

JUDICIAL EXPEDIENCY AND NEGLIGENCE RULES

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ABSTRACT

The switch from contributory to comparative negligence is thought to have been motivated primarily out of a concern for justice. We offer a different perspective. Language in state supreme court decisions suggests that some judges thought the switch would reduce appeal rates. We hypothesize that courts were more likely to make the switch when their appellate caseloads are relatively high. To examine this, we estimate hazard models, showing that states with appellate courts where caseloads grew relatively faster made the switch more quickly, and the effect was more pronounced for the switch to the pure, as opposed to the modified, form of comparative negligence.

1. Introduction

The economic analysis of law struggles with finding a convincing economic rationale for the widespread adoption of comparative negligence in the United States in the period 1969-1985.¹ First, it is still unclear whether comparative negligence creates better incentives for parties to adopt efficient care than contributory negligence.² Also, the alleged risk-spreading virtue of comparative negligence is questionable. Given the availability of third-party insurance, there are better alternatives available

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¹ See Artigot i Golobardes and Gómez Pomar (2009); Bar-Gill and Ben-Shahar (2003).

² See e.g. Shavell (1987).

to spread the risk of accidental harm.³ Finally, comparative negligence is generally considered to generate higher costs per case. For example, White (1989) argues that comparative negligence seems to generate higher litigation and administrative costs than the traditional negligence rules because courts must decide on the degree of negligence by both parties and not just whether each party was negligent.⁴

Curran (1992) provides an interest group model to explain the timing of the switch from contributory to comparative negligence in the United States.⁵ He argues that of all the potential interest groups, only manufacturers and lawyers had a sustained interest in comparative negligence. For most of the twentieth century, manufacturers stood to lose from the adoption of comparative negligence, while the legal profession stood to gain. However, the adoption of strict product liability in many states from the mid-1960's onwards eliminated the resistance of manufacturers, which enabled lawyers to push successfully for the adoption of comparative negligence. Curran provides some empirical support for this argument. It is a puzzle, however, why these interests were important in determining the switch to comparative negligence, but were unable to stave off the movement toward strict product liability, which would be seemingly unattractive to both the lawyers and the manufacturers by Curran's rationale.

In this article, we provide a different, though not necessarily mutually exclusive, perspective. We argue that comparative negligence, especially in its pure form, was used to mitigate appellate caseloads. Our hypothesis is that states with larger supreme court caseloads had a stronger incentive to switch to comparative negligence. This hypothesis is based on the following insights. First, appellate caseloads started to rise dramatically in the 1960s.^{6,7} This increase was much larger and started earlier in some states than in others. Second, supreme courts with large increases in caseloads looked for ways to decrease their caseloads. Third, a switch from contributory negligence to comparative negligence was expected to reduce the numbers of appeals since the harshness of contributory negligence led many courts to create a complex patchwork of exceptions which often gave rise to an appeal.⁸

³ See e.g. White (1989).

⁴ See also Landes and Posner (1987); Shavell (1987); Bar-Gill and Ben-Shahar (2001). See, however, De Mot (2011), who shows that the litigation costs are not necessarily larger under comparative negligence.

⁵ See also Rubin (2001), Zywicki (2000).

⁶ Note that appellate judgeships have more than doubled in the period 1965-1980, but they have grown much more slowly than the volume of appeals. See Marvell and Kuykendall (1980).

⁷ This was not only the case in state Supreme Courts, but also in the US Supreme Court. In 1951, there were 1,200 new cases in the US Supreme Court. In 1971, the number had reached 3,600. See Federal Judicial Center (1972).

⁸ Note that tort claims make up a substantial part of all appellate court filings.

The next section provides some further background on contributory and comparative negligence and on the incentives of the judiciary necessary to motivate our empirical investigation. Section 3 offers some background on the data. Section 4 contains the empirics. Section 5 concludes.

2. Negligence rules, appeal rates and the judiciary

As mentioned in the introduction, our hypothesis is based on three elements. We provide more details on caseloads in later sections. In this section, we focus on the judiciary's incentive to reduce caseloads and on the difference in appeal rates under contributory and comparative negligence.

2.1. *The incentives of the judiciary*

Some studies have concluded that state appellate courts managed to keep abreast of the caseload explosion of the 1960s and 1970s by making numerous and varied changes to their personnel, structure, and procedure.⁹ We argue that supreme courts have also made changes in substantive law to keep caseloads under control. This fits into a line of research that argues that judges are rational utility maximizers with relatively weak performance incentives and constraints on their decision-making, at least at the highest levels. This issue has been stressed by Cooter (1983) and Posner (1993). Both authors assume that judges seek to minimize effort subject to various institutional constraints. Cooter assumes that judges providing private services have a financial incentive to increase their caseload to the extent it increases their income. In Posner's approach, focusing on federal judges, income is fixed and can hence not be increased by more effort. For Posner judicial utility is a function of income, status, and leisure. Since the income of judges is largely fixed, maximizing leisure becomes especially important, conditional on maintaining status levels (Posner 1993; Stras 2006).¹⁰ Posner further predicts that judges who have reached a high income level (e.g. Supreme Court justices) will prefer to maximize leisure.¹¹ Furthermore, "the opportunities for a leisured judicial life, especially at the appellate level, are abundant" (Posner, 2008, 61). Hence one can expect judges to try to reduce their workload.

⁹ See e.g. Marvell (1989).

¹⁰ The importance of maximizing leisure for judges was recently repeated by Posner (see Posner 2008).

¹¹ In Posner's words: "I therefore predict that a higher judicial salary is likely to reduce the amount of work done by existing judges" (Posner 1993).

In theory, judges confronted with an increased workload could maximize leisure by simply deciding fewer cases. This would unavoidably lead to increased court congestion and a backlog of cases. This could harm the reputation of judges and will likely be avoided (Helland and Klick, 2007; Beenstock and Haitovsky, 2004). Judges could also lobby the legislator for more judges to deal with increasing workloads. However, this could reduce the prestige of the judges as more people attain the position. The judiciary will then look for alternative ways to reduce its workload according to Posner's model of judicial behavior.

There is some empirical evidence supporting this. For example, Helland and Klick (2007) show that judges in class action cases have an incentive to easily grant the attorney's fee request in order to terminate cases rapidly, thus avoiding court congestion. Research from Israel also shows that judges, for reputational reasons, will avoid a large case backlog and hence will dispose of more cases when the caseload increases (Beenstock and Haitovsky, 2004). Other research shows that a higher workload increases the probability of retirement of judges (see e.g. Nixon and Haskin 2000; Spiriggs and Wahlbeck 1995).¹²

2.2. Appeal rates under contributory and comparative negligence

Turning to the third element of our hypothesis, a switch to comparative negligence, especially the pure form, was regarded by commentators and judges as being capable of reducing appellate caseloads. Before the widespread adoption of comparative negligence, many state courts had tried to reduce the harshness of contributory negligence by creating a patchwork of exceptions to avoid its application.¹³ For example, many courts recognized that contributory negligence does not bar recovery when the defendant's conduct can be considered gross negligence. This approach, however, was widely recognized to lead to endless appeals because courts could not define "slight," "ordinary," and "gross" negligence with sufficient clarity.¹⁴ The "last clear chance" doctrine provides another example. This doctrine makes the last person who could have reasonably avoided an accident liable.¹⁵ Prosser notes the great difficulties this doctrine has caused both judges and lawyers.¹⁶ So according to many commentators, interpreting and applying the patchwork of exceptions led to a tremendous waste of judicial resources¹⁷ and resulted in enormous confusion among and within the various states¹⁸. This

¹² For a summary of this literature see Stras, 2006.

¹³ See Mills (2002).

¹⁴ See e.g. Green (1944), at 50-53; Malone (1945), at 141; Prosser (1953), at 17-18.

¹⁵ See Wittman (1998).

¹⁶ Prosser (1951, 437 n. 99).

¹⁷ See Mills (2002).

¹⁸ Prosser (1951, at 428).

approach complicates the application of the law and increases the appellate caseload considerably.

Even without the complex patchwork of exceptions, there are good reasons to suspect that comparative negligence is likely to reduce the appellate caseload (especially in its pure form). The straightforward reason is that under contributory negligence the plaintiff either wins or loses all. Hence, the incentive of the losing party to appeal may be large. Comparative negligence presents a more moderate approach compared to the “all or nothing” character of contributory negligence. Hence, comparative negligence may reduce the incentives of the parties to file an appeal. Suppose for example that the trial court only holds the defendant liable. Under all three rules (contributory negligence, pure comparative negligence and modified comparative negligence), the defendant bears the entire loss. Only she can have an incentive to appeal. The incentive for the defendant to appeal is clearly greater under contributory negligence than under comparative negligence. Under contributory negligence, the defendant has two possibilities to fully escape bearing any part of the loss: if he convinces the appellate court that he didn’t act negligently, or if he convinces the appellate court that the plaintiff acted negligently. Under comparative negligence, the defendant only escapes bearing the full loss if he convinces the appellate court that he didn’t act negligently. If he can only show that the plaintiff acted negligently as well, he will not fully escape bearing the loss. The incentive to appeal is clearly intermediate under modified comparative negligence.

Supreme court judges were also well aware that comparative negligence was likely to reduce appellate caseloads.¹⁹ In the Supreme Court decision in which Michigan adopted pure comparative negligence, Justice Williams wrote: “We acknowledge that even under the ‘pure’ form of comparative negligence there will be appeals concerning the percentage of award, but it is undoubtedly more compelling to appeal when you have been awarded nothing than when you have received some compensation”.²⁰ Note also that courts treat jury determinations of fault percentages to be findings of fact subject to minimal judicial review (see e.g. *Woods and Deere*, 1996). Regarding the choice between pure and modified comparative negligence, in the Supreme Court decision in which California adopted pure comparative negligence, Judge Sullivan wrote: “We also consider significant the experience of the State of Wisconsin, which until recently was considered the leading exponent of the ‘50 percent’ [i.e., modified comparative negligence] system. There that system led to numerous appeals on the narrow but crucial issue whether plaintiff’s negligence was equal to defendant’s....”.²¹

¹⁹ Of course, we do not expect Supreme Court judges to explicitly acknowledge that reducing appellate caseloads was a reason for making the switch from contributory to comparative negligence.

²⁰ *Placek v. City of Sterling Heights*, 275 N.W.2d 511.

²¹ *Li v. Yellow Cab Co.* (1975) 13 C3d 804. See also Prosser (1953, 491-492), who wrote: “The practical effect has been very similar to that of ‘slight’ and ‘gross’ negligence. Again appeals have multiplied, in

Furthermore, under the expectation that pure comparative negligence is the form that is more likely to reduce workload, one would anticipate that courts will adopt the pure form while legislatures will adopt the modified form. To a large extent, this is indeed what happened. Nine of the twelve states that changed judicially adopted a pure form. Twenty-two of the twenty-seven states that changed through legislation adopted a modified form.

Of course, in some types of cases, comparative negligence may increase the incentive to appeal. We now present a more formal model which shows under which circumstances this will be the case. After that, we look at the parties' incentives to file claims, since this influences the number of appeals as well.

2.2.1. Model

We examine the incentives to appeal in 4 situations which cover the full range of possible decisions of the court of first instance: (1) The trial court found that both parties were negligent; (2) The trial court found that only the defendant was negligent; (3) The trial court found that neither party was negligent; and (4) The trial court found that only the plaintiff was negligent. For the sake of simplicity, we assume away trial costs and focus on judgments in the first instance courts and expected judgments in the appeal courts.

1. *The trial court holds both parties negligent.*

Under contributory negligence, the plaintiff will bear the entire loss. Only she may have an incentive to appeal. If the plaintiff does not appeal, her pay-off equals $-J$. If the plaintiff appeals, her pay-off equals $(1-(1-a).b)(-J) + (1-a).b.(J-J) = -J + (1-a).b.J$, with a the probability that the appeal court will hold the plaintiff negligent given that the trial court did, and b the probability that the appeal court will hold the defendant negligent given that the trial court did. The difference between appealing and not appealing for the plaintiff equals $(1-a).b.J$.

Under pure comparative negligence, the parties will share the loss. Both may have an incentive to appeal. If the plaintiff does not appeal, her pay-off equals $-s.J$, with s being the share the plaintiff bears herself in case the trial court decides both parties

which the court is asked to determine whether the particular conduct of the plaintiff is fault at least 'equal' to that of the defendant. Since this must depend not only upon all circumstances of the case as they affect the conduct of both parties, but upon a comparison of one with the other, it is obvious that each decision must be upon the individual facts, and that either the losing defendant or the losing plaintiff has ample encouragement to raise the issue. It is not surprising that there is no semblance of consistency to be discerned in cases of the same general type."

are negligent. If the plaintiff appeals, her pay-off equals $(1-b).(-J) + (1-a).b.(J-J) + a.b.(-s'.J) = -(1-b).J - a.b.s'.J$, with s' being the share that the plaintiff bears herself in case the appeal court decides both parties are negligent. The difference between appealing and not appealing for the plaintiff equals $-(1-b).J + (s-a.b.s').J$. Now we look at the incentives of the defendant to appeal. If the defendant does not appeal, her pay-off equals $-(1-s).J$. If the defendant appeals, her pay-off equals $-(1-a).b.J - a.b.(1-s').J$. The difference between appealing and not appealing equals $-(1-a).b.J - (a.b.(1-s')-(1-s)).J$.

Under modified comparative negligence, we need to distinguish between the situation in which the trial court thought that (1) the plaintiff's negligence was greater than the defendant's negligence and (2) the defendant's negligence was greater than the plaintiff's negligence. In the first case, the plaintiff bears the entire loss. Only she could have an incentive to appeal. If the plaintiff does not appeal, her pay-off equals $-J$. If the plaintiff appeals, her pay-off equals $(1-b).(-J) + (1-a).b.(J-J) + a.b.c.(-s'.J) + a.b.(1-c).(-J)$, with c being the probability that the appeal court will deem the defendant's negligence greater than the plaintiff's negligence, given that the trial court thought the opposite was true. The difference between appealing and not appealing for the plaintiff equals $b.J + a.b.c.(-s'.J) + a.b.(1-c).(-J)$. In the second case, the parties share the loss. Both parties could have an incentive to appeal. If the plaintiff does not appeal, her pay-off equals $-s.J$. If the plaintiff appeals her pay-off equals $(1-b).(-J) + (1-a).b.(J-J) + a.b.d.(-s'.J) + a.b.(1-d).(-J)$, with d the probability that the appeal court will deem the defendant's negligence greater than the plaintiff's negligence, given that the trial court thought so. The difference between appealing and not appealing for the plaintiff equals $(1-b).(-J) + (s - a.b.d.s').J + a.b.(1-d).(-J)$. If the defendant does not appeal, her pay-off equals $-(1-s).J$. If she appeals, her pay-off equals $-(1-a).b.J - a.b.d.(1-s').J$. The difference between appealing and not appealing equals $-(1-a).b.J + ((1-s)-a.b.d.(1-s')).J$.

Contributory negligence	Comparative negligence	Modified comparative negligence
P: $(1-a).b.J$	P: $-(1-b).J + (s-a.b.s').J$ D: $-(1-a).b.J + ((1-s)-a.b.(1-s')).J$	Trial court decided that plaintiff's negligence was greater: P: $b.J + a.b.c.(-s'.J) + a.b.(1-c).(-J)$ Trial court decided that defendant's negligence was greater: P: $-(1-b).J + (s - a.b.d.s').J - a.b.(1-d).J$ D: $-(1-a).b.J + ((1-s)-a.b.d.(1-s')).J$

Both the plaintiff and the defendant may have an incentive to appeal under pure comparative negligence, but this incentive may be quite limited compared to the

plaintiff's incentive to appeal under contributory negligence. We can see this through a simple numerical example. Suppose the plaintiff has suffered a loss of 100. Under comparative negligence, if the trial court holds both parties negligent, each party will bear part of the loss (e.g. each 50). If the plaintiff can convince the appellate court that the defendant acted negligently but that he himself did not, his gain equals 50 (100-50). Under contributory negligence, his gain would equal 100 (100-0). More formally, the plaintiff's incentive to appeal is only smaller under contributory negligence than under comparative negligence if the following condition is satisfied: $a.b.(1-s') > 1-s$. Regarding modified comparative negligence, in case the trial court decided the plaintiff's negligence was greater, the plaintiff's incentive to appeal is larger under modified comparative negligence than under contributory negligence: $b.J + a.b.c.(-s'.J) + a.b.(1-c).(-J) = b.J - a.b.(s'.c + 1-c).J > b.J - a.b.J$. The plaintiff's incentive is larger under modified comparative negligence than under pure comparative negligence if $a.b.(1-c).(1-s') < 1-s$. In case the trial court decided that defendant's negligence was greater, the plaintiff's incentive to appeal is smaller under modified comparative negligence than under pure comparative negligence, but the opposite is true for the defendant's incentive to appeal (because the modified form gives him an additional opportunity to escape liability, i.e. when he can convince the appellate court that his negligence was smaller than the plaintiff's negligence).

2. *The trial court only holds the defendant negligent*

Under all three rules, the defendant bears the entire loss. Only she can have an incentive to appeal. Under contributory negligence, if the defendant does not appeal, her pay-off equals $-J$. If the defendant appeals, her pay-off equals $-(1-e).b.J$, with e the probability that the appeal court will hold the plaintiff negligent given that the trial court did not, and b (still) the probability that the appeal court will hold the defendant negligent given that the trial court did. The difference between appealing and not appealing for the plaintiff equals $J - (1-e).b.J$.

Under pure comparative negligence, if the defendant does not appeal, her pay-off equals $-J$. If the defendant appeals, her pay-off equals $-(1-e).b.J - e.b.(1-s').J$. The difference between appealing and not appealing for the plaintiff equals $J - (1-e).b.J - e.b.(1-s').J$.

Under modified comparative negligence, if the defendant does not appeal her pay-off equals $-J$. If the defendant appeals, her pay-off equals $-(1-e).b.J - e.b.f.(1-s').J$, with f the probability that the appeal court will consider the defendant's negligence to be greater than the plaintiff's negligence, given the decision of the first instance

court. The difference between appealing and not appealing equals $J - (1-e).b.J - e.b.f.(1-s').J$.

Contributory negligence	Comparative negligence	Modified comparative negligence
D: $J - (1-e).b.J$	D: $J - (1-e).b.J - e.b.(1-s').J$	D: $J - (1-e).b.J - e.b.f.(1-s').J$

The incentive for the defendant to appeal is clearly greater under contributory negligence than under comparative negligence. Under contributory negligence, the defendant has two possibilities to fully escape bearing any part of the loss: if he convinces the appellate court that he didn't act negligently, or if he convinces the appellate court that the plaintiff acted negligently. Under comparative negligence, the defendant only escapes bearing the full loss if he convinces the appellate court that he didn't act negligently. If he can only show that the plaintiff acted negligently as well, he will not fully escape bearing the loss. The incentive to appeal is intermediate under modified comparative negligence.

3. *The trial court does not hold either party negligent*

Under all three rules, the plaintiff bears the entire loss. Only she can have an incentive to appeal.

Under contributory negligence, if the plaintiff does not appeal, her pay-off equals $-J$. If she appeals, her pay-off equals $-(1-(1-e).g).J + (1-e).g.(J-J)$, with g the probability that the appeal court will hold the defendant liable, given that the trial court did not. The difference between appealing and not appealing equals $J - (1-(1-e).g).J$.

Under comparative negligence, if the plaintiff does not appeal, her pay-off equals $-J$. If she appeals, her pay-off equals $-(1-g).J - e.g.s'.J$. The difference between appealing and not appealing equals $J - (1-g).J - e.g.s'.J$.

Under modified comparative negligence, if the plaintiff doesn't appeal, her pay-off equals $-J$. If she appeals, her pay-off equals $-(1-g).J - e.g.h.s'.J - e.g.(1-h).J$, with h the probability that the appeal court will consider the defendant's negligence to be greater than the plaintiff's negligence. The difference between appealing and not appealing equals $J - (1-g).J - e.g.h.s'.J - e.g.(1-h).J$.

Contributory negligence	Comparative negligence	Modified comparative negligence
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$P: J - (1-g).J - e.g.J$	$P: J - (1-g).J - e.g.s'.J$	$P: J - (1-g).J - e.g.h.s'.J - e.g.(1-h).J$
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The incentive to appeal for the plaintiff is clearly larger under comparative negligence than under contributory negligence, since the plaintiff will also be awarded something if both parties are found negligent under comparative negligence. The incentive to appeal under modified comparative negligence is intermediate.

4. *The trial court only holds the plaintiff negligent*

Under all three rules, the plaintiff bears the entire loss. Only she can have an incentive to appeal.

Under contributory negligence, if the plaintiff does not appeal, her pay-off equals $-J$. If she appeals, her pay-off equals $-(1 - (1-a).g).J$. The difference between appealing and not appealing equals $J - (1 - (1-a).g).J$.

Under comparative negligence, if the plaintiff does not appeal, her pay-off equals $-J$. If she appeals, her pay-off equals $-(1-g).J - a.g.s'.J$. The difference between appealing and not appealing equals $J - (1-g).J - a.g.s'.J$.

Under modified comparative negligence, if the plaintiff doesn't appeal, her pay-off equals $-J$. If she appeals, her pay-off equals $-(1-g).J - a.g.i.s'.J - a.g.(1-i).J$, with i the probability that the appeal court will find the defendant's negligence greater than the plaintiff's negligence. The difference between appealing and not appealing equals $J - (1-g).J - a.g.i.s'.J - a.g.(1-i).J$.

Contributory negligence	Comparative negligence	Modified comparative negligence
$P: J - (1-g).J - a.g.J$	$P: J - (1-g).J - a.g.s'.J$	$P: J - (1-g).J - a.g.i.s'.J - a.g.(1-i).J$

It's clear that the incentive of the plaintiff to appeal is greater under comparative negligence than under contributory negligence. Under contributory negligence, the plaintiff needs to prove two things to obtain (full) compensation: that he didn't act negligently and that the defendant did act negligently. Only then will the appellate court reverse the decision of the trial court. Under comparative negligence, the plaintiff also receives full compensation if he can show that he didn't act negligently and that the defendant did act negligently. On top of that, he also recovers part of the loss if he can only prove that the defendant acted negligently. The incentive to appeal under modified comparative negligence is intermediate.

In conclusion, comparative negligence does not lower appeal rates for all types of cases. The overall effect will depend on which types of categories of cases (1,2,3 or 4) end up in the courts of first instance more frequently. Categories 1 and (especially) 2 are likely to dominate. The reason is that the vast majority of tort cases are motor vehicle cases. In these cases the plaintiff win rate is quite high.²² Shanley (1985) finds that for automobile accidents, in the vast majority of cases either (1) both parties are held liable, or (2) only the defendant is held liable, with category (2) much more common than category (1). Category 2 is the category in which the incentives to appeal are always smaller under comparative negligence than under contributory negligence.

2.2.2. The incentive to file

The fact that appeals are less frequently filed *among the cases that have been decided by a trial court*, does not automatically imply that comparative negligence will reduce the total appellate caseload compared to contributory negligence. Comparative negligence may increase the incentive to file a case in the trial courts because comparative negligence increases the expected value of a claim. This could lead to an increase in the total number of appeals, even though the appeal frequency may decrease.

However, empirical research (e.g. Shanley, 1985) shows that under a contributory negligence rule, juries often deliberately did not hold a plaintiff, who was actually negligent, liable in order to avoid the harsh consequences of this rule. At the same time, in such cases juries did not allow these plaintiffs to receive *full* damages from negligent defendants. In other words, juries de facto applied a rule of comparative negligence.²³ It is thus logical to conclude that the legal switch was unlikely to have an overwhelming effect on the number of filings. Moreover, one has to take settlement incentives into account. An Arkansas study showed that the adoption of comparative negligence prompted no drastic change in trial court burden there. The change increased the incentive to sue but at the same time promoted more pretrial settlements. The report concluded that concern over court congestion should not be a factor in a State's decision to adopt comparative negligence (see Rosenberg, 1959; Thomson, 1969).

²² See for example Civil Justice Survey of State Courts 2005, <http://bjs.gov/content/pub/pdf/cbjtsc05.pdf>.

²³ Shanley studied 675 auto accident trials in San Francisco County in the 1970s, half before and half after California's adoption of pure comparative. He created a statistical model based on a plaintiff/defendant negligence scale that he used to predict jury behavior in these cases. Awards under a properly-followed comparative rule would have been 92 percent higher than under a properly-followed contributory rule. However, the actual increase was only 20 percent.

Obviously, these deliberate errors of juries regarding the plaintiff's negligence most likely increased the appeal rate under contributory negligence substantially. We can see this by looking at the first case in our model above. In cases in which the trial court holds both parties negligent, under contributory negligence only the plaintiff has an incentive to appeal, with a difference between appealing and not appealing of $(1-a).b.J$.²⁴ Unless a is quite small and b is quite large, the incentive to appeal will not be extremely large. If juries would however try to mimic a rule of pure comparative negligence, both parties may have an incentive to appeal.²⁵ If the plaintiff does not appeal, her pay-off equals $-s.J$. If she appeals, her pay-off equals $-(1-(1-e).b).J$.²⁶ The difference between appealing and not appealing equals $s.J-(1-(1-e).b).J$. The plaintiff's incentive to appeal may be quite small, because the chance that the appellate court will find him liable is large (e is quite large because the lower court *deliberately* disregarded the plaintiff's negligence; with a large e , $s.J-(1-(1-e).b).J$ will often be negative). However, the defendant's incentive to appeal will be quite large, given the intentional error by the lower court (e will be large). If the defendant does not appeal, his pay-off is $-(1-s).J$. If he appeals, his pay-off equals $-(1-e).b.J$. The difference between appealing and not appealing is $(1-s).J-(1-e).b.J$. When e is close to 1, the difference will approach $(1-s).J$.

3. State Appellate Caseloads

Our empirical analysis focuses on the period from 1969 onwards. By 1969, only 7 states had adopted comparative negligence: Mississippi (1910, legislatively adopted the pure form)²⁷, Georgia (1913, judicially adopted²⁸ a modified form), Nebraska (1913, legislatively adopted a modified form²⁹), Wisconsin (1931, legislatively adopted a modified form³⁰), South Dakota (1941, legislatively adopted a modified form³¹), Arkansas (1955, legislatively adopted a modified form³²) and Maine (1965,

²⁴ With a the probability that the appeal court will hold the plaintiff negligent given that the trial court did, and b the probability that the appeal court will hold the defendant negligent given that the trial court did.

²⁵ We assume that appellate courts do not try to mimic comparative negligence.

²⁶ With e the probability that the appeal court will hold the plaintiff negligent given that the trial court did not.

²⁷ M.C.A. § 11-7-15.

²⁸ Note that Georgia's legislature passed a law applying the comparative negligence rule to plaintiffs injured in railroad accidents. The Supreme Court then extended this rule to all accidents. See Curran (1992, fn 11).

²⁹ R.S.Neb. 25-1151.

³⁰ Wis. Stat. § 331.045 (1931)

³¹ SL 1941, ch 160.

legislatively adopted a modified form³³). During these decades, appellate caseloads were quite low.³⁴ It's unlikely that caseloads influenced the adoption of comparative negligence in that period. Schwartz (1986) provides a reason for the adoption of comparative negligence for two states, Mississippi and Wisconsin. They seemed to have adopted comparative negligence as a way to forestall the adoption of workmen's compensation laws. Between 1940 and 1969, there were many failed efforts in many state legislatures to adopt comparative negligence.³⁵ According to many commentators, major corporate defendants and insurance companies helped to block comparative negligence legislation because of the concern that it would be too costly.³⁶

Since 1969, twelve states made the switch to comparative negligence judicially. Nine of these states changed to pure comparative negligence (Alaska, California, Florida, Illinois, Iowa, Kentucky, Michigan, Missouri and New Mexico) and three to a modified form (South Carolina, Tennessee and West-Virginia). Twenty-seven states made the switch through legislation. Five states changed to a pure form (Arizona, Louisiana, New York, Rhode Island and Washington) and twenty-two to a modified form (Colorado, Connecticut, Delaware, Hawaii, Idaho, Indiana, Kansas, Massachusetts, Minnesota, Montana, Nevada, New Hampshire, New Jersey, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Utah, Vermont and Wyoming). The District of Columbia and 4 states (Alabama, Maryland, North Carolina and Virginia) still use the rule of contributory negligence. Table 1 provides information related to each state's negligence rule.

Table 1:
State Negligence Rule

State	Year Adopted	Adopted By
Contributory Negligence		
Alabama		
District of Columbia		
Maryland		
North Carolina		
Virginia		
Pure Comparative Negligence		
Mississippi	1910	Legislature
Rhode Island	1971	Legislature
Florida	1973	Court

³² No. 191, [1955] Ark. Acts. 443 (repealed 1957).

³³ 1965 Me.Laws, Pub. L., ch. 424.

³⁴ See Marvell (1983).

³⁵ E.g. in New York in 1947, in Michigan in 1947. In 1950, sixteen states attempted to pass comparative negligence, without success. See Schwartz (1986).

³⁶ See Schwartz (1986).

Washington	1973	Legislature
Alaska	1975	Court
California	1975	Court
New York	1975	Legislature
Louisiana	1979	Legislature
Michigan	1979	Court
Illinois	1981	Court
New Mexico	1981	Court
Iowa	1982	Court
Missouri	1983	Court
Arizona	1984	Legislature
Kentucky	1984	Court
Modified Comparative Negligence		
Georgia	1913	Court
Nebraska	1913	Legislature
Wisconsin	1931	Legislature
South Dakota	1941	Legislature
Arkansas	1955	Legislature
Maine	1965	Legislature
Hawaii	1969	Legislature
Massachusetts	1969	Legislature
Minnesota	1969	Legislature
New Hampshire	1969	Legislature
Vermont	1969	Legislature
Colorado	1971	Legislature
Idaho	1971	Legislature
Oregon	1971	Legislature
Connecticut	1973	Legislature
Nevada	1973	Legislature
New Jersey	1973	Legislature
North Dakota	1973	Legislature
Oklahoma	1973	Legislature
Texas	1973	Legislature
Utah	1973	Legislature
Wyoming	1973	Legislature
Kansas	1974	Legislature
Montana	1975	Legislature
Pennsylvania	1976	Legislature
West Virginia	1979	Court
Ohio	1980	Legislature
Delaware	1984	Legislature
Indiana	1985	Legislature
South Carolina	1991	Court

In the remainder of this section, we focus on some broad tendencies that the data unveil. First, Supreme Court caseloads in states that adopted the pure form of comparative negligence were often very large. For example, the California Supreme Court adopted a pure comparative negligence rule in 1975.³⁷ In that year, Supreme Court caseloads were amongst the highest of all states (524 filings per judge). The great majority of states had much lower caseloads. Florida judicially implemented a rule of pure comparative negligence in 1973.³⁸ At the time of adoption, Supreme Court caseloads were higher than they were in Florida in only a handful of states. Louisiana adopted pure comparative negligence legislatively in 1979.³⁹ In that year, the caseload of the Supreme Court of Louisiana was very high compared to the great majority of other states (406 filings per judge). The caseload had increased substantially between 1975 and 1979. In 1975, there were “only” 229 filings per judge.

Second, the differences between states that chose a pure form and states that chose a modified form are quite substantial. Appellate caseloads in pure comparative negligence states were often high to very high. For the many states that adopted a modified form of comparative negligence, the caseloads were comparably low. For example, Oklahoma adopted a modified form of comparative negligence in 1973. The number of filings per judge for the Supreme Court was 98. Delaware changed to modified comparative negligence in 1984. The caseload in the Delaware Supreme Court in that year was quite modest: 66 cases filed per judge.

Third, focusing on the states that did not introduce any form of comparative negligence, around the period that many states shifted to comparative negligence (early-mid seventies), appellate caseloads were quite low in Alabama (41 filings per judge in 1975), North Carolina (74 filings per judge in 1975) and Maryland (108 filings per judge in 1975).⁴⁰ After 1975, the caseload never increased dramatically in these states.⁴¹

³⁷ *Liv v. Yellow Cab*, 119 Cal. Rptr. 858 (1975).

³⁸ *Hoffman v. Jones*, 280 So.2d 431. The rule is now laid down in a statute (F.S.A. § 768.81(2))

³⁹ Louisiana Act No. 431.

⁴⁰ They were a bit higher in Virginia and the District of Columbia, but the appellate courts in these states have some quite rare characteristics. In Virginia, both the Supreme Court and the intermediate appellate courts have discretionary jurisdiction over the vast majority of their caseload. For the Supreme Court, there’s only discretionary jurisdiction in civil cases (only a few other state Supreme Courts share this characteristic). The Supreme Court of the District of Columbia, with its nine justices, often sits in panels of three, which significantly reduces the workload. In most states, the Supreme Court justices sit en banc.

⁴¹ In the last years, there seem to be some problems for the court of last resort to keep up with the caseloads in Maryland (the ratio of outgoing as a percent of incoming cases was 85% in 2008).

4. Empirics

To examine our hypothesis more carefully, we use the data on state appeal caseloads to predict the adoption of comparative negligence in each state. We use data on the number of appeals in the state's appellate court of last resort divided by the number of judges on that court to provide a metric of how busy each judge is. These data come from yearly reports of the National Center of State Courts. Note that the reports start only from the year 1975. However, the 1976 report provides comprehensive data for the period 1967-1974 for many states. Table 2 provides descriptive statistics.

Table 2:
Descriptive Statistics

Variable	Description	Mean	Std. Dev.	Source
Appellate Caseload	Total cases filed in state's appellate court of last resort in a given year	1,387	1,452	National Center for State Courts
Appellate Caseload Per Judge	Appellate caseload divided by the number of judges on state appellate court of last resort	209	171	National Center for State Courts
Standardized Appellate Caseload	(Appellate caseload per judge – mean appellate caseload per judge)/standard deviation of appellate caseload per judge	0	1	National Center for State Courts
Constant Income Per Capita	State per capita income in constant thousands of dollars	13	4	Bureau of Economic Analysis
Violent Crime Per Judge	The number of violent crimes committed in the state in the given year divided by the number of judges on the appellate	4,177	6,186	Bureau of Justice Statistics

Recently, the Maryland Court of Appeals Chief Justice Robert Bell made a request to have the Judiciary undertake a study of comparative fault and determine whether the comparative fault standard could be adopted in Maryland via a judicial rule. See <http://conduitstreet.mdcounties.org/2011/04/19/session-wrap-up-government-liability-legislation/>.

Standardized violent crime per judge	court of last resort (Violent crime per judge – mean violent crime per judge)/standard deviation of violent crime per judge	0	1	Bureau of Justice Statistics
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Given that some states switched prior to the existence of appeals court data and the fact that some states have not switched, we estimate hazard models that allow for censoring. We do not impose a parametric trend on the data, instead allowing for common year fixed effects to account for the apparent tendency of many states to make the switch in the same year. Essentially, our semi-parametric model estimates the probability of adoption by state i in year t , conditional on the state having not adopted comparative negligence in a year before t . To account for dependence within a state, we cluster the standard errors at the state level.

Table 3 provides some baseline results. To account for economic effects that may also help determine the switch we provide a specification that controls for deflated state per capita income as well.

Table 3: Appellate Caseload and the Adoption of Comparative Negligence
Semi-Parametric Hazard Model
(Standard errors clustered by state)

	(i)	(ii)
Standardized Appellate caseload per Judge	1.01 (0.38)***	1.01 (0.39)**
Deflated per capita income		0.01 (0.02)
Marginal Effect for Standardized Caseload	0.18	0.18

Note: Model estimates the probability of adoption of comparative negligence in year t conditional on having not adopted by year $t-1$ using a probit model that includes year fixed effects.

** $p < 0.05$ (two tailed test of zero coefficient)

*** $p < 0.01$ (two tailed test of zero coefficient)

We find that an increase in a state's appellate caseload of one standard deviation increases its likelihood of adopting comparative negligence by more than 18 percent. This effect is statistically significant at better than the 1 percent level.

There may be a concern that appeals rates are endogenous to other factors that lead to a state's adoption of comparative negligence. To address this possibility, we note

that appeals rate surged in this time period primarily due to an increase in criminal appeals. This suggests the use of violent crime, since violent crimes are much more likely to lead to appeals, as an instrument for the appeals workload. Since violent crime should be orthogonal to the forces affecting the civil law system, this approach should help us isolate the causal effect of the appeals workload on the adoption of comparative negligence. We present results from this approach in table 4.

Table 4: Appellate Caseload Instrumented by Violent Crime
Semi-Parametric IV Hazard Model
(Standard errors clustered by state)

	First Stage	Second Stage
Standardized Appellate caseload per Judge		1.71 (0.51) ^{***}
Standardized Violent crime per Judge	0.72 (0.06) ^{***}	
Deflated per capita income	-0.02 (0.04)	0.02 (0.12)
Marginal Effect for Standardized Caseload		0.18

Note: Model estimates the probability of adoption of comparative negligence in year t conditional on having not adopted by year $t-1$ using a probit model that includes year fixed effects. The first stage regression includes the year fixed effects as well.
^{***} $p < 0.01$ (two tailed test of zero coefficient)

Although our instrument appears to be quite strong with a t statistic exceeding 11, and it generates a coefficient with respect to the appellate workload metric of the predicted sign, we find no change in the estimated marginal effect of the relationship between caseload and the adoption of comparative negligence. This suggests that our original estimates do not suffer from an omitted variables bias. From this, we infer that increasing a state's appellate caseload by one standard deviation increases the likelihood it adopts comparative negligence by 18 percent.

Our hypothesis applies most strongly to the pure form of comparative negligence since the modified form maintains much of the discrete nature of contributory negligence. That is, for plaintiffs above the 50 percent negligence threshold, there will still be a strong incentive to appeal, as indicated by the statements found in the cases discussed above. For that reason, we reexamine the regressions above, using the adoption of pure comparative negligence as the outcome of the hazard functions. For this analysis, we censor observations once a state adopts modified comparative negligence on the assumption that these states effectively leave the risk set when making this choice (i.e., it is unlikely that they will later switch to pure comparative

negligence). For the IV specification, we use the same instrument as described above. We present these results in Table 5.

Table 5: The Adoption of Pure Comparative Negligence
Semi-Parametric IV Hazard Model
(Standard errors clustered by state)

	OLS	IV
Standardized Appellate caseload per Judge	1.44 (0.50) ^{***}	1.83 (0.54) ^{***}
Deflated per capita income	0.21 (0.14)	0.19 (0.16)
Marginal Effect for Standardized Caseload	0.29	0.27

Note: Model estimates the probability of adoption of comparative negligence in year t conditional on having not adopted by year $t-1$ using a probit model that includes year fixed effects. The first stage regression includes the year fixed effects as well.
^{***} $p < 0.01$ (two tailed test of zero coefficient)

Consistent with our hypothesis, the effect of the appeals workload is larger with respect to the adoption of pure comparative negligence than it is with respect to comparative negligence generally. In the case of any comparative negligence, the effect of a standard deviation increase in appeals per judge is 0.18, while it is 0.27 with respect to the adoption of pure comparative negligence.

While our hypothesis is stronger in the case of pure comparative negligence, at least within the range of cases where the plaintiff's negligence is under 50 percent, the switch to comparative negligence may reduce the likelihood of appeal and, therefore, be somewhat attract to judges wishing to reduce their workload. We can examine the switch to both forms of comparative negligence by estimating a competing risks hazard model where a state leaves the risk set when it adopts any form of comparative negligence, but we can still separate the effect of appeals workload on the shift to the different forms of comparative negligence. We present the results of this analysis in Table 6.

Table 6: Contributory vs. Modified Comparative vs. Pure Comparative
Competing Risks Semi-Parametric Hazard Model
(Standard errors clustered by state)

Base Category	Contributory Negligence	Modified Comparative
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Appellate caseload per Judge	1.08 (1.05)
Pure Comparative	
Appellate caseload per Judge	2.89 (1.03) ^{***}
p value for test of equality of coefficients	0.19

Note: Model estimates the probability of adoption of modified or pure comparative negligence in year t conditional on having not adopted either form of comparative negligence by year $t-1$ using a multinomial logit model that includes year fixed effects and deflated per capita income.

^{***}p < 0.01 (two tailed test of zero coefficient)

As suggested, the coefficients for both outcomes are positive, but the coefficient for the adoption of pure comparative negligence is substantially larger. Further, the coefficient on the appeals workload is statistically significant with respect to the adoption of pure comparative negligence but not for the adoption of the modified form.

These results are consistent with the idea that states were more likely to adopt comparative negligence, especially in its pure form, as their appellate caseloads grew. Presumably this was done as a way to reduce the workload of appellate judges, consistent with a model of self-interested judicial behavior.

5. Conclusion

States with large appellate caseloads were more likely to adopt pure comparative negligence compared to states with lower appellate caseloads, which either adopted a modified form of comparative negligence, or left their rule of contributory negligence unaltered. This is consistent with a model of judicial behavior wherein judges seek to reduce their own workload using the tools available to them. In this case, the tool involves changing substantive law, or using their influence to induce the state legislature to change the law for them.⁴²

This analysis helps to fill a gap in the law and economics of torts literature which has previously had difficulty explaining the movement toward comparative negligence, given that its effect on incentives is unclear while substantially increasing litigation costs. While our results could be driven by background trends or other omitted variables, a plausible instrumental variables approach yields comparable results.

⁴² For an interest group perspective on the judiciary where judges lobby the legislature see Anderson, Shughart and Tollison (1989).

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