mechanisms for achieving those goals in a decentralised manner' (Duffie and Sonnenschein 1989 p 594). Arrow's contributions ground the theoretical commitments underlying the Great Moderation that exhibited unbounded confidence in unregulated markets to allocate resources. Arrow's work on general equilibrium and uncertainty suggests that, assuming that consumers and producers abide by the principles of rational expectations, financial security markets could price risk just like any other commodity.

Here, as with general equilibrium theory more generally, the EMH was a necessary corollary to ensure that asset prices accurately reflect their worth in consideration of objective perfect information. Under the conditions of risk that Arrow sought to incorporate into his equilibrium model, agents must have rational expectations based on prices that reflect asset evaluation in light of complete information. However the hypothesis of rational expectations 'which is still current in macroeconomics' (Kirman 2016 p 553) is flawed on two counts directly linked to the failure of prices to signal accurate valuation in 2007. The first is that instead of perfect information in view of objective knowledge, when it comes to the communication of knowledge, individuals can only transmit their beliefs which, if they happen to be false, means that 'the market is efficient at internalising false beliefs and not information' (Kirman 2016 p 553). The second is that given the additional incentive compatibility problem, flagged by Rodrik pertaining to the credit rating agencies being paid by those they rate, the information efficiently internalised by market efficiency may not only be a function of erroneous belief, but it could also be a product of intentional deception.

In summary, then, economists including Rodrik agree that modern economics spanning from Adam Smith, to Kenneth Arrow and Eugene Fama reveal the underlying belief that, 'economies self-organise in an efficient way if left to their own devices' (Kirman 2016 p 560). Of course, Rodrik is cautious in his approval of the invisible hand thesis, but still concurs that Arrow's 'First Fundamental theorem [of welfare economics] is a big deal because it actually *proves* the Invisible Hand hypothesis' (Rodrik 2015 p 50). However, not only is the general equilibrium model understood to be the crowning achievement of modern economics and useful for justifying the Great Moderation – not to mention vindicating central banks' use of DSGE (dynamic stochastic general equilibrium) models in the present – but it also contributes to economists' confidence that they can model all human behaviour. This is because economists' rationality thesis holds that all reasoned decision-making must be representable using expected utility functions.

At best the invisible hand thesis has unresolved tensions residing in the fact that the perfect information hypothesis is flawed as a result of potential inaccurate beliefs and irrational expectations. At worst, however, the assumption of rational self-interest underlying the invisible hand hypothesis is internally incomplete or inconsistent. Possibly, as we saw in 2007, the expression of individuals' self-interest in credit markets was irrational, if based on irrational

expectations, and hence mutually destructive. Alternatively actors may have been rational, yet GE and EMH models could be incomplete if their understanding of rational action is insufficient to capture all modes of purposive conduct, specifically those reflecting non-consequentialist procedural considerations including truth telling and rule following. In the same vein, GE and EMH models may be internally inconsistent if rational action generates an inefficient equilibrium, as in a Prisoner's Dilemma situation, achieving a mutually destructive outcome.

Reasons given for the market breakdown include: excessive risk-taking driven by financial managers' compensation rewarding this practice against shareholders' interest; the perverse incentive of credit-rating agencies in maintaining high scores for their clients; China's move to acquire dollar assets leading to a reduction of interest rates and fewer opportunities for profit; and in turn lower interest rates encouraging riskier investment. Rodrik is clear that over-reliance on the invisible hand thesis and EMH, heralded by Lawrence Summers and Alan Greenspan among other leading economists, 'legitimized and enabled a great wave of financial deregulation that set the stage for the crisis' (Rodrik 2015 p 159). The result was that economists, and those relying on them, 'became overconfident in their preferred models of the moment: markets are efficient, financial innovation improves the risk-return trade-off, self-regulation works best, and government intervention is ineffective and harmful' (*ibid*).

Whence Virtue?

Rodrik concludes that the foundations of professional economics are fine: it has appropriate models and an analytic structure to understand markets. He casts blame on the psychological attributes of economists, or 'hedgehog' syndrome. He also chastens the sociology of the profession because, 'promoting markets in public debates has today almost become a professional obligation' (Rodrik 2015 p 170). Additionally, economists' models 'provide narratives that lodge easily in the popular consciousness' (Rodrik 2015 p 174). As with the Laffer curve discussed by Shiller, 'these fable-like narratives often have morals that can be formulated in catchy terms… 'taxation kills incentives'…and also sync up with clear political ideologies' (Rodrik 2015 p 174). Thus the failures of free market theory can be laid at the feet of irrational individuals and imperfect competition as a result of inadequate information. Moreover, public consumers of economic theory prefer endorsing *laissez faire* ideology. Debating a plurality of models, applying models to specific contexts, and conducting randomised field experiments are part of the solution. The other part is maintaining professional conduct through exhibiting the psychological profile of a fox, which rejects grand vision in favour of embracing plural perspectives, therefore sometimes recommending market solutions and other times government regulation.

For reasons articulated by Rodrik in Chapter 6, 'Economics and Its Critics', I doubt this measured reformation of economic practice will be sufficient to

realise economists' aspiration to help build appropriate institutions to avoid future economic crises. This doubt is based on three types of reason. First, the scope expansion of economics maintains its hold beyond the analysis of economic exchange, to encompass all human choice. This prevents economists from locating the basis of economics in inherently scarce tangible goods and services that constrain economic growth, as opposed to analysing social progress writ large. Why have we not achieved a post-scarcity society? What is the role of the expansion of economic analysis to all decision-making which treats all value as inherently scarce, and thus perpetuates rendering seeking luxury equivalent to seeking water, food, shelter, employment and medicine?

Second, the imperialistic expansion of economics to all domains of human interaction may encourage profiting from building markets out of deprivation through leveraging threats in coercive bargaining. An alternative is fulfilling a shared demand for security based on the premise of reciprocal no-harm that, if maintained, enables achieving inclusive growth facilitating sustainable livelihood through the exchange of scarce resources. Third, and the topic I explore here, economists' assumption that all considerations of worth are reflected in agents' complete and consistent preference rankings over all conceivable outcomes reinforces the belief that only incentives motivate actors. This assumption is not merely the window dressing of models, but both informs general equilibrium theory and serves as the orthodox theory of rational choice (Hausman 2011).

Rodrik acknowledges that economists emphasise incentive-driven solutions to problems and honestly admits that these solutions can have the opposite impact by driving out the very type of behaviour that rewards or penalties are designed to encourage. A favoured example is an experiment economists conducted in Israeli preschools in which the policy goal was to reduce parents' incidences of picking up their children late. Thus, some programmes instituted fines to charge parents for their late arrival. Counter to what economists had hypothesised, 'to virtually everyone's surprise' (Rodrik 2015 p 190) the introduction of financial penalties was followed by increasing occurrences of tardy child pick up. The *post hoc* rationale to explain this unexpected behaviour on the part of parents was that implementing financial incentives gave the appearance that leaving children at the preschool for prolonged periods was proper, and that caretakers were on call to offer additional childcare for an established price.

Similarly, Rodrik reports that the current tendency to treat failures to uphold the rule of law, such as with respect to insider trading, the Volkswagen diesel emission scandal, and irresponsible risk-taking during the financial crisis, as mere finagling with legality backed up by a willingness to pay a fine if caught breaking rules, fails to recognise a basis for moral judgment. Thus those found guilty of harming others through breaches of regulation are not punished according to a finding of moral culpability and a breach of character, but rather simply a failure to uphold a social guideline, much like a traffic violation.

Rodrik (2015 p 71) cites Samuel Bowles' recent work, 'Why Good Laws Are No Substitute for Good Citizens' (published subsequently as Bowles 2016) to draw the lesson that economists 'need a richer paradigm of human behaviour (or of costs and benefits) than they use in the simplest models' (Rodrik 2015 p 191). This suggests taking the step that already characterises the economic practice of putting all considerations of worth in agents' preference rankings. The idea, which is not uncommon among philosophers of economics (see Hausman 2011), is that economic models can be made richer through the identification of formal methods to incorporate non-tangible sources of worth into expected utility functions (e.g. Pettit 2002) as well as individuals' propensity to prefer doing what others do or expect them to do (Bicchieri 2016).

Rodrik's proposed solution to the hedgehog problem of economists' singular attraction to general equilibrium theory and the efficient market hypothesis continues down the same path that initially supported overconfidence in the power of economic models to reflect the economy as though it represents *everything* relevant to human choice and action. This implication is a function of economists' ongoing effort to identify as their domain every consideration of worth impinging on every rational choice people make (Hausman 2011). Rodrik looks to behavioural economics as a palliative to this acknowledged tendency that is consistent with game theoretic models of the economy, including general equilibrium theory.

Behavioural economists acknowledge and accommodate consumers' demonstrated systematic patterns of irrational decision-making through their field-studies of revealed choice. Thus they provide new tools for policy interventions through architectural platforms to steer actors' decisions (Thaler and Sunstein 2009). They seem to offer a welcome counter to the standard deference to the *Homo economicus* populating most economic models (Rodrik 2015 p 69-70, 104-107). According to Rodrik, 'the rise of behavioral economics marks the greatest departure for standard economics because it undercuts the benchmark, almost canonical assumption of economic models: that individuals are rational…[which] allows the modeling of behaviour by relying on standard mathematical optimization techniques in which individuals maximise…well-defined objective functions under a budgetary and other restraints' (Rodrik 2015 p 202). Yet not only was Amos Tversky, the Nobel Prize winning behavioural economist Daniel Kahneman's collaborator, a central contributor to rational choice theory (Bell *et al* 1988), but far from departing from expected utility theory, this body of economics reinforces orthodox rationality as the benchmark model that 'normal' irrational people systematically violate.

Rodrik seems to acknowledge that there is a transformative effect of learning economics and specifically game theory, although he equivocates over whether those who pursue economic degrees have a predisposition to viewing humans as fundamentally selfish. He questions whether 'this benchmark role of self-interest in economic models produce[s] a normative bias in its favor?' (Rodrik 2015 p 187). We can question if learning economics '"normalizes" such

behavior…and crowds out other, more socially oriented behavior' (*ibid*). He finds that, in fact, economics students tend to express more selfish behaviour than their peers in other fields and that 'their behavior is more consistent with benchmark economic models such as the prisoners' dilemma' (*ibid*).

This positing of consequentialist self-interest also normalises the role of incentives in institutional design, driving out commitment, trust, and possibly even reciprocity (see e.g. Guala 2006). Instead of concluding that exposure to benchmark economic models induces selfishness, Rodrik points to evidence suggesting that those favouring selfish explanations of behaviour gravitate to economics. Thus we are not surprised that as a consequence, 'self-interest features prominently in economic models, [and] economists exhibit a bias toward incentive-based solutions to public problems' (Rodrik 2015 p 188).

Rodrik argues that the economics discipline attracts those who are predisposed to demonstrate selfish action, and that benchmark models such as prisoner's dilemma are not, therefore, transformative. However, he also directly acknowledges that, '[o]nce you work through the prisoners' dilemma, you can never think of problems of cooperation in the same way.' Long after the specifics of the model and exposure to pedagogic training were subject to conscious reflection, 'they remain templates for understanding and interpreting the world' (Rodrik 2015 p 20). Thus Rodrik himself puts the pieces of the puzzle together in *Economics Rules*: economists' benchmark models rationalise action consistent with the rational behavioural norms they presuppose.

My worry here is not simply that the economics profession transforms the social world into its image of self-interested maximisation given limited options. Rather, my deeper concern is that in their globalising effort to model all aspects of individual choice (in rational choice theory) and interactions (in general equilibrium theory), that economists miss the point that not all decision-making is about maximising expected gain under conditions of scarcity. Thus, the way forward for the economics discipline may not be to develop alternative models of, for example, culture (Rodrik 2015 p 210), but instead to confront the fact that not all expressions of agency and social phenomena are economic.

Non-instrumental types of action include appreciation, communication, truth-telling, and keeping agreements made, in addition to following rules as a matter of reasoning as opposed to incentives (Heath 2003, 2011). These defy economic rationality because they are not about weighing costs against benefits, or calculating how to achieve the most preferred end. Economists and social modellers may not be aware of the default principle underlying orthodox game theory which posits that 'a player's preferences depend on the physical results [resulting comprehensive world state] for all the players' (Hausman 2011 p 53).

This default principle rules out modelling reciprocity, trustworthiness, commitment, or the path-dependence of an outcome because, for example, although I may value truth-telling as an intrinsic good, whether I tell the truth or not is not physically represented in an end state unless it exists as a tangible

aspect of the global world state of affairs constituting the game's payoff matrix. Recall the ancient view of economics as the study of provisioning a household or nation, and the classical economists' concentration on alleviating poverty, promoting prosperity and achieving the efficient allocation of scarce goods. According to this past perspective, non-instrumental action, intrinsic interests, and virtuous conduct are distinct from and complementary to instrumental gain, rather than simply one more attribute of calculated choice. The idea that not every consideration of worth can be reflected in actors' expected utility functions in game theory is anathema to orthodox rationality (Hausman 2011 p 49-56), and to the recent trend toward viewing rational choice as the queen of the social sciences that can provide models for all behaviour, animal as well as human (e.g. Gintis 2009).

Contemplating the possibility that not all behaviour is about maximisation, and not all decision-making is about attaining preferred outcomes, brings us full circle to Rodrik's analysis of the failure of the economics profession that contributed to the 2007 financial collapse. *Economics Rules* defends that the economics profession is not the culprit (Rodrik 2015 p 159), and that the remedy resides in resisting the public clamour for pro-market solutions and in using a plurality of models with specific contexts in mind. However, we recall that economists are themselves more likely to view selfish conduct as normal, and also prone to accept that incentives are the prime mover of human action. By this logic they therefore will be more susceptible to adopting professional stances that are self-serving. This then paves the way to the incentive incompatibly challenge that Rodrik acknowledges lurks underneath the financial crisis: financial managers secure their own advantage over their stakeholders', and credit rating agencies serve their patrons' interests.

The only recourse is for institutional designers to develop the best regulatory regimes that add appropriate incentive structures to keep anti-social behaviour in check. Rodrik reports that under the pro-market thinking consistent with the EMH, either markets should be self-disciplining by internalising all costs, or external sanctioning devices must be resorted to. Contradicting the invisible hand hypothesis, these sanctioning devices demand governance not only to mandate property rights but, further, by imposing regulations to ensure that free exchanges do not lead to inefficient outcomes. Well-defined property rights may not result in a Pareto optimal outcome, and it is known that some efficient markets still permit winners to extra value from losers (Rodrik 2015 p 194; see also Hausman and MacPherson 2006 p 11-13).

Virtuous action, which underlies truth-telling and upholding contractual agreements, is not instrumental and is not performed on a cost-benefit analysis basis. Rodrik acknowledges 'the intrinsic moral value of other-regarding and socially responsible behaviors', as well as that, as in the Israeli kindergarten example, incentivising action can undermine the social relations that sustain valuable practices (Rodrik 2015 p 193, 191). Focusing on the ethical basis of truth telling is pertinent to assessing the failure of the GE and EMH's to account

for the 2007 market collapse. These theories rely on perfect information to sustain the argument that Pareto optimal outcomes result from free exchange.

As George Akerlof's lemon model of the result of asymmetries of information in the used automobile market shows, if buyers cannot be confident in having knowledge of the quality of goods, they cannot differentiate among products, and will only offer to pay on the assumption that they may purchase a bad vehicle (Akerlof 1970). As an outcome only lemons, or toxic assets, remain for sale. If we were to assume that asymmetries of information held in global financial markets leading up to the 2007 market collapse, and that as Akerlof predicts, only toxic assets remain for sale, then his model may be pertinent to a forensic analysis of what occurred. Buyers may be able to counter asymmetries with costly investigations, or they could rely on cheap talk, or must make decisions with asymmetric information. Alternatively, there could be an institutionally and socially reinforced norm of the intrinsic merit of truth telling that reinforces the personal disposition to be honest in business affairs.

In 1999, economists experimented on the impact of enforcing a no-communication rule on market exchanges, an unregulated cheap-talk exchange of information in which sellers were free to make deceptive product claims, and a behavioural mandate for truth-telling upheld by market authorities (Forsythe *et al* 1999). Investigating financial markets, they discovered that the no-communication rule created the conditions of the Akerlof model, leading to adverse equilibrium selection because only inferior quality products were traded. Cheap-talk also led to an equilibrium outcome, but surplus value was transmitted from buyers to sellers who capitalised on deceptive product claims. However, under the treatment of a reinforced norm for honest communication, an efficient market equilibrium resulted that favoured buyers.

Whereas economists may interpret the significance of this experiment to recommend imposing sanctions for misstating facts, this approach would reinforce the economisation of all value. Instead of instilling a norm of truthfulness as a value inherent to efficient markets, such a tactic treats malfeasance as poor prudential judgement: not a moral question of character, but rather a 'cost-benefit calculus' about the likelihood of getting caught (Rodrik 2015 p 189). As Rodrik acknowledges, this thinking inside the box of orthodox economic theory, which assumes individuals are strictly motivated by incentives, could make the same error as the approach to curtailing parental delinquencies in picking up children from kindergarten. It could routinise lying because the attempt to extract honest behaviour as a result of a penalty for bad behaviour or reward for good behaviour institutionalises the idea that making the decision to be truthful or to lie is only a matter of cost-benefit analysis.

In the company of the celebrated economist Adam Smith, Rodrik encourages the study of economic development with a focus on 'the institutions that made modern, prosperous capitalism possible: the rule of law, contract enforcement and property rights protection' (Rodrik 2015 p 205). However, he would do better in also following Smith's argument in the *Theory of Moral Sentiments*,

that justice grows out of the negative virtue of abstaining from violating others' property rights. Otherwise, by definition, the rule of law itself must be one more market—as public choice argues—and the only force maintaining it is the threat of sanctions upheld by regulatory government.

Avoiding contradiction, according to Smith, the motive for abiding by property rights and the rule of law is not the maximisation of self-interest. Instead it arises from appreciating an impartial perspective of what the maintenance of rights and agreements requires. Attempting to either dismiss virtue as irrational conduct, or to encompass it within the motive of promoting instrumental gain, misconstrues the point (Amadae 2008). Telling the truth and keeping agreements requires commitment, which is a voluntarily self-adopted standard for action that upholds rules of conduct independent of calculating costs and benefits. Having complete information and realising the truth about a state of affairs for oneself aligns knowledge with self-interest. Being honest, and keeping agreements voluntarily made, reflect moral virtue that 'benefits others by creating and supporting trust relationships' (Driver 2003; see also McCloskey 2016).

Conclusion

The most surprising feature of *Economics Rules* is that economics as a discipline seems to have no clearly identifiable boundary of content, as though every possible decision individuals make throughout their lifetimes can be classified as economic. This is a radical point of departure from the classical economists' focus on lowering the cost of subsistence and the neoclassicals' focus on allocating scarce means to achieve ends at efficient market clearing prices. Employing expected utility theory, which purports to encompass every rational decision of each actor in the economy in all circumstances throughout their lifetimes, economists followed Kenneth Arrow and Gerard Debreu in being confident that perfect competition delivers the sanguine outcomes of stability and optimality. Their general equilibrium model, relying on strategic rationality, accounts for all individuals' desires and associates an input, or cost, with agents satisfying others' desires. This model of agency and collective action is all-inclusive. It grounds the benchmark models of the invisible hand thesis and inspired the efficient market hypothesis. Despite the utter failure of this approach, which to date recommends a sanctioning regulatory structure to offer correctives for perverse incentives, central banks now rely on dynamic stochastic general equilibrium models to generate monetary policy. In the meantime, departing from Adam Smith's inquiry into the fundamentals of economic growth (Galbraith 2015), the global economy continues to be buoyed by competition over inherently scarce goods such as real estate in capital cities and rising stock prices independent from dividends (Sornette 2017). New forms of technology and investment lead to very little job creation. Yet they are successful engines for profit for the few who work in those industries, leading to increasing inequities of resource distribution.

However the biggest problem remains that economics without boundaries, that respect intrinsic interests and non-instrumental action, will not have the appropriate basis to present a sound blueprint for inclusive growth and a prosperous future that can address global challenges to sustainability. It may be possible to develop agent-based models of Adam Smith's virtuous individual who, as a minimum, exhibits prudence and the negative virtue of justice that requires respecting other's rights, being honest, and keeping agreements made. However, the rationales and motives for this alternative basis for action are neither incentives nor characteristic patterns of irrationality discoverable by behavioural economists. From rational expectations to the efficient market hypothesis and invisible hand theory, economists' assumptions ground orthodox economic thought, but fail to do justice to the full range of human concerns and activities because inherent disciplinary limitations are not acknowledged or respected.

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Endnote

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