Forty Years of Civil Jury Verdicts

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Debate over civil justice reform in the United States frequently centers on the extent to which damage awards granted by juries have been escalating over time. However, past studies on civil juries have been hampered by lack of data on verdicts spanning a sufficiently long time period. Average jury awards tend to be highly variable from year to year, making it difficult to distinguish trends over relatively short periods of time. We use the longest time series of data on jury verdicts ever assembled: 40 years of data on tort cases in San Francisco County, CA and Cook County, IL collected by the RAND Institute for Civil Justice. We find that while there has been a substantial increase in the average award amount in real dollars, much of this trend is explained by changes in the mix of cases, particularly a decreasing fraction of automobile cases and an increase in medical malpractice. Claimed economic losses, in particular claimed medical losses, also explain a great deal of the increase. Although there appears to be some unexplained growth in awards for certain types of cases, this growth is cancelled out on average by declines in awards in other types of cases.

I. Introduction

Juries and the verdicts they render seem to be perpetual hot topics in debates over civil justice reform. It has become standard mantra for proponents of reform to claim that damage awards are simply too high and getting worse, often citing a few high-profile verdicts or some limited statistics to demonstrate a high level of growth in award magnitude. Opponents contest the validity of these statistics or cite their own numbers showing far more limited growth in the size of jury verdicts. The confusion is made possible by a general lack of systematic discussion on the nature and causes of long-term trends in jury awards.

Scholarly work on trends in jury verdict awards has been inconclusive, but generally finds little support for the more pessimistic view of runaway juries and increasingly generous awards. Shanley and Peterson (1983), Moller (1996), Eisenberg and Henderson (1992), Eisenberg (1999), and Merritt and Barry (1999) all find statistically significant but often minor (or even negative in the Merritt and Barry study) growth in average, or median, jury awards over time. Daniels and Martin (1995) examine 20 years of jury verdicts and find that the data have too much variability to support any general trends. In general, the data are highly variable and exhibit starkly different short-term trends over five-year and even 10-year periods, particularly for different types of verdicts (e.g., medical malpractice and products liability). The variability in short-term trends highlights the need for a longer time series to more thoroughly examine long-term changes in the average size of civil jury verdicts.

This article examines the long-term trends in jury verdicts reached in tort trials using 40 years of data from San Francisco County, CA and Cook County, IL. Our data come from the RAND Institute for Civil Justice (ICJ), which has been collecting and analyzing data on jury verdicts for the past 20 years.[1] However, while the ICJ data include verdicts rendered in some jurisdictions from as far back as 1959, previous reports have focused their analysis on smaller time periods of just 20, 10, or 5 years. This report uses verdicts reached in the years 1960–1999 in San Francisco County and Cook County and, as such, this is the first time all the collections of ICJ data have ever been combined into a single, unified sample for multidecade analysis, albeit for two counties only. The 40 years of data that we analyze here comprise, to our knowledge, the longest time series on jury decisions ever collected in a uniform manner, offering an unprecedented opportunity to study the long-term behavior of jury verdicts.

Our study is concerned not only with how much jury verdicts have grown over time, but also with the determinants of that growth. Peterson (1984) showed systematic differences in awards granted to different case types (e.g., automobile personal injury cases, medical malpractice cases, etc.) even when the type of injury was controlled for. The results of Chin and Peterson (1985) suggest that some of this difference can be explained by

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[1]See, e.g., Peterson and Priest (1982), Shanley and Peterson (1983), Peterson (1984), Chin and Peterson (1985), Hensler et al. (1987), Peterson (1987), Moller (1996), and Moller, Pace, and Carroll (1999).

differences in plaintiff and defendant characteristics. Because the distribution of cases that go to trial is generally not static, we would expect that changes in award levels could be driven in part by changes in a variety of case characteristics. Using a rich set of control variables, we ask how much of the change in jury awards over time can be explained by observable characteristics. The "left-over" variation in awards over time should incorporate changes in jury behavior as well as any unobservable factors correlated with awards.

We show in this article that both the average and median jury awards in tort cases have increased significantly in real terms from 1960–1999. Factors such as the mix of case types and the level of claimed economic damages have changed noticeably as well. We use regression analysis to identify how much of the trend in average awards can be explained by changes in these observable case characteristics. Although the regression results must be interpreted with caution due to the potential for selection bias, growth in awards unexplained by our model can provide some insight as to how much jury behavior might have changed since 1960.

Our results are striking. Not only do we show that real average awards have grown by less than real income over the 40 years in our sample, we also find that essentially all of this growth can be explained by changes in observable case characteristics and claimed economic losses (particularly claimed medical costs). However, focusing on the average award masks considerable heterogeneity in the growth rates for different kinds of cases. In particular, we find that the average award in automobile cases declined after controlling for claimed medical costs, offsetting persistent and unexplained growth in the average awards for other tort cases. In general, though, the growth (or decline) does not appear substantial enough to support claims of radically changing jury behavior over the past 40 years. Rising claimed medical costs appear to be one of the most important factors driving increases in jury verdicts.

In the following section of this article, we discuss the data that we use and address some issues regarding its reliability and limitations. In the third section we turn to our analysis of the data. In that section, we first present a descriptive analysis, where we discuss the observed trends in the number of verdicts, size of awards, and types of verdicts in our sample. Then we move on to a regression analysis where we examine both the size of the trend and the determinants of it. The fourth section offers some concluding remarks and suggestions for future research.

II. DATA

A. ICJ Jury Verdict Data

This article uses data from the ICJ's Jury Verdicts Coding Project, a data-collection effort that has tracked verdicts in selected jurisdictions dating back to 1959. The sources for this database are private publications (generally known as "jury verdict reporters") that are primarily intended for lawyers, insurance adjusters, and others who have a need to keep abreast of what local juries are awarding for specific types of claims. The publications report recent jury verdicts within a particular jurisdiction by providing detailed information about case and party characteristics and the outcome of each trial. The approach to gathering such information used by each jury verdict reporter differs but generally they either use trial reports submitted voluntarily by attorneys or identify new verdicts through court records and other sources and thereafter survey the attorneys directly.[2]

Our data for this analysis come from the *California Jury Verdicts Weekly* and *Cook County Jury Verdict Reporter*, publications that have provided information on trials conducted in California and Cook County, IL, respectively, for more than four decades. In this article, we exclude verdicts from *California Jury Verdicts Weekly* that originate outside of San Francisco County because San Francisco is the only California county for which 40 years of complete data were recorded by ICJ staff. We also excluded verdicts involving contracts, business, or other types of "financial injury" cases, verdicts resulting from trials conducted in the federal district courts located in California or Illinois, and verdicts rendered in limited jurisdiction courts (e.g., "municipal" or "small claims" courts) of each state. These types of verdicts were excluded because the coverage of these in the reporters—especially during the 1960s and 1970s—does not seem as comprehensive as that for tort cases in general jurisdiction superior courts.[3] Included in our sample are all medical malpractice, other professional malpractice, product liability, automobile, common carrier, and premises liability verdicts, as well as other tort cases such as civil rights cases and intentional torts.

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[2]Another method that appears to have been employed by at least one reporter in the 1960s and 1970s was to station observers in each courtroom within a particular jurisdiction to record details of any trials they encountered first hand.

[3]See Moller, Pace, and Carroll (1999).

We combined 40 years of data from the ICJ's four separate data-collection efforts. In the most recent phase of the data-collection project (Phase IV), a comprehensive data-collection instrument was used to abstract extensive information about verdicts rendered in 1995 through 1999 in all of the counties of California and New York, Cook County (Chicago, IL), Harris County (Houston, TX), King County (Seattle, WA), and the Saint Louis, MO metropolitan area. A similar approach was taken for previous coding efforts for verdicts rendered between 1985 and 1994 for these same jurisdictions (Phase III), for California and Cook County cases only for the years of 1980 through 1984 (Phase II), and for San Francisco County and Cook County only for the years 1960 through 1979 (Phase I). As such, the only jurisdictions available that would cover the maximum range of years were San Francisco County and Cook County.

The core data instruments used in Phase IV and Phase III were largely the same, differing only by some additional questions included in Phase IV. However, the coding instruments used in Phase I and Phase II were markedly different, both from each other and from the later instruments. Each of the phases collected somewhat different sorts of information from the jury verdict reporters though there were a set of common elements such as party type, outcome, broad category of litigated issues, and the like. Our strategy was to target a few critical data items that were reported consistently enough across the different phases that comparable measures could be calculated. These items include total damage awards, claimed economic losses (sometimes referred to as "claimed specials"), the types of issues litigated, and various plaintiff and defendant characteristics.[4] Once these items were coded, we merged the verdicts from the different phases to create a data set that was comparable over the entire 40 years.

B. Estimation Using Data from Jury Verdict Reporters

The use of data from jury verdict reporters in empirical analysis has traditionally been the subject of some controversy.[5] One area of concern is the comprehensiveness of the data collected by jury verdict reporters. Court

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[4]Unfortunately, we have as yet been unable to create a consistent coding scheme for the type and severity of any physical or psychological injuries being claimed.

[5]For example, see Vidmar (1994), Moller, Pace, and Carroll (1999), and Eisenberg (2001).

systems themselves historically do not collect much, if any, detailed data about the specific verdicts rendered in their own courtrooms and, in any event, no reporter that we are aware of gets all its information from official court records. Rather, jury verdict reporters generally rely on individual attorneys involved in the case to voluntarily provide information. This has led some to question whether the data collected from reporters are reliable in the sense that they accurately represent the sample of jury verdicts.

Earlier ICJ studies used a sampling of public records to assess the reliability of the reporters used in this study for the Phase I data. Peterson and Priest (1982) found that the *Cook County Jury Verdict Reporter* included at least 90 percent of the verdicts in almost every year from 1960–1978. Shanley and Peterson (1983) found that the *California Jury Verdicts Weekly* includes at least 84 percent of the verdicts in San Francisco County in 1974 and 1979. Moreover, the verdicts most likely to be omitted were contract and financial injury cases, which is one of the reasons we do not include these cases in this study. Therefore, we feel that the data are suitably reliable for our purposes.

The second issue typically brought up with regards to reporter data is a more general one that applies to all analyses of outcomes at trial: the fact that jury verdicts represent a small fraction of all disputes in the civil justice system. Matters that actually receive a jury verdict are relatively few in number, and many of the factors that influence the decision whether to continue to pursue compensation all the way from initial injury to the final verdict stage are probably unobservable, even in a rich data set such as ours. Priest and Klein (1984), Eisenberg (1990), Vidmar (1994), Eisenberg and Farber (1997), Eisenberg (2000), and others all suggest that the pretrial bargaining process leads to a nonrandom selection of disputes that are described in data on jury verdicts. If the unobservable factors that influence the selection of cases proceeding to trial change in any systematic way over time, this could affect our estimate of the long-term trend in awards.

Speaking more formally, the jury verdicts in our sample represent a *truncated* sample of all disputes.[6] The key to whether our regression analysis of the long-term trend in jury behavior produces an unbiased estimate of the trend in jury behavior is that the truncation be exogenous to the level of damage awards. For us to identify the "true" long-term trend, it must be true that (1) the sample selection process has remained stationary over time or (2) any changes in the selection of verdicts is either independent of

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[6]For a discussion of estimation in the presence of truncation, see Maddala (1983).

changes in the level of awards or is completely explained by changes in the other observed independent variables in our model.

The primary effect of the selection problem is that it weakens our ability to interpret our estimate of the long-term trend in awards as a causal parameter, that is, as an estimate of changes in the underlying preferences and behavior of juries. Using the distinction discussed in Clermont and Eisenberg (1998), our analysis should be thought of as descriptive rather than true inference (unless the assumptions listed above hold). We will describe how juries grant awards in the set of cases that actually result in a jury verdict, and the extent to which the observed trend in awards is explained by changes in observable case characteristics. To this end we hope to be able to determine whether the data provide any direct evidence that juries have been systematically granting higher awards.

III. ANALYSIS

A. *Observed Growth in Awards and Changes in Case Characteristics*

Our empirical objectives in this study are twofold: to document the growth in average awards over time and to determine how much of this growth is due to changes in observable characteristics. In this section we provide a descriptive analysis of how the average award and the characteristics of the cases have changed over time. The characteristics that we think influence award levels (and that we have data on) include the types of issues litigated, plaintiff and defendant characteristics, and the level of claimed medical and nonmedical economic losses.

Turning first to the level of damage awards, Figure 1 illustrates the average and median jury award in Cook County and San Francisco County from 1960–1999 in Year 2000 dollars. The jury award is the total amount of dollars awarded to the plaintiff, including all compensatory and punitive damages. For the purposes of this figure, the data have been "trimmed," that is, the top and bottom 1 percent of the data were removed to reduce the impact of outliers.[7]

The figure shows the average and median awards conditional on a plaintiff win, which for our purposes is defined simply as some positive dollar

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[7]This trimming is done purely for aesthetic purposes. The data are not trimmed for the regressions presented later, but the qualitative results are identical even if we do trim.

Figure 1:   Average and median damage awards in tort verdicts by year.
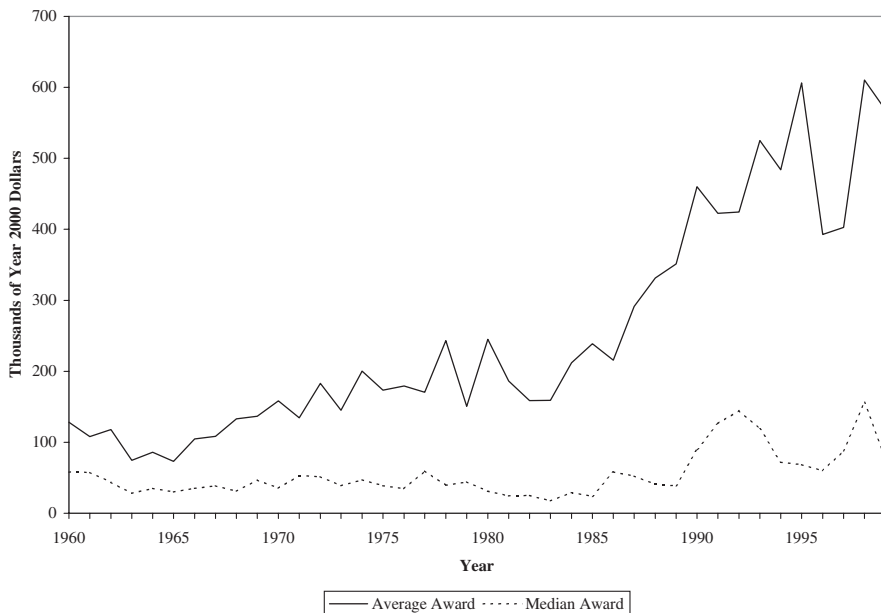
NOTE: The figure includes data on all tort verdicts from San Francisco County and Cook County in which a nonzero award was granted to the plaintiff. The top and bottom 1 percent of awards are trimmed.

amount awarded to the plaintiff.[8] There are two key metrics of jury generosity: the level of awards that they grant and the likelihood with which they assign liability to the defendant. By looking only at plaintiff wins we are considering trends in the former independently of the latter. If juries have become more or less likely to find for the plaintiff over time, this is an important trend in jury behavior that will not be captured by our analysis. Thus, our study should be seen as focusing on only one aspect of jury

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[8]Not every plaintiff who receives a nonzero amount of damages from a jury will necessarily believe that the outcome of the trial has been a successful one. The damages awarded can sometimes be less than the plaintiffs and their attorneys might have hoped for, less than what they might have expected, and sometimes less than their own costs incurred during litigation and trial. Thus, "wins" as we have narrowly defined them may occasionally result in very unhappy plaintiffs and very pleased defendants.

Table 1: Number of Verdicts in Tort Trials by Jurisdiction by Decade[1]

	San Francisco County		Cook County	
	Total	*Plaintiff Wins*	*Total*	*Plaintiff Wins*
1960–1969	2,097	1,051	4,461	2,074
1970–1979	1,581	887	4,732	2,201
1980–1989	824	480	4,095	2,458
1990–1999	621	348	4,093	2,107
Total	5,123	2,766	17,381	8,840

[1]The data are weighted to reflect sampling procedures that were used in different phases of the data-collection effort. The weight for each verdict is the inverse probability of being included in the sample.

behavior, and the assignment of liability is a topic that we leave for future research.

The figure clearly illustrates a trend toward higher jury verdicts in tort cases over the 40 years of our sample. There is modest growth in the average over the first 25 years, followed by a period of exceptionally rapid growth in the late 1980s and little or no growth in the 1990s. The median award changes little until almost 1990, after which it grows substantially, though not by as much as the average.

Although Figure 1 clearly points to a trend toward higher verdicts (at least on average), as indicated previously, such a trend could be misleading if it is driven by changes in the types of cases that are tried before a jury. One trend that we notice in our sample is a steady decline in the number of verdicts in San Francisco County over time. This is illustrated in Table 1, where we present the number of verdicts in both jurisdictions by decade. In the table, the data are weighted to reflect the fact that some cases (mostly automobile) are sampled. We see that the total (weighted) number of verdicts in San Francisco County falls from over 2,000 in the 1960s to just over 600 in the 1990s. In terms of verdicts with a plaintiff win, our primary focus in this study, we see a similar drop from 1,051 in the 1960s to 348 in the 1990s. No such drop is evident in Cook County, however, where the total number of verdicts is 4,461 in the 1960s and 4,093 in the 1990s, and the number of plaintiff wins is 2,074 in the 1960s and 2,107 in the 1990s.[9] Note

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[9]Simply looking at verdict counts ignores the fact that both counties have likely seen significant population growth over the years. Thus, it is likely that verdicts per capita have declined in both counties.

that the fraction of verdicts in which the plaintiff wins changes very little over time, with plaintiffs winning close to half the time.[10]

Underlying the decline in verdicts in San Francisco County is a large decline in the number of verdicts involving automobile personal injury cases. The (weighted) number of these verdicts in San Francisco County and Cook County drops from 1,137 in the 1960s to 232 in the 1990s. This decline explains 61 percent of the total decline in verdicts over that period. The number of automobile cases in Cook County stays between 2,500–3,000 verdicts per decade in the 1960s, 1970s, and 1980s, but it falls to just under 1,500 in the 1990s.

We suspect that the decline in auto verdicts was due at least in part to changes in the jurisdictions that those cases fell under. On July 1, 1979, for example, the limit on civil cases filed in the municipal courts of California increased from $5,000 to $15,000. Thus, it became possible to bring a larger number of low-stake claims in these courts of limited jurisdiction with their simplified procedures, smaller filing fees, and shorter times to trial. Our jury verdict data for California only includes matters reaching the trial stage in the superior courts of general jurisdiction, so some cases that would have been in our data before 1979 might not have been after.[11] Other increases to the jurisdictional limit of the California municipal courts during our study period included a jump from $3,000 to $5,000 in 1961 and from $15,000 to $25,000 in 1986.[12] We are unaware of any similar changes in Cook County. Note that a decline in the number of verdicts in cases with low potential value will lead to an increase in the average verdicts observed in our sample.

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[10]In fact, if we look at the total faction of plaintiff wins in both jurisdictions over all 40 years it is approximately 50.6 percent.

[11]The Judicial Council of California (the entity that monitors the judicial business in that state) estimated that the superior courts experienced a 19 percent drop off in new case filings as a result of that new limit in just its first full year of operation, 24 percent in the second year, and 26 percent in the third. In that first year, 96 percent of the estimated decrease involved motor vehicle personal injury, death, and property damage cases. See Judicial Council of California 1983:87–88, 127.

[12]More recently, California has moved toward a unified court system where the former municipal courts have been absorbed into the superior courts. As early as June 1998 (the exact date depends on the particular county), matters that might have been litigated and tried in the municipal courts (i.e., cases with a maximum value of $25,000) were now treated as "limited civil" cases to be tried in the superior court of that county. San Francisco County unified its courts on December 31, 1998. Unfortunately, the *California Jury Verdicts Reporter* does not indicate whether a case was treated as a limited civil matter at the time of filing in a superior court. As such, it is possible that a number of verdicts detailed in the reporter during 1999 may have involved low-stakes claims previously handled in a municipal court.

Figure 2:   The distribution of litigated issues in tort verdicts by decade.
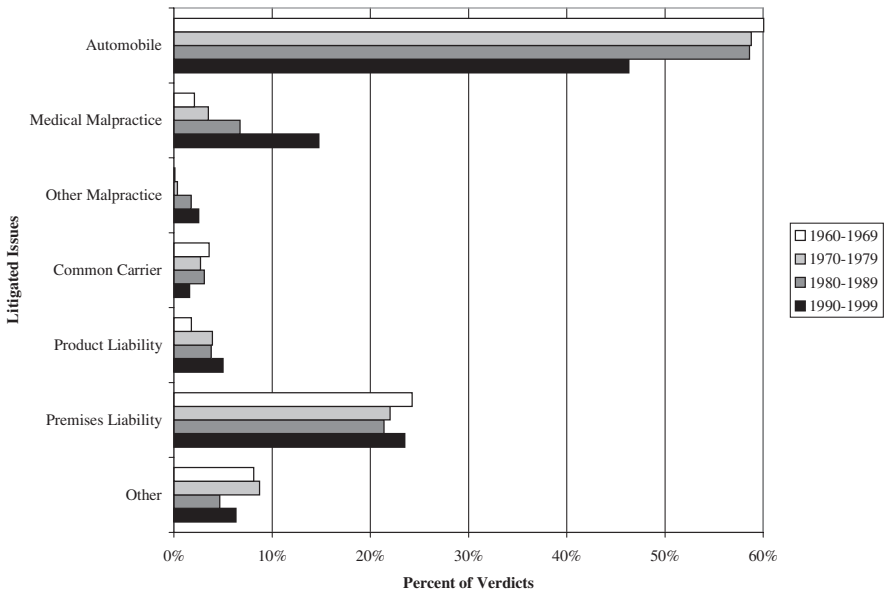
NOTE: The figure includes data on all tort verdicts from San Francisco County and Cook County in which a nonzero award was granted to the plaintiff.

Later, when we decompose the growth of awards, we will control for these changes in municipal limits.

Shanley and Peterson (1983), Peterson (1984), and Moller (1996) all show that different types of cases are associated with different levels of awards, with automobile cases typically being "low-stakes" cases. If the judicial changes in California systematically led to a decline in the number of low-stakes cases, we would expect it to change the mix of case types in our sample. Figure 2 shows how the distribution of verdicts involving different types of cases in our sample has changed over time. The figure shows the percentage of verdicts involving automobile personal injury, medical malpractice, other professional malpractice, common carrier liability, product liability, premises liability, and other tort cases in each of the four decades in our sample.[13] We focus on the mix of case types, as opposed to the

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[13]The cases included in each of the specific issues listed in this figure (i.e., categories other than "Other Tort Cases") are those where our coders identified a single case type as the primary subject matter of the dispute. Some cases obviously involve multiple issue types (e.g., a trial

numbers of verdicts involving particular issues, because we are interested in how the *average* case has changed over time. Note that because we are interested in explaining trends in award levels, from now on our analysis focuses exclusively on the set of verdicts in which the plaintiff wins.

From the figure we observe two primary changes in the distribution over time: a drop in the share of verdicts involving automobile cases and an increase in the share involving medical malpractice. The percent of verdicts involving auto cases falls from a high of about 60 percent in the 1960s to just 46.3 percent in the 1990s. The fraction involving medical malpractice increases fairly gradually over the first three decades in the sample, rising from 2.1 percent in the 1960s to 6.7 percent in the 1980s, and then increases sharply to 14.7 percent in the 1990s. For verdicts involving other specific case types, we see moderate but clear increases in the percentage of trials involving other professional malpractice and product liability, and a fairly steady decline in the proportion of those with common carrier issues.

Changes in the types of issues being litigated suggests a possible explanation for at least part of the trend observed in Figure 1. If automobile cases have lower payments on average and if they declined in frequency over the 40 years in our sample, then, ceteris paribus, we would expect an increase in the overall average dollars awarded by juries. Note that this change cannot be explained just by reforms to San Francisco's municipal court limits because some of the biggest changes occur in the 1990s when there was no change in the jurisdictional ceiling.

Another factor that might influence average award amounts is the type of litigant, specifically whether the defendant is an individual, a corporation, or government entity. Under the "deep pockets" hypothesis, which is essentially the notion that juries impose larger damages on defendants with greater resources because they are better able to bear costs, we would expect that individual defendants would pay out less in terms of awards even if all other aspects of these cases remained unchanged. If true, then a possible explanation for observed trends in jury awards would be changes in the mix

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where a defendant-doctor is being sued for medical malpractice for negligent insertion of a silicone breast implant and where a manufacturer-defendant is being sued in the same case over products liability for the defective implant) but our data make it difficult to distinguish primary from secondary issues. Focusing on single-issue cases helps make comparisons of case types as clear as possible. Verdicts in which multiple issues were litigated are included in the "Other Tort Cases" category.

Figure 3:   Distribution of defendant types in tort trials by decade.
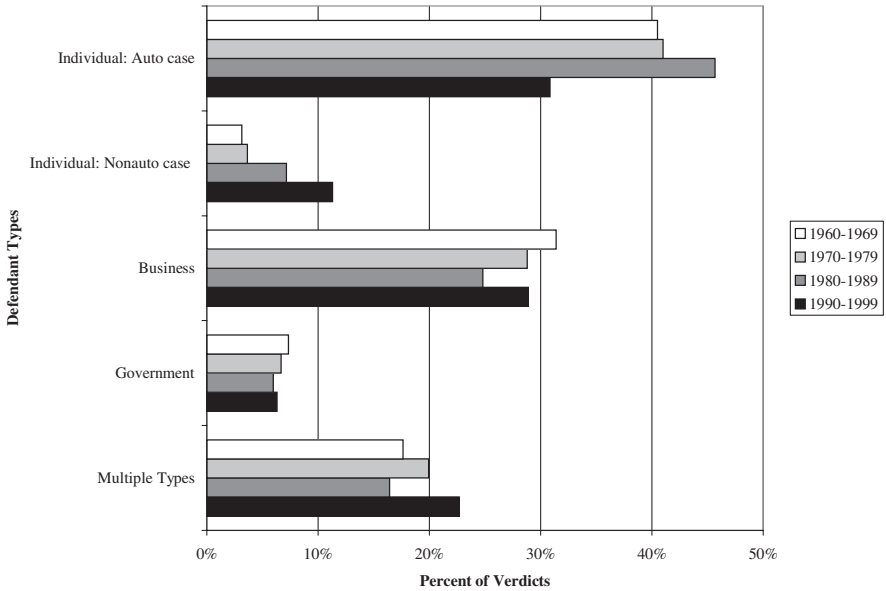
of defendants in these cases over time. Note that we say nothing about plaintiff characteristics here. Over 90 percent of plaintiffs in our sample are individuals, a fact that remains largely unchanged over time. Thus, while we control for plaintiff types in our multivariate analysis in the next section, we ignore it for now.

Figure 3 illustrates the distribution of defendant types in our sample by decade. We divide defendants into five categories: individuals involved in auto cases, individuals involved in nonauto cases, businesses, government agencies and institutions, and multiple-type defendants. We have separated out individual defendants in automobile cases from other individual defendants in our analysis because of the need to identify (to the greatest extent possible) those individuals who are in actuality being sued as a business or professional entity and as such may be treated as a "deep pocket" by a jury. Unfortunately, the Phase I and Phase II data do not allow us to separate out professionals (such as doctors and lawyers) or the owners of businesses from

other types of individuals.[14] Our assumption is that within the case types listed in Figure 2, individuals named as defendants in motor vehicle accident cases would be the least likely to be sued for their professional or business activities.[15]

Given the decline in automobile cases and rise in medical malpractice cases observed in Figure 2, it is unsurprising that we observe a decline in the 1990s in the proportion of verdicts in which the defendants are individuals involved in auto accidents and a steady rise in those where the defendants are individuals involved in other cases (whom we expect to have a greater likelihood of being a professional or business entity). However, there does not appear to be any other clear trend in the mix of defendant types that could explain any significant portion of the increase in average awards reflected in Figure 1 on its own.

A third observable characteristic of cases in our data that may be related to the potential value of a case (and therefore related to the size of the ultimate award) is the level of economic losses claimed by plaintiffs, such as medical costs and lost wages. A case that involves greater losses by the plaintiff should be associated with higher damage awards, ceteris paribus. Thus, if the level of claimed economic losses has been increasing in cases generally, then so should the level of damage awards.

Figure 4 illustrates the average claimed medical and nonmedical losses in verdicts with a plaintiff win by year from 1960–1999 in San Francisco County and Cook County. Here we trimmed the top and bottom 1 percent of total claimed economic losses. The figure shows that the economic losses (both medical and nonmedical) claimed by plaintiffs have increased over time, though not consistently. Nonmedical losses vary significantly over five-year and 10-year periods, though the average trend over all 40 years is clearly positive. Average medical losses stayed flat until the late 1980s and early 1990s, when they began to increase sharply.

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[14]It is possible that some such professionals could be classified under the business defendant category in the Phase I and Phase II data. Although the data were coded in such a way that it is impossible to verify this, examination of Figures 2 and 3 suggests that the data are consistent across the different phases.

[15]There are certainly instances where an individual is named as the sole defendant in a motor vehicle accident suit when in fact he or she is being sued in regard to his or her actions as an employee of a business entity. The jury may well be aware of the "deep pocket" potential of the employer and the likelihood that a verdict against the employee would ultimately be paid by the business but, unfortunately, our data provides no information on how they viewed the actual status of the defendant.

Figure 4:   Claimed economic losses in tort verdicts by year.
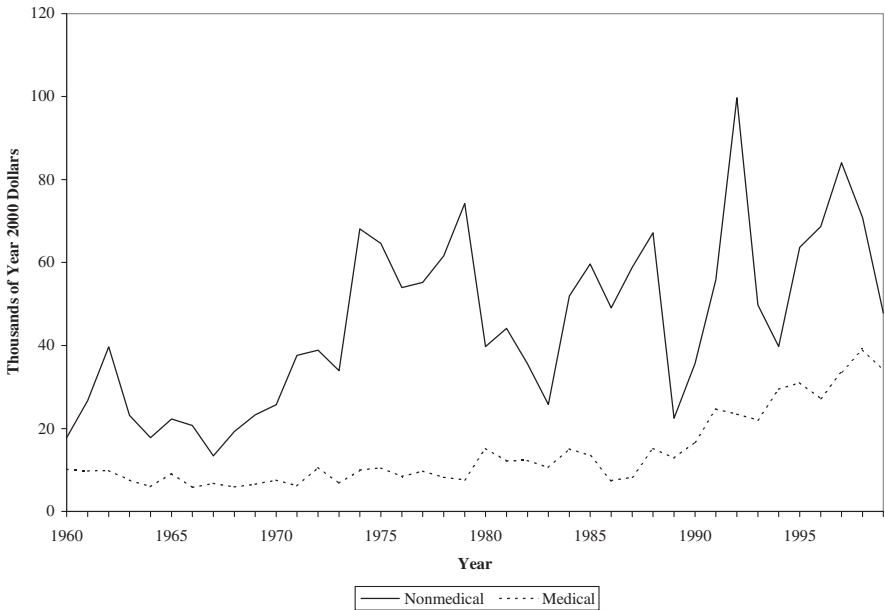
NOTE: The figure includes data on all tort verdicts from San Francisco County and Cook County in which a nonzero award was granted to the plaintiff. The top and bottom 1 percent of total claimed economic losses (medical plus nonmedical) are trimmed.

It is not surprising that claimed medical losses grew in real terms, especially in the last 15 years. From 1960 to 1999, the total Consumer Price Index (CPI) grew at an average rate of approximately 4.6 percent, while the component of the CPI dedicated to medical care grew at an average rate of approximately 6.4 percent, a difference of just under 2 percent per year.[16] The difference in growth rates has increased over time as well, with the annual growth rate in the medical component being 2.5

[16]For the base CPI we use "The Consumer Price Index for All Urban Consumers (CPI-U) for the U.S. City Average for All Items, 1982–84 = 100," series CUUR0000SA0, while for the component devoted to medical care we use "The Consumer Price Index for All Urban Consumers (CPI-U) for the U.S. City Average for Medical Care, 1982–84 = 100," CUUR0000SAM, as reported by the Bureau of Labor Statistics (BLS). For more information on the CPI, visit the BLS website (http://www.bls.gov).

percentage points higher on average than the total CPI since 1980. However, the growth in medical costs is not enough to explain the growth in medical losses. Even if we deflate claimed medical losses using the medical CPI, the picture is largely unchanged.

There are several possible explanations as to why claimed medical and nonmedical losses grew in real terms. We have already explained that changes in the court system in California led to a decline in the number of verdicts for cases involving small losses in the superior courts of general jurisdiction, which would lead to an increase in the observed (claimed) losses in our sample. Another explanation that pertains to claimed nonmedical losses would simply be an increase in real wages. Additionally, we might expect that both claimed medical and nonmedical loss would be higher if the personal injuries suffered by plaintiffs were more severe in later years of the sample, either because injury severity on average went up or because plaintiffs with more severe injuries became relatively more likely to file suit and go to trial. Yet another explanation would be that the types of losses claimed by plaintiffs changed over the 40 years covered by our sample. Although we cannot say for sure which of these best explains the trend shown in Figure 4, the end result is that over time we observe a significant increase in the level of claimed economic losses at issue in the verdicts in our sample.

All the factors we have discussed here could have driven at least part of the upward trend in awards shown in Figure 1. Still, it is impossible to decompose just how much of the trend might be attributable to any individual factors by analyzing them each in isolation. In the next section we study the long-term trend in awards using a regression model that allows us to consider the effect of all these different factors simultaneously.

B. Regression Analysis

In this section we explore how much of the trend in awards documented in Figure 1 can be explained by changes in observable case characteristics such as the type of issue litigated and the nature of the defendants and plaintiffs. We address this question with the following regression model:

$$ln(award_i) = \beta X_i + \alpha year_i + \varepsilon_i,$$

where $ln(award_i)$ represents the logged damage award granted by the jury in case i, X is a vector of different case characteristics, $year$ is the year in which the verdict was decided, and ε is an independent and identically distributed random error term with a standard normal distribution.

The parameter α is our main parameter of interest. We provide no structural interpretation of this parameter; it simply provides a measure of the average annual change in awards. It is important to note that this specification of the model implicitly assumes that each year has an identical effect on awards. This assumption is restrictive (there may be variation in the short-term trend) but we feel that it is appropriate for our purposes because we are primarily interested in explaining what drives the average long-term trend in awards rather than short-term fluctuations.

We include an extensive set of independent variables in *X*. First, we include variables that indicate case characteristics such as whether the verdict occurred in San Francisco County or Cook County, the types of litigated issues involved (using the same categories as Figure 2), the characteristics of the defendant(s) (as in Figure 3) in the case, and the characteristics of the plaintiff(s) in the case (as individual, business, government, or other). We include claimed medical and nonmedical economic losses as a series of dummy variables that indicate ranges of the size of the claimed losses (e.g., $0, $1–$10,000, etc.).[17] Finally, we include a series of dummy variables to control for the previously discussed changes in the municipal court limits in San Francisco.[18] These should prevent any trend in awards generated by changes in filings being falsely attributed to other factors that might be correlated with the potential value of a case.

We estimate the regression model on the sample of verdicts in which a positive payment is made to the plaintiff. This is an important point to recognize because by doing so we exclude verdicts in favor of the defendant (i.e., no money was awarded to any plaintiff in the case) from our estimation. We justify this exclusion under the assumption that juries determine liability issues and damage award levels independently, which is what they

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[17]The claimed economic loss variables are recorded as dummy variables to account for possible heterogeneity in the cases where no damages are reported. Some of these cases may report no economic losses but might involve relatively high noneconomic losses, i.e., relatively high "pain and suffering." Furthermore, cases where economic losses were claimed at trial but not recorded might be mistakenly coded as zero in our data. Because we cannot distinguish these different cases, the use of dummy variables should make transparent any inconsistencies or anomalies in the data. If the data are correct, then variables indicating successively higher levels of damages should have a larger effect on damage awards.

[18]These variables are dummies that indicate whether a verdict was in San Francisco before 1961, between 1961 and 1979, between 1980 and 1986, and after 1986. Unfortunately, our data do not allow us to pinpoint whether a case was filed before the municipal limits took place, so there may be a few misclassified cases (but not enough to affect the results).

should be doing, at least in theory. An alternate specification is to consider the liability decision and the award decision jointly, perhaps using a tobit model or a linear specification including plaintiff wins or losses.[19] However, we do not believe this is appropriate because it implicitly assumes that the underlying model for the liability decision and the award decision are identical.[20] For our purposes, a violation of the assumption of independence between the assignment of liability and the granting of awards would be problematic if the correlation between award levels and liability changed over time.[21] In this article we simply assume that juries decide these issues independently, and leave a more detailed investigation of this issue for future research.

We employ a log-linear specification, with the logged dollar amount of the award as the dependent variable. In this specification the estimated coefficients represent percent changes in the level of awards. Sampling weights are used to produce consistent estimates of the trend. Unlike the figures before, no trimming is done to the data for the regressions. The qualitative results are the same even if we do trim, suggesting that outliers do not present a serious problem for our analysis.

Table 2 presents a summary of the regression results, focusing on the estimated value of α. Full regression results and summary statistics are available from the authors upon request. For our purposes it is sufficient to note that most variables have the predicted signs and are statistically significant at the 5 percent level.[22] Columns I–IV of Table 2 each summarize a regression of award amounts on the year of verdict with additional explanatory variables added in. The first row in Column I shows the estimated annual increase in awards when we simply regress the damage award on the year variable and a constant term. We can see that the simple model implies a

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[19]For an example of the tobit model applied to jury verdicts, see Merrit and Barry (1999).

[20]In other words, case characteristics that led to higher damages would be required by the model to have an equal impact on the probability of a plaintiff win.

[21]For example, if juries were more likely to assign liability to higher-stakes cases in later years than in early years it would cause us to overestimate the long-term trend.

[22]Notably, the claimed economic loss variables show a monotonic relationship, i.e., higher losses are uniformly associated with higher damage awards, except at zero. Verdicts where claimed economic losses are zero have awards that are relatively low, but still higher than the verdicts where claimed losses are positive but small. This suggests that there is probably some misreporting of claimed losses in our data, but that the problem is not too serious.

Table 2: The Estimated Long-Term Trend in Tort Damage Awards[1]

	I	II	III	IV
Estimated annual percentage increase	2.4*	1.8*	1.3*	−0.1
	(0.2)	(0.3)	(0.3)	(0.3)
Predicted average award in 1999[2]	$323,179	$256,958	$212,064	$123,240
Difference over observed 1960 average	$195,035	$128,814	$83,920	−$4,904
Variables included in the model				
Case characteristics?	No	Yes	Yes	Yes
Claimed nonmedical losses?	No	No	Yes	Yes
Claimed medical losses?	No	No	No	Yes
R^2	0.02	0.22	0.30	0.39

[1]Heteroskedasticity-consistent standard errors in parentheses. An * indicates statistical significance at the 5 percent level. Annual percentage increase is the coefficient of a regression of the logged real jury award on the year of verdict. The estimation was performed with weighted least squares, using the inverse probability of inclusion in the sample as weights. The sample included all verdicts in San Francisco County and Cook County in which a nonzero award was granted to the plaintiff, 7,055 verdicts in all.

[2]The average award in 1960 was $128,144 in Year 2000 dollars. The predicted 1999 awards are calculated by applying the appropriate percentage change in each column annually for 39 years.

2.4 percent annual real increase in damage awards. Surprisingly, the average rate of growth in jury awards over this time period is less than the average growth rate in real income; the Bureau of Economic Analysis reports annual growth of real GDP equal to about 3.4 percent per year on average from 1960–1999.[23] Nevertheless, annual growth of 2.4 percent is still significant and implies approximately a 252 percent real increase in awards over the entire 40 years.

Column II reports the results with case characteristics added to the model, specifically the indicators for Cook County, case type, plaintiff type, and defendant type, as well as the controls for changes in the San Francisco municipal limits. Adding in these controls reduces the estimated growth in tort awards to 1.8 percent annually. Loosely speaking, this implies that changes in the types of issues being litigated, the nature of the litigation, and the number of verdicts in each jurisdiction explain approximately 25 percent of the observed growth in tort awards from 1960 to 1999.

In the first row of Column III we report the estimated trend with claimed nonmedical economic losses added to the model. Here the esti-

[23]This number is calculated by taking the average of the annual percent changes as reported on the Bureau of Economic Analysis's website (http://www.bea.gov).

mated real growth in awards falls to 1.3 percent per year. Thus, approximately 21 percent of the "simple" growth rate in awards of 2.4 percent per year can be explained by increases in earnings losses and other nonmedical financial losses. Put another way, if the observable case characteristics and nonmedical economic losses stayed the same in our sample, we would expect to have observed an annual growth rate in real awards of 1.3 percent.

Finally, in Column IV claimed medical losses are added to the model. Here we can see that the trend in awards falls to a decline of one-tenth of 1 percent annually, and this estimate is statistically indistinguishable from zero. This suggests that claimed medical losses account for approximately 58 percent of the observed growth in tort awards from 1960–1999. Perhaps more strikingly, these results suggest that case characteristics, claimed nonmedical economic losses, and claimed medical losses account for essentially *all* the observed growth in average tort awards in San Francisco County and Cook County over this time period.[24]

In the bottom two rows of Table 2 we present the implied dollar value of awards predicted by each of the models. In the first row we take the average award in 1960, which is $128,144 in Year 2000 dollars, and predict the 1999 award level using the estimated annual trend in each column. The predicted 1999 award level for the simple model, with a 2.4 percent average growth rate, is $323,179. This amounts to a predicted growth of $195,035 between 1960 and 1999 (this difference is displayed in the bottom row of Table 2).

Now suppose instead that we increase awards according to the estimated growth rates with observable case characteristics held constant, equal to 1.7 percent per year. Here the predicted 1999 award is $256,958, which is $128,814 higher than the 1960 average. If we control for case characteristics and claimed nonmedical economic losses, the predicted award falls to $212,064, which is just $83,920 higher than the 1960 level. Finally, control-

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[24]Although we only report the results for the trend in average awards, we find almost identical results for the trend in median awards as well. Using median or quantile-regression techniques we find that the estimated average annual increase in the median award is approximately 2.3 percent in the simple model (corresponding to Column I) and approximately −0.5 percent in the full model (corresponding to Column IV). Note that it is generally no simple matter to carry out quantile regression on data with sample weights. Thus, we computed the estimated trend in the median by expanding our data as if the sampling weights were instead frequency weights (so an observation with a sampling weight of 5 counts as 5 observations in the quantile regression). We suspect that this technique produces consistent parameter estimates but incorrect standard errors, so we do not report those here.

Table 3: The Estimated Long-Term Trend in Damage Awards in Auto and Nonauto Cases[1]

	I	*II*	*III*	*IV*
Estimated percent increase in auto	0.1	0.8	0.3	−1.3*
	(0.3)	(0.4)	(0.4)	(0.4)
Estimated percent increase in other torts	4.1*	3.4*	2.7*	1.6*
	(0.3)	(0.3)	(0.3)	(0.3)
Variables included in the model				
Case characteristics?	No	Yes	Yes	Yes
Claimed nonmedical losses?	No	No	Yes	Yes
Claimed medical losses?	No	No	No	Yes

[1]Heteroskedasticity-consistent standard errors in parentheses. An * indicates statistical significance at the 5 percent level. Annual percentage increase is the coefficient of a regression of the logged real jury award on the year of verdict. The estimation was performed with weighted least squares, using the inverse probability of inclusion in the sample as weights. The sample included all verdicts in San Francisco County and Cook County in which a nonzero award was granted to the plaintiff. The sample of automobile verdicts has 2,661 observations and the sample of other tort verdicts has 4,394 observations.

ling for these factors and claimed medical losses, the model predicts a 1999 award of $123,240, which is $4,904 *lower* than the 1960 average. Ultimately, these results imply that if the types of litigated issues, types of plaintiffs and defendants, nonmedical economic losses, and medical losses in 1999 were at the same level as in 1960, we would expect to observe an average damage award that was roughly the same in real dollars.

Focusing on average awards for all litigated issues, plaintiffs, and defendants ignores the possibility that different types of cases may have experienced different levels of growth. We explore this issue by estimating the model separately for verdicts in automobile and other tort cases. These results are illustrated in Table 3. The columns in Table 3 are analogous to the columns in Table 2; each represents a separate regression, starting with the simple model in Column I and successively adding case characteristics, claimed nonmedical economic losses, and claimed medical losses.[25]

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[25]The variables included as case characteristics are slightly different when we separate the automobile cases from the other tort cases. When we estimate the model on the sample of automobile verdicts we drop the indicators of case type (medical malpractice, other malpractice, etc.) and the indicator for when the defendant is an individual in a nonauto case because obviously these variables are zero in every observation. Likewise, the indicator for an automobile case and an individual defendant in an automobile case are dropped when we estimate the model on the sample of other tort cases.

The table shows that verdicts in automobile cases experienced virtually no growth in real terms. The estimated average increase in automobile awards is just 0.1 percent annually in the simple model (Column I), statistically indistinguishable from zero. Strikingly, controlling for claimed medical economic losses in Column IV produces an estimated 1.3 percent annual decline in average awards in automobile cases. Things are quite different, however, when we examine other tort cases. The estimated trend for nonautomobile torts in the simple model, as shown in Column I of Table 3, is approximately 4.1 percent per year. Adding case characteristics, claimed nonmedical economic losses, and claimed medical losses lowers the trend to a 1.6 percent annual increase (Column IV). Thus, for verdicts in automobile cases there is a persistent decline in average awards and for verdicts in nonautomobile cases there is persistent growth. These changes cancel each other out on average, which explains why the estimated long-term trend for all cases is essentially zero.

It is not immediately clear why the results should be so different for automobile and other tort cases. For our purposes here it is enough to note that there is strong evidence of heterogeneity in the long-term trend for different types of cases, and the factors driving these divergent trends are clearly worthy of further study. It is also important to note that even in the higher-growth nonautomobile verdicts our model explains a majority (approximately 61 percent) of the observed long-term trend. In general, our results suggest that increases in the size of claimed economic losses reported to juries has driven a great deal of the observed growth in average awards in tort cases since 1960.

IV. CONCLUSION

We use original data on 40 years of jury awards in tort cases in two counties to describe the long-term trends in jury awards since 1960. The richness of our data allow us not only to describe the rate at which awards have changed over time, but also to isolate the factors that have contributed to that change. We believe that our research highlights the need to focus less on simple observed changes in awards and more on the underlying factors that drive those changes.

We find that average damage awards have risen substantially in real terms since 1960, though, surprisingly, we found that the rate of growth was less than the growth in real GDP that occurred over the same time. The

verdicts in our sample displayed other important changes over time that impacted the growth in award levels. Most notably, the portion of automobile cases dropped off in later years of the sample in favor of "high-stakes" cases such as medical malpractice. Moreover, there was a pronounced increase in claimed economic losses over time, particularly medical losses. When we estimate the long-term trend in jury awards and control for these factors, we find that these observable factors explain the entire observed increase in average award levels. However, there is also evidence that the trend diverged for automobile and nonautomobile tort cases. There appears to have been growth in nonautomobile tort awards over the past 40 years that cannot be explained solely by changes in observable case characteristics. On the other hand, verdicts in automobile cases seemed to decline on average once other case characteristics are controlled for.

Our results suggest little evidence to support the hypothesis that juries are awarding substantially higher awards on average, though they may be doing so for certain kinds of cases. On the surface, it seems difficult to reconcile this statement with the headline-grabbing awards that have occurred over the past decade. One explanation for this is that, away from the headlines, the awards in some cases have declined and offset the growth in the larger and more highly publicized awards. Another explanation is that these highly publicized awards are so much larger than we have seen in the past because the scope of liability in the civil justice system has expanded and the stakes involved in these cases have risen dramatically. Additionally, the awards that get the most attention often involve punitive damages, and these occur rarely enough that they have a minimal effect on the long-term trend in the awards in our data. Finally, we stress that our results do not imply that awards in tort trials are not higher than they were 40 years ago; clearly, they are. We simply argue that a substantial portion of this growth appears to be for changes in the specific types of tort cases being brought to trial and the level of economic damages claimed by plaintiffs.

It is important, however, to keep in mind the limitations of data on jury verdicts, which suggest that one should be cautious about interpreting these results too literally. Although we control for many important case characteristics, our data are unable to control for any changes in settlement or claiming behavior that is not perfectly explained by the variables we observe. Therefore, we believe that the best way to interpret our results is as descriptive rather than causal. We show that there is little prima facie evidence to support the hypothesis that juries have become increasingly generous over time on average, but estimating the actual change in jury behavior can be

done only by dealing with the selection of disputes into jury verdicts more directly.

This article raises several interesting topics for future research. We showed heterogeneity in the long-term trend between automobile and nonautomobile cases, but future work could explore the issue of heterogeneity for multiple types of cases as well as for different plaintiff and defendant types. Another interesting area to pursue is the extent to which the variability of awards has changed over time. It is possible for the average or median award to stay relatively constant while still experiencing significant changes in variability, and award variability can have significant implications for both plaintiffs and defendants. Also, in this study we focused narrowly on only one metric of jury behavior, but it would also be interesting to examine how juries have changed with regards to the assignment of liability over time. Additionally, given the fact that the sample used in this article is limited to two counties, it would be useful to explore the extent to which the experiences of San Francisco County and Cook County generalize to the rest of the country.[26] Finally, an obvious question would be whether the same results have held true for business and contracts disputes, an area of litigation that experiences a much higher frequency of punitive damage awards than seen in tort cases and possibly one that is more sensitive to changes over time in what juries believe are appropriate levels of compensation.

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[26]The number and coverage of jury verdict reporters has grown in recent years and some court systems are now collecting much better data on verdicts within their own jurisdictions. It is hoped that similar long-term analysis of a much broader collection of counties and even entire regions of the country will be possible by the next decade.

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