

---

2006

## Economics as a Science: Robert Nelson's Economics as Religion

Thomas S. Ulen

Follow this and additional works at: <https://scholarlycommons.law.case.edu/caselrev>

 Part of the [Law Commons](#)

---

### Recommended Citation

Thomas S. Ulen, *Economics as a Science: Robert Nelson's Economics as Religion*, 56 Case W. Rsrv. L. Rev. 649 (2006)

Available at: <https://scholarlycommons.law.case.edu/caselrev/vol56/iss3/11>

This Symposium is brought to you for free and open access by the Student Journals at Case Western Reserve University School of Law Scholarly Commons. It has been accepted for inclusion in Case Western Reserve Law Review by an authorized administrator of Case Western Reserve University School of Law Scholarly Commons.

# ECONOMICS AS A SCIENCE: ROBERT NELSON'S *ECONOMICS AS RELIGION*

*Thomas S. Ulen*<sup>†</sup>

## I. INTRODUCTION

Several years ago a colleague in the Department of Religious Studies asked me to participate in a roundtable discussion of environmental policy issues. There were many distinguished participants (and me) from a wide range of scholarly disciplines—the biological sciences, ecology, civil engineering, environmental sciences, religious studies, and law, among others. Most of them, I later found out, were not only prominent scholars, but also activists on behalf of environmental causes. I had been invited principally in my capacity as an economist (and as a member of the disparate faculty then organized into something, now extinct, called the “Institute for Environmental Studies”). The roundtable participants had all read the same set of materials and gathered for an unstructured discussion of those materials.

During an early session, we looked at the issue of endangered species.<sup>1</sup> There was a lot of emotion—not rending of clothes, wailing, gnashing of teeth, and pulling out tufts of hair, but close to all of those—exhibited by those who felt strongly that those species in danger of extinction should be protected, at almost any cost. I played my part in this drama as the unwitting villain. I raised the possibility that the costs of preserving certain species might exceed the benefits. I even raised the possibility that the benefits were difficult to quantify

---

<sup>†</sup> Swanlund Chair, University of Illinois at Urbana-Champaign; Professor of Law, University of Illinois College of Law; and Director of the Illinois Program in Law and Economics.

I am very grateful to Andy Morriss for his invitation to participate in this appreciation of Professor Nelson's work. I also want to thank Christina Garcia, University of Michigan School of Medicine Class of 2010, and Bryan Deaton, University of Illinois College of Law Class of 2006, for their marvelous research assistance.

<sup>1</sup> See Gardner M. Brown, Jr., & Jason F. Shogren, *Economics of the Endangered Species Act*, J. ECON. PERSP. 1, 3 (1998) (providing an economic view of the Endangered Species Act).

and, probably, not very large. A hush—not, let it be said, a rapt hush—fell over the room. Undaunted, I proceeded to make the argument that humankind ought to be the measure of all things and that benefits to humankind surely had to weigh more heavily than benefits to nonhumans (even including the values that humans put on nonhumans). It is difficult to characterize the nature of silence, but my sense was that the hush had clearly passed from being a shocked but respectful hush into a stunned silence that seemed to scream, “Who let him in?”<sup>2</sup>

I will not belabor this experience. What struck me so forcefully was that I thought (and still think) that my training as an economist equipped me to ask relevant questions that the others had not only not asked and answered, but had never thought to ask. I thought then, and still devoutly believe, that cost-benefit questions are the central questions to ask about environmental issues (and about almost every other public policy issue). I am not certain how far I would push this view. I do not believe, for example, that I would maintain that the economist’s way of looking at the value of endangered species is the *only* meaningful way to evaluate that issue. And cost-benefit analysis, however useful, might give way to more deontological inquiry with respect to some important public policy debates.<sup>3</sup> But I would be willing to assert that the economist’s method was the most relevant method of making that difficult evaluation—that it is a better method than mere assertion, appeals to revelation or political power, resort to polling data, philosophical paeans to the environment and its diversity, and so on.

I kept thinking of this episode as I read through Robert Nelson’s *Economics as Religion*. As I shall indicate shortly, there are parts of this book that I admire a great deal, but there are also parts with which I take deep issue. As an economist who has spent the vast bulk of his career among extremely bright and articulate noneconomists, I am accustomed to criticisms of the field of economics and used to defending it. It is doubly disconcerting to have the criticisms made by an initiate into the mysteries of economics and for those criticisms to sound distressingly like the looper of the criticisms that I hear from my noneconomist colleagues.

Professor Nelson’s claim is that the most fruitful manner in which to view the modern economics profession and its core learning is as a

---

<sup>2</sup> Professor Nelson captures the fanatical religious fervor of environmentalists perfectly in his section, “Environmental Calvinism,” in *Economics as Religion*. ROBERT H. NELSON, *ECONOMICS AS RELIGION: FROM SAMUELSON TO CHICAGO AND BEYOND* 308-13 (2001).

<sup>3</sup> I am grateful to my colleague and mentor in these matters, Larry Solum, for discussion on this point. See Lawrence B. Solum, *Public Reason*, 92 VA. L. REV. (forthcoming 2006).

theology. The field of economics should not contend, as those learned in that field frequently do, that their discipline is a science—indeed, the Queen of the social sciences.

I respectfully and profoundly disagree. My strong belief is that there is much more to the field of economics than millenarian pronouncements. I believe that the scientific claims of economics are strong and demonstrable. In what follows, I shall attempt to defend my view over that of Professor Nelson.

The next section lays out Professor Nelson's claim very briefly and, I hope, fairly. Then I turn to my criticism of his claim through looking at the impact of economics on the study of law. I think that the application of economic thinking to the analysis of legal issues beautifully illustrates what is off-base with Professor Nelson's contention. Those who have been devoutly opposed to economic thinking in law have unwittingly taken up Professor Nelson's flag and marched under it, while those who champion law-and-economics do so in no small part because of their belief that economics brings a much-needed scientific methodology to the study of law.

## II. NELSON'S ARGUMENT

Professor Nelson's claim is that there is a millenarian streak running through the modern field of economics. No one could miss this streak in the work of Karl Marx in the mid- and later nineteenth century. What is new and interesting in Professor Nelson's claim is his contention that that religious streak is evident in the work of such modern giants as John Maynard Keynes, Paul Samuelson, Frank Knight, Milton Friedman, George Stigler, Gary Becker, Richard Posner, Ronald Coase, and the New Institutional Economists.

By "millenarian" I mean (and think that Professor Nelson means) some grand normative statements that have an apocalyptic ring and import to them. And the heart of Professor Nelson's criticism of these statements is, I believe, twofold: (1) there is no empirical or descriptive basis for the millenarian pronouncements, and perhaps worse, (2) economists contend that there is a scientific basis for their statements. Indeed, my sense is that it is this hypocritical passing off of baldly normative statements as if they had a scientific warrant that most irks Professor Nelson.

To illustrate the argument, consider what Professor Nelson says about Paul Samuelson, one of the giants of modern economic theory and an early winner of the Nobel Prize in Economic Sciences. He characterizes Samuelson as a prophet for the Progressive "gospel of efficiency."

The problem is that this image of the market mechanism of [Samuelson's] *Economics* is more poetry than science. It is best understood as a compelling metaphor for its time designed to attract converts to a new understanding of the progressive gospel of efficiency. . . . In retrospect, as in Marxism and other systems of economic thought before it, the greatest attraction of *Economics* was its underlying inspirational message.<sup>4</sup>

And later:

It is instead the religious duty of all good citizens of our time to bear the sacrifices of economic progress without complaint. Hence, for example, if asked to move to another job in another city, to live away from their families, to see the character of their neighborhoods changed by development, to lose the remaining wild areas of the countryside, or to bear other burdens for progress, they should instead rejoice in the fact of their opportunity to participate in the achievement of a future heaven on earth. In this way, all of humankind will soon enough experience a transformation of the human condition, and the temporary burdens of the past will soon be forgotten.<sup>5</sup>

This Progressive gospel was to have economists serving, literally, as its high priests:

Samuelson followed the Roman Catholic model. The members of the economics profession, and other scientific and professional elites, would be motivated by the higher considerations of a priesthood, as compared with businesspeople and other ordinary citizens in the commercial realm. There would be no popular votes held for the scientific leaders of society. Samuelson acknowledged the practical necessity to allow wide rein for the pursuit of self-interest in the marketplace. However, the professional economists and other scientific managers of the progressive state would function according to the ethical standard of the Roman Catholic priesthood. They would reject the commercial motive of self-interest and instead act in their professional and public capacity to serve the common good—"the public interest"—of all of society.<sup>6</sup>

---

<sup>4</sup> NELSON, *supra* note 2, at 58.

<sup>5</sup> *Id.* at 70.

<sup>6</sup> *Id.* at 99-100.

Moving to the Chicago school, Professor Nelson characterizes Knight, Friedman, Stigler, and Becker as having, ultimately, an anti-Progressive agenda. They enlisted their economic thinking to further this agenda. According to Nelson, the Chicago school explored the socially desirable results of (lightly) regulated individual self-interest, pushing morality, love, shared community values, and all other extrinsic motivations for behavior out of the picture:

In pushing the motive of pursuit of individual advantage to its logical extreme, Becker, Posner, and other Chicago school economists of their ilk are in effect preaching a new secular religion. In Christian religion . . . everything that happens in the world is said to be controlled by God. Now in the Chicago project . . . everything is controlled by economic forces of self-interest. The place of the Christian God in explaining the workings of the world has been taken by the workings of the economic drive for individual gain (broadly conceived).<sup>7</sup>

And just a bit later:

In a virtual miracle, the Chicago school may just happen to be—among all the many messengers on earth that would have been available to God—the chosen vessel for a new revelation to humankind. It has supplanted the outmoded (in language and substance) instructions of the Ten Commandments and other messages of the Christian Bible. In every area of life, men and women do—and should, as is also the implicit message—these things that will serve to maximize their individual well-being.<sup>8</sup>

Professor Nelson's investigation of Ronald Coase and the New Institutional Economics finds similar, but more muted, millenarian strains.<sup>9</sup>

### III. A CRITICISM

Before I take issue with some of Professor Nelson's arguments, I want to identify a point of agreement. I agree with Professor Nelson that some economists do tend to oversell the policy implications of their work. There is no contesting the fact that prominent economists sometimes stray into normative territory without adequately advertis-

---

<sup>7</sup> *Id.* at 185.

<sup>8</sup> *Id.* at 186.

<sup>9</sup> *Id.* at 210-12.

ing to their readers that they have done so and that these normative statements sometimes have shaky or nonexistent theoretical and empirical foundations. And this can lead uncritical readers to believe that the economists have “proven” something that is, rather, a matter of opinion. There are lots of examples of this phenomenon in *Economics as Religion*, some of which I have noted in the previous section.

Another example of straying beyond support appears in development policy. In the early 1990s, many developmental economists and most major development funding organizations in Washington, D.C., adopted what has been called the “Washington Consensus” on development policy. The gist of that consensus was to “stabilize, privatize, and liberalize”—that is, to reduce fiscal deficits, achieve macroeconomic stability, control inflation, open the economy to foreign trade, eliminate currency overvaluation, transfer public assets to private hands, and so on.<sup>10</sup> I think that Professor Nelson would characterize the statements made on behalf of the Washington Consensus as being “religious.” But this “religion” has not lasted very long. The vigorous arguments in favor of this consensus, no matter how convincingly made, have become very muted. Indeed, a prominent and careful student of development, Dani Rodrik, says, “[I]t is fair to say that nobody really believes in the Washington Consensus anymore.”<sup>11</sup> So, yes, Professor Nelson is correct: some economists do tend to oversell the policy implications of their work.

Regardless of our differences, Professor Nelson is to be commended for having written an interesting and almost comprehensive recent history of economic thought. (I shall explain what I think is missing in Section III.B below.) His characterization of Samuelson’s attempts to put economics on a scientific basis, of the path-breaking work of Frank Knight, Milton Friedman, George Stigler, and Gary Becker of the Chicago school, and of Ronald Coase and the New Institutional Economics are all insightful.

The rest of this section addresses points on which I diverge with Professor Nelson. First, I make the case that economics is more science than religion. I then turn to some criticisms of Professor Nelson’s history of modern economic thought. He has, I believe, omitted references to some fascinating trends in modern thought that do not fit his hypothesis very well. And finally, I want to buttress, I hope, my case for economics as a science by looking at the impact of economic concepts and methodology on legal scholarship and the study of law.

---

<sup>10</sup> Dani Rodrik, *Goodbye Washington Consensus, Hello Washington Confusion?*, J. ECON. LITERATURE (forthcoming).

<sup>11</sup> *Id.* (manuscript at 2).

*A. Economics as a Science*

My central criticism of Professor Nelson's thesis is that he has missed or misrepresented the central thrust of modern economics. While I cannot dispute the quotations that he ably marshals in support of his thesis, I do not think that they add up to an indictment of modern economics as being nonscientific.

Indeed, I think that Professor Nelson's argument skates very close to the edge of plausibility. He strains to fit his reading of events into his thesis in the same manner that conspiracy theorists find a completely different reality in what the rest of us have taken for granted. Those theorists take the same events perceived by the rest of us—the assassination of President Kennedy by Lee Harvey Oswald—and tell a just-so story that seems to explain the same facts but from a completely different perspective—not the actions of a very troubled loner, but the manipulation of a Manchurian-candidate-like assassin by the Cuban government, seeking revenge for CIA attempts on Castro's life. Or the contention that the magnificent works known to us as the product of William Shakespeare were not written by the little-educated son of a provincial glovemaker, but by Edward de Vere, the 17th Earl of Oxford.<sup>12</sup>

In this vein, Nelson takes excerpts from the works of Karl Marx, John Maynard Keynes, Paul Samuelson, Frank Knight, and others and purports to show coherent millenarian themes (not the same themes, certainly, but all apocalyptic) running through their work. But this is selective quotation mining. A different set of quotes might—I am hedging because I have not attempted to put together these quotes myself—demonstrate that the religious element in the work of these great economists is minor, while the scientific element is dominant.

Let me briefly put forth the case in favor of economics as a science, not as a religion. The philosophy of science provides an extensive and rich literature on what it means to be a science.<sup>13</sup> Instead, I shall concentrate on an unsophisticated but essentially accurate portrait of science, illustrating how science applies to the standard method of approaching economic questions.

A scientist begins his inquiry into a natural phenomenon in the understanding that she is an empiricist—that the phenomenon she seeks

---

<sup>12</sup> For the Oxfordian case, see MARK ANDERSON, *SHAKESPEARE BY ANOTHER NAME: A BIOGRAPHY OF EDWARD DE VERE, EARL OF OXFORD, THE MAN WHO WAS SHAKESPEARE* (2005). For the more conventional view, see STEPHEN GREENBLATT, *WILL IN THE WORLD: HOW SHAKESPEARE BECAME SHAKESPEARE* (2004).

<sup>13</sup> See, e.g., DAVID L. HULL, *SCIENCE AS A PROCESS* (1990); PHILLIP KITCHER, *THE ADVANCEMENT OF SCIENCE: SCIENCE WITHOUT LEGEND, OBJECTIVITY WITHOUT ILLUSIONS* (1993); ALEXANDER ROSENBERG, *THE PHILOSOPHY OF SCIENCE* (2000).



to explain is measurable and that descriptions and explanations of that phenomenon must be observable and, eventually, observed. As I mentioned earlier, this view of how to understand the world stands in stark contrast to the views that intuition, revelation, tradition, power, and authority reveal descriptions and explanations of real phenomena. A distinctive aspect of the empiricist method of understanding the world is the concept of “falsifiability,” an idea usually associated with Sir Karl Popper.<sup>14</sup> A meaningful scientific statement is one that can, in principle, be proven untrue—can, that is, be falsified. To take Popper’s paradigmatic example, the proposition “All swans are white” is meaningful, because it can be falsified by the observation of a black swan.

So, a scientific inquiry begins with a falsifiable hypothesis.<sup>15</sup> The scientist then elaborates on that hypothesis, making it as comprehensive and coherent as she can. She might also indicate what empirical tests could confirm or refute her hypothesis.

Eventually, for the scientific inquiry to complete a stage, an investigator must confront the hypothesis with data.<sup>16</sup> (This empirical work does not have to be done by the person who framed the theory that guided the gathering of data and its statistical testing.) This confrontation confirms or refutes the hypothesis and may raise new questions. The process then begins anew, with theoretical elaborations on the result of the previous theory-empirical work stage and subsequent empirical or experimental work designed to confirm or refute the new hypothesis.

It is vital to the full understanding of economics as a science to stress the methodological and procedural aspects of the empiricism that guides science. Science does not present us with a body of settled conclusions but with a means of knowing about the world—a means that stands in stark contrast to divination of animal entrails, prayer, assertion, tradition, revelation, authority, and the like. Surely there are questions that have been definitively answered—the earth and nine or, possibly, ten planets revolve around the sun—but in many instances the questions are open. A community of those learned in the subject continually explores these questions. While their collective and cumulative efforts approach closer to the truth, frequently the truth is just out of reach.

---

<sup>14</sup> See KARL POPPER, *THE LOGIC OF SCIENTIFIC DISCOVERY* 40-42 (1959).

<sup>15</sup> In the context of law, an example might be, “Switching the default liability standard for medical injuries from the fault standard to strict liability will increase the cost of medical care.”

<sup>16</sup> This empirical work does not have to be done by the person who framed the theory that guided the gathering of data and its statistical testing.

### B. Some Minor Criticisms

One criticism of Professor Nelson's work is that his reading of modern economic thought is selective and (like that of conspiracy theorists) biased to foster his particular point of view. *Economics as Religion* focuses on several very prominent modern economists or schools of thought, but the book is not a comprehensive modern history of economic thought. In particular, Professor Nelson says almost nothing about such prominent modern theorists as Tjalling Koopmans, Gerard Debreu, Michael Spence, George Akerlof, and Joseph Stiglitz. To be completely fair, Professor Nelson does mention the last three of this list, but he does so, not to illustrate the linear development of economic theory, but rather to highlight some of the shortcomings of the Chicago school.

Also glaringly absent from *Economics as Religion* is any mention of econometrics. At the same time that Paul Samuelson was seeking to put economics onto a more formal theoretical grounding, other economists, such as Jan Tinbergen and Simon Kuznets (both Nobel Prize winners) were trying to develop data and methods of testing that could subject the formal theory to confirmation or rejection.

The story of the development, refinement, and eventual centrality of econometrics in modern economic inquiry is missing from *Economics as Religion*. This is not merely an oversight; it significantly biases Professor Nelson's case in his favor. There is very little that is millenarian about anything that econometricians have written or are likely to write. Their writings are technical and only occasionally directed at practical matters. But as an indispensable complement to the work of the theorists, the work of creating modern econometrics is one of the most important aspects of modern economics as a science.<sup>17</sup>

### C. The Scientific Study of Law

I am extremely mindful of the scientific aspect of economics because of my many years of professing law and economics. To those unfamiliar with the modern history of legal scholarship, this statement

---

<sup>17</sup> One might also cite the work of behavioral economists, who use findings from actual behavior to replace or refine rational choice theory. See, e.g., Matthew Rabin, *Psychology and Economics*, 36 J. ECON. LITERATURE 11 (1998) (providing different forms of psychological evidence to challenge the rationality assumption in economics). If one were sympathetic to Professor Nelson's view, one might cite the development of behavioral economics as the creation of yet another religious sect. I prefer to see it as a natural progression in economists' attempts to understand human choice. It is a remarkable testament to that view that in 2002 the selection committee awarded the Nobel Prize in Economics to Daniel Kahneman, a psychologist.

will seem mysterious. But to those who are aware of the remarkable changes that have occurred in the legal academy over the past twenty-five years, the connection between the scientific nature of economics and the study of law will seem obvious. Let me briefly lay out the connection.

When I first taught the economic analysis of law at the University of Illinois College of Law in the early 1980s, the notion of beginning the analysis of a legal issue with a theoretical question was virtually unknown. Rather, legal analysis began by articulating the prevailing doctrine on some question of law and then proceeded by showing that some hypothetical fact scenario could not easily be accommodated to the existing doctrine (therefore requiring an emendation of the doctrine) or that various jurisdictions had taken incompatible doctrinal stances on the same question of law (therefore requiring some light-footed and high-minded reconciliation among the differing doctrines). These are important tasks for anyone concerned about the law, but they are not at the heart of modern legal scholarship. At that time, I was astonished by the dearth of systematic empirical work that could reinforce all of this doctrinal work. To make matters worse, when there was empirical work that called doctrine into question, it was largely ignored.<sup>18</sup> It was as if professors at medical schools had opined on the effectiveness of different cures without paying any attention to systematic trials of alternative courses of treatment.

Since the early 1980s, an alternative method of examining the law has become popular and, arguably, has even grown to become the default method of legal scholarly analysis. That innovation is known as law-and-economics or the economic analysis of law. That style of analysis begins with the economic proposition that economics provides a theory of how decision-makers make choices—not just choices about explicitly economic choices, such as whether to buy stocks or bonds, but all choices, including such seemingly non-economic choices as whether to have another child or whether to comply with a legal rule. By viewing legal decision-makers as making rational choices, law-and-economics provided a new way of theorizing about how people might respond to the imprecations of the law.

Law-and-economics provided a *theory* of legal decision-making. This was the beginning of a scientific way of looking at the law. Scholars could now hypothesize about how those whose behavior the law sought to affect might respond to legal rules. But as I indicated above, providing a theory is only a part of the manner in which sci-

---

<sup>18</sup> See, e.g., Thomas S. Ulen, *A Nobel Prize in Legal Science: Theory, Empirical Work, and the Scientific Method in the Study of Law*, 2002 U. ILL. L. REV. 875, 876 (2002).

ence proceeds. The second part—intimately connected with the framing of theory—is empirical work. And there is some evidence to suggest that empirical legal work is increasing.

Let me cite four bits of evidence for the increase in empirical legal scholarship. In the late 1990s, Professor Robert Ellickson of Yale Law School published a study of trends in legal scholarship finding an increase in empirical legal scholarship to be the most easily documentable trend in recent legal scholarship.<sup>19</sup> Ellickson found that during the period 1994 to 1996 there were six times more references in legal scholarship to the search term *empiric!* and all of its permutations than to *post-modern!* and its permutations, a term he interprets to be a proxy for skepticism about empirical work.<sup>20</sup> However, he found that his indices of empirical and quantitative work were constant from 1982 to 1996. But the indices for the terms *statistic!* and *significan!* doubled over the same time period.<sup>21</sup> From this he concludes that “[t]he data . . . hint[s] that law professors and students have become more inclined to produce (although not to consume) quantitative analyses.”<sup>22</sup>

Second, empirical studies have long been published in the best law reviews and, of course, in specialty journals, such as the *Journal of Legal Studies* and the *Journal of Law and Economics*. Now, however, there is a first-rate journal devoted expressly to the topic—the *Journal of Empirical Legal Studies*.<sup>23</sup>

Third, the Social Science Research Network (SSRN), the on-line scholarly publishing outlet where an increasing number of scholars first post their writing, has a subject-area working-paper series in empirical legal studies, edited by Professor Jennifer Arlen of New York University Law School.<sup>24</sup> Finally, the theme of the January 2006, Annual Convention of the American Association of Law Schools was empirical legal scholarship.

---

<sup>19</sup> Robert C. Ellickson, *Trends in Legal Scholarship: A Statistical Study*, 29 J. LEGAL STUD. 517 (2000). Ellickson did a search on Westlaw of all documents containing certain key phrases meant to indicate the style of scholarship that the piece represented. *Id.* at 528-29, tbl.4.

<sup>20</sup> *Id.* at 528.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> The journal is edited by a distinguished group of law professors at Cornell. One of the editors, Theodore Eisenberg, is a notable self-taught pioneer in empirical studies of legal topics. See, e.g., James A. Henderson, Jr., & Theodore Eisenberg, *The Quiet Revolution in Products Liability: An Empirical Study of Legal Change*, 37 UCLA L. REV. 479 (1990) (using empirical studies to track changes in judicial decision-making in products liability cases).

<sup>24</sup> Experimental & Empirical Studies Legal Subject Matter Journal, <http://www.ssrn.com/lisn> (follow “Subject Matter” hyperlink; then follow “Experimental & Empirical Studies” hyperlink) (last visited May 8, 2006).

One can explain this change in the nature of legal scholarship by noting that law-and-economics imported the scientific method of inquiry into the study of the law.<sup>25</sup> That is, the rise of empirical work is not something that simply happened coincidentally with other “law and” developments in legal scholarship. Rather, it occurred as an almost inevitable result of the theories of legal decision-making provided by economics and of the devotion to empiricism and the scientific method that characterize modern economics.

The last point to which I want to draw attention is how the process aspect of science might apply to this recent pattern of law-and-economics scholarship. Recall that science is a method of inquiry and that it continuously *approaches* a true description and explanation of natural phenomena. I think that it is this aspect of science as applied to the study of law that is the least appreciated and most difficult for doctrinal scholars to accommodate to. Making a bold attempt to push our understanding of law forward may lead a scholar to make what seems like an outrageous claim—that, for example, the doctrinal stance against the routine enforcement of stipulated damages is wrong. But it is in trying to defend such interesting and bold claims that significant scholarly advances are to be made. A very wise scholar once pointed out to me that you do not have to be right in order to do significant work and be a highly regarded scholar. Simply making the best theoretical and empirical case for a bold scholarly position that may ultimately prove incorrect—which is more or less how Professor Nelson describes much of Gary Becker’s work on the family<sup>26</sup>—may cause others to look at the issue in significant new ways. In this understanding of science, making scholarly mistakes—bold, meaningful mistakes—is a vital part of advancement.

As a telling example of this procedural aspect of the scientific inquiry, consider the important work that *legal scholars* are doing on behavioral aspects of choice. When economists and lawyers familiar with economics first started analyzing legal decision-making, the model of human decision-making that they used was rational choice theory. That theory holds, in one version, that human beings are flawless calculators of the costs and benefits of the alternatives open to them at any point in time and choose that alternative that maximizes their well-being. Part of the initial negative reaction to law-and-

---

<sup>25</sup> This is a point that I have made in previous work. See, e.g., Thomas S. Ulen, *The Unexpected Guest: Law and Economics, Law, Other Cognate Disciplines and the Future of Legal Scholarship*, 79 CHI.-KENT L. REV. 403, 404 (2004) (discussing the trend in legal scholarship toward a more scientific approach); Ulen, *supra* note 18, at 876 (discussing recent trends in legal scholarship).

<sup>26</sup> Nelson, *supra* note 2, at 176-84.

economics was due, I am certain, to skepticism of this account of how humans make decisions generally, and particularly with respect to legal choices. This skepticism grew into a distrust of economics and of theorizing. But those reactions betray a complete misunderstanding of the scientific method of learning about the world.

The appropriate response to the misunderstanding is to use the scientific method to provide a better theory of decision-making. Some responded in this more appropriate manner. Rather than reject the entire enterprise of theorizing about choice, some economists and legal scholars began to explore systematic deviations from the predictions of rational choice. This literature, referred to generally as "behavioral decision theory," has provided social scientists with new and important insights into the analysis of legal (and other) decision-making processes.<sup>27</sup>

This process aspect of the scientific inquiry is, perhaps, the most difficult for doctrinal legal scholars to come to terms with. Their greatest rewards in school and in practice have come in getting the correct answer, not in being brilliantly wrong.<sup>28</sup> They are suspicious—perhaps prudently so—of grand theories and overarching explanations of real phenomena. However laudable this extreme skepticism may be in many settings, it is stultifying with respect to scholarly advancement.

Science is collaborative and cumulative: we work on the same problem or set of problems separately but from the same general standpoint, and we share our results. Our small advances add up over time to large understandings. That is the great strength of science as a method of discovering explanations about real phenomena. Economics more than any other social science has embraced this method of inquiry, to its great credit and to our great benefit. The marvelous advances in legal understanding of the past twenty-five years are due to law-and-economics having imported that same method of inquiry into the study of law. Moreover, because we are at such an early phase of the scientific study of legal issues, empirical work has only just begun. There is much more excitement to come.

#### IV. CONCLUSION

I have tried here to summarize and criticize Professor Robert Nelson's view that modern economics has an essential religious streak.

---

<sup>27</sup> Ulen, *supra* note 18.

<sup>28</sup> See Daniel A. Farber, *The Case Against Brilliance*, 70 MINN. L. REV. 917, 917 n.1 (1986) (using the term "brilliance" to "refer to new ideas that turn conventional thinking on its head").

My central criticism of that contention is that it seems to me to miss or misrepresent the scientific forest for the millenarian trees. Economists have, of course, made sweeping normative claims for their learning, but I see these claims as mere puffery rather than the highest and best statements about the profession. Rather, the heart of economic work over the past seventy-five or so years has been the steady accretion of understanding through the process of theorizing, subjecting to empirical study, refining the theory in light of empirical results, performing more empirical work, and so on.

I have tried to show that the importation of economic thinking into the study of law has begun the same process within legal scholarship—with the same great increase in our understanding, and with the same promise of explaining much more.

The procedures by which science seeks to understand and explain the world—procedures whose success in the physical, chemical, and biological sciences have lately been repeated in the social sciences—are one of the greatest human innovations of the last millennium. As much as we have learned, there is still much more to be uncovered.