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RETHINKING APPEALS

Uri Weiss[*]

ABSTRACT

This paper makes the point that a court decision that is open to an appeal is akin to a take-it-or-leave-it settlement proposal for both parties. For the case to not be appealed, both parties need to "take," i.e., accept, this proposal. Thus, on one hand, if both parties cannot achieve a settlement by themselves, they usually benefit from the right to appeal. On the other hand, a right to appeal activates the regressive effects that characterize settlements, which also applies to lower-court decisions. For example, legal uncertainty has a regressive effect on lower-court decisions: if the judge wishes to block appeals to protect one party's interest, his or her own self-interest, or the system's interest, the lower court judge's decision will be regressively biased relative to the higher-court decision. In fact, this could also occur without strategic judges, but this would be an evolutionary process.

[*] Uri Weiss is a Polonsky fellow at Polonsky Academy and the Hebrew University of Jerusalem. I am grateful to Robert J. Aumann, Ehud Guttel and Omri Yadlin for supervising me in different phases of this continuing project. I thank Irit Haviv-Segal, Joseph Agassi, Kenneth Arrow, Barak Atiram, Serbiu Hart, Alon Harel, Manachem Mautner, and Michael Maschler for our discussions.

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I. INTRODUCTION

A. On Appeals – The Effects of the Right to Appeal

The right to appeal is a controversial topic. The U.S. Supreme Court has repeatedly declined to recognize a due process right to appeal in either civil or criminal cases.[1]

How does the right to appeal influence litigation and the law? The common wisdom is that the right to appeal may block arbitrariness in the legal system, correct and prevent mistakes, incentivize judges to avoid negligence in their work, enforce precedents, and lead to uniformity in the legal system and by this reduce legal uncertainty.[2] Of course, the right to appeal may impose additional litigation costs on parties and the legal system and lengthen the time of the legal process.[3] Game theory analysis may contribute to critically examining and challenging this common wisdom surrounding the effects of appeals

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[1] *See* Cassandra Burke Robertson, *The Right to Appeal*, 91 N.C. L. REV. 1219 (2012).

[2] Robertson claimed

> that a right to appeal protects both private litigants and the justice system as a whole. First, doctrinal consistency necessitates the explicit recognition of a constitutional right to appeal-a right that the Supreme Court's criminal and punitive damages doctrines have already implicitly recognized. Second, the modern procedural system has developed in a way that relies on appellate remedies as part of fundamental due process. Traditional procedural safeguards such as the jury trial and the executive clemency process-may once have sufficiently protected due process rights. In the modern era, however, these procedures have diminished at the same time that reliance on appeals has grown. As a result, if appellate remedies are removed from the procedural framework, the system as a whole cannot provide adequate due process protection. Finally, recognizing constitutional protection for appellate rights would also express a normative policy choice, promoting the values of institutional legitimacy, respect for individual dignity, predictability, and accuracy.

Id. at 1219.

[3] First, litigants should pay their lawyers. Second, they may need to pay extra fees for the court. Third, this is time consuming. Fourth, it may lead to additional delay in the capacity of the plaintiffs to fulfill their right. Even if they win in trial court, they may not use the money because they are not sure that they will not lose in the appellate court.

by explaining how much, why, and when appeals lead to these results and exploring the ways to improve this institution.[4]

This paper investigates the game of appeals, which is not necessarily a symmetrical one (i.e., a litigation in which there may be a strong party versus a weak party). The right to appeal changes the game of litigation in a way that changes the incentives of lower court judges. The right to appeal may give judges incentives to block appeals. Therefore, this paper argues that judges who respond to these incentives by choosing the most effective measures to block appeals will give the weak parties in an uncertain legal regime less than their average payoff in the higher court – something that is still better for the weak parties than the lottery of appeal.

Additionally, this paper uses a simple numerical example to make its points, and a formal model is available in the appendix.

B. Literature Review

Some law and economics papers have investigated how the right to appeal influences litigation and the law. Richard Posner summarized the law and economics approach to appeals as follows:

> [T]he right to appeal serves two social purposes. It reduces the cost of legal error and it enables uniform rules of law to be created and maintained . . . were appellate courts not empowered to correct errors, they could not perform their substantive law making function (precedent production) litigants would have no incentive to appeal.[5]

Posner is right that the capacity of the appellate courts to correct mistakes gives incentives to appeal. We will present other works that investigate when this incentive is strong enough. A prominent law and economics study on appeals was undertaken by Steven Shavell.[6] He

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[4] For my approach toward using game theory see Uri Weiss & Joseph Agassi, *The Game Theory of the Pax Roman versus the European Union*, 70 DEPAUL L. REV. 201 (forthcoming). *See also* Uri Weiss & Joseph Agassi, *Game Theory for International Accords*, 16 S.C. J. INT'L L. & BUS. 1 (2019). In my papers with Joseph Agassi, we argue that game theory is most useful in recommending what games should not be played.

[5] *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW, pt. IV, § 22.18 (9th ed. 2014).

[6] *See* Steven Shavell, *The Appeals Process as a Means of Error Correction*, 24 J. LEGAL STUD. 379 (1995).

asked what rationale can be offered for the incorporation of an appeals process in a system of adjudication. Shavell claimed that the right to appeal helps to correct mistakes, if the parties know whether the lower court made mistakes, and if the appellate court reverses more errant decisions than correct ones.[7] In this case, the parties will appeal more on errant decisions than correct decisions.[8] If the appeal cost is within the right range, which may be controlled by imposing fees and giving subsidies, then the parties will appeal if – and only if – there was a mistake in the decision. In these situations society may optimize the correction of mistakes by controlling the litigation costs and by investing in the appellate court instead of investing more in the lower courts.[9]

In 2006, Shavell investigated how the right to appeal incentivizes adjudicators and concluded that the appeals process leads to better decision making because it "constitutes a threat to adjudicators whose decisions would deviate too much from socially desirable ones."[10] He argued that the right to appeal incentivizes adjudicators to give a decision that is close enough to the higher court's preferred decision, i.e., in the case of legal certainty to give a decision that is equal to the preferred decision by the higher court plus or minus the litigation costs of a party.

As clarified by Chad Westerland, Jeffrey A. Segal, Lee Epstein, Charles M. Cameron, and Scott Comparato, adjudicators are incentivized to implement the current preferences, not the precedents, of the higher courts.[11] The article's empirical research supports the notion that this is what judges do in real life.

Christina L. Boyd, as well as authors of other empirical law and economics papers, are interested in the extent to which district judges

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[7] *Id.*

[8] *Id.*

[9] *Id.* Friedrich A Hayek claimed, against any kind of planning, that the central planner does not have enough information to lead to the intended allocation; therefore, he saw any successful planning as impossible. Friedrich A. Hayek, *Planning, Science, and Freedom*, 148 NATURE 580 (1941). Therefore, Shavell's thesis should not be classified as belonging to Hayek's school. Hayek's students will wonder, how will the state gain the information required to know the ideal subsidies and fees, which may differ in every case? *Id.*

[10] Steven Shavell, *The Appeals Process and Adjudicator Incentives*, 35 J. LEGAL STUD. 1, 1 (2006).

[11] *See* Chad Westerland et al., *Strategic Defiance and Compliance in the U.S. Courts of Appeals*, 54 AM. J. POL. SCI. 891 (2010).

implement their own preferences and how much they implement the preferences of the higher courts.[12] The implicit or explicit assumption in these papers is that, to prevent lower court decisions from being reversed or appealed, judges need to implement the preferences of the highest court. I will argue that this is not the case when the preferences of the highest court are uncertain and the game is asymmetric; in this case, giving the expected decision of the highest court is not a good strategy for blocking appeals.

Both of Shavell's works on the subject assume that the game is symmetric.[13] This is a game between two parties who are risk neutral, have the same litigation costs, and are equal in terms of any other relevant respects.[14] Shavell established the foundations, and his work may be the basis for the next step — analyzing the asymmetric game of appeals, or more generally, a game that is not necessarily symmetrical. This development will make Shavell's theory more useful, since the litigation game played in real life is not necessarily an equal one. Whereas banks and insurance companies are very close to risk neutral regarding the stakes involved at trial, their customers will be much more risk averse.[15] Moreover, parties have different time discounts and different bargaining power; therefore, the real-life game of litigation is not necessarily even-handed.[16] Furthermore, in many

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[12] *See* Christina L. Boyd, *The Hierarchical Influence of Courts of Appeals on District Courts*, 44 J. LEGAL STUD. 113 (2015).

[13] Shavell, *supra* note 6; Shavell, *supra* note 10.

[14] I propose to learn from Shavell that the right to appeal encourages a party to appeal large mistakes more than small mistakes or corrected decisions, if the appellate court reverses more errant decisions than correct ones (by reversing more, I do not mean the probability of reversal but the expected change in outcome by the higher court). If the expected change in the results by the appellate court positively depends on the size of the mistake, and if the cost of the appeal is independent from the size of the mistake, then it is rational for a party to appeal large mistakes against them more than small mistakes or correct decisions. This is the case, since the cost of the appeal will be the same, but the benefit in the case of an appeal will be larger. This lesson is much more limited than Shavell's theory, but it does survive Hayek's criticism of social planning and is also valid in the asymmetric game. Hayek, *supra* note 9.

[15] *See* Uri Weiss, *The Regressive Effect of Legal Uncertainty*, 2019 J. DISP. RESOL. 149 (2019).

[16] *See* Reiko Aoki & Jin-Li Hu, *Time Factors of Patent Litigation and Licensing*, 159 J. INSTITUTIONAL & THEORETICAL ECON. (JITE) 280 (2003). The study of Aoki Reiko and Jin-Li Hu

> incorporates the concept of time into an analysis of patent litigation and licensing. [They] show that increasing imitation, or litigation costs with either a longer imitation lag or an extended litigation

types of litigation, such as insurance litigation or bank customer litigation, the game will typically be asymmetrical.[17] Moreover, when we think about how to design the institutions for legal systems, or what games should be prevented, the asymmetric ones are very important. This is because the main goal of the law is to minimize evil and arbitrariness, to protect the weak party from great injustice, or, in the words of the Bible: "If ye oppress not the stranger, the fatherless, and the widow . . . ."[18]

When moving from a symmetric litigation game to an asymmetrical game, the results change drastically. If a game has legal uncertainty, the lower court judge is biased against the weaker party if the judge attempts to block appeals. In these scenarios, the appeal will not adequately prevent mistakes. Moreover, the stronger party may appeal, even if they obtain more than their expected reward in the highest court, in order to achieve more through a settlement.

This paper's model is inspired by Cooter's model regarding judicial discretion as a function of the power separation.[19] His conclusion was as follows: "the court's discretionary power of interpretation corresponds to the set of possible laws that are Pareto efficient relative to the preferences of the decision-makers who must

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> time, may have effects on licensing, settlement, and fees other than increasing the pecuniary costs. A higher pecuniary imitation cost always benefits the patentee and hurts the imitator. However, the patentee may prefer faster imitation to induce ex ante licensing, while the imitator may prefer slower imitation to reduce the settlement fee.

Id. at 280.

[17] Marc Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 L. & SOC'Y REV. 95, 97-114 (1974). Galanter claimed that

> [b]ecause of differences in their size, differences in the state of the law, and differences in their resources, some of the actors in the society have many occasions to utilize the courts (in the broad sense) to make (or defend) claims; others do so only rarely. We might divide our actors into those claimants who have only occasional recourse to the courts (one-shotters or OS) and repeat players (RP) who are engaged in many similar litigations over time. The spouse in a divorce case, the auto-injury claimant, the criminal accused are OSs; the insurance company, the prosecutor, the finance company are RPs.

Id. at 97.

[18] Jeremiah 7, 6.

[19] ROBERT D. COOTER, THE STRATEGIC CONSTITUTION (2002).

cooperate to enact fresh legislation."[20] In this article, I conclude that the lower court's discretionary power in a particular case corresponds to the set of possible settlements that are Pareto efficient relative[21] to the preferences of the litigants who have the right to appeal. Yadlin used a similar model to analyze judicial activism.[22] Yadlin claimed that activist courts increase their future latitude of possible decisions that the legislature could not override. Yadlin also defined judicial discretion as the range of a court's possible decisions that will not be overruled by the other branches of the government, i.e., the range of decisions that will not be changed by new legislation. Yadlin actually spoke about the *de facto* judicial discretion (this may be considered to be the judicial discretion from the realist point of view), and used game theory to propose a measurement for the decision range of the judge, that Yadlin sees as the judicial discretion.[23] This paper is inspired by Yedlin's work: Yadlin examined the range of the judges' decisions that will not be overruled by the other branches through the political game, and we will examine the range of judges' decisions that will not be overturned by upper courts through appeals.

C. Litigation and Justice

The litigation process may be biased against weak parties. One way this is demonstrated is that they may systematically receive less recompense in settlements or in courts than they are entitled to by the law.[24] How can we reduce injustice in litigation? How can we reduce the disadvantages that weak people have in the litigation process? To understand this, this paper will ask the following question: What are the distributive effects, and who are the winners and losers of the right to appeal? The theory of Law and Economics may have some interesting things to say about the behavior of not just the litigants but the judges as well.

This paper argues that a court decision that is open to appeal is strategically akin to a take-it-or-leave-it settlement proposal for both parties; therefore, it may be interesting to think about the distributive

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[20] *Id.* at 227.
[21] *Id.*
[22] Omri Yadlin, *Judicial Activism and Judicial Discretion as a Strategic Game*, 19 BAR ILAN UNIV. L. REV. 665 (2003) (Hebrew).
[23] *Id.*
[24] Weiss, *supra* note 15, at 150.

effects of settlements, when we think about appeals. On one hand, both parties would benefit from a legal settlement; otherwise, they would not accept it.[25] On the other hand, legal settlements do not reflect the expected judgments on a one-to-one basis; furthermore, settlements are systemically biased in favor of repeat players, rich people, and men against one-time players, poor people, and women.[26]

Weiss showed that legal uncertainty has a regressive distributive effect on settlements.[27] There are parties that gain from increasing legal uncertainty and others that lose from it. Legal uncertainty leads to regressive settlements –

> a shift from a more certain legal regime to a less certain regime transfers wealth from risk-averse parties to risk-neutral parties via settlements. Thus, since poor people are more risk-averse than rich people, legal uncertainty leads to a transfer of wealth from poor people to rich people. Additionally, since women are (or are at least perceived to be) more risk-averse than men, legal uncertainty leads to a transfer of wealth from women to men.[28]

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[25] Adam Smith pointed out: "[T]rade which, without force or constraint, is naturally and regularly carried on between any two places, is always advantageous, though not always equally." *See* ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 489 (R. H. Campbell & A. S. Skinner eds., 9th ed. 1827).

[26] Galanter, *supra* note 17, at 97-114; Weiss, *supra* note 15, at 150.

[27] Weiss, *supra* note 15, at 150. When we refer to 'legal uncertainty,' we refer to the variance of the expected judgment of the court. It is important to clarify that we do not address the probability of guessing the outcome, but rather the variance of the expected judgment. Thus, a standard is not necessarily more uncertain than a rule, although it is more difficult to guess the outcome of a trial under a standard regime. For example, a comparative negligence regime has the form of a legal standard. It is usually more certain than a contributory negligence regime, which has the form of a legal rule.

Under a comparative negligence regime, the plaintiff may have a 33.33% probability of receiving 0, a 33.33% probability of receiving 50, and a 33.33% probability of receiving 100. Under a contributory negligence regime, the plaintiff may have a 50% probability of receiving 0 and a 50% probability of receiving 100. Thus, in this case the comparative negligence regime is more certain, because the variance of the possible outcomes is lower, despite the fact that there are more possible outcomes; therefore, it is harder to foresee the exact outcome of the case. When the remedy is standard, it may decrease legal uncertainty.

[28] Weiss, *supra* note 15, at 149.

This means that legal uncertainty has a class and gender regressive effect. It is important to understand the regressive effect of legal uncertainty, since the degree of legal uncertainty is not determined by nature; rather, it is the choice of society.

Let me take an example that will explain the theory that legal uncertainty leads to a transfer of wealth from risk-averse people to risk-neutral people.

A risk-neutral and a risk-averse party – such as a bank and a customer – are litigating about an asset with a value of 100. Under a certain legal regime, the law is such that each party is entitled to 50% of the asset (as in the *Talit*[29] rule). In other words, each party has a 100% chance of receiving 50; therefore, the payoff function of each party, in money terms, is 1×50. In contrast, under an uncertain legal regime, each party has a 50% chance of gaining everything and a 50% chance of gaining nothing, i.e., each party has a 50% chance of gaining 100 and a 50% chance of gaining 0. Hence, the payoff function of each party, in money terms, is $(0.5 \times 100) + (0.5 \times 0)$.

The expected judgments of each party in the two cases are equivalent. In both cases, the expected judgment will award 50; however, the variance in the judgment in each regime is different. In the certainty regime, the variance is 0; meanwhile, the variance is 50^2 in the uncertainty regime.

It is known that the vast majority of legal cases end in settlements.[30] Therefore, it is interesting to investigate which

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[29] Mishnah Bava Metzia 1:1 ("Two people are holding a garment. One of them says, 'I found it,' and the other says: 'I found it.' One of them says: 'It is all mine,' and the other say, 'It is all mine.' Then, one swears that his share in it is not less than half, and the other swears that his share in it is not less than half, and should then be divided between them.").

[30] Theodore Eisenberg & Charlotte Lanvers, *What is the Settlement Rate and Why Should We Care?*, 6 J. EMPIRICAL LEGAL STUD. 111, 111 (2009). According to Eisenberg and Lanvers,

> [r]egardless of the method of computing settlement rates, no reasonable estimate of settlement rates supports an aggregate rate of over 90 percent of filed cases, despite frequent references to 90 percent or higher settlement rates. The aggregate rate for the EDPA [District of Pennsylvania] alone was 71.6 percent and for the NDGA [Northern District of Georgia] alone was 57.8 percent, suggesting significant interdistrict variation, which persists even within case categories. We report separate settlement rates for employment discrimination, constitutional tort, contract, and tort cases in the two districts. The highest settlement rate was 87.2

settlement will be reached in each regime. In the certainty regime, each party knows that there is a 100% chance that he or she will win 50 in a trial. Therefore, neither party will agree to any settlement that awards less than 50, and the disagreement payoff[31] of each party is 50. Thus, the only possible settlement is 50-50, i.e., the bank is going to receive 50, as is the customer.

In contrast, under an uncertain legal regime, the expectation of the judgment is $(0.5 \times 100) + (0.5 \times 0)$. The disagreement payoff of the risk-neutral party – the bank – will continue to be 50; since, for the bank, the value of the lottery of the trial is the expected judgment. However, for the risk-averse party – the customer – the value of the trial is lower than that of the expected judgment. He or she prefers a lower, but certain, sum of money to the outcome of a risky lottery. Let us assume that the value of the trial for the customer is 25.[32] This means that the customer's disagreement payoff is 25, i.e., the minimum sum of money that the customer will agree to receive in a settlement is 25. Thus, the disagreement payoffs for the bank and the customer are 50 and 25, respectively, which means that the surplus is 25. Let us assume that they will share the surplus equally, giving each party 50% of the surplus. This leads to an expected settlement of 62.5-37.5 in favor of the risk-neutral party – the bank.

II. THE REGRESSIVE EFFECT ON LOWER COURT DECISIONS

Although settlements are in the interest of the two parties, they occasionally do not reach a settlement, especially in the case of legal uncertainty with at least one risk-averse party. This may be because of a lack of rationality or the agency problem,[33] but it may also be

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> percent for tort cases in the EDPA and the lowest was 27.3 percent for constitutional tort cases in the NDGA. Our results suggest a hierarchy of settlement rates. Of major case categories, tort cases tend to have the highest settlement rates, then contract cases, then employment discrimination cases, followed by constitutional tort cases.

Id.

[31] The disagreement payoff is the payoff that gives a party zero profit if they enter the deal, i.e., they will neither win nor lose. In other words, it is how much a non-deal is worth to the party.

[32] This happens, for example, when the utility function of money is $y=x^{0.5}$ and the initial wealth of the customer is 0.

[33] It happens when the parties' lawyers promote their own interests, and they are incentivized to prefer litigation to settlement.

because of information problems, such as asymmetric information[34] or optimism.[35] Or, because both parties negotiate aggressively, each party could demand more than 50% of the surplus created by the settlement.[36] At any rate, as will be explained later, parties who achieve settlement before the trial would also be influenced by the possibility that, in the absence of a settlement, lower court judges will be influenced by the possibility of appeal.

Let us now imagine that, for some reason, the two parties in the above example did not come to an official settlement. In such a case, the court would impose a decision. In the absence of a right to appeal, the court will give a decision of 50-50 in a certain legal regime; whereas, in an uncertain legal regime, judges will give a decision of 0 in 50% of cases, and in the other 50%, they will give a decision of 100. Thus, the average judgment will be 50 under both certain and uncertain legal regimes. However, it is well known that in the real world, there may also be a *fundamental* right to appeal. When the right to appeal is factored in, the results will be different. In uncertain legal regimes, the lower court's decision will be regressively biased when we have strategic judges, and even if we do not, then the effective (significant) lower court decisions will be regressively biased. The right to appeal also activates the regressive effect of legal uncertainty on lower court decisions since, in effect, an appealable court decision is strategically akin to a take-it-or-leave-it settlement decision that judges impose on both parties.

I will illustrate this by example. In a certain legal regime, in which every party is expected to gain 50 in the higher court, the only decision that will not lead to an appeal is 50-50. However, in an uncertain regime, in which each party has a 50% chance of gaining 0 and the same chance of gaining 100, the result will be different.[37] The bank, the risk-neutral party, will appeal each decision that gives it less than 50, i.e., 50 is its disagreement payoff. However, the customer, the risk-averse party, will appeal each decision that gives him or her

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[34] Lucian A. Bebchuk, *Litigation and Settlement Under Imperfect Information*, 14 RAND J. ECON. 404, 404 (1984).

[35] Oren Bar-Gil, *The Evolution and Persistence of Optimism in Litigation*, 22 J. L., ECON. & ORG. 490, 491 (2005).

[36] This is a bilateral negotiation, and if they play a Hawk-Dove game, then there is a possible equilibrium that in some cases they will both be hawkish, causing the negotiation to fall apart.

[37] Of course, the expected judgment of the higher court is based on the lower court decision; the lower court result may greatly change the expected outcome on appeal.

less than his or her certainty-equivalent sum, let us say, in this case, 25, i.e., 25 is the customer's disagreement payoff. Thus, the decision will not be appealed if, and only if, it falls in the range between 25 and 50. The conclusion is that, unlike the broader category of outcomes that lead to appeals arise under a certain legal regime, every decision between 25 and 50 will not lead to an appeal in the uncertain legal regime. Let us call the range of decisions that will not lead to an appeal the "decision range of the judge." The conclusion is that in the uncertain legal regime, the decision range of the judge will be regressively biased, i.e., legal uncertainty has a regressive effect on the decision range of the judge.[38] This result is very different from the result of the symmetric appeal game, such as the one described in Shavell's 2006 article.[39]

A. The Regressive Decision Range Leads to Regressive Court Decisions

I will explain why a biased decision range also causes court decisions to be regressive. Initially, I will assume that the judges try to block appeals and will conclude that legal uncertainty leads to regressive lower court decisions; then, I will explain why this is a good assumption. Later, I will assume that the judges do not act strategically; nevertheless, I will conclude that legal uncertainty has a regressive effect on the effective court decisions.

Let us now assume that the goal of the judge is to block appeals. In this case, in the certain legal regime, the judge's only decision will be 50, which is the only way to block appeals. However, under the uncertain legal regime, the judge will decide between 25 and 50. It is reasonable to think that we have both judges who are more pro-customer than the high court and those who are more pro-bank than the high court and that in the uncertain legal regime, whereas the pro-

[38] Our conclusion will not change if we add legal costs to our analysis, unless the appeal costs are such that they prevent one party from appealing. Let us modify our main example, such that there is appeal cost imposed on each party. In the uncertain legal regime, every decision between twenty-five + the appeal cost and fifty - the appeal cost will not lead to an appeal. However, in the certain legal regime, every decision between fifty - the appeal cost and fifty + the appeal cost will not lead to an appeal. We can see that the appeal cost increases the decision range but that it is still regressive. *See infra* Section IV(C) (discussing the effect of appeal costs in more complicated games).

[39] Shavell, *supra* note 10, at 1.

bank judges can decide 25, the pro-customer judges cannot decide more than 50. Let us explain: the maximum the pro-customers judge can give the customer without leading to appeal is 50, while the minimum the pro-banks judge can give the customer without leading to appeal is 25. Then, if 50% of the judges are pro-bank and will decide 25, and if 50% of them are pro-customer and will decide 50, the average judgment will be 37.5. Thus, whereas the average judgment in the certain or uncertain regime with no right to appeal is 50, the average judgement in the uncertain regime with the right to appeal is 37.5. Hence, legal uncertainty leads to the regressive range and to regressive judgments. When the judge thinks that the risk-averse party is entitled to more than the expected judgment of the high court, he or she will award only the expected judgment, but when the judge thinks that the risk-averse party deserves less than the expected high court judgment, he or she will award less.

B. Why The Judge May Try to Block Appeals?

I have shown that when a judge gives a decision within the decision range, i.e., when he or she blocks an appeal, legal uncertainty has a regressive effect on the decision. However, why is it reasonable to assume that judges sometimes do so.

First, this assumption may be reasonable because this behavior serves both parties: a shift from any judgment outside the decision range to any judgment within the decision range creates a Pareto improvement because both parties prefer any point within the decision range to any point outside of the range. If, for example, the judge awards 60 to the customer, this will lead to an appeal that would be worth only 25 to the customer; therefore, the customer will prefer to receive 49 (or even 26) to obtaining 60. On the other hand, the bank will prefer that the customer obtains 40 rather than 10, because if the customer obtains 10, this would lead to an appeal, which, from the point of view of the bank, is equivalent to a judgment of 50. In fact, when the judge gives a judgment that is outside the decision range, it is worth 25 to the customer and 50 to the bank. Both parties prefer the judge to give a judgment J between 25 and 50, which would be worth J to the customer and 100 – J to the bank. Thus, since a decision within the decision range is preferable to both parties, it is reasonable to assume that the judge will give the decision.

Second, it may be reasonable to assume that judges will give a decision within the decision range because this saves time in the legal system. Saving time by legitimate means (I do not claim that the strategy of blocking appeals is legitimate) is both efficient and just because increasing the time the parties need to wait for a decision also has a regressive effect on settlements.

Third, it may be reasonable to assume that judges will decide within the decision range to serve their own interests: they may generally prefer that people not appeal their decisions, which may also be a criterion for the promotion of judges in the system.[40]

Of course, the strategy of blocking appeals may be frequent strategy of judges because of the combination of the previously mentioned causes: a decision within the range that blocks appeals serves both parties, serves the self-interest of the judge, and it saves time for the legal system.

Fourth, judges may conclude that they were just when they made decisions that no party appealed because no party resisted the decisions by an appeal; then, without officially designating the decision range, judges by trial and error can conclude that their decisions are just.[41] The conclusion from our research should be that the lack of appeal does not signal that the judge applied the law correctly; rather, this demonstrates that the judge applied it in a way that no party has an incentive to appeal.

Even if we do not assume that judges in every case will try to block an appeal, the assumption may be valid for at least a specific decision: the judge does not wish the case to arrive at the higher courts.[42] It could be efficient for the judge to invest time in only some,

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[40] *See* Jimmy E. Gates, *How Often Are Circuit Judges' Decisions Overturned?*, CLARION LEDGER (Oct. 8, 2016, 8:00 PM), https://www.clarionledger.com/story/news/2016/10/08/how-often-circuit-judges-decisions-overturned/91269350 ("Reversal rates of over 20 percent for circuit judges are considered high and a red flag, New York law professor Laurie Shanks says.").

[41] The game theories of information are used to assume that a player get a signal from the behavior of the other player, and it influences their behavior. They usually do not take into account that the player may err in analyzing the information, what may lead to a chain of mistakes. *See* Robert J. Aumann, *Agreeing to Disagree*, 4 ANNALS STAT. 1236 (1976); George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 QUARTERLY J. ECON. 488 (1970).

[42] *See* Ryan C. Black & Ryan J. Owens, *Courting the President: How Circuit Judges Alter Their Behavior for Promotion to the Supreme Court*, 60 AM. J. POL. SCI. 30, 30-43 (2016) ("We examine whether circuit court judges sacrifice policy purity for career goals. We compare the behavior of contender judges–those most likely to be

but not all, decisions.[43] Then, judges can give the selected cases a chance to come to the higher court, but at the same time, can prevent the majority of cases from reaching the higher court.[44]

Furthermore, even if the judge wishes to minimize his or her legal errors that would be corrected by the higher courts, it would be best for the judge to decide within the decision range because such decisions will not be invalidated by the higher court. If, for example, the judge tries to guess the decision of the higher court (0 or 100), he or she will be wrong in 50% of the cases, and his or her average error will be 50 (which is the averaged error of every decision outside the decision range). Deciding within the decision range will also minimize the number of decisions that will be overruled.

Finally, let us investigate what will happen if the judges who gain promotions are those with the lowest average errors in cases that

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elevated to the Supreme Court–during vacancy periods with their behavior outside vacancy periods. We also examine the behavior of noncontender judges during those same times. The data show that during vacancy periods, contender judges are more likely to vote consistently with the president's preferences, to rule in favor of the United States, and to write dissenting opinions. Noncontender judges fail to evidence such behavior. These findings provide empirical support for the argument that federal judges adapt their behavior . . . .").

[43] The Talmud recognizes the problem that judges may prioritize investing time in the cases that the rich are more sensitive to, cases that discuss big sums of money, and warns against this.

> The Gemara continues to interpret clauses from the verse cited above. "You shall hear the small and the great alike." Deuteronomy 1, 17. Reish Lakish says: This teaches that the judgment of one *peruta* should be as dear, i.e., important, to you as the judgment of one hundred *maneh*, i.e., ten thousand dinars. The Gemara asks: With regard to what *halakha* is this said? If we say it is with regard to the need to study it carefully and to decide the case justly, it is obvious that even cases relating to small sums must be judged thoroughly. Rather, Reish Lakish was speaking with regard to giving it precedence: The small claims case may not be deferred in favor of the larger claim merely because the disputed sum is smaller.

Babylon Talmud, Sanhedrin 8a.

[44] Different scholars, such as Arthur D. Hellman, discuss how the Supreme Court "selects, from among the thousands of cases brought before it, the few that it will hear and decide on the merits." Arthur D. Hellman, *The Supreme Court, the National Law, and the Selection of Cases for the Plenary Docket*, 44 U. PITT. L. REV. 521, 524 (1982). Another question, which is the other side of the coin, may be, how the lower court judges may select the few cases that will be heard and decided by the upper courts.

reach higher courts? In this situation, it is beneficial for the judges to have only decisions that can likely avoid significant errors go to the higher court (easy cases). Likewise, it is efficient for the judge to try to block appeals in the difficult cases. Difficult cases, those with legal uncertainty, make it difficult for the lower court judge to predict the higher-court decision. Hence, in cases with legal uncertainty, those judges are expected to try to block appeals. The right to appeal will activate the regressive effect not only on the decision range but also on the decisions themselves.

C. The Regressive Effect on a Nonstrategic Judge

What occurs when the judge is not strategic but decides without considering the opportunity of the parties to appeal? In this case, the right to appeal will not activate the regressive effect of legal uncertainty on the court decision, but only its effect on the effective court decision. An effective court decision is one that is enforced, considered to be significant, and will not be appealed. Effective court decisions will be only those within the decision range; otherwise, they would be appealed and lose their significance. Thus, even if we eliminate the assumption of strategic behavior by the judge, legal uncertainty still has a regressive effect on the effective court decision.

However, there is one important difference between the regressive effect on a strategic judge and that on a nonstrategic judge: this arises when the judge's belief in the risk-aversion of women is false (there is a disagreement in the literature about whether the common stereotype that women are more risk averse than men is true or false).[45] If the perception that women are more risk averse than men is false, but the judge nevertheless believes it to be true, then strategic judges will try to block appeals by giving gender regressive decisions. Meanwhile, nonstrategic judges will decide according to their

[45] *See* Nancy A. Jianakoplos & Alexandria Bernasek, *Are Women More Risk Averse?*, 36 ECON. INQUIRY 620 (1998) (regarding the analysis of studies that claim women are more risk averse than men); Joni Hersch, *Smoking, Seat Belts, and Other Risky Consumer Decisions: Differences by Gender and Race*, 17 MANAGERIAL & DECISION ECON. 471, 481 (1996); Joop Hartog et al., On a Simple Measure of Individual Risk Aversion (Aug. 14, 2000) (Discussion Paper, Tinberg Institute, University of Amsterdam). *See also* Renate Schubert et al., *Financial Decision-Making: Are Women More Risk-Averse?*, 89 AM. ECNON. REV. 381, 381-85 (1999). However, it can be asserted that the proposition of these studies – that women are more risk-averse than men – merely reflects a false, chauvinistic stereotype. *See id.*

ideology, and the false stereotype of women will not affect a woman's decision to appeal, nor the decision of the other party to do so. Thus, the false stereotype will not influence the effective court decision of a nonstrategic judge. However, if the stereotype is true, then it will have an effect on the survival of the nonstrategic judge's decisions because women, being more risk averse, will less frequently appeal decisions against them than men.

III. ROBUSTNESS OF THE ASSUMPTIONS

Now, I will examine the robustness of three of our implicit assumptions, and I will show that relaxing them will cause the regressive effect of legal uncertainty on the judge to be even stronger than initially thought. I will argue that the expected judgment of the higher court will no longer be included in the lower decision range because the strong side may have a credible threat they will appeal if the lower judge gives the weaker side the expected judgment of the higher court. These modifications are interesting, since they make the model even more realistic. The first modification lies in the possibility that a repeat player may accumulate a reputation as a tough appealer. The second modification relates to the possible existence of information problems in the model. Finally, the third modification springs from the possibility that the parties might reach a settlement in the time window between submitting the appeal and receiving the higher court decision.

A. Litigation with a Repeat Player

I have assumed that both parties – the bank and the customer – are one-time players, a scenario in which the decision range will be between 25 and 50 (in favor of the bank). However, it will be realistic to assume that the bank is a repeat player, in which case the decision range may be even more regressively biased. First, for simplicity's sake, I analyze what occurs when only the bank is a repeat player. Then, I will analyze what occurs when the judge is also a repeat player.

The bank may develop a reputation as a tough appealer by adopting the following strategy: the bank appeals if and only if the judgment is more than 25.1. The goal of the judge is to block appeals; therefore, a judgment of 25.1 by the court, acceptance of this decision (but not of a decision that gives more to the customer) by the bank, and

its acceptance by the customer is a possible equilibrium. This means that if the bank pursues such a strategy and the judge pursues a strategy of giving the customer no more than 25.1, both the judge and the bank will lose by unilaterally changing their strategy.

However, the "game" may be made more difficult for the bank if the judge is also a repeat player who might accumulate a tough reputation. The judge may adopt a strategy of deciding 49 in every case, and the decision's acceptance by both the bank and the customer would also represent an equilibrium (no player will benefit from unilaterally changing his or her strategy[46]); moreover, every point between 25 and 50 could be an equilibrium of this interaction.[47]

Additionally, I propose the following application: optimism may be a commitment device to develop a reputation of a tough appealer without antagonizing the judge. Oren Bar-Gil showed that optimistic lawyers survive the litigation market because of their advantage in settlement negotiations.[48] I propose that they also survive the litigation market because of their advantage in incentivizing the lower courts to decide in their favor to block appeals.

B. Information Problems

Cases that do not end in settlement are special. Usually, in these cases, there are informational problems, i.e., the party might err in their assessment of the legal judgment; particularly one party may be optimistic[49] or have asymmetric information,[50] and the fact that a case did not end in a settlement may send the judge a signal that there were informational problems, i.e., that the side may have wrong assessments of the result of the appeal. To render a decision within the decision range, the judge needs to give a decision within certain equivalent values (the disagreement payoffs) of the parties in light of

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[46] John F. Nash, *Equilibrium Points in N-Person Games*, 36 PROC. NAT'L ACAD. SCIS. 48, 48-49 (1950).

[47] If in a particular legal system, there is an equilibrium that the judges give in such interactions 25 to the customer, it may establish a strong argument in favor of abolishing or limiting the right to appeal.

[48] Oren Bar-Gil, *The Evolution and Persistence of Optimism in Litigation*, 22 J.L., ECON. & ORG. 490, 491 (2005).

[49] George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984).

[50] Lucian A. Bebchuk, *Litigation and Settlement Under imperfect Information*, 14 RAND J. ECON. 404, 404-05 (1984).

their beliefs, i.e., the judge should give a result that each player will prefer to the game of appeal. The judge cannot know which party believes that they will obtain a higher court award. Let us assume that each party may be optimistic, such that each party believes the judgment will be 40-60 in their favor; therefore, the bank will appeal every decision that awards more than 40 to the customer. In contrast, the customer may believe that his or her expected gain in court is 60, but the customer is risk-averse; therefore, let us assume that for the customer, this is equivalent to a certain award of 30; this is their disagreement payoff. Now, the decision range becomes 30 to 40 in the judge's eyes, which is even more regressively biased. This time, even the expected judgment of the court is not included in the decision range, and the progressive judge cannot grant even this to the customer without leading to an appeal. More generally, when there is no appeal cost, it is sufficient to have a minimal information problem in order that the judge cannot ensure blocking the appeal by deciding the expected judgment of the higher court. If a risk-neutral party believes that he or she will obtain more in the higher court than in the judgment of the lower court (minus the litigation cost), he or she will appeal.

C. Settlement Opportunities

It is possible to reach a settlement even after an appeal, if both parties are interested, so now let us assume that it is possible to reach such a settlement.[51] The parties may come to a settlement in order to

[51] *See* Seth A. Seabury, *Case Selection After the Trial: A Study of Post-Trial Settlement and Appeal* (Rand Inst. Civ. Just., Working Paper No. WR-638-ICJ, 2009). Seabury claimed that

> [t]here are many parallels between the possible selection of disputes heard in appellate courts and trial courts. The parties engaged in a civil dispute have the option to settle a case out of court at nearly any point, including after a trial court decision and leading up to an appeal. Moreover, all litigants must absorb some cost if a dispute is resolved in court, and sometimes the cost can be quite substantial. Given the incentives to avoid appearing in court, economists typically view observed instances of trial or appeal as a bargaining failure. Such failures might occur for various reasons—the two most commonly cited are asymmetric information or divergent expectations of litigants— almost none of which are likely to be purely random. This suggests that, just as is the case with trial courts, the cases we observe in an appellate

save the appeal cost or in order to neutralize the risk. Under an uncertain legal regime, settlements are regressive[52] and, in fact, appealing gives the bank an opportunity to come to a regressive settlement. Therefore, the bank may appeal more decisions, which may render the decision range even more regressive. It may be beneficial for the bank to appeal, even if the judgment awards the customer less than the customer's expected reward in court; in this case, the expected judgment of the appeals court is excluded from the decision range, as we will illustrate and explain in the next paragraph.

Let us take the following game of a litigation between a risk-neutral bank and a risk-averse customer. If the upper court decides the case, the customer has a 50% chance of gaining 0 and the same chance of gaining 100, and this lottery is worth 25 for the customer. This time, if there is an appeal, the parties will bargain to achieve a settlement. (This is the new assumption in this sub-section). We assume that in case of settlement, the two parties will distribute the surplus equally, which means that the settlement will be such that the customer will obtain 37.5, and we assume that the parties have a 50% chance of achieving a settlement. This means that an appeal creates a lottery in which the customer receives $0.25 \times 0 + 0.5 \times 37.5 + 0.25 \times 100$. If the customer's utility function of money is $y=x^{0.5}$ and his or her initial wealth is 0, then this "lottery" is worth 30.94 to the customer.[53] However, the bank will appeal if the customer obtains more than 43.75, which is the expected outcome of the above "lottery." Therefore, the decision range of the judge in this case is to give the customer[54] between 30.934 and 43.75. This means that now the progressive judge cannot give the customer even the judgment that is to be expected in

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> court are highly unlikely to form a representative sample of disputes.

Id. at 1.

[52] Weiss, *supra* note 15.

[53] This is actually the customer's value of playing the game of appeal.

[54] Let us be more formal and propose a more general analysis of this game: if the bank appeals, it has a probability P to come to a regressive settlement with the customer, in which it pays the customer only S ($S < 50$), and a probability of $1 - P$ to pay 50 (i.e., the judgment expected in the higher court) in case of no settlement. This means that the bank will appeal if and only if the judge awards more than $(P \times S) + (1 - P) \times 50$.

Let us be more general: if the expected judgment of the upper court is J to the customer, then the bank will appeal if and only if the judge awards more than $(P \times S) + (1 - P) \times J$, i.e., more than $J - P (J - S)$ to the customer.

the higher court.[55] We can see that the opportunity to reach a settlement after an appeal may create an incentive to appeal: if the bank appeals, it obtains a chance to come to a settlement with the customer, in which it pays less than 50; therefore, the bank will no longer "take" a decision of 50 but will prefer to appeal and gain the chance to come to a regressive settlement. Of course, this may also influence the pretrial settlement, as we will analyze in the next sections.

D. Pretrial Settlements

In this section, I will examine the effect of the right to appeal on the pretrial settlements. I will investigate the effect of the right to appeal on some possible games.

Let us now modify the game, that we analyzed in the former section, such that there is also an opportunity for pretrial settlement, i.e., an opportunity to come to a settlement before the lower judge makes his or her decision (in addition to the possibility to achieve a settlement after the appeal).[56] Since the decision range in this example is between 30.934 and 43.75, when the parties predict that the lower judge will decide in the middle of the decision range, they will come to a pretrial settlement[57] of (30.934+43.75)/2 = 37.342.

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[55]Let us assume now that the bank has power to make a credible take-it-or-leave-it proposal. If the bank appeals and makes a take-it-or-leave-it proposal, there is a proposal that is optimal to make in the condition of uncertainty regarding the disagreement payoff of the weak party. If the optimal offer for the bank is O, the probability that the customer will take the optimal offer is q, and the expected outcome by the appellate court is J, then the bank will appeal every decision that gives the customer more than
QO + (1 - q) J, which is less than J.

[56] I will remind the reader of the rest of the assumptions if the upper court decides the case, the customer has a 50% chance of gaining 0 and the same chance of gaining 100, and this lottery is worth 25 for the customer. If there is an appeal, the parties will bargain to achieve a settlement. We assume that in case of settlement, the two parties will distribute the surplus equally, which means that the settlement will be such that the customer will obtain 37.5, and we assume that the parties have a 50% chance of achieving a settlement. This means that an appeal creates a lottery in which the customer receives $0.25 \times 0 + 0.5 \times 37.5 + 0.25 \times 100$. If the customer's utility function of money is $y=x^{0.5}$ and his or her initial wealth is 0, then this "lottery" is worth 30.94 to the customer. However, the bank will appeal if the customer obtains more than 43.75, which is the expected outcome of the above "lottery."

[57] However, if the above-mentioned lower judge decides in his or her favor point within the decision range, and if 50% of the judges are pro-customer and 50% of the judges are pro-banks, then the weak party has 50% chance to obtain 30.934, and 50%

Let us now analyze another game, in which the stronger side has the absolute bargaining power during settlement negotiation. Again, the assumptions are that if the upper court decides the case, the customer has a 50% chance of gaining 0 and 50% chance of gaining 100, and this lottery is worth 25 for the customer. Additionally, if there is an appeal, the parties will bargain to achieve a settlement, and there is also an opportunity for pretrial settlement, i.e., an opportunity to come to a settlement before the lower judge makes his or her decision. This time we modify the assumption of the game, such that in the case of a settlement the strong party has the absolute bargaining power, i.e., the party can make a credible take-it-or-leave-it proposal and by this achieve all the surplus, and we keep the assumption that there is 50% chance that a settlement will be achieved in the case of an appeal. Thus, the game of appeal is worth 25 for the customer: this is what the lottery of a decision by the upper court is worth for them, and this is what the customer will get in a settlement if a settlement is reached by the parties. From the point of view of the Bank, the game of appeal is equivalent to paying 37.5, since there is 50% that the game will lead to a settlement of 25, and 50% that the game will lead to a decision in which the Bank needs to pay 50 on average. The conclusion is that the decision range of the lower judge is between 25+0.5epsilon and 37.5. (The weak party will appeal on every decision that gives them less than 25+0.5epsilon, and the strong party will appeal on every decision that gives the weak party more than 37.5.) If the lower judge decides in the middle of her decision range, the result will be 31.25. Since the two parties predict that the lower judge will decide 31.25, then in the pretrial bargaining the parties will achieve a settlement of 31.25. Interestingly, the weakest party improves his or her position due to the right to appeal. When there is no right to appeal, then the strong party will make a pretrial settlement proposal of 25 plus epsilon (the value of the trial to the weak party plus epsilon). When there is a right to appeal, this weakest party will achieve a pretrial settlement of 31.25, instead of obtaining a settlement trial worth 25 to them. The power of the lower judge to choose in his or her decision range balances the

chance to obtain 43.75. In this case, the worth of the lottery to the weak party is like obtaining 37.065, and the worth of the lottery to the strong player is like paying 37.342. Thus, given that the parties have equal bargaining power, the pretrial settlement will be 37.2035.

absolute bargaining power of the strong party.[58] We can conclude that in these games, the appeal serves the weakest party, the party who is both risk-averse and has no bargaining power, in the sense that this time, the weakest party will get much more from the surplus created by the insurance of the settlement. The explanation is that the lower court judge will offer the weakest party an insurance at a cheaper price than a proposal made for the weakest party by the stronger party, who is strong enough to make a take-it-or-leave-it proposal. Appeal is actually equivalent to a take-it-or-leave-it settlement proposal to both parties by the judge, and the "settlement proposal" of the lower judge will be less regressive than the settlement proposal of the party with the full bargaining power. The greater the likelihood that a settlement after an appeal will not be achieved, the wider the decision range of the judge will be, which will play in the favor of the weakest party!

E. Appeal Costs

The result of the litigation game may change dramatically if appeal costs are introduced into the game and if the appeal costs are high enough. First, the appeal costs may be such that the stronger party, and only the stronger party, will have a credible threat to appeal. When the lottery of appeal is worth less to the weak than to the strong party, such as in the above games (because of the difference in the risk aversion), appeal costs may lead to this situation. This may also be the case because of budget constraints. Second, the appeal costs increase the decision range of the lower judge, because now a settlement saves the appeal costs, and additionally the costs may make the range more regressive because the weaker party is more risk-averse regarding the appeal costs.

Third, we argue that when there are also differences in bargaining power, the stronger party may use high appeal costs to gain more via settlement negotiations. This is the explanation. If there is an American rule of sharing the litigation costs and the appellate court will decide x for sure, the stronger party has an incentive to appeal even if the lower judge decides x. If in that case the strong party has the capacity to make a credible take-it-or-leave-it settlement proposal

[58] However, this power of the judge will be neutralized if the strong party develops a reputation of appealing every decision that gives the weak party more than his or her minimally acceptable sum, and the judge will have a policy of minimizing appeals at any price.

(after the decision of the lower court), the strong party will propose the weak party a settlement amount of x – appeal costs, and the weak party will take the settlement proposal. Thus, the lower judge will decide x – appeal costs, and the pretrial settlement will be x – appeal costs. When there are high appeal costs and legal certainty, then the right to appeal becomes a regressive one under the American rule of sharing the litigation costs.[59] However, when we have legal certainty, then the right to appeal will not change the result under the English rule of sharing the litigation costs.[60] In this case, a decision of x and only a decision of x will not imply appeal. Thus, the lower judge will decide x, and the pretrial settlement will be x.

However, when we have a game in which each party has a 50% chance to obtain nothing and a 50% chance to obtain all, then the right to appeal has a regressive effect. After the lower court decision is issued, the party with the stronger bargaining power will make a lower proposal due to the appeal costs (this is the case both under the American rule of sharing the litigation costs and the English rule). This regressively influences the decision range of the lower judge. On the other hand, the right to appeal enables the phase in which the lower judge can choose every point in his or her decision range, not necessarily the more regressive range. This protects the weakest party, since the judge is expected to give the weakest party more than the value of the lottery of a trial in the higher court to the weakest party; while, in the case of no right to appeal, the party with the absolute bargaining power proposes that the weakest party obtains the value of the lottery of the trial to them plus epsilon.[61]

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[59] *See* Peter Karsten & Oliver Bateman, *Detecting Good Public Policy Rationales for the American Rule: A Response to the Ill-Convicted Calls for "Loser Pays" Rules*, 66 DUKE L.J. 729 (2016) (explaining that the American rule requires each party to pay for its own attorneys).

[60] John Leubsdorf, *Does the American Rule Promote Access to Justice? Was That Why it was Adopted?*, 67 DUKE L.J. 257, 257 (2019) (explaining that, under the English Rule, "a prevailing party ordinarily recovers its own attorney fees from its losing opponent.").

[61] Let us analyze the following example, in which there is a litigation between a strong party with full bargaining power and the weakest party. The weakest party has 50% chance of obtaining 100 in the appellate court, and 50% chance to obtain 0 in the appellate court. The initial wealth of the weakest party is AC, i.e., the appeal costs (by this we neutralize the risk aversion regarding the appeal cost in order to make our analysis more simple), and his or her utility function is like in the abovementioned games. There are opportunities for settlement bargaining before the lower court makes its decision and after the lower court makes its decision. There is

I suggest that to protect the weakest parties, society should prevent the game of appeals with high appeal costs, particularly under the American rule of litigation costs or under an uncertain legal regime. However, if society can prevent the appeal costs from becoming too high, then the best option for the weakest party (who is both risk-averse and has no bargaining power) is to have a right to appeal. Furthermore, the right to appeal may influence legal uncertainty. The reduction of legal uncertainty improves the position of the weakest party, but the possible lengthening of the legal process plays against the party. It is possible to conclude that the right to appeal improves the situation of the *weakest* party, unless the litigation costs or the lengthening of the trial are significant enough, in which case the right to appeal plays against the weakest party.

The main policy recommendation that we can derive from the above discussion is that society should reduce appeal costs and the time that an appeal takes. The desirability of the right to appeal should be a function of the appeal costs, the time that it takes, the uncertainty in the legal system, and the appeals' effect on reducing legal uncertainty.

Furthermore, based on the above analysis, we can reach a negative conclusion: it is not true that the transition from a game

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an American rule of distributing the litigation costs. What will be the decision range of the judge? The minimal acceptable point by the weakest party will be 25 – AC, since this is what the lottery of the appeal is worth to them. The strong party knows that if there is a settlement after the lower court decides, the settlement will be 25 – AC and that if there is no settlement, he or she (i.e., the strong party) will obtain a lottery in which he or she will have 50% chance of paying 100 + AC and 50% of paying AC, i.e., paying 50+AC on average. We will denote the probability of achieving a settlement after an appeal by P_s; therefore, the strong party's minimal acceptable point is P_s (25 - AC) + (1-P_s)(50+AC). Thus, if the lower judge decides in the middle of his or her decision range, the lower court's judgment will be [25 – AC + P_s(25 - AC) + (1 -P_s)(50 + AC)]/2 = 37.5 -P_s(12.5 + AC), and this will also be the settlement. This is what the weakest party will obtain, while in the equivalent game of trial without appeal, the weakest party will obtain 25 (in both games, we assume that there are no litigation costs, other than the appeal costs). In other words, the gap between the settlement in the game with an appeal and the settlement in the game without appeal is 12.5 - P_s (12.5 + AC). The surprising conclusion is that the right to appeal protects the weakest party if the probability of achieving settlement after appeal is low, which reduces the strong party's incentive to appeal and which enables the lower court to make a less regressive judgment; however, if the likelihood of achieving a settlement is high, then the right to appeal protects the weak party if and only if the appeal cost is low. If the probability of achieving a settlement after the lower court decision is 1 (if the players arrive at this phase), then the right to appeal damages the weakest party when there is any appeal cost greater than 0.

without the right to appeal to a game with the right to appeal always results in Pareto improvement.

IV. WHEN THE JUDGMENT IS BINARY

There are cases in which the lower-court judge must decide to rule entirely in favor of one party. Will legal uncertainty still have a regressive effect on the lower court's decision? My answer is that when the judge acts strategically, legal uncertainty still has a regressive effect, and this effect is stronger, and I will explain why in the next paragraphs.

Let us take the following example: there is a 50% probability that the bank will win a disputed asset on appeal and a 50% probability that the customer will win the disputed asset on appeal; the lower judge must decide who obtains 100% of the asset and who obtains 0% of the asset. In such a case, it will be rational for the judge who wishes to minimize appeals or overruled cases to decide in favor of the bank, given that the probability that the bank will appeal is higher. The probability that the bank will respond to loss by appealing seems larger than the probability that the customer will respond to loss by appealing, because the bank can commit itself to appeal to develop a tough reputation; the bank is less risk-averse than the customer regarding the litigation cost, as the bank is not limited by resources, and as the bank has a much lower subjective interest rate.[62] Thus, an uncertain legal regime has a regressive effect on the strategic lower-court judge, even when the judgment is binary. This time, the regressive effect will be even more acute. If each party has a 50% probability of winning on appeal, then the lower court—which wishes to block appeals—will decide 100% of the cases in favor of the strong party whose probability of appealing is higher.

Furthermore, the weak party may lose 100% of the cases even if the weak party has more than a 50% probability of winning. If the judge attributes a lower probability that the weak party will respond to loss by appealing than that the strong party will respond to loss by appealing, a judge who simply wishes to block appeals will decide in 100% of these cases in favor of the strong party.

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[62] For the bank, the risk of the particular litigation is spread among many shareholders, so it is a very small loss for each one of them. *See* Weiss, *supra* note 15.

Let us take the following example: the weak party has a 75% probability of winning on appeal, and the judge attributes a probability of 40% to the possibility that the weak party will respond to loss by appealing and a probability of 60% to the possibility that the strong party will respond to loss by appealing. Thus, a judge who simply wishes to block appeals will decide in 100% of these cases in favor of the strong party. However, this time, the judge's strategy will change if his or her goal is to minimize the probability that his or her decision will be overruled. In that example, the judge will decide in 100% of the cases in favor of the weak party (if the judge decides in favor of the weak party, there is a 6/10 probability that an appeal will be submitted and a 1/4 probability that the appeal is accepted, i.e., if the judge decides in favor of the weak party, the judge's chance of being reversed is 6/10 * 1/4 = 6/40; however, if the judge decides in favor of the strong party, there is a probability of 4 /10 that the appeal will be submitted and a probability of 3/4 that a submitted appeal will be accepted, i.e., if the judge decides in favor of the strong party, the judge's chance of being reserved in this case is 4/10 * 3/4 = 12/40).

The strategic judge who wishes to minimize reversals will decide in favor of the weak party if and only if the probability that the weak party will appeal in the case of losing multiplied by the probability that the weak party will win if the case comes to an appellate court is greater than the probability that the strong party will appeal in the case of losing multiplied by the probability that the strong party will win in the appellate court if the case comes there.[63] Let us emphasize that if each party is equally likely to win, even this judge will decide in favor of the stronger party in 100% of the cases.

Moreover, let us analyze the following possible game where the court needs to resolve two issues: whether there is liability and the size of the damage. Moreover, we assume that in this particular game the first question will be appealable, and each party will have a 50% probability of gaining, but the second question will not be appealable. The risk-averse customer is the plaintiff, and the risk-neutral bank is the defendant. What will be the result of this game? This time, the judge cannot block appeals by giving the weak party 25%-50% of the

[63] P_w is the probability that the weak party will win in case of appeal; P_{aw} is the probability that the weaker party, i.e., the risk-averse party, will appeal if it loses; and P_{as} is the probability that the stronger party will appeal if it loses. In this case, the strategic judge will be in favor of the weaker party if and only if $(1 - P_w) \times P_{ar} < P_w \times P_{ap}$.

damage. If the lower court decides that the damage is 30 and that the bank is liable, the bank will have incentive to appeal, because even if the bank loses on appeal, it only needs to pay 30. Thus, the judge's best strategy in this case will be to decide in favor of the party whose odds of appealing in the case that the party loses are higher, which means that the judge will decide in favor of the bank. This is a strong argument against making only binary questions open to appeal.

V. ON THE RELATIONSHIPS BETWEEN THE COURTS

We have shown that a lower judge's decision that is open to appeal will be more regressive than that of the appellate court. We can draw conclusions from this about the relationships between courts. First, we should expect that uncertain higher court decisions will be applied regressively by the lower courts. In our main example of litigation under the uncertainty rule, the expected decision of the appellate court is 50, but the expected decision of the lower court is 37.5. If the highest court makes uncertain decisions, this will lead to applications that will be more uncertain than it seems when we ignore the regressive effect of legal uncertainty on decisions that are open to appeals.

Second, it is not enough to study the law by reading only the higher court decisions. Based on the theory of this article, we conjecture that lower court decisions do not represent one-to-one reflections of higher court decisions but are more regressive. Thus, to know the realistic legal situation, we also need to read lower court decisions. It is not sufficient to read the lower court decisions that come to the appellate court because they have special characteristics.[64]

Third, appealed cases do not reflect the lower court judges' decisions because decisions that do not fall within the decision range will be appealed. Since the decision range is regressive, on average, a judge's appealed cases are less regressive than the other cases. In our

[64] *See* George L. Preist & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J.L. STUD. 1, 1 (1984) ("Virtually all systematic knowledge of the legal system derives from studies of appellate cases. Appellate cases, of course, provide the most direct view of doctrinal developments in the law. Few scholars today, however, are content to study doctrinal developments alone without regard to the broader influence of legal rules on social affairs. Appellate cases may tell us which disputes courts find troublesome and which they find easy to decide. But this doctrinal information discloses very little about how legal rules affect the behavior of those subject to them or affect the generation of legal disputes themselves.").

main example, most decisions will be between 25 and 50, and they will not come to the appellate court. However, the decisions that will be between 0 and 25 or between 50 and 100 will come to the appellate court. Therefore, if the higher court judges gain their impressions from reading only the appealed decisions, they will form an erroneous opinion about the lower-court judges′ decisions; they may consider the lower-court judges' decisions to be more progressive than they truly are.

Fourth, we should be careful when describing higher courts as progressive. They may be more progressive than lower courts, not because of the personalities or ideologies of their judges or because the most progressive judges are promoted to the higher court, but because the higher court judges have different incentives than the lower court judges.[65] When the law is uncertain, the right to appeal gives the lower court judges an incentive to decide more regressively than the higher courts. Furthermore, since the decision range is biased, lower courts that are more regressive than the higher court will succeed in making their legal ideology effective; but a progressive court will not succeed, or at least succeed less often, when one of the parties is risk neutral, such as insurance companies or banks. Therefore, many more lower courts will be more regressive than higher courts and many fewer lower courts will be more progressive. When the law is more uncertain, the gap between the progressiveness of the higher court and the lower courts will be higher. We can come to hold the illusion that the higher court may be painted as progressive due to the uncertain results for which the higher court is responsible.

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[65] Theodore Eisenberg and Henry S. Farber, *Why Do Plaintiffs Lose Appeals? Biased Trial Courts, Litigious Losers, or Low Trial Win Rates?*, 15 AM. L. & ECON. REV. 73 (2013). Eisenberg and Farber argue that

> [m]ultiple studies find that plaintiffs who lose at trial and subsequently appeal are less successful on appeal than are losing defendants who appeal. The studies attribute this to a perception by appellate judges that trial courts are biased in favor of plaintiffs. However, at least two alternative explanations exist. First, losing plaintiffs may appeal at higher rates independent of the potential merits. Second, if plaintiffs tend to pursue to trial lawsuits where they should win on the merits less than half the time, then potentially reversible outcomes at trial will be more likely to be adverse to defendants. This study revisits the analysis of the appellate process with a statistical model that ties together win rates at trial, appeals rates, and success rates on appeal.

Id. at 73.

Another contribution of the game theory discussion may be to analyze the limitations of appeals, given that there must be a final decision. Since there is necessarily a final decision that is not open to an appeal, the advantages of the right to appeal are limited. As noted by Shavell, we have the following problem: "who guards the guardians?"[66] Meaning, who will correct the mistakes of the highest judges, and who is supposed to correct the mistakes of lower judges?[67] In other words, if an appeal leads to a new trial that is not open to an appeal, why do appeals lead to fewer mistakes?[68] Hurwicz pointed out in his Nobel lecture that the problem of "but who will guard the guardians" is not terribly acute and could be weakened.[69] The need to guard the second guardian conjures up the image of an infinite regress of guardians, and since an infinite regress of guardians is not usually available, this seems to preclude enforcement. However, Hurwicz concluded that although bad outcomes with an infinite regress are logically possible, enforcement is not always impossible.[70] The problem may be weakened if the higher guardian is incentivized to achieve the public good or is ethically committed to it. Let us apply Hurwicz's thesis (which is not a theory, but a refutation) to the case of an appeal. First, let us consider the particular proposals of Shavell:

> society may invest special effort in selecting appeals court judges to ensure that their preferences are aligned with society's, it may have appeals court judges decide in panels (to offset each other's differences in preferences), and it may induce appeals court judges to

[66] Shavell, *supra* note 10, at 23.
[67] Shavell, *supra* note 10, at 23.
[68] If one legal mistake is much more expensive than another legal mistake, such as in criminal law, it is reasonable to give a right to appeal only when there is the possibility of the more expensive mistake, i.e., if and only if there is a conviction. If the probability that the lower court will err is equal to the probability of the higher court erring and the probability of making mistakes in the case of an acquittal is the same as in the case of conviction, then the one-sided appeal right will lead to the same number of mistakes as in the system without an appeal or with two-sided appeals but to a much less expensive mistake. This mechanism will prevent a conviction that is not exposed to an appeal. However, the lower judges may be influenced by this right to convict, since only this decision is open to correction, or to acquit to block an appeal. However, what can be the solution in civil ligation?
[69] *See* Leonid Hurwicz, *But Who Will Guard the Guardians?*, 98 AM. ECON. REV. 577, 577-85 (2008).
[70] *Id.*

> write opinions explaining their decisions (reducing their ability to contravene social preferences).[71]

Shavell's solution assumes that society can overcome the agency problem, and Shavell does not recognize in the problem that society may wish to promote preferences that are not consistent with the rule of law or with justice.[72] Let us now propose a partial solution to the problem: if the highest court's decisions, including the cases that are not selected, are such that they are more *visible* to the civil society, media and academia, this may weaken the problem of who guards the guardians regarding appeals, and this is also why a critical examination of the Supreme Court is so important. In other words, the right to appeal sheds light on legal decisions that are appealed to the highest court, which partially sterilizes the system, since it makes both the norms and the deviations from the norm visible or at least gives them a chance to be visible. However, this will not hold if the lower courts' deviations from the norm are not visible. We argue that in the case of legal uncertainty, deviations against weak parties will be much less visible (since the weak parties have no incentive to appeal), which makes the problem of "who guards the guardians" regarding appeal much more acute and makes appeals much less useful in correcting mistakes and preventing arbitrariness.

VI. CONCLUSION

Lower court decisions, which are open to appeal, are, in effect, take-it-or-leave-it settlement proposals to the parties. Similar to settlement proposals, these decisions will be "accepted" if and only if both parties refrain from rejecting them. Thus, the discretion of lower-court judges is regressively biased; the appeal actually activates the regressive effects that characterize settlements, also with respect to lower-court decisions. Thus, the regressive effect of legal uncertainty, for example, applies not only to settlements in the narrow legal sense but also to lower-court decisions.

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[71] Shavell, *supra* note 10, at 1.

[72] The bible establishes: "Therefore the law is slacked, and judgment doth never go forth: for the wicked doth compass about the righteous; therefore wrong judgment proceedeth." Habakkuk 1, 4.

We wish to propose the following recommendations based on our discussion. The first recommendation is, of course, to reduce legal uncertainty: legal uncertainty is not determined by nature but is the choice of the society. Society determines the degree of legal uncertainty by determining how clear the legislation should be, what method the court should use to interpret the law, what the status of precedents should be, what the method of contract interpretation should be, when to prefer legislating standards versus when to prefer legislating rules, how precise the law should be, when the court should decide according to the law, what room for discretion the court should have, when the authorities should be bound by the law, and how complex the legal system should be.[73]

The second recommendation is to eliminate the institution of champerty, so a litigation firm can appear on behalf of the risk-averse party. Then, the risk-averse party can sell their legal suit to a litigation firm which has a much stronger commitment to appeal. The litigation firm will have a much stronger commitment to appeal, since it may be much less risk averse, having a much better time discount or accumulation reputation of "tough appealer."

When the customer has a legal claim that gives him or her 100 by half probability and 0 by half probability, this legal claim is worth 50 to the risk-neutral litigation firm. In addition, when there are no transaction costs and when there is perfect competition, the price paid to the customer will be 50. If one litigation firm refuses to pay more than 49, another firm will agree to pay more. In other words, if there are no transaction costs, and if there are risk-neutral litigation firms and a marketplace with perfect competition, the regressive effect of legal uncertainty will be neutralized. Even if the litigation firms were not risk-neutral but were less risk-averse than the customer (which is perhaps a more realistic assumption), the regressive effect of legal uncertainty would be significantly reduced by selling the suit to the litigation firm.

Of course, in real life there are transaction costs of selling the legal claim to the litigation firm, such as time, hiring people and information collection.[74] Moreover, there is the moral hazard problem: after the party has sold its suit, it will have no interest in cooperating with the litigation firm. A solution to this problem might be that only a certain percentage of the suit will be sold to the litigation firm. Third,

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[73] Weiss, *supra* note 15, at 149.
[74] *See* Weiss, *supra* note 15, at 174-75.

there may be the problem of asymmetric information. Asymmetric information means that the party that wants to sell its suit to a litigation firm knows more than the litigation firm about what the judgment is expected to be. The selling party knows some of the claims that the other party is going to raise.[75] Therefore, the abolition of champerty is only a partial solution to the problem.

The third recommendation may be to limit the right to appeal. The factual findings of the lower courts receive great deference on appeal, and this is a significant limitation of the right to appeal.[76] However, the disadvantage is that limiting the right to appeal reduces the criticality of legal decision making. In rational legal systems, the higher court corrects the mistakes of the lower courts.[77] In addition, this would increase the legal uncertainty regarding the first court's decision. In fact, it is preferable for both parties to have a judge give a decision in their decision range rather than to have the lottery of a trial in the higher court. Thus, in this case, both parties benefit from the right to appeal. We also saw that the right to appeal may protect the weakest party in the pretrial bargaining settlement. Therefore, we do not recommend adopting this solution. However, in case of a binary decision of the lower court, a Pareto improvement cannot be created by the lower court's decision, and the right to appeal is regressive; thus, it may be a good idea to consider to limit the right to appeal, if in the particular legal system the court makes binary decisions. This raises the questions of when are the legal decisions binary and how widespread is this phenomenon? An alternative to the right to appeal may be to have more judges deciding on a case.[78] Our thesis may also

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[75] By this we apply Akerlof's ideas about asymmetric information. *See* Akerlof, *supra* note 41.

[76] *See* Keni Yoshino, *Appellate Deference in the Age of Facts*, 58 WM. & MARY L. REV. 251, 251 (2016) (explaining that "[w]hile the dominant view among appellate courts is that legislative facts should only receive de novo review, the practice of the courts has in actuality been much more fitful and inconsistent.").

[77] *See* Shavell, *supra* note 6, at 379 ("What rationale can be offered for incorporation of an appeals process in a system of adjudication? The justification analyzed here concerns error correction: the appeals process allows society to harness information that litigants have about erroneous decisions and thereby to reduce the incidence of mistake at low cost (because the appeals tribunal convenes only in a subset of cases.").

[78] It is interesting that the rule in traditional Jewish law is that there is no right to appeal but that every court should have at least three judges (however, it should be said that in Jewish law there is no strong rule of res judicata). Shavell pointed out

form a strong argument against having binary decisions in the lower courts, particularly when there is a right to appeal. Another case in which it may be justified to limit or cancel the right to appeal is when the parties bear high appeal costs, particularly when we have the combination of high appeal costs and the American rule of dividing the litigation costs or when we have high appeal costs and a legal uncertainty that is not reduced by the right to appeal.

Ultimately, I see this work as a strong argument against legal uncertainty; however, I do not see this work as a strong recommendation against appeals—only in cases of binary decisions by the lower courts, including cases where only the lower court's binary decision is open to appeal, or in cases in which there are high enough appeal costs. Yet, I see it as an open question, what to do with the problem that the right to appeal may give the judge an incentive not to decide according to the law, what contradicts the rule of law? How much does it challenge the right to appeal?

VII. APPENDIX – THE MODEL

Let us now present the proposed theory by a formal model. The advantage of a formal model is that we can test the argument, especially its generality, and make the argument more transparent.

J is the judgment that the more risk-averse party is expected to gain in the case of an appeal.

$\mathbf{P_m}$ is the premium that the more risk-averse party is ready to pay to neutralize the risk.

$\mathbf{P_l}$ is the premium that the less risk-averse party is ready to pay to neutralize the risk.

$\mathbf{AC_m}$ is the appeal cost of the more risk-averse party.

$\mathbf{AC_l}$ is the appeal cost of the less risk-averse party.

Thus, the more risk-averse disagreement payoff is $(J - P_m - AC_m)$ and the less risk-averse disagreement payoff is $(J + P_l + AC_l)$. In other words, the more risk-averse party will not appeal if and only if they get (in the lower court) at least $(J - P_m - AC_m)$; meanwhile, the less risk-averse party will not appeal if the risk-averse will get (in the lower court) more than $(J + P_l + AC_l)$.

Hence, the decision will not be appealed if and only if it falls in the range between $(J - P_m - AC_m)$ and $(J + P_l + AC_l)$. This will be

that the right to appeal is a substitute for investing resources in the first phase of the adjudication by the legal system. Shavell, *supra* note 6, at 387.

the decision range. Further, because $P_l > P_m$ in the uncertain legal regime, the decision range in the uncertain legal regime is biased against the risk-averse party (this is the case even when the appeal costs of both parties are equal).

However, in the certain legal regime, in which there is no risk, the premium that each side is ready to pay is 0, i.e., $P_m = P_l = 0$. Thus, the decision range will thus be between $(J - AC_m)$ and $(J + AC_l)$. If the appeal cost of the weak party is equal to that of the strong party, the decision range is not biased in the certain legal regime.

The conclusion is that the greater the legal uncertainty, which is actually the unilateral appeal cost, the more biased is the decision range. This will also be the case regarding the delay of justice. Given that the weak party is less patient than the strong party because of different time discounting, the appeal cost of the strong party will be smaller than that of the weak party if the trial takes a significant amount of time (we included the cost of waiting for the money in the appeal cost).