Economists are from Mercury, Policymakers are from Saturn

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Economists are from Mercury, Policymakers are from Saturn: The Tax Policy Implications of Communication Failure

Roberta Mann

It is curious how often you humans manage to obtain that which you do not want.

Policymaking lawyers and economists are different types of people who come together in the policymaking realm. Sometimes policymakers rely on economic analysis to make decisions. Sometimes policymakers use economic analysis to support decisions already made. In particular, economic analysis has played a large role in the formation of tax and budgetary policy. However, there is a problem. Not only do economists and lawyers communicate differently, they think, perceive, react and respond differently. They almost seem to be from different planets, speaking different languages. While both lawyers and economists use “stories” to persuade, economic analysis cloaks the story in a complex mathematical model, opaque to those without training in economic theory. The results of economic modeling can obscure the decisions that policymakers and the public need to make—about the direction of the tax system, the nation, and the economy. This article examines the roles economists and lawyers play in the development and implementation of the income tax system.

1 Mr. & Mrs. L.L. Stewart Professor of Business Law, University of Oregon School of Law. I am grateful to the University of Oregon School of Law for supporting my research and to the many lawyers and economists who inspired and commented on this work. In particular, I want to thank Pamela Moomau, who inspired me to write this article; Len Burman and Jonathan Forman, who provided encouragement; Kirk Stark and Jason Oh and the participants in the UCLA Tax Policy Colloquium; Neil Buchanan, Leo Martinez, Theodore Seto, and Brian Sawers and the participants in the 2013 Critical Tax Conference; Miranda Perry Fleischer; Daniel Shaviro, Tom Woodward and particularly Rosemary Marcuss, who introduced me to the work of Deirdre McCloskey.

2 Spock, in Errand of Mercy, Star Trek (Original Series), first aired March 23, 1967. Mr. Spock, a character on the television series Star Trek, was famously logical.
I. INTRODUCTION

*Men are from Mars, Women are from Venus* is a book about communication between different types of people in a relationship. Lawyers and economists are different types of people who come together in the policymaking realm. Although legislators come from many backgrounds, law has been the most common profession of both House members and Senators since 1945. Government regulators and administrators frequently have legal training. As economist Richard Thaler wrote, “as a

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3 John Gray, *Men Are From Mars, Women are from Venus* (HarperCollins 1992). I have changed the planets in my title to Mercury and Saturn, because of the classic associations of those planets with money and finance. Thank you, Tom Woodward, for that suggestion, which avoids potentially unseemly connotations. Although Deirdre McCloskey may have convinced me that I was right all along. See Deirdre McCloskey, The Rhetoric of Economics 176 (2d ed., University of Wisconsin Press 1998) (chart showing male on the same side of the demarcation line as scientific and objective and female on the same side of the line as normative and value.)

4 R. Eric Petersen, Representatives and Senators: Trends in Member Characteristics Since 1945, Cong. Res. Serv. Rep. 42365 (Feb. 17, 2012), pp. 10 -11. See also, David L. Faigman, Legal Alchemy: The Use and Misuse of Science in the Law 122-23 (W.H. Freeman & Co. 1999) (“[T]he vast majority of the leaders of 1776 and those of today were trained in the law. [O]ur present group of legislators is notable for their lack of science training. Of the 535 members of the United States Congress, fewer than 1 percent have any significant training in science.”) Id.

5 For example, of 48 Commissioners of the Internal Revenue Service since 1862, 46 have been lawyers. See David Cay Johnston, Showing Good Form at I.R.S.; New Commissioner has Agency Minding Its Manners, NY Times (Apr. 15, 1999), available at http://www.nytimes.com/1999/04/15/business/showing-good-form-at-irs-new-commissioner-has-agency-minding-its-manners.html?pagewanted=all&src=pm.
general rule, the United States Government is run by lawyers who occasionally take advice from economists. Accordingly, this article uses the terms lawyer, policymaker, and legislator interchangeably. Sometimes policymakers rely on economic analysis to make decisions. Sometimes policymakers use economic analysis to support decisions already made. In particular, economic analysis has played a large role in the formation of tax and fiscal policy. However, there is a problem. To paraphrase author John Gray, not only do economists and lawyers communicate differently, they think, perceive, react, and respond differently. They almost seem to be from different planets, speaking different languages.

While lawyers and economists both use “stories” to persuade, economic analysis cloaks the story in a complex mathematical model, opaque to those without training in economic theory. The seemingly objective results, stated in terms of dollar figures or percentages, may mislead the consumers of such information to invest the conclusions with greater certainty than they represent. The results of economic modeling can obscure the decisions that policymakers need to make—about the direction of the tax system, the nation, and the economy.

Policymakers uncritically using economic analysis to inform policy decisions has real world consequences. In 2010, economists Carmen Reinhart and Kenneth Rogoff published an influential paper on the relationship between government debt and economic growth. The paper concluded that debt to gross domestic product (GDP) ratios of 90 percent or above results in “notably lower growth outcomes.” The study was cited to justify austerity measures throughout the European Union and raised concerns about deficits in the United States. Unfortunately, Reinhart and Rogoff made significant errors in the analysis, errors discovered by economists attempting to replicate the study. The authors noted that the findings of the Reinhart and Rogoff study “served as an intellectual bulwark in support of austerity politics.” Austerity measures in Greece and Spain led to public protests, sometimes violent, as well as stock market declines.

http://www.irs.gov/uac/Previous-IRS-Commissioners-(1955-2013)
Although, encouragingly, economist Deirdre McCloskey said that we are not from different universes. At least we are in the same solar system. McCloskey, supra note 3, at xix.
Adam Davidson, God Save the British Economy, NY Times (Dec. 19, 2012) “Economics often appears to be an exercise in number-crunching, but it actually resembles storytelling more than mathematics.”
Martin A. Sullivan, Start-Ups, Not Small Businesses Are Key to Job Creation, 134 Tax Notes 158, 160 (2012)”[Sometimes], the passage or defeat of major tax legislation can hinge on obscure assumptions made by obscure economists.”
Id. at 22.
Paul Krugman, The Excel Depression, NY Times (Apr. 18, 2013); Paul Krugman, How the Case for Austerity Has Crumbled, NY Rev. of Books (June 6, 2013).
Id. at 15.
See, e.g., Niki Kitsantonis, Anti-Austerity Protest in Greece Turns Violent (NY Times Dec. 15, 2010); Liz Alderman & Nicholas Kulish, Angry Greeks Pelt German Diplomat in Austerity Protest, NY Times
Whose tax rates should increase? Should tax breaks be ended, and if so, which ones? While the buck stops with the policymakers, economists can help the decision by analyzing the potential consequences of a particular means to a policy end—provided that the policymaker understands the economist’s advice.

This article was inspired by a story. A few years ago, a government economist told me that she became an economist because her father, a tax lawyer, drove her crazy always telling anecdotes. She wanted data, not stories. It was a moment of startling clarity. I, as a lawyer, had completely different expectations (probably unrealistic) about economic analysis. I decided to write this article for policymakers and the economists who advise them. It is from my perspective, as a lawyer who has little formal economic training. The article proposes a prescription for better communication between economists and tax policymakers in three steps, modeled loosely on Gray’s communication advice for men and women. First, we need to understand why we do not understand each other. Next, we need to respect and understand each other’s strengths and weaknesses. Finally, policymakers need to understand at least a bit about the principles of economics, and economists need to help policymakers by translating economic vocabulary.

As I will soon be advising my economist readers to clearly state their assumptions, I’d better clearly state mine. First, I recognize that not all policymakers are lawyers, but I assume that the number of policymakers with advanced training in economics is insignificant. Second, I assume that economic analysis strives to be objective—that is, that any biases and hidden normative judgments are inadvertent. Finally, I assume that policymakers would be better served by attempting to understand economic analysis, rather than merely reading the conclusions of an economic paper and, if those conclusions match the desired outcome, using them to persuade other similarly unsophisticated persons.


16 “As economists sometimes say, the plural of ‘anecdote’ is not data. Timothy Taylor, The Instant Economist 4 (Penguin 2012).
17 For example, I thought that the function of economists was to predict the future, or at least to predict the future consequences of a policy. Taylor, supra note 16, at 3.
18 In the early 1980’s, I took two economics courses which were required as part of the M.B.A. curriculum at Arizona State University. As I recall, I enjoyed them very much.
19 “The opportunity cost of enchanting other economists is alienating noneconomists.” McCloskey, supra note 3, at 83.
20 By insignificant, I mean ‘unimportant.’ See Faigman, supra note 4, at 123.
21 McCloskey, supra note 3, at 40 (“[F]ew economists recognize the metaphorical saturation of economic theories believed to be literal.”)
22 When faced with economic analysis, the untrained policymaker has three options: 1) read the analysis carefully to understand whether the analysis is “robust;” 2) trust the economist to give the right answer, either because of personal knowledge of the economist’s integrity or respect for the organization for whom the economist works; or 3) find a study with a conclusion that matches the policymaker’s preconceived notion. See Faigman, supra note 4, at 125 (“[L]egislators often use a façade of science to legitimate decisions—decisions not always made in reliance or even consistent with the science being cited.”
The first section of this article will set out the debate between lawyers and economists about tax policy, examining the classic policy goals of taxation and illustrating how economic analysis has addressed those goals. The following section will contrast the training of economists with the training of lawyers, identifying the strengths and weaknesses of each perspective. Finally, the article will explore some common communication failures between economists and policymakers and suggest some areas for improvement.

II. TAX POLICY GOALS AND ECONOMIC ANALYSIS

The art of taxation consists in so plucking the goose as to obtain the largest possible amount of feathers with the least possible amount of hissing.23

A. TAX POLICY GOALS

Traditionally the goals of tax policy have been expressed as equity, efficiency, and simplicity.24 The above quote takes a simplistic view of tax policy, focusing on efficiency concerns. But even this simple example raises many questions: how many geese are available to be plucked (base-broadening); do some geese have more feathers than others (progressivity); do some geese hiss more than others (deadweight loss); do some geese run more quickly than others and thus are more difficult to catch and pluck (enforcement)? Are feathers the only goal, or is the farmer interested in eggs, or pâte, or roast goose?

If the only goal of the tax system is to raise revenues, the tax system should impose a minimal burden on the payers. Thus, a major objective of tax design is minimizing deadweight loss, defined as the social cost of taxation that produces no revenue.25 The hissing of the goose represents deadweight loss.26 Where taxpayers are humans rather than geese, deadweight loss might represent reducing hours worked to avoid taxation or spending money on tax planning services. Lump sum, sometimes called head, taxes, create no deadweight loss because taxpayer behavior cannot change the tax. However, head taxes are politically unpopular, largely because they are considered unfair.27

Efficiency, as exemplified by the silent goose, has come to dominate tax policy concerns, to the dismay of many legal scholars.28 Legal scholars have complained that

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26 Id.
27 In 1990, British Prime Minister Margaret Thatcher imposed a poll tax, which sparked widespread protests. Peter Passell, Furor over British Poll Tax Imperils Thatcher Ideology, NY Times (April 23, 1990). The “community charge” was repealed by the government of her successor, John Major. Craig R. Whitney, Britain will Abandon its Fiercely Disputed ‘Poll Tax,’ NY Times (March 22, 1991).
the goal of efficiency has predominated in tax policy, at the cost of equity. 29 At least one scholar has placed the blame for the omission of equity concerns squarely on the economics profession.30 Rather than blame economists, this article seeks to find a better way for lawyers and policymakers to understand the messages economists send us and whether the problem relates to how lawyers and policymakers frame the questions asked of economists.

Equity is divided into two concepts: vertical equity and horizontal equity.31 Vertical equity usually translates into a progressive rate structure, that is, higher income individuals pay tax at higher rates than lower income individuals. 32 Horizontal equity is a concept more honored in the breach than in the observance, defined as taxing similarly situated taxpayers similarly.33 Equity means fairness, and what fairness looks like depends upon the eye of the beholder. Fairness could mean a “fair” distribution of the burdens of taxation. The concept could be extended to providing a “fair” distribution of after-tax income or wealth, if the policymaker desired. Simplicity is a goal often cited, but most frequently ignored, in the design of the tax system.34

B. HOW ECONOMIC ANALYSIS HAS ADDRESSED TAX POLICY GOALS

1. OPTIMAL TAX MODEL

As noted above, the first best tax for efficiency purposes is a head or poll tax, because taxpayers cannot change their behavior and avoid the tax.35 Believing that the best way to design a tax system is to raise revenue with the fewest possible distortions, economists developed the endowment tax ideal, as exemplified by James Mirrlees’ “optimal income tax” model. Mirrlees’ goal was to determine how progressive an income tax should be if the tax system’s goal is maximization of social welfare.36 Wealth is an attractive empirical target because wealth, unlike social welfare, can be easily quantified. Mirrlees’ optimal tax model was designed to create the second best tax—one that is maximally efficient with minimal distortion while still bearing some relation to ability to pay. In other words, the optimal tax model provides a mathematical tool for balancing equity and efficiency.37 Mirrlees based the model on two assumptions: (1) that earning potential, or endowment, is the ideal tax base, and (2) a person generally earns as much as he is potentially able to earn. Mirrlees proceeded to design his model

29 See, e.g., Buchanan, supra note 28; Sugin, supra note 28.
30 Ventry, supra note 28, at 55.
34 I will also ignore simplification concerns, as such concerns would only complicate my analysis. See, Samuel A. Donaldson, The Easy Case Against Tax Simplification, 22 Va. Tax Rev. 645, 647 (2003). Donaldson argues that tax complexity is not only inevitable, but desirable. Id.
37 Sugin, supra note 28, at 229.
using actual earned income as a discernible, though inexact, substitute for one's ability to earn. The economist's judgment of the efficiency of a tax focuses on substitution effects, since only substitution effects produce deadweight loss. Mirrlees found, somewhat to his surprise, that his optimal tax model suggested lowering tax rates on the wealthy. Mirrlees prefaced his conclusion with many caveats. He admitted that his “simple consumption-leisure utility function is a heroic abstract of a much more complicated situation” and that “many objections to using observed income distributions as a means of estimating the distributions of skills will spring to mind.”

Mirrlees’ optimal tax model proved highly influential as well as highly controversial. Historian and law professor Dennis Ventry posits that the tax system’s shift to “a flatter, less-progressive tax system that favored corporations and high-income individuals” was caused by changes within the economics profession and its increasing influence on the tax policymaking process. Ventry theorizes that economists, perhaps uncomfortable with the messy idea of “fairness” or equity in the tax system, turned their focus on efficiency. Some economists have resisted considering equity too seriously, arguing that they “have no special competence in determining which distribution of resources is appropriate.” Ventry and other scholars bemoan the economics profession’s abandonment of equity.

Reading Mirrlees’ careful description of his model’s assumptions, and his concern about its application to the real world, it is evident that he did not intend to remove equity from the tax system. The valuable contribution made by Ventry and other critics of the economic focus on efficiency is to emphasize the often hidden normative assumptions made by economic models.

2. Optimal Tax Model — Revisited

Economists Peter Diamond and Emmanuel Saez re-examined optimal tax theory and tackled the issue of how to draw policy recommendations from theoretical models. Diamond and Saez viewed theoretical results as useful for policy only under three conditions: (1) “the result should be based on an economic mechanism that is empirically relevant and first order to the problem at hand”; (2) “the result should be reasonably

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38 Mirrlees, supra note 36, at 207. “Being aware that many of the arguments used to argue in favour of low marginal tax rates for the rich are, at best, premised [sic] on the odd assumption that any means of raising the national income is good, even if it diverts part of that income from poor to rich, I must confess that I had expected the rigorous analysis of income-taxation in the utilitarian manner to provide an argument for high tax rates. It has not done so.” Id.

39 Mirrlees, supra note 36, at 207.

40 A Google Scholar search reveals over 3,000 citations to Mirrlees’ article. (search “Mirrlees” performed 7/21/2013, 3341 citations). Professor Alex Raskolnikov describes the optimal tax theory as “the crown jewel of public economics.” Alex Raskolnikov, Accepting the Limits of Tax Law and Economics, 98 Cornell L. Rev. 523, 526 (2013).

41 See Sugin, supra note 28.

42 Ventry, supra note 28.

43 In the interests of scientific rigor and gaining ‘some relative advantage to non-economists’, the profession has avoided decisions about equity. Ventry, supra note 28, at 60.


45 See, e.g., Sugin, supra note 28.

robust to changes in the modeling assumption”; and (3) “the tax policy prescription should be implementable—that is, the tax policy needs to be socially acceptable and not too complex relative to the modeling of tax administration and individual responses to tax law.”

They further explain that the second condition requires the reader to “view with suspicion results that depend critically on very strong homogeneity or rationality assumptions.”

Diamond and Saez’s first policy recommendation derived from optimal tax theory is to tax the top one percent of earners at marginal rates between 48 and 76 percent. Although the equations are beyond this lawyer’s comprehension, the authors have added some compelling and credible narrative. First, if the government values redistribution, the social marginal value of consumption for top bracket taxpayers is small relative to that of the average person in the economy. Translated into narrative form, Bill Gates doesn’t need another airplane as much as average person Bill Smith needs new shoes. Diamond and Saez also note that the elasticity of taxpayer response to rising tax rates includes not only “real economic responses such as labor supply, business creation, or savings decisions, but also tax avoidance and evasion responses.”

That seems credible to someone who has practiced tax law. If wealthy taxpayers can successfully avoid taxation, then the tax base will be sensitive to rates, and the optimal tax rate will be low. However, tax avoidance can be reduced through base broadening and tax enforcement, so this elasticity need not be added to the equation. The policy response should be to reduce tax avoidance and not to lower rates.

This article’s goal is to examine the barriers to communication between economists and lawyers in the context of tax policy, with the aim of facilitating beneficial tax reform. The following section of the article will focus on the tax policy goal of equity and attempt to assess whether reasonably intelligent lawyers without economic training (exemplified by the author) can determine from available economic literature which tax reform proposals are likely to enhance the fairness of the tax system.

3. A LAWYER ATTEMPTS TO UNDERSTAND ECONOMIC ANALYSIS

The 2012 presidential election and the subsequent “fiscal cliff” negotiations featured a classic macroeconomic tax policy debate focused on the issue of progressivity: would increasing the tax rate on the wealthy have a beneficial or detrimental effect on the economy? The fiscal cliff referred to a two-fold deadline facing the federal government:

47 Id. at 166.
48 Id.
49 Id. at 175.
50 Id. at 168.
51 Id. at 172.
52 Id.
53 Id.
54 Id. at 174. The paper does not address how to reduce tax avoidance, but there is extensive literature on that point. See, e.g., Joel Slemrod, Cheating Ourselves: The Economics of Tax Evasion, 21 J. Econ. Persp. 25 (2007); Susan C. Morse, Tax Compliance and Norm Formation Under High Penalty Regimes, 44 Conn. L. Rev. 675 (2012); Leandra Lederman, Reducing Information Gaps to Reduce the Tax Gap: When is Information Reporting Warranted, 78 Fordham L. Rev. 1734 (2010).
first, the so-called Bush tax cuts were set to expire at the end of 2012; and second, automatic spending cuts were about to be imposed on the government’s discretionary budget.  

Republican lawmakers argued that Democratic President Obama’s proposal to raise the tax rate on the wealthiest taxpayers constituted “class warfare.” The President responded, “This is not class warfare—it’s math.” After President Obama’s re-election in 2012, Congress initially refused to pass legislation to avert automatic tax hikes on all Americans and automatic spending cuts, creating the so-called “fiscal cliff.” Economic analysis of tax increases on the wealthy went both ways.

Economists at the Congressional Research Service (CRS) concluded that lower tax rates on the wealthy bear no measurable relationship to economic growth. Senate Republicans objected to the CRS report, which was withdrawn from circulation. The report was later reissued with the same conclusions. A report by economists at top lobbying firm Ernst & Young, produced at the behest of clients including the U.S. Chamber of Commerce, came to a contrary conclusion, finding that “these higher marginal rates result in a smaller economy, fewer jobs, less investment, and lower wages.” With these contradictory results, how can a policymaker determine which study to believe?

The author will now attempt to understand the two conflicting studies, using the critical analysis suggested by Professor Sarah Lawsky in her article “How Tax Models Work.” Lawsky advises the reader to examine the model’s assumptions and then consider whether the model’s assumptions are right or wrong, and, if wrong, why (or even if) this matters. For example, Sugin’s critique of the optimal tax model focused on Mirrlees’ two baseline assumptions: (1) that earning potential (“endowment”) is what should be taxed and (2) that people will maximize earnings. With respect to the first assumption, Sugin argues that fairness requires equality, and endowment does not represent equality. Endowment may differ because of circumstances and not only by choice. With respect to the second assumption, she argues that the assumption further

56 Helene Cooper, President’s Plan on Deficit Mixes Cuts and Taxes, NY Times A1 (Sept. 18, 2011).
64 Id. at 1690.
65 See Sugin, supra note 28, at 230.
66 Id. at 239.
67 Id. at 264.
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requires the difference between potential earnings and actual earnings (“leisure”) to be non-productive, self-regarding, and chosen. 68 A normative bias towards market work lurks in the second assumption. 69 Of course, Mirrlees himself recognized the limitations of his model, and Sugin’s objections may be better directed at those economists who have extended Mirrlees’ theory. 70

An uncritical reading of Mirrlees’ analysis would suggest that raising tax rates on the wealthy would result in a suboptimal economic situation. Of course, in 1971, when Mirrlees wrote his article, the top marginal tax rate on individuals was 70 percent. 71 The 2012 election’s “class warfare/math” debate was about raising the top marginal tax rate from 35 percent to 39.6 percent. The original CRS report that raised Republican ire follows Lawsky’s first advice to tax modelers: explicitly state the goal. 72 “This report ... seeks to establish what, if any, relationship exists between the top tax rates and economic growth.” 73 The author of the CRS report, Thomas Hungerford, concluded that “changes in the top marginal tax rate over the past 65 years do not appear correlated with economic growth. The reduction in the top tax rates appears to be uncorrelated with savings, investment, and productivity growth.” 74 The report thus ties its observations to the real world, as recommended by Lawsky. 75 Lawsky’s final recommendation is that the author be explicit about the assumptions and limitations inherent in the model. 76

After the initial CRS report was withdrawn, the reissued report contained more detailed explanations of the model and the underlying data. 77 The underlying data sources listed seem sensible to accomplish the stated goal including: IRS Statistics of Income, Bureau of Labor Statistics, Federal Reserve bond yields, and per capita gross domestic product (GDP) from the Bureau of Economic Analysis. 78 The detailed description of the model, on the other hand, sheds little light to the untrained eye. 79 In the body of the report, the author notes that the report will examine the correlation between the top statutory tax rates and various measures of economic growth, specifically noting

68 Id. at 245.
69 Id. at 246.
70 Id. at 236.
72 Lawsky, supra note 63, at 1691.
73 Hungerford I, supra note 59, at 2.
74 Id. at 16.
75 Id. at 18.
76 Lawsky, supra note 63, at 1691.
77 Hungerford II, supra note 61, at 18 – 22.
78 Id. at 18.
79 “Multivariate time-series regression techniques were used to determine the statistical significance of the estimated relation between the top statutory tax rates and various indicators of economic growth. The standard errors were corrected allowing for heterosekdastic and autocorrelated error-term using the Newey-West procedure with 5 lags. All variables were tested for the presence of a unit root. Most variables were found to have a unit root and these variables were first differenced for the analysis (i.e., the one year change in the variable is used in the analysis); none of the variables appear to be cointegrated.” Id. at 18. In describing a similar passage by another economist, McCloskey noted “to most of his readers he may as well have written ‘it is assumed that the blub-blub is a blub maximizer, blub-blub blub-blub-blub and blub in perfectly blub and blub blub.” McCloskey, supra note 3, at 8.
that causation will not be determined. The report uses two methods: first, estimating the simple bivariate correlation through scatter diagrams; and second, using multivariate time-series regression analysis, which estimates the relationship between two variables holding the values of the other variables, including the effects of time, constant. Further, the author states that the report “does not provide a comprehensive model to examine all determinants of economic growth.” In reporting the results of the scatter diagram showing tax rates and the saving ratio, Hungerford notes that there appears to be a positive relationship; that is, higher taxes lead to higher savings. He notes that this relationship could be coincidental and performed regression analysis to test the relationship, which was shown to be statistically insignificant. The overall conclusion is that a tax rate change limited to a small group of taxpayers at the top of the income distribution has no statistically significant impact on economic growth, a result that is consistent with other cited research on tax cuts. This research appears modest and careful and the conclusions limited. This observer can detect no hidden normative assumptions.

The contrary report, written by economists Robert Carroll and Gerald Prante of Ernst & Young, LLP, [E&Y Report] takes a different approach and comes to the opposite conclusion. The stated goal of the report is to consider “the long-run macroeconomic impact of the increase in the top individual rates to better understand their effects and help inform the policy debate.” While Hungerford’s stated goal was an examination of historic data, Carroll and Prante’s goal appears to be prediction of economy-wide future events, and implies determination of a causal relationship between tax rates and economic growth. Thus, the goal of the report is not as clear as the goal of the CRS report.

The E&Y report ties the model to the real world, in a conditional way, finding that an increase in top tax rates would reduce long-term output by 1.3 percent, when the resulting revenue is used to finance additional government spending. As the report looks to future consequences of policy actions not yet taken, the results depend upon a number of variables, which are outlined by the authors. The report estimates the impact of four sets of tax increases: (1) the increase in the top two tax rates from 33 to 36 percent and 35 to 39.6 percent; (2) the reinstatement of the limitation on itemized deductions for high-income taxpayers; (3) the taxation of dividends as ordinary income at a top tax rate of 36.9 percent and the increase in the top tax rate applied to capital gains to 20 percent; and (4) the increase in the 2.9 percent Medicare tax to 3.8 percent for high income taxpayers and the application of this tax to unearned income including interest.
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dividends, and capital gains. While it is not entirely clear from the report, it appears that the cumulative effect of these tax increases was studied. The report then applies the presumed increase in government revenues in one of two ways: either to finance additional government spending or to finance an across the board reduction in tax rates.

The analysis uses the EY General Equilibrium Model of the U.S. Economy (EY GE Model) and considers the sensitivity of the results to alternative sets of behavioral assumptions. The authors note that, “ultimately, the estimated impacts will depend on a combination of the structure of the model and how responsive households and firms are to changes in after-tax rewards, such as the wage rate and the after-tax returns.”

The study used parameter values for this responsiveness derived from prior research and ran the analysis using assumed high and low values for the parameters. The model assumes that “households adjust labor-leisure choices to maximize utility in the fact of a lower after-tax reward from work” and that “firms adjust their use of labor and capital inputs in production to maximize firm value in response to reductions in the after-tax return from savings and investment.”

The model examines four production sectors: corporate manufacturing, corporate nonmanufacturing, noncorporate, and housing. The model contains two consumer groups: the top 2 percent of taxpayers and all other households.

Closer review of the model fails to illuminate the full nature of the assumptions made. The analysis assumes that firms and individuals rationally seek to maximize financial rewards and accounts for some degree of behavioral variation. The assumption that firms and individuals seek to maximize financial rewards is subject to the same critique that Sugin made of the optimal tax model—that is, a normative bias towards market work. While the behavioral variation included in the model may address the critique, it is unclear as to what extent. Description of the production for each sector and definition of household utility are sufficiently technical as to defy understanding.

Although the report explains firm decisions in the following way: “Firms will add to investment so long as the increase in firm value resulting from additional investment exceeds the after-tax cost of additional investment,” it fails to explain how investment increases firm value. The report fails to disclose its assumptions with respect to additional government spending—how will the additional funds be spent?

In a comparison between these two reports on the same basic topic, the positive assertion of the E&Y report that the higher tax rates would harm the economy appears to have less credibility than the more modest conclusion of the CRS report that history does not reveal any correlation, much less causation, between economic growth and higher tax rates on high income Americans. The perceived weaknesses of the E&Y report may be a

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89 Id. at 9.
90 Id. at 3.
91 Id. at 11.
92 Id.
93 Id. at 9.
94 Id. at 17.
95 “Production is represented by the standard Cobb-Douglas functional form with differing elasticities of factor substitution, factor-intensities, and scale parameters. Household utility is represented by a CES [constant elasticity of substitution] function of leisure and consumption goods from the four production sectors.” Id. at 17. Blub blub. See supra note 79.
96 Carroll & Prante, supra note 62, at 17.
reflection of this observer’s political bias, or her lack of understanding of general equilibrium models. With respect to the latter point, however, will the report meet its stated goal of “informing the policy debate” if policymakers without economic training cannot understand the model’s underpinnings?

This reader is skeptical that the E&Y model produces a “credible world” as described by Lawsky. Lawsky lists three criteria for evaluating models that create a “credible world.” First, the model should be similar in relevant ways to the real world. The selection of production sectors appears to be a reasonable approximation of the “real” economy. Second, the model should show us results similar to what we see in the real world. The CRS report shows in historical context that the result predicted by the E&Y report has not been obtained in the real world. Third, the model’s assumptions should fit naturally together. Without training in economics, the assumptions of the E&Y report are opaque, and this determination cannot be made. Indeed, this third criterion illustrates the point of this article—that lawyers untrained in economics are ill-equipped to determine whether an economic model creates a credible world. The economic model simply does not communicate to the lawyer what the lawyer needs to know to critically evaluate it.

III. WHY WE DON’T UNDERSTAND EACH OTHER

It is not only lawyers and economists that fail to understand each other. Biologist Daniel W. McShea suggested that certain words be banned from interdisciplinary discussions of complexity in the history of the universe. Entropy, information, and computation have particular technical meanings in the field of physics and mean something different outside of that field. Similarly, equilibrium, preference, and significance mean different things to economists and lawyers. McShea noted, “[i]f interdisciplinary communication is going to work, we need to avoid the language of equations and formalisms and speak instead in the language of example and analogy.” Of course, lawyers and economists receive different training. But this fact proves both too little and too much. Both economists and lawyers are trained in critical analysis of problems. Economic training, at least in the modern era, focuses on mathematical skills. “Economics uses mathematical models and statistical tests and market arguments, which

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98 Lawsky, supra note 63, at 1681.
99 Id.
100 Id.
101 Id. at 1682.
102 Lawsky’s article appears focused on models created by legal scholars, so presumably this point would not arise under the situation contemplated by her.
104 McShea, supra note 103, at 1319.
105 “[A]ny field, such as economics, differs from another . . . in two respects. It uses a . . . different selection from the common store of figures of speech. And it studies different objects.” McCloskey, supra note 3, at 66-67. “‘Not an equilibrium’ is the economist’s way of saying she disputes the ending proposed by some untutored person.” Id. at 14.
106 McShea, supra note 103, at 1319.
Economists are from Mercury, Policymakers are from Saturn: The Tax Policy Implications of Communication Failure

look alien to the non-economist eye.” Legal training focuses on critical analysis and persuasive writing.

Explicitly setting forth the requirements for each professional degree will highlight the potential communication difficulties between the two groups. Moreover, economists and lawyers have different analytical frameworks that guide their normative assumptions. The economic normative framework can be summarized by three questions: (1) what should be produced by society, (2) how should it be produced, and (3) who gets to consume what is produced?

Anyone who has attempted to read an article containing economic analysis will have noticed the prevalence of mathematical equations. Indeed, one economist noted that the obscurity in the style of modern economics “is necessary to defend scientific ethos.”

Doctoral candidates in economics must take higher-level mathematics courses before enrolling in the most basic economics courses. The University of Michigan website notes “training in calculus, linear algebra, differential equations, and probability and statistics is . . . essential.” The University of California, Berkeley, Department of Economics requires doctoral applicants to know multivariate calculus, basic matrix algebra, and differential equations and complete a two-year math sequence, which emphasizes proofs and derivations. The Massachusetts Institute of Technology program cites proficiency in calculus and linear algebra as the minimal level of mathematics necessary for success. Economists need mathematical expertise to develop economic models, which specify empirical relationships between policy alternatives, the variables used in determining the desirability of possible outcomes, and other relevant variables. These requirements appear to confirm that “most economists believe that once you have reduced a question to numbers you have taken it out of human

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107 McCloskey, supra note 3, at xix.
108 Tom Woodward noted that while lawyers are a self-regulating profession with limited admission to those who have passed the bar exam, anyone, irrespective of formal training, can style themselves an economist. See, e.g., Jared Bernstein, who holds a PhD in Social Welfare and has been the chief economist and economic advisor to Vice President Biden and deputy chief economist at the U.S. Department of Labor. http://www.cbpp.org/experts/index.cfm?fa=view&id=204.
110 See, e.g., Mirrlees, supra note 36. Some tax lawyers use economic models as well. See, e.g., Bradley T. Borden, Quantitative Model for Measuring Line-Drawing Inequity, 98 Iowa L. Rev. 971 (2013) and Sarah B. Lawsky, Modeling Uncertainty in Tax Law, 65 Stan. L. Rev. 241 (2013). However, the effect of mathematical equations on most lawyers is soporific, at best. Faigman wrote: “Indeed, nothing puts a class of law students to sleep faster than putting numbers on the chalkboard. It is a phenomenon you can actually observe. A bell curve makes their eyes glaze over. A minor equation or two calculating a standard deviation renders law students unconscious; and a more complicated regression analysis induces a deep coma.” Faigman, supra note 4, at xi.
111 McCloskey, supra note 3, at 11.
hands."\textsuperscript{116} However, to be fair, economists are sometimes the harshest critics of this view. Thomas Piketty, a French economist, writes "this obsession with mathematics is an easy way of acquiring the appearance of scientiﬁcity without having to answer the far more complex questions posed by the world we live in."\textsuperscript{117}

The normative framework for law can be summarized as fairness or justice.\textsuperscript{118} Of course, “fairness, in the sense of a just result, is not an easy concept to define. The problem of reaching an agreed upon meaning for that term is that people simply cannot agree on its meaning.”\textsuperscript{119} To a lawyer, law is not just a matter of resource allocation, which can be resolved in more or less efficient ways.\textsuperscript{120} In the law, value judgments cannot be avoided.\textsuperscript{121}

There are no prerequisites for the study of law. Law schools evaluate prospective law students on their undergraduate grades, in any discipline, and on their performance on the Law School Admission Test (LSAT). According to the Law School Admission Council, which administers the LSAT, the LSAT is designed to measure skills that are considered essential for success in law school: the reading and comprehension of complex texts with accuracy and insight; the organization and management of information and the ability to draw reasonable inferences from it; the ability to think critically; and the analysis and evaluation of the reasoning and arguments of others.\textsuperscript{122}

“Critical thinking” skills include drawing well-supported conclusions, reasoning by analogy, determining how additional evidence affects an argument, applying principles or rules, and identifying argument flaws.\textsuperscript{123} No calculus or linear algebra required. Indeed, “many students who have spent much of their educational life avoiding math and science become lawyers.”\textsuperscript{124}

In most law schools, like most graduate economics programs, the first year curriculum focuses on required courses. Those courses typically include a number of doctrinal law subjects, such as property, torts, civil procedure, constitutional law, contracts, and criminal law. First year law students invariably take a legal writing course. Legal writing can include objective analysis like a memo from a law clerk to a judge. More often, legal writing is designed to persuade. An excellent way to persuade is to tell

\begin{footnotes}
\item[116] McCluskey, supra note 3, at 100.
\item[120] See, Ronald J. Allen, Rationality and the Taming of Complexity, 62 Ala. L. Rev. 1047, 1056 (2011) (”The various forms of justification for substantive law are almost as varied and as complex as the behavior they regulate, but in general have to do with what a society believes to be morally correct and economically efficient behavior.”) Id.
\item[121] Faigman, supra note 4, at 26 (“Values, or policies, are the ultimate currency of the law.”)
\item[122] LSAC, About the LSAT, http://www.lsac.org/jd/lsat/about-the-lsat.asp#types.
\item[123] Id.
\item[124] Faigman, supra note 4, at xi.
\end{footnotes}
A persuasive legal brief weaves facts and legal precedent together in a way that tells a story. Communications expert Walter Fisher wrote about the “narrative paradigm,” which holds that humans are essentially storytellers and that stories resonate with their audience when the stories are “rational.” A rational story provides good reasons for its conclusions.

Thus, both legal and economic reasoning require rationality and logic to persuade. However, without advanced training in mathematics, it is difficult for a lawyer to think critically about economic models. They cannot evaluate the reasoning and arguments, hidden as they are by the economic model. Even if the lawyer understands the economist’s simplifying assumptions and what variables are included or left out of the model, she is ill-equipped to assess the robustness of the results. This is not the fault of the model or its designer, but rather a result of the different skills possessed by the economist and the lawyer. On the other hand, the expertise of the tax lawyer can add value to economic analysis. Professor Alex Raskolnikov notes that “tax lawyers know and understand tax rules—both in theory and in practice—much better than public finance economists ever could.” Thus, if economists and lawyers found a way to understand each other, tax policy could benefit immeasurably.

IV. THE MARRIAGE OF LAW AND ECONOMICS – STRENGTHS AND WEAKNESSES

In any marriage, each spouse will have different skills and perspectives. If those different skills and perspectives are respected and valued, the marriage should prosper. In this section, we examine the skills and perspectives of the lawyers and economists working together in the tax policy realm. After identifying the relevant players, I will examine the law and economics movement to see if it can explain the differences between the communication styles of economists and lawyers, as well as on their relative strengths and weaknesses.

127 “Economics is . . . a good example of the ‘hermeneutic circle’: you need to know the argument overall to understand the details and the details to understand the argument.” McCloskey, supra note 3, at 6.
128 Indeed, because economic models are often proprietary, even other economists have difficulty judging the robustness of results. Even public models can be so complex as to defy critical analyses. See William D. Nordhaus, Stephen A. Merrill & Paul T. Beaton, eds., Effects of U.S. Tax Policy on Greenhouse Gas Emissions 9 (2013) (“[M]odels need to be made more transparent by clarifying both their assumptions and their structure.”) Id. The GHG report used three public models: the National Energy Modeling System (NEMS), the Center for Business and Economic Research Model (CBER), and the Food and Agricultural Policy Research Model (FAPRI). The GHG report also used the Intertemporal General Equilibrium Model (IGEM), a proprietary model. Id. at 173 – 174.
129 As illustrated by the author’s attempt to compare two economic models in the previous section.
130 Raskolnikov, supra note 40, at 529.
A. THE PLAYERS

Federal tax law is, of course, created by Congress, a legislative body dominated by lawyers who are advised by economists. 131 Congress gets advice from both government and private sector economists. The economists at the Joint Committee on Taxation (JCT) specifically advise the tax-writing committees of Congress. The Congressional Budget Office (CBO), 132 the Government Accountability Office (GAO), 133 and the Congressional Research Service (CRS) all employ economists who provide Congress with analysis of tax issues, 134 as well as other legislative issues. In addition, many organizations of a variety of political persuasions, such as the Heritage Foundation and the Urban-Brookings Tax Policy Center, publish economic analyses of tax issues. 135 Accounting firms and lobbying firms use the services of economists in furtherance of their clients’ goals. 136 Of course, academic economists also play an important role, both in developing theory and in making policy recommendations.

B. LAW AND ECONOMICS

The law and economics movement “flowered” in the mid-1900s. 137 Before law and economics, legal scholars searched for patterns in cases, statutes, and regulations, with the goal of explaining past decisions and predicting future legal trends. 138 Law and economics moved beyond patterns and looked for the intended purposes served by legal rules, determining those purposes by analyzing incentive and price effects. 139 Law and economics takes an instrumentalist view of law, viewing law as the instrument for solving social problems and trying to determine how the law operates. 140 Instrumentalism begins with the notion of detachment— that the law should be justifiable to a detached spectator who is not committed to maintaining some set of perceived logical connections among legal doctrines. 141

Judge Richard Posner described economics as “the science of rational choice.” 142 Economic theory assumes that people respond to incentives by altering their behavior

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131 See Peterson, supra note 4, and Thaler, supra note 6.
134 See, e.g., Hungerford II, supra note 61.
136 See, e.g., Carroll & Prante, supra note 62. Ernst & Young is one of Washington’s top 10 lobbying firms as well. See Top Lobbying Firms, Center for Responsive Politics, http://www.opensecrets.org/lobby/top.php?indexType=1
138 Katherine V. Litvak, Easterbrook and Fischel, in Pioneers, supra note 137, at 246.
139 Litvak et al., supra note 138, at 246.
141 Hylton, supra note 140, at 227.
because they are “rational maximizers” of their own self-interest.143 Joseph Stiglitz notes that “belief in rationality is deeply ingrained in economics.”144 This belief in rationality led to two important economic ideas that continue to inform legal analysis: Pareto efficiency and the Coase theorem. The Coase theorem, developed by economist and law professor Ronald Coase, posits that, in absence of transaction costs, private bargaining will lead to the most efficient use of resources.145 Pareto efficiency holds that an allocation is efficient if someone is made better off with no one made worse off. The Kaldor-Hicks concept of efficiency modifies Pareto efficiency by finding an outcome more efficient if those who are made better off could, in theory, compensate those who are made worse off.146 No actual compensation need be made. Kaldor-Hicks efficiency is an underlying rationale for cost-benefit analysis, which is often used to justify legal judgments and government decisions.147

Cost-benefit analysis, while providing useful information for policymakers, is sometimes used by policymakers to avoid difficult value judgments. For example, in balancing revenue loss from a tax credit for wind energy production with the benefit of decreased carbon emissions, each factor has both an empirical and a normative component.148 Economists can estimate how many firms will use the wind production tax credit, but the value of decreased carbon emissions and whether the decreased revenue is worth it requires normative judgment. “The economic science of cost-benefit analysis can certainly offer some guidance on this matter, but it remains some distance from objectifying these tasks.”149

Law and economics is often criticized for adhering too closely to the rational actor model. The rational actor weighs the costs and benefits of anticipated action and chooses the act with the greatest net benefit. In economic analysis, the benefits and costs are reduced to dollars so that an apple-to-apple comparison can be made. Critics of law and economics have argued that people do not always behave as rational actors, that they do not carefully and accurately weigh the costs and benefits of their anticipated actions.150 Stiglitz is a major critic of the rationality assumption, and notes that his economist colleagues are “irrationally committed to the assumption of rationality.”151

In the end, whether an analyst wants to modify the rationality assumption to better reflect realistic human behavior is a question of the detail the analyst wants to build into

143 Posner, supra note 142, at 4.
146 Posner, supra note 142, at 13.
147 See, e.g., Frank Ackerman & Lisa Heinzerling, Priceless: On Knowing the Price of Everything and the Value of Nothing (New Press 2004). “By proceeding as if its assumptions are scientific and by speaking a language all its own, economic analysis too easily conceals the basic questions that lie at its heart and excludes the voices of people untrained in the field. Again and again, economic theory gives us opaque and technical reasons to do the obviously wrong thing.” Id. at 9.
148 Faigman, supra note 4, at 55.
149 Id. at 56.
150 Hylton, supra note 140, at 238.
151 Stiglitz, supra note 144, at 248.
his model.152 The model is an essential part of the economist’s analytic process. Economist Kenneth Arrow described any decision problem as having four parts:

1. an objective function which indicates the relative desirability of different possible outcomes;
2. a range of policy alternatives, or instruments ...
3. the model, which specifies the empirical relations connecting the instruments, the variables entering into the objective function, and other relevant variables; and
4. the computational methods by which the decision maker chooses the values of the instruments so as to maximize the objective function subject to conditions specified by the model.153

A simple model is often described as “elegant,” perhaps because “abstraction is the essence of scientific inquiry, and economics aspires to be scientific.”154 Arrow describes simplification of the “original” problem as a universal technique.155 An economic theory’s lack of realism is a “precondition of the theory.”156 Of course, not all economists follow the strong rational actor model, and careful economists note the scope of their assumptions and what is included and left out of the model used. Economists must resist putting too much realism in the model because when an economic model becomes more complex, it may become so flexible that no empirical observation can either refute or support it.157 Arrow notes that uncertainty is a fundamental characteristic of government economic policy, which means that no model of government economic policy can achieve perfect predictability.158

Legal theory and economic theory share two major branches: positive and normative.159 Positive legal theory seeks to explain why the law is the way it is. Positive economic theory seeks to explain why the economy reacts the way it does. Normative legal theory describes how the law should be. Normative economic theory describes how the economy should be designed. One of the goals of tax legislation is improving the economy, thus normative law and economic theory would seem to marry the best of both worlds from the perspective of a tax legislator. Of course, it is not that simple.

Just as the law can be divided into many diverse sub-topics, each requiring its own particular skill set, economics is divided into three core areas: macroeconomics, microeconomics, and econometrics.160 Microeconomics studies how supply and demand interact in individual markets for goods or services. Macroeconomics studies how the overall economy responds to policy changes. Within these major core areas of

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152 Hylton, supra note 140, at 242.
153 Arrow, supra note 115, at 44.
154 Posner, supra note 142, at 17.
155 Arrow, supra note 115, at 64.
156 Posner, supra note 142, at 17.
157 Id. at 17.
158 Arrow, supra note 115, at 44.
159 Hylton, supra note 140, at 232.
economics exists further subdivisions: labor economists, political economists, environmental economists, public finance economists, and behavioral economists.\textsuperscript{161}

Law and economics has focused on the application of microeconomics to private law, such as torts, contracts and corporate law.\textsuperscript{162} In the book entitled Pioneers of Law and Economics, there is only one mention of tax law.\textsuperscript{163} As Professor Alex Raskolnikov has observed, the taxing transaction is not like other private transactions.\textsuperscript{164} He argued that paying taxes is inefficient even if it produces no negative externalities and that inefficient responses to taxation “cannot be fully deterred at any cost.”\textsuperscript{165} But perhaps the omission of tax law is because only one of the three oft-cited criteria for evaluating tax rules-efficiency- implicates neoclassical economic theory.\textsuperscript{166} The other criteria, equity and ease of administration, arguably do not. Equity requires moral judgment about fairness, which, as noted, is foreign to neo-classical economic theory.

C. STRENGTHS AND WEAKNESSES

Informed by the foregoing discussion, we can now summarize the strengths and weaknesses of economists and lawyers.

Economists’ strengths: Economists are good at:
1. Developing “objective models.”\textsuperscript{167}
2. Exploring alternative policies through models.\textsuperscript{168}
3. Assessing the “efficiency” of a particular policy.\textsuperscript{169}

Lawyers’ strengths: Lawyers are good at:
1. Understanding legal doctrine.\textsuperscript{170}
2. Understanding transactions—how will a proposed policy change affect a particular client or constituent.\textsuperscript{171}
3. Normative ordering.\textsuperscript{172}

Economists’ weaknesses:
1. Narrow focus on rationality.\textsuperscript{173}
2. Oversimplification.\textsuperscript{174}

\textsuperscript{161} This is a non-exclusive list of the types of economists for illustrative purposes.
\textsuperscript{162} Raskolnikov, supra note 40, at 525.
\textsuperscript{163} Pioneers, supra note 137, at 289.
\textsuperscript{164} Raskolnikov, supra note 40, at 525.
\textsuperscript{165} Id.
\textsuperscript{166} Stanley Surrey & Gerard M. Brannon, Simplification and Equity as Goals of Tax Policy, 9 Wm. & Mary L. Rev. 915, 915 (1968); Buchanan, supra note 28, at 1; Anthony C. Infanti, Tax Equity, 55 Buffalo L. Rev. 1101, 1191 (2008); Cheryl D. Block, Pathologies at the Intersection of the Budget and Tax Legislative Processes, 43 B.C. L. Rev. 863, 911 (2002).
\textsuperscript{167} Arrow, supra note 115, at 44.
\textsuperscript{168} See, e.g., Mirrlees, supra note 36.
\textsuperscript{169} See, e.g., Mirrlees, supra note 36.
\textsuperscript{170} Raskolnikov, supra note 40, at 589.
\textsuperscript{173} See supra note 151.
\textsuperscript{174} See supra notes 154 – 155.
3. Failure to clearly explain assumptions.\textsuperscript{175}
4. Failure to distinguish economic and statistical significance. \textsuperscript{176}

Lawyers’ weaknesses:
1. Fondness for anecdote.\textsuperscript{177}
2. Inability to understand economic models, mathematics, or the scientific method.\textsuperscript{178}
3. Tendency to consider statistics and models as “truth.”\textsuperscript{179}

Now that we understand each other’s strengths and weaknesses, can we move towards actually understanding each other? First, we need to delve a bit more deeply into why policymakers misinterpret economic analysis.

V. WHY DO POLICYMAKERS MISINTERPRET ECONOMIC ANALYSIS?

The reader should remember one of the assumptions of this article: although we are discussing miscommunication, it is between “two generally well-meaning communities of professionals.”\textsuperscript{180} The policymakers want answers. Numbers seem to give us objective and trustworthy answers to complex questions.\textsuperscript{181} In the book \textit{Proofiness}, author Charles Seife says, “if you want to get people to believe something really, really stupid, just stick a number on it. Even the silliest absurdities seem plausible the moment they are expressed in numerical terms.”\textsuperscript{182} “The numbers are necessary material. But they are not sufficient to bring the matter to a scientific conclusion.”\textsuperscript{183}

According to mathematicians, mathematical truth is fallible and corrigible.\textsuperscript{184} Seife describes several categories of proofiness that may apply to the misuse of economic analysis, whether by design or misunderstanding. Disestimation is taking a number too literally, understatng or ignoring the uncertainties that surround it.\textsuperscript{185} Fruit-packing refers to the misleading presentation of numbers.\textsuperscript{186} Fruit-packing techniques include cherry-picking selected data,\textsuperscript{187} comparing apples with oranges by using different

\textsuperscript{175} See, e.g., supra note 95.
\textsuperscript{176} McCloskey, supra note 3, at 112 – 38. McCloskey analyzed 182 papers appearing in the journal American Economic Review from 1980–1989, finding that 70 percent of the papers failed to distinguish statistical significance from economic, policy, or scientific significance. Id. at 131.
\textsuperscript{177} “Congress has long been excessively vulnerable to memorable anecdotes,” whether true or not. Michael J. Graetz, The U.S. Income Tax: What It Is, How It Got That Way, and Where We Go from Here 189 (W.W. Norton & Co. 1999). The one-year repeal of the estate tax was facilitated by the largely apocryphal story of the lost family farm. Michael J. Graetz & Ian Shapiro, Death by a Thousand Cuts: The Fight Over Taxing Inherited Wealth 126 (Princeton Press 2005).
\textsuperscript{178} Faigman, supra note 4, at 54 (“[M]ost lawyers have little or no appreciation for the scientific method and lack the ability to judge whether the proffered research is good science, bad science, or science at all.”)
\textsuperscript{179} This observation is not limited to lawyers, it is common to all humans. Charles Seife, Proofiness: How You’re Being Fooled by the Numbers (Penguin 2010). See also, Faigman, supra note 4, at 76. (Lawyers have “dangerously unrealistic expectations of a scientific answer.”)
\textsuperscript{180} Faigman, supra note 4, at xi.
\textsuperscript{181} See, e.g., Lawsky, supra note 63, at 1692. “Law and economics seems to bring relief from common law’s relentless indeterminacy.”
\textsuperscript{182} Seife, supra note 179, at 8.
\textsuperscript{183} McCloskey, supra note 3, at 112.
\textsuperscript{184} Id. at 166.
\textsuperscript{185} Seife, supra note 179, at 23.
\textsuperscript{186} Id. at 26.
\textsuperscript{187} Id. at 27.
units of measurement,\textsuperscript{188} and apple-polishing by manipulating data.\textsuperscript{189} Using averages is a common form of apple-polishing almost invariably used by politicians announcing tax cuts.\textsuperscript{190} An average is the total amount divided by the number of data points—it does not necessarily represent the typical or most common result, but people often interpret average as “typical.”\textsuperscript{191} Finally, human minds are designed to detect patterns, which makes us vulnerable to mistaking correlation for causation.\textsuperscript{192}

There are countless examples of this mistake. One of my favorites is the New York Post article “States Taxing Themselves to Death.”\textsuperscript{193} The authors found “evidence” in the 2010 census—the states that had high state income tax rates lost population. The authors confidently stated “the trend is unmistakeable [sic]: the ‘losing’ states drove out their high-income citizens (and middle-income jobs) with heavier tax burdens.”\textsuperscript{194}

![Tale of the tax tape](image)

\begin{verbatim}
States that gained or lost House seats and their per-capita state burden

<table>
<thead>
<tr>
<th>GAINED</th>
<th></th>
<th>LOST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>(+4)</td>
<td>$1,434</td>
</tr>
<tr>
<td>Florida</td>
<td>(+2)</td>
<td>1,905</td>
</tr>
<tr>
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<tr>
<td>Georgia</td>
<td>(+1)</td>
<td>1,726</td>
</tr>
<tr>
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<td>(+1)</td>
<td>2,347</td>
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<tr>
<td>South Carolina</td>
<td>(+1)</td>
<td>1,719</td>
</tr>
<tr>
<td>Utah</td>
<td>(+1)</td>
<td>1,904</td>
</tr>
<tr>
<td>Washington</td>
<td>(+1)</td>
<td>2,359</td>
</tr>
</tbody>
</table>

Weighted average: $1,788

<table>
<thead>
<tr>
<th>LOST</th>
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</thead>
<tbody>
<tr>
<td>New York</td>
</tr>
<tr>
<td>Ohio</td>
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<tr>
<td>Massachusetts</td>
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<tr>
<td>Michigan</td>
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<tr>
<td>New Jersey</td>
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<tr>
<td>Penn.</td>
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<tr>
<td>Illinois</td>
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<tr>
<td>Iowa</td>
</tr>
<tr>
<td>Louisiana</td>
</tr>
<tr>
<td>Missouri</td>
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</tbody>
</table>

Weighted average: $2,267
\end{verbatim}

\textsuperscript{188} Id. at 31.
\textsuperscript{189} Id. at 35.
\textsuperscript{190} Id. at 37. See FactCheck.Org, Here We Go Again: Bush Exaggerates Tax Cuts (Feb. 20, 2004), http://www.factcheck.org/here_we_go_again_bush_exaggerates_tax.html, (“President Bush stumbled Feb. 19, saying the average tax cut is $1,089. The White House corrected that figure to $1,586. But the fact is that most Americans won’t see anywhere near either of those amounts.”)
\textsuperscript{191} Seife, supra note 179, at 38.
\textsuperscript{192} Id. at 41. See also Taleb, supra note 87, at 93.
\textsuperscript{193} Dick Morris & Eileen McGann, States Taxing Themselves to Death, NY Post (Dec. 22, 2010).
\textsuperscript{194} Id. Note the “weighted average” on the chart.
A skeptical reader found another possible explanation: perhaps the states are freezing themselves to death. ¹⁹⁵

<table>
<thead>
<tr>
<th>Gained</th>
<th>Average Temperature (Fahrenheit)</th>
<th>Lost</th>
<th>Average Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas (4)</td>
<td>76 (Dallas)</td>
<td>New York (-1)</td>
<td>49 (NYC)</td>
</tr>
<tr>
<td>Florida (2)</td>
<td>75</td>
<td>Ohio (-2)</td>
<td>50</td>
</tr>
<tr>
<td>Arizona (1)</td>
<td>71</td>
<td>Massachusetts (-1)</td>
<td>50</td>
</tr>
<tr>
<td>Georgia (1)</td>
<td>65</td>
<td>Michigan (-1)</td>
<td>47</td>
</tr>
<tr>
<td>Nevada (1)</td>
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<td>52</td>
</tr>
<tr>
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<td>Washington (1)</td>
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<td>Illinois (-1)</td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Louisiana (-1)</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missouri (-1)</td>
<td>56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Both of these charts are equally persuasive, or silly, depending on your perspective. Neither proves causation. ¹⁹⁶

Understanding what numbers, and economists, can and cannot do is the key to respecting the role of economists. Economists cannot give lawyers all the answers. Nevertheless, policymakers will continue to try to find certainty.

It is astonishing how confident people both outside and inside the Congress can be in predicting the consequences of tax law changes, when those consequences are impossible to know, given the current state of knowledge. Such estimates should be taken for what they are: expressions of religious belief, not a consensus of predictions of the economics profession. In the political process, economic predictions routinely serve to justify, and sometimes mask, ideological battles. Clear and noncontroversial answers to crucial questions simply do not exist. ¹⁹⁷

Economists can help policymakers by highlighting the uncertainties. One common problem with economic analysis is the failure to distinguish between statistical significance and economic significance. “The abuse of the word ‘significance’ in

¹⁹⁶ “A random series will always present some detectable pattern.” Taleb, supra note 87, at 135.
connection with statistical arguments in economics is universal.”¹⁹⁸ Policymakers could inquire as to whether the “significance” was statistical or economic.

Another problem is “regression to the mean.” This statistical fallacy was illustrated by the studies supporting the beloved trope that small businesses are the engines of job creation.¹⁹⁹ The regression to the mean fallacy, “common in statistical analyses looking at data over time, results in an inverse relationship between size and growth (in this case, a relationship in which small firms grow larger than large firms) even when they are independent of each other.”²⁰⁰ After correcting for this bias, economists found that the amount of small firm job creation was not as large as the unadjusted data suggested.²⁰¹

Neither a good narrative nor a plethora of statistics necessarily tells the truth about any government policy. As Sullivan noted, “bland economic reasoning does not connect with the voters the way a story about struggling small business does.”²⁰² Economists note that anecdotal evidence is not statistically significant.²⁰³ But economic analysis doesn’t always tell us what we want to know, and now we know that statistical significance doesn’t tell us ‘how large is large.’

VI. CONCLUSION: HOW SHOULD ECONOMIC ANALYSIS BE USED IN EVALUATING THE TAX SYSTEM?

Like any human, I’ve tried to distill this article into a narrative. Undoubtedly, it contains my own biases and assumptions. Optimistically, I assume that economic analysis attempts to be objective. Economists oversimplify, and lawyers read what they want to into the results. To paraphrase author John Gray (Men are from Mars, Women are from Venus) again, lawyers could complain that economists don’t listen.²⁰⁴ An economist listens to the lawyer asking a question, like “what will be the effect of raising taxes on high-income individuals,” assesses what is bothering the lawyer, and then offers a solution. If policymakers want equity, but economists keep offering efficiency, what should policymakers do?²⁰⁵ The role of the policymaker is to make policy. Economists do not make policy. But to understand economic policy, policymakers must understand economics, not specifically the language of economics, but the principles.

Economists could complain that lawyers keep asking them questions they can’t answer, like “what is the carbon impact of the Internal Revenue Code?”²⁰⁶ Lawyers are

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¹⁹⁸ McCloskey, supra note 3, at 113.
¹⁹⁹ Sullivan, supra note 9, at 158.
²⁰⁰ Id. at 160.
²⁰¹ Id.
²⁰² Id. at 161.
²⁰³ However, Bayes’ Theorem of probability, used by statistician Nate Silver to predict the 2012 election, combines prior experience with current evidence to determine the probability of a future event. Thus, anecdotes may well be significant, at least in the aggregate. Bradley Efron, Bayes’ Theorem in the 21st Century, 340 Science 1177 (June 7, 2013).
²⁰⁴ Gray, supra note 3.
²⁰⁵ Id. at 15.
²⁰⁶ See Nordhaus et al, supra note 128, at 153. This study was mandated by the Energy Improvement and Extension Act of 2008, P.L. 110-343, section 117, 122 Stat. 3807, 3831, proposed by Congressman Earl
disappointed at the answer. Economists value efficiency. Lawyers are intuitive. Rather than lawyers blaming economists and economists blaming lawyers, understanding and acceptance are key to creating a good relationship between the two types of professionals. One could argue that policymakers should study economics. While I suspect that most policymakers do not want to take the time or effort to get a PhD in economics, Professor Faigman suggested a middle way – a 12-step program for policymakers without scientific training. Just three steps would go a long way towards enhancing communication. Step one: the policymaker must admit that she does not understand economics. Step two: the policymaker says, “I am not afraid to seek help from bona fide experts in relevant fields, but I will not abdicate my responsibility to them.” In the final step, the policymaker promises “to endeavor to understand the nuts and bolts of the scientific method and not simply the conclusory statements offered by scientists.”

Understanding can be difficult. Economists and lawyers seldom mean the same things even when they use the same words, like equity or fairness. Economists want to quantify, and tend to think that the solutions to all problems can be reduced to numbers. Lawyers should appreciate economists’ efforts and skill, while at the same time, recognizing their limitations. The tax system is complex, and interactions between taxes, spending, trade policy, and innovation can be difficult to untangle. Even without advanced math training, lawyers can read economic analysis critically. What are the stated assumptions? Economists can help by explaining the assumptions in narrative form and giving at least general indications of the weights placed on each factor considered. Is correlation presented as causation? Does the analysis mix units of measurement? Are averages presented as typical results? Lawyers, politicians, and policymakers need to take responsibility for including equity in deliberations and not blame economists if equity is not front and center. We would do well to remember that “‘[c]onclusion’ is a human idea, not Nature’s. It is a property of human minds, not of the statistics.”

207 Gray, supra note 3, at 16.
208 Id. at 17.
209 Id. at 198.
210 Id.
211 Id.
212 Id.
213 Gray, supra note 3, at 60.
214 Id at 129.
215 Id. at 136.
216 McCloskey, supra note 3, at 112.