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Law and Economics versus Economic Analysis of Law

Geoffrey P. Miller¹

Abstract: This paper distinguishes law and economics – conceived as an equal partnership between two disciplines – and economic analysis of law, conceived as the application of economic reasoning to legal rules and institutions. I explore the difference by contrasting Robert Aumann’s economic analysis of a text from the Talmud with an analysis of the same text conducted from within the framework of law and economics. The paper demonstrates that law and economics and economic analysis of law offer complementary means for obtaining information about the social world.

Introduction

The topic of this paper is “law and economics versus economic analysis of law.” The topic may seem empty because the ideas are synonymous. Richard Posner, one of the founders of law and economics, is also the author of a book entitled “Economic Analysis of Law.” Few people would see room for a distinction.

Nevertheless, I will argue that the fields of law and economics and economic analysis of law can be distinguished. I hope to identify differences between these fields of study and to illustrate something of what each has to offer in terms of explaining features of our social world.

Definitions

One difference between law and economics and economic analysis of law is the order of words. The term “economic analysis” of law privileges the contribution of economics. The activity is done by economics, which is mentioned first; law is a passive subject. In the case of “law and economics,” in contrast, the disciplines are described as equal partners, with a slight preference to law if any hierarchy is to be inferred.

These linguistic differences mirror matters of substance. The economic analysis of law is the use of economic principles and reasoning to understand legal materials. It is a branch of economics. Law comes into the picture as an object of study. Just as macroeconomics looks at

¹ Stuyvesant Comfort Professor of Law, New York University. I thank Samuel J. Levine and Guido Calabresi for helpful comments on an earlier draft.

matters such as employment, growth and productivity, economic analysis of law looks at legal rules and institutions and seeks to analyze them from an economic point of view. Law and economics, on the other hand, is a genuine partnership of two disciplines, each with something to contribute. Economics adds the insights of economic science; law adds the understanding of complex institutions, politics, and social policies.²

Economic Analysis of Law

I want to illustrate the distinction between law and economics and economic analysis of law by discussing a paper by Professor Robert Aumann. Aumann is a distinguished game theorist and winner of the 2005 Nobel Prize in Economics. Among his many interests, Aumann writes about economic principles in the Talmud – the compendium of Jewish law and thought compiled in Babylonia and Jerusalem in the early centuries of the Common Era.

Professor Aumann’s paper, “Risk Aversion in the Talmud,”³ addresses a debate between two sages, Rabbi Nathan and Rabbi Khisda, on a fine point of family law. Here’s a stylized version of the background.

Prior to their marriage a husband-to-be signs a marriage contract promising to pay his wife-to-be 500 zuz in the event of divorce.⁴ Later, the wife sues her husband, claiming that he has obtained a divorce but refuses to pay the money called for in the contract. As required under the applicable law of evidence, she introduces two witnesses, W1 and W2, who testify that the divorce occurred. Based on this testimony the judge orders the husband to pay 500 zuz to the wife. The husband pays up.⁵

In the next stage, the husband sues W1 and W2, claiming that they perjured themselves when they testified that the couple had divorced. The judge agrees with the husband. The judge now has to determine the amount of damages. Here is where Professor Aumann’s economic analysis enters the picture.

Jewish law provided that a perjurer is treated as the person against whom he testified would have been treated had the perjury not been discovered.⁶ So the perjurers must pay the

² After the completion of this article I encountered Guido Calabresi’s preface to a forthcoming collection of his works in Spanish, in which much the same distinction appears. See Guido Calabresi, Preface to *Un Vistazo a La Catedral* 13-16 (Palestra et al., eds., Guillermo Arribas, trans., 2011).

³ Robert Aumann, Risk Aversion in the Talmud, *Economic Theory* 21, 233–239 (2003) [“Aumann”].

⁴ The contract is actually more complicated: the wife would receive the payment if she is widowed or divorced, but not if she predeceases her husband. *Id.* at 234.

⁵ These facts are stylized, among other things, because the Talmud does not specify whether the judge in an actual case actually ruled in favor of the wife or whether the husband actually paid. For purposes of exposition it is useful to assume that these events happened, without ruling out the possibility that the judge did not rule for the wife or the husband did not pay.

⁶ Aumann at 234.

husband an amount equal to the harm that was imposed by their perjury. But how is this standard to be implemented?

A simple answer would be 500 zuz – the amount the husband had to pay because of the wrongful testimony. But established precedent rejected this measure because it would over-compensate the husband. The principal reason is that the couple might have divorced even if the first lawsuit had not occurred.⁷ If the couple would have divorced anyway, then the perjury caused no harm because the husband would have to pay his wife 500 zuz in any event.⁸

Taking account of this fact, the rabbis might have established the following rule: if the couple would have divorced anyway, W1 and W2 pay nothing; if the couple would not have divorced, W1 and W2 pay 500 zuz. But the rabbis were more subtle than this. The measure of damages they adopted was, in effect, the amount the husband paid as a result of the perjured testimony *discounted by the probability that the couple would have divorced in any event*.

Assume, for example, that at the time of the wife's lawsuit the probability of divorce is 40%. This may seem unrealistically low because it's obvious that the marriage has broken. But as I will discuss in a moment, the husband could refuse to grant the wife a divorce, so the assumption is not all that unrealistic. If the probability the couple would divorce anyway is 40%, then the measure of damages is 500 zuz x 60%, or 300 zuz.

We can make this clearer by examining the husband's balance sheets before and after the payment of 500 zuz to his wife. Let's assume for convenience that prior to the litigation the husband has 1000 zuz in assets and that his only liability is his contingent obligation to pay his wife 500 zuz in the event of divorce. His balance sheets before and after the payment are then:

⁷ For clarity of exposition, I ignore two issues that would need to be considered in calculating the amount of the husband's damages: (1) discounting the judgment to present value; and (2) accounting for the possibility of the wife's predeceasing the husband in case they stay married. I also assume, as discussed below, that one effect of the judgment in the first lawsuit is to establish the divorce.

⁸ Aumann at 234.

Husband's Balance Sheet Before Payment to Wife

Assets	Liabilities/Net Worth
1000 cash	200 contingent liability to wife (500 x .4)
	800 net worth

H's Balance Sheet After Payment to Wife

Assets	Liabilities/Net Worth
500 cash	0 contingent liability to wife
	500 net worth

The measure of damages should be the reduction in the husband's wealth caused by the perjury: 800 zuz (husband's net worth before the perjury) less 500 zuz (husband's net worth after the perjury), or a total of 300 zuz. Professor Aumann invites the reader to admire the economic sophistication displayed by the Talmud here. The rabbis were taking account of the *expected value* of the husband's liability – the amount he would have to pay in the event of divorce multiplied by the probability of divorce. This is an impressive achievement, especially for jurists operating so very ago.

But then what do we make of the debate between Rabbi Nathan and Rabbi Khisda? Rabbi Nathan said the measure of damages should be calculated "in accordance with the wife" while Rabbi Khisda said the measure of damages should be calculated "in accordance with the husband." This creates a puzzle because it seems that the measure of damages should be invariant as between the spouses. The amount the husband is out of pocket – 500 zuz – is fixed. And the probability that the spouses would divorce – 40% -- is also an objective measure that should not depend on the spouses' perspectives. So what were the rabbis talking about?

Professor Aumann has an answer. He claims that the rabbis were discussing *risk-aversion*.

Here's the idea (my exposition is different from Aumann's but the basic ideas are the same). Prior to the wife's lawsuit, the couple both faced risk with respect to the husband's contractual promise. Why is this important? Because people have attitudes towards risk that need to be taken into account in a complete economic analysis. The analysis that gives the husband damages of 300 zuz implicitly assumes that the parties are risk-neutral. But most people are not risk-neutral. Most people are risk-averse. They don't like to have anxiety about the future.

What happens if we drop the assumption about risk neutrality and assume instead that the husband and wife are risk-averse? If we do that, Professor Aumann claims, the debate between the rabbis makes sense because the perspectives of the spouses does make a difference in the calculation of damages.

Consider first the view of Rabbi Khisda, who advocated using the perspective of the husband. Prior to the perjured testimony, the husband had a contingent liability which, ignoring risk, was equal to 200 zuz ($500 \text{ zuz} \times 40\%$ probability that the couple would divorce). But the actual economic cost to the husband was more than this because he disliked risk. We need therefore to add a risk premium measuring the extent that the risk reduced his utility. Let's say the risk premium is 25 zuz. In that case, prior to the court's judgment in the initial lawsuit, the full cost to the husband of his contingent liability was 225 zuz (200 zuz, the expected cost of payment to his wife in the event of divorce, plus 25 zuz in risk premium). After the judgment, the husband has paid 500 zuz to the wife, but has also been relieved of a liability with an expected value of 200 zuz and a risk which he is willing to pay 25 zuz to avoid. If the perspective of the husband is used, therefore, his damages against W1 and W2 should be 275 zuz, not 300 zuz (500 zuz paid to wife as a result of the perjured testimony less 225 zuz contingent liability and risk premium extinguished).

This we can demonstrate by comparing the husband's balance sheet before and after the perjured testimony:

Husband's Balance Sheet Before Payment to
Wife, with Risk Premium

Assets	Liabilities/Net Worth
1000 cash	200 contingent liability to wife 25 risk premium
	775 net worth

Husband's Balance Sheet After Payment to
Wife, with Risk Premium

Assets	Liabilities/Net Worth
500 cash	0 contingent liability to wife 0 risk premium
	500 net worth

The husband's economic cost of the perjury, taking account of risk aversion, is the reduction in his net worth: 775 minus 500, or 275. This, according to Professor Aumann, would be the measure of damages "according to the husband."

But suppose we use the perspective of the wife, as advocated by Rabbi Nathan? We interpret this to mean that the measure of damages should be the wife's ill-gotten gain (it may seem odd that the witnesses should be required to pay wife's ill-gotten gain, but we will see that this is actually sensible). What is the wife's ill-gotten gain? She received 500 zuz as a result of W1 and W2's perjury. But this ill-gotten gain must be offset by what she would sacrifice. Prior to the judgment she possessed a contingent asset, namely the prospect of receiving 500 zuz in the event of divorce. We saw that because the probability of divorce is 40%, the value of this asset, ignoring risk aversion, is 200 zuz. But because the wife is risk averse, the actual economic value of this asset to her is less than 200 zuz. Suppose the wife's risk premium is the same as the husband's – 25 zuz. Then the risk-adjusted value of the wife's contingent asset is

only 175 zuz, not 200 zuz. The true measure of her ill gotten gain from the judgment in the original case is then 325 zuz (500 zuz received from husband less 175 zuz in value of the contingent asset which is extinguished by the judgment).

Again, this becomes clear when we examine wife’s balance sheet before and after the perjury (assuming for convenience that the expectation of payment from the husband in the event of divorce is her only asset at the beginning of the lawsuit):

Wife’s Balance Sheet Before Payment from Husband, with Risk Premium

Assets	Liabilities/Net Worth
200 contingent receivable from husband (less 25 risk premium)	175 net worth

Wife’s Balance Sheet after Payment from Husband, with Risk Premium

Assets	Liabilities/Net Worth
0 contingent receivable 0 risk premium 500 cash	500 net worth

Judged by this measure, her ill-gotten gain is the increase in her net worth as a result of the perjury: 500 zuz minus 175 zuz or 325 zuz.

Professor Aumann thus suggests that risk aversion explains the discussion between Rabbi Nathan and Rabbi Khisda: if the husband’s perspective is used, as advocated by Rabbi Khisda, the measure of damages is 275 zuz; if the wife’s perspective is used, as advocated by Rabbi Nathan, the measure of damage is 325 zuz. Professor Aumann observes that this debate, so interpreted, reflects sophisticated economic insight: the rabbis not only understood the concept of expected value, but also grasped and were able to quantify the idea of risk aversion.

Law and Economics

Professor Aumann's approach is an example of the economic analysis of law: it is the application of pure economic theory to legal materials. And as we have seen, the analysis generates interesting and insightful results that shed real light on the meaning of a difficult text. But now let's analyze this issue, not from the perspective of the economic analysis of law, but rather from the perspective of law and economics. Remember, law and economics introduces institutional details not on the radar screen of economic analysis of law, a fact which makes the task messier and more complicated but also potentially richer and more revealing.

The legal background of the dispute between husband and wife is the traditional Jewish law on marriage and divorce. This law was not gender-neutral. Husbands could divorce their wives for many reasons, but wives could only obtain a divorce from their husbands under limited circumstances.⁹

This legal background imposed three risks on wives at the time of marriage – risks that were all the more problematic because the wife's family was likely to have imperfect information about the character of the future husband at the time the wedding was being arranged.

First, the wife had the risk that her husband would divorce her. After divorce, she would have a harder time finding a second husband: she would be older, less beautiful, and not a virgin. Also the divorced wife may not have enjoyed the right to a full share in property that accumulated during the marriage.

The second risk was the possibility that during the marriage the husband would dominate the wife. This followed from the fact that while divorce was costly to the wife, it was less costly to the husband. Divorced husbands could remarry free of much of the stigma of age, faded beauty or lack of virginity that plagued divorced wives. And husbands also may have been able to appropriate for themselves a larger share of wealth accumulated during the marriage. This lack of parity at divorce meant that husbands had greater power during the marriage. They could threaten divorce – a threat which was credible since the husband could obtain a divorce at will and not incur devastating consequences.

⁹ The school of Shammai held that a man should not divorce unless he has found his wife guilty of some unseemly conduct. The school of Hillel, on the other hand, held that that he may divorce "even if she has merely spoilt his food." Rabbi Akiba went even further, holding that a man may divorce if he finds another woman more beautiful. Babylonian Talmud, Tractate Gittin, Folio 90a. Women, on the other hand, were generally not permitted to initiate divorce, although the wife might be able to compel the husband to divorce her in unusual circumstances.

The third risk was that of being trapped in a loveless marriage. If the husband refused consent to a divorce, there was little the wife could do to force him (although she might go on strike by refusing sex or not performing other duties of the marriage).

When the law imposes background rules that parties do not want, they can try to contract around these rules. The marriage contract at issue in Aumann's article is an example – not a complete avoidance of the rules, but at least a mitigation of their harshness. The contract provided that in the event of divorce, the husband must pay the wife a sum of money – effectively a form of liquidated damages.

This promise mitigated two of the risks we have just identified. Divorce risk was reduced because the husband would have to pay the wife money if they divorced. The requirement of paying damages deterred the husband from divorcing in the first place; and if he did divorce, the damages he had to pay would partially compensate his wife for the costs she experienced as a result.

The contract also mitigated the risk that the husband would dominate the wife. Because the requirement of paying damages reduced the credibility of his threat to divorce, he had less power to compel her to bend to his will. Accordingly, the contract partially rectified the power inequality in the marriage.

All this is good. The problem was that the marriage contract did not correct for the third risk to the wife – the risk she would be trapped in a loveless marriage. The husband could still refuse the wife's request for a divorce and nothing in the marriage contract limited his ability to do so. In fact the liquidated damages provision gave the husband an affirmative reason to *refuse* the wife's request for a divorce: by not granting her a divorce he could avoid paying her the money called for in the contract. The husband, of course, might also want a divorce. But if he was unscrupulous, he could utilize the strategy of making her life unhappy in hopes of inducing her to waive her rights in exchange for his agreement to divorce.

This brings us to the lawsuit of wife versus husband. The idea that the wife could win such a lawsuit seems mysterious. Given that Jews of the Diaspora lived in small communities where people knew one another's business, the wife's claim that her husband had secretly obtained a divorce seems somewhat implausible. In some cases, to be sure, the husband might have obtained a secret divorce. But often the fact of a divorce, if it occurred, would have been known not only to the community at large but also to the judge. If the judge had not heard of a divorce, he had some reason to infer that none had occurred. Further, if the wife could find witnesses willing to perjure themselves by saying a divorce had occurred, why couldn't the husband bring in even more witnesses to testify truthfully that it had not? Why would the wife win this lawsuit?

One plausible answer is that she would win the lawsuit because it was a legal fiction. The judge would know, or suspect, that no divorce had occurred. But he could nevertheless accept the testimony of the wife's witnesses and reject that of any witnesses put forward by the husband. He would do so because a ruling in favor of the wife would have the legal effect of establishing the divorce. Nothing in the subsequent lawsuit between the husband and the wife's witnesses would undermine this result (for one thing, the wife isn't even a party to this later suit).

Why would judges go along with this fiction? For the same reasons that judges have always endorsed legal fictions: to serve what they saw as important reasons of public policy. Two concerns seem most pertinent. First, the judges might have worried about the unfairness of the background rules on divorce and sought a means to improve the legal position of wives in this context. Or the judges might have attempted to implement the intent of the parties manifested in the marriage contract, which was to reduce the risk the wife takes on when she marries.

But the device of legal fiction, if it indeed existed, did not solve all the problems. It protected wives against some of the risk of divorce, allowed wives a means of exit from loveless marriages, and rectified, to some extent, the imbalance of power in the marriage. But, unless modified by other rules, it would accomplish these objectives at the risk of undermining the stability of the family. If wives could routinely obtain judgments of divorce against their husbands based on perjured testimony, they would effectively enjoy divorce on demand. The legal fiction even gave wives an affirmative incentive to terminate their marriages because they would receive a reward in the form of the contract payment if they did so (although they would still experience the social costs).

This is where the second lawsuit comes in. It is useful first to clarify the nature of the parties in interest. Although this case is officially brought against the wife's witnesses and not against the wife, it is probable that the witnesses had no real exposure. Because these witnesses perjured themselves on the wife's behalf, we imagine that they are her friends and that she will indemnify them for the amounts of any judgment which they have to pay to the husband. Thus any judgment the husband obtains against the witnesses is, in effect, a judgment against his (former) wife.

This brings us to the question Professor Aumann addresses in his paper, namely the measure of damages. From a law and economics perspective, we look at this issue in light of the complex legal, institutional, and factual background – information that is screened out in pure economic analysis of law. We investigate, in particular, whether the measure of damages adopted by the court reflects the public policy objectives we have identified.

We saw that the rabbis rejected an all-or-nothing approach to damages and instead granted damages based on the probability of divorce. As demonstrated in Professor Aumann's paper, the economic analysis of law can explain this as reflecting the concept of expected value. How can this be understood from the perspective of law and economics? Law and economics would not reject Professor Aumann's explanation, but would also consider other information pertinent to the question.

Consider three situations in this regard:

1. In the first situation the husband does not want the divorce and is not abusing his wife or demanding that she waive her rights. It is the wife who wants the divorce because she would be happier with someone else. This is the situation where the concerns about the legal fiction are greatest. The damages measure adopted by the rabbis addresses this situation by depriving the wife of any financial benefit from the divorce. The court would find that the probability of divorce was zero. The husband therefore gets his full judgment of 500 zuz against W1 and W2 and the wife indemnifies W1 and W2 by this amount. The effect is that the wife gets no payment under the contract and the husband incurs no penalty.

2. In the second situation the marriage has completely broken down. The husband wants the divorce as much as his wife does but is making her life miserable in an attempt to induce her to waive her rights. Here, the judge could find that the probability of divorce is 100%. The wife gets her divorce and also keeps the full contract payment.

3. In the third situation the marriage is troubled and unhappy, the parties are insensitive to one another, but the relationship is not totally broken. Here, the court might assess the ex ante probability of divorce as 50%, and therefore award the husband a moderate amount of damages against W1 and W2.

In each of these cases, the court can use the measure of damages as a means for advancing important social policies: giving wives relief from loveless or abusive marriages, reducing disparities in power within marriages, protecting the family against instability, and policing against opportunism by either party. Accordingly, law and economics provides a supplemental explanation for the Talmudic measure of damages – one not inconsistent with the economic interpretation advanced by Professor Aumann, but arguably more informative (if also less precise) because it is based on the institutional details that a lawyer can bring to the table.

What then about the debate between Rabbi Nathan and Rabbi Khisda? What does it mean, in this context, to say that the damages are calculated “in accordance with the wife” or “in accordance with the husband”?

Law and economics suggests an answer which differs in some respects from that provided by Professor Aumann. In the husband's lawsuit against the wife's witnesses there will inevitably be differences in testimony. The wife's witnesses will argue that the marriage had irretrievably broken and that divorce was inevitable.¹⁰ The husband's witnesses, on the other hand, will argue that the marriage was not broken and that only the wife's fecklessness and irresponsibility led to the first lawsuit.

It is inherently difficult to sort through this sort of testimony, which has to do with intimate details not readily observable outside the marriage. The judge accordingly needs some sort of a rule of thumb as to whose testimony to favor in the event of disagreement. But which party should the judge favor? The matter is especially problematic in this context since the identity of the parties is confused: the husband is technically the complaining party, but the case is part and parcel of an action in which the wife is the complainant. Not surprisingly, the question generated disagreement. Rabbi Khisda advises that in such a case the court should give greater weight to the husband's evidence; Rabbi Nathan advises that the court should give greater weight to the wife's.

This debate is not merely theoretical. Rabbi Khisda's position would make it more difficult for wives to obtain release from a loveless marriage, would limit wives' power in the marriage relationship, and would make wives more vulnerable to opportunistic behavior by their husbands, but would also protect against the risk that wives would leave their marriages for problematic reasons. The position advocated by Rabbi Nathan, on the other hand, would have opposite consequences: wives would be empowered and allowed easier rights of exit from loveless relationships, but husbands would also be placed at greater risk of opportunism by their wives and the stability of the family might be undermined.

In this respect the debate between the rabbis can be seen, not only as an interesting discussion of abstract ideas, but also as reflecting conflicting views on a fundamental question of public policy – a question which, in different ways, judges, legislators, and the public at large continue to debate today.

Conclusion

The foregoing has been an effort to illustrate the differences and the respective strengths and weaknesses of law and economics, on the one hand, and the economic analysis of law, on the other – seen through the lens of Professor Aumann's brilliant exposition of a legal text from the Talmud.

¹⁰ Technically, these witnesses are testifying for the defendants who were the wife's witnesses in the first case, but in reality they are testifying for the wife.

Each approach has advantages and disadvantages. Economic analysis of law brings to the table the well-understood methodology and a precision of analysis that is emblematic of economics as a whole. On the other hand economic analysis of law also carries with it the limits of its discipline, which include the fact that, to achieve analytical precision, the approach must abstract from many features that make a difference in the real world.

Law and economics is inherently more complex than economic analysis of law and less analytically rigorous. These might be considered weaknesses. On the other hand, law and economics, because it does not abstract from the real world, also offers a potentially richer menu of explanations for the phenomena under investigation. At its worst, law and economics can be muddied, as when we mix many colors into an ugly brown. But at its best, law and economics can be a rainbow that adds vibrancy and depth to the analysis that comes out of the purely economic approach.

The same issues and the same tradeoffs occur throughout our discipline, whether the question is one of Talmudic law or of the benefits and costs of adhering to the absolute priority rule in bankruptcy reorganization. The purpose of this paper is not to advocate for one perspective or the other, but rather to identify the differences between them and to argue that both, in different ways, have something important to add to our understanding of the social world.