

WORKING P A P E R

A Framework for Analyzing Influences and Outcomes of Mass Litigation Episodes in the United States

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Abstract

Mass-litigation episodes involving claims alleging personal or financial injury or property damage are a familiar feature of the U.S. civil-legal landscape. Building upon seminal work by Galanter (1990) and Hensler & Peterson (1993), who view “case congregations” or “litigations” as interesting units of observation, we propose a conceptual framework for analyzing the roles of social, institutional, economic and legal factors that affect or are affected by mass litigation. The framework has three major parts: (1) the “core” of the litigation, comprising defendant behavior, injuries, and litigation activity; (2) exogenous influences on developments within the core; and (3) endogenous outcomes of the litigation activity within the core. Influences and outcomes fall into five categories, namely (1) legal doctrine and processes, (2) other litigation, (3) regulation, (4) media reports and (5) market factors. Examples from several mass-litigation episodes illustrate the concepts and suggest their relevance for understanding the world of mass litigation.

Mass litigation episodes involving allegations of substantial injury from products such as asbestos, polychlorinated biphenyls (PCBs), the Dalkon Shield, and Fen-Phen diet pills or services such as nursing-home care and allocation of shares in initial public offerings (IPOs) are a familiar feature of the United States civil-legal landscape. The private and social interests in how such episodes (or “litigations” or “case congregations”) play out and are resolved can be profound, involving, for example, perhaps millions of injuries, billions of dollars of resource costs and compensation payments, and lasting impacts on law and regulation. Improving our understanding of the phenomenon of mass litigation has considerable intellectual and practical significance.

Mass litigation outcomes of social interest are numerous and diverse. They include direct litigation outcomes such as who (if anybody) receives compensation, how much, and when, and the transaction or resource costs involved. Other outcomes of social concern are external to the litigation proper, including economic effects such as the availability and cost of products and services and the nature and extent of innovative effort; and public respect for the civil legal system and for science.

Drawing reliable, general lessons about the effects of mass litigation is challenging. The purpose of this article is to propose a conceptual framework and related terminology to help social scientists and others analyze processes and outcomes of mass litigation.

Existing research pertaining to mass litigation consists largely of (1) analyses of legal processes, often motivated by ethical and other challenges of achieving rough justice when judicial resources do not allow claims to be adjudicated individually (e.g.,

Weinstein 1994, 1995; Feinberg 1998), and (2) case studies of notable mass litigation episodes (MLEs) such as asbestos (Carroll, et al. 2005), silicone breast implants (Angell 1997), Bendectin (Green 1996; Sanders 1998), Agent Orange (Schuck 1987), the Dalkon Shield (Bacigal 1990; Sobol 1991), MER/29 (Rheingold 1968), and tobacco (Rabin 1992).

Neither kind of study—nor both kinds of studies in combination—however, provides a reliable basis for such research objectives as (1) drawing general lessons about the causes and consequences of mass litigation, (2) refuting unreliable generalizations, or (3) evaluating policy proposals aimed at improving the fairness or efficiency of the U.S. civil-legal system in dealing with large numbers of related lawsuits. For example, studies focused on legal processes typically involve limited, if any, consideration of outcomes other than direct litigation outcomes. In contrast, case studies often consider broader social effects, but researchers (not surprisingly) tend to choose especially interesting—and, for that reason, atypical—litigations for detailed study. Clearly, generalizing from even large numbers of atypical litigations is unlikely to provide a balanced assessment of the nature and extent of the “mass litigation problem.”¹

¹ For example, a central feature common to the breast-implant, Bendectin, and Agent Orange product-liability mass torts—a feature, we speculate, that was central to the decisions of the authors to study these mass torts intensively—is the weak (some would say “nonexistent”) scientific support for many of the injury-causation allegations. Moreover, the asbestos mass tort is atypical—and arguably *sui generis*—at least with respect to its scale (e.g., numbers of defendants, diversity of roles of defendants, costs) and longevity, with mass litigation dating back to at least the early 1970s and still on going. Regarding the uniqueness of asbestos, even twenty years ago, Galanter (1990:392) writes: “Asbestos is perhaps the most complex of case congregations—actually a cluster of congregations...”

We define “mass litigation” (ML) broadly to encompass mass torts and other types of mass litigation.² According to our definition, ML involves:³ (1) large numbers of claims and claimants;⁴ (2) allegations of personal injury, property damage, financial injury, or any combination of such allegations; (3) the potential for very large costs to defendants, their insurers, claimants, and plaintiffs’ attorneys; and (4) interdependent claim values (ICVs).⁵

To analyze mass litigation, we view the litigation proper as part of a broader system of diverse factors that influence a particular mass litigation and are influenced by that litigation. We refer to a particular litigation, the factors that influence it, and the factors that are influenced by it, as a “mass litigation episode” (MLE). We view an MLE as the unit of observation for empirical analysis, the perspective that seems appropriate to the search for lessons about the phenomenon of mass litigation. Adopting this perspective suggests intriguing and challenging questions for social scientists and other researchers. For example, (1) what factors related to legal doctrine, processes and litigant

² Mass torts are typically defined to include mass litigation alleging personal injury—and sometimes property damage—but not financial injury.

³ This definition is similar to that of Hensler & Peterson (1993), an article discussed presently, who restrict their attention to mass torts.

⁴ The requirement of large numbers of claims (in addition to large numbers of claimants) implies, for example, that a class action lawsuit that is largely unrelated to other lawsuits are excluded by our definition. Such lawsuits seem best studied within inquiries into class action—rather than mass—litigation.

⁵ Resulting, for example, from common issues of fact or law across claims, limited funds available to defendants for legal defense and to pay claims, or settlement values for many being determined on the basis of outcomes of a relatively small (e.g., a dozen or two) number of so-called “bellwether trials.” The concept of interdependent claim values, which we believe is very powerful, was emphasized by Hensler & Peterson (1993:967). The essence of the idea is contained in Galanter’s definition of a congregation of cases, namely “What I mean by a *congregation* is a group of cases that are seen as a defined set that share common features, that are shaped by a common history, that are subject to shared contingencies, and lean into a common future.” (Galanter 1990:372)

behavior are often crucial in determining the courses and outcomes of MLEs? (2) what types of social and economic developments that are exogenous to particular MLEs often have major effects on the courses and outcomes of those MLEs? (3) what types of social and economic developments that are separate from the legal maneuverings employed by attorneys and judges are often affected by these maneuverings? and (4) what general lessons, if any, can be distilled from considering, comparing and contrasting the case histories of many MLEs? Successfully addressing such complex questions requires an explicit conceptual framework.

Galanter (1990) and Hensler & Peterson (1993) are the only two works of which we are aware that consider collections of related cases as important objects of study, and emphasize (sometimes implicitly) the broader social contexts and impacts of mass litigation. Both articles mention, and in some cases discuss in some depth, phenomena and forces that play prominent roles in the framework we propose.

Galanter (1990) raises directly the contrast between cases and collections of related cases as units of observation for study. He emphasizes that some collections of related civil cases can best be understood as “congregations”—which are now commonly called “litigations”—arising from a common event, product, or claim, and that different congregations of cases will be linked by common facts as well as common legal issues. He considers the extent to which the volume of litigation in a case congregation is predictable from the volume of the underlying social activity (e.g., airplane crash claims result from airplane services); he concludes that the hypothesis is not well supported.⁶

⁶ “This dissociation of the litigation from the volume of activity should come as no surprise to the beneficiaries of twenty years of research on the dispute process.” (Galanter, 1990:375)

More closely related to the subject of the current article, Galanter also suggests and discusses some “exogenous influences” on case congregations⁷ and some “endogenous” changes⁸ that sometimes manifest within the litigation system. He also introduces the concept of “holistic” effects “that are associated with the size, distribution, and character of the case congregation” (Galanter 1990:384). Finally, Galanter also discusses “careers” of congregations that pertain to “the way in which that congregation unfolds over time” (Galanter 1990:384) and discusses “career effects” which he defines as “changes in litigation behavior that result from the temporal sequence of similar litigation” (Galanter, 1990:385-6).

Hensler & Peterson (1993) focus on mass torts and social and legal factors that gave rise to an expansion of mass tort litigation during the 1980s and early 1990s. Hensler & Peterson (1993:965-969) define mass torts to involve numerous legal claims (i.e., many plaintiffs with injuries); important commonalities across claims (i.e., shared facts, shared legal issues or both); and highly interdependent claim values (i.e., whereby the outcome of any individual claim within a mass tort can substantially affect the value of other claims within the same mass tort). After presenting 18 brief case summaries of mass torts, Hensler & Peterson (1993:1013-1030) offer observations about why mass tort litigation proliferated during the 1980s. Chief among them are factors contributing to increased claiming activity (e.g., mass-media attention, increased plaintiff bar

⁷ Which he summarizes as “level of underlying activity, the presence of rights, the availability of lawyers and resources, or changing stakes” (Galanter, 1990:378).

⁸ E.g., effects on behavior of defendants that could reduce future litigation (“preventive effects”), changes in awareness and behavior of potential claimants (“mobilization effects”), “educative effects” on the plaintiffs’ bar, and changes in legal regimes.

coordination and resources) as well as changes in substantive and procedural law (e.g., expansion of products liability doctrine, use of federal multidistrict litigation procedures).

We follow Galanter (1990) and Hensler & Peterson (1993) in believing that (1) the phenomenon of mass litigation is an important, albeit challenging, subject for study, (2) histories of MLEs can be broken down into basic elements, and (3) a conceptual framework and language for doing so could greatly facilitate future research.

We anticipate that the conceptual framework proposed in this article—which we believe is the first such framework to be explicitly proposed—will be refined over time as additional empirical information is brought to bear. The current version was developed through the consideration, interpretation, and synthesis of empirical information currently available to us. That information includes several published case histories of particular mass torts that are cited in this article and publicly available information we have recently collected for roughly 25 other fairly recent, diverse MLEs in the United States.

Ideally, a conceptual framework for studying MLEs and associated terminology would well serve at least four purposes. First, it would help researchers organize their thinking by putting numerous and diverse factors relevant to MLEs into a manageable number of coherent categories and highlighting how factors within and across categories may relate to one another. Second, development and use of a shared conceptual framework—along with shared terminology—could greatly facilitate communication within and across research teams. Third, a conceptual framework can provide a checklist of factors and relationships that researchers should consider when trying to understand or collect information about MLEs. Finally, a conceptual framework could be invaluable in searching for empirical patterns and in suggesting hypotheses for further study regarding,

for example, factors that play crucial roles in many MLEs and the conditions under which these factors are more and less important across MLEs.

We believe that, with the empirical information now available to us, the time is right to propose an explicit conceptual (or theoretical) framework that can be used to begin to advance those purposes. Our framework or “theory” is primarily a categorization of events that seem to matter fairly often and, implicitly by exclusion, factors that don’t at this point seem crucial.

Overview of the Conceptual Framework

Figure 1 provides a simplified depiction of the proposed conceptual framework. The diagram represents *a single* mass litigation episode, for example a mass tort (such as PCBs, the Dalkon Shield or Vioxx) or a non-tort MLE (such as the litigation over allocation of shares in IPOs or abuse and neglect of nursing home residents). In the figure, ovals and rectangles represent groups or categories of factors that comprise a mass litigation episode—categories that are selected to further the four purposes of developing the framework enumerated at end of the first section of the article. Arrows indicate causal links flowing from actions or events in one category to actions or events in another category, with the causal effects flowing in the direction of the arrowhead. For expositional convenience, the arrows in Figure 1 are labeled with letters that are referred to later in this section.

Insert Figure 1 about here

The framework includes three major parts, each of which is described in the remainder of this section of the article and more extensively discussed and illustrated in a later section. The first part of the framework, which is represented by the three ovals in the center of the figure, is what we refer to as the *core* of the MLE. This core comprises defendant behavior, actual or alleged injuries, and the litigation activity undertaken as part of the *mass litigation episode under consideration*, which we also refer to as the *focal mass litigation episode*.⁹ The second and third parts of the framework, which are represented by the rectangles to the left and right of the core comprise events and activities that are separate from or external to the core of the MLE. The *influences* are exogenous factors that affect what occurs within the core of the MLE under consideration; i.e., their values are determined independently from events and activities within the core. The *outcomes of the core of the MLE* are (endogenous) factors that are affected by what occurs within the core.

The core of the MLE comprises three sets of factors that legal practitioners, for example, would think of as the key or essential components of any mass litigation. These may be thought of in terms of three central questions: (1) what did the defendant (or defendants) do? (2) what actual or alleged injuries resulted from the defendant's behavior? and (3) what actions were taken by claimants, defendants, lawyers, judges, juries, and others to bring, advance, defend, manage and resolve legal claims? The arrows labeled B and C indicate the well-known ideas that the defendant's behavior can affect actual or alleged injuries and that actual and alleged injuries can affect the

⁹ A single case study of an MLE would involve *one focal* mass litigation episode (i.e., the MLE that is the subject of the case study), and an analysis of broader issues regarding mass litigation would involve *multiple focal* MLEs, each of which would represent an observation for cross-sectional analysis.

litigation activity. The arrow labeled D indicates that the defendant's behavior, which is often a crucial and disputed issue in mass litigation,¹⁰ often affects the litigation activity directly in addition to indirectly through injuries.

As elaborated below, the influences fall into five categories, namely, (1) legal doctrine and processes, (2) other litigation, (3) regulation, (4) media reports, and (5) market factors. As depicted in Figure 1, influences on the core of a focal MLE can affect the litigation activity in that MLE both directly (arrow E) or indirectly through the path depicted by arrows A, B, and C or the path depicted by arrows A and D. The path indicated by arrows A, B, and C represents, for example, the well-accepted idea that tort doctrine can affect the level of care taken by the defendant to reduce risk—through so-called “deterrence effects”—which in turn can affect actual or alleged injuries, which in turn affect the litigation activity.

The *outcomes* of the litigation activity within the core of the focal MLE, which are represented by the rectangle on the right-hand-side of Figure 1, are analytically distinct from the *influences* because the former are endogenous with respect to the litigation activity in the core of the MLE under consideration and the latter are exogenous. As detailed below, the five categories of outcomes are the same as the five categories of influences. Thus, arrow F represents causal effects of the litigation activity on legal doctrine and processes, other litigation, regulation, and so on. Finally, arrow G indicates that the outcomes of litigation activity in a particular mass litigation may themselves “feed back” and affect the litigation that (previously) affected them.

¹⁰ For example, in the context of claims alleging negligence, whether the defendant met the standards of care legally required to avoid liability is often a crucial issue in litigation.

We elaborate and illustrate the three parts of the conceptual framework in the following three sections of the article. Before doing so, we offer four additional comments about overarching matters.

First, it can be difficult to specify—even conceptually—the set of legal claims that are included within a particular mass litigation episode. As far as we know, the literature has not addressed this issue head on. In our view, however, Hensler & Peterson (1993) emphasize and elucidate the key conceptual insight, namely, that interdependent claim values should be part of the definition of a mass tort. Thus, we consider a particular legal claim or lawsuit to be part of the set comprising an MLE if the value of that claim or lawsuit depends on what occurs in litigating claims that are clearly within the set of interest.^{11,12}

¹¹ Application of this definition could begin by delineating one or more claims of interest. It seems to us that this is not problematic as a practical matter. More specifically, it seems that researchers naturally begin with a set of related claims that are of obvious interest, and our criterion can then be used to make more subtle decisions about what other claims to include. Galanter (1990:372, fn. 1) also expresses the view that judgment is required to delineate what cases are and are not included in a particular case congregation.

¹² Clearly, applying this criterion requires judgment, but some immediate implications are apparent. For example, different claims involving the same product or service but alleging different kinds of injuries should generally be considered part of the same MLE. (This appears to be common practice—for example, each of Agent Orange, Bendectin, Fen-Phen, and asbestos is considered one mass tort despite each involving multiple types of claimed injuries.) Claims involving different injury types may involve highly interdependent claim values because, for example, facts such as defendant level of care in testing or studying injury risks may be germane to multiple injuries from the same product or because the defendants have limited funds available to pay claims. The adequacy of warnings and the state of scientific evidence related to injury causation, in contrast, may typically not be a source of interdependent values of claims involving distinct injuries. For example, evidence bearing on the incremental risk of cancer to someone who is exposed to a particular chemical may be irrelevant to gauging the incremental risk of birth defects in children of women exposed to that chemical.

Second, it seems fairly common for multiple influences from one or more of the five categories of influences on the core of the MLE to operate in combination. For example, an effect on the litigation activity might involve mass-media coverage (our fourth category) of a regulatory action (our third category). The conceptual framework is sufficiently flexible to admit such possibilities, but they create an expository challenge. In providing examples of such phenomena below, we assign them (more or less arbitrarily) to only one of the five categories, while also noting roles of events in other categories.

Third, it typically takes several years from the time that large numbers of legal claims have been made to the time when almost all of these claims have been resolved, and it can take decades.¹³ For purposes of simplicity, however, our graphical depictions of a focal MLE in the figures in this article have no explicit representation of the time dimension. Our discussions and examples, however, do pay explicit attention to the relative timing of events.

Fourth, it is often unclear from published case studies or other information we have examined whether events outside of the core of the focal MLE should be viewed as exogenous or endogenous to the core. Events that predate the litigation are obviously exogenous to the litigation, but events occurring after the MLE commences may also be exogenous. In choosing our examples of exogenous events, we emphasize events that occurred (1) before any litigation commenced (in the relatively rare instances in which

¹³ Asbestos seems to be extreme in this regard, with multiple claims dating to the early 1970s and large numbers of (presumably, more recently filed) claims yet to be resolved more than thirty years later.

that time is clear), or (2) before the number of claims was large enough to qualify a collection of legal claims as a “mass” litigation.¹⁴

We now turn to elaborating and illustrating the three parts of the framework.

Core of the Mass Litigation Episode

As just described and depicted in Figure 1, the core of any particular MLE comprises defendant behavior, actual or alleged injuries, and litigation activity. We discuss and illustrate these categories in this section.

Litigation Activity

A mass litigation episode involves legal claims for compensation (and, in some instances, also demands for sanctions or injunctions on the defendants)—whether informal requests or demands for payment or lawsuits filed (usually) in various courts. According to our definition of mass litigation, an MLE involves many claimants or plaintiffs and many separate claims for compensation, with the claims involving common underlying facts or legal issues, or both. The term “litigation activity” refers to actions taken by ML *participants* with various roles falling into two categories, namely, *adversaries* and *facilitators*.

Adversaries are participants who take actions within the civil justice system (broadly construed to encompass both formal and informal claims) to promote their own interests, such as private and public plaintiffs, plaintiff and defendant lawyers,

¹⁴ As a conceptual matter, it is not obvious what criterion or criteria should be used to define when an MLE “starts.” Some candidates are at the time (1) of the filing of the first claim of the type that will eventually become sufficiently common for the collection of claims to comprise a *mass* litigation; (2) at the time that well-informed observers would conclude that a mass litigation is in progress; or even (3) at the time that defendants made the decisions that led to actual or alleged injuries. Moreover, as a practical matter, it can be effectively impossible with a reasonable amount of research effort to apply any such criterion empirically.

defendants, and (often) defendants' insurers. Facilitators are ML participants such as judges, jurors, arbitrators, and special masters who help resolve disputes but do not have direct stakes in their outcomes.¹⁵ Litigation outcomes such as damage awards, settlements, defense verdicts, attorney fees, sanctions, injunctions, and transaction costs are also captured within the "litigation activity" oval.

Because MLEs involve high stakes, many claims, many plaintiffs—and, often, multiple defendants—these episodes are frequently characterized by various complicated legal and procedural maneuvers. The relevant legal processes include many that are not peculiar to mass litigation settings such as client recruitment and screening, filings, motions, rulings, appeals, trials and insurance disputes.¹⁶ There are also several formal and informal legal processes that apparently arise exclusively or largely in mass litigation settings.¹⁷

¹⁵ It seems that some expert witnesses retained by defendants or plaintiffs would be best viewed as facilitators and others as participants. See Sanders (1998:99-101) for an interesting discussion of financial and other pressures on expert witnesses to tailor their testimony to please the lawyers who hire them. In contrast, it seems that court-appointed experts are appropriately viewed as facilitators.

¹⁶ The literature pertaining to these processes—typically found in law reviews and monographs intended primarily for legal scholars and practitioners—is massive.

¹⁷ One well-known mechanism for aggregating individual claims is the class action. It is not clear to us whether a single class action lawsuit in the absence of other legal claims with interdependent claim values would typically be viewed by researchers or practitioners as a "mass litigation." (It would not according to our definition of "mass litigation," which requires that there be multiple claims as well as multiple claimants.) We do not further discuss class actions in this article for the following reasons. First, class actions are not the primary means of handling mass tort litigation in the states—as Rheingold (2007:4-20) writes: "A much greater volume of [mass tort litigation] in state courts is handled on a basis other than class actions." Second, it seems fairly rare these days for attempts to obtain class-action certification to succeed. This is true in the context of both personal injury and financial injury. For example, prominent class actions that were certified by trial courts but overturned on appeal include *Castano*, a tobacco personal injury action (Shook, Hardy & Bacon L.L.P. 2006:3-5) and *In re: Initial Public Offering Securities Litigation*, claims for compensation of financial injury related

Arguably, the most important legal processes that are unique to mass-litigation settings are various formal and informal processes used by courts to economize on judicial and private resources—most obviously by avoiding duplicative discovery activities—and to avoid conflicting judicial rulings in different individual cases. Perhaps the best-known formal mechanism is federal multidistrict litigation (MDL) in which related cases filed in different federal district courts are transferred to a single district court and judge to manage cases for pre-trial purposes (Olson 1988-89; Hensler 2001a,b; Rheingold 2007:chapter 3). Many states have similar procedures for transferring cases filed in their states to single judges (Hermann, Ritts & Ray 2005; Ostolaza & Hartmann 2007). Hensler (2007) provides a compilation of mass toxic tort litigations past and present along with descriptive information including whether a federal MDL proceeding was employed. Spiro et al. (1999) provide extensive descriptive information about many mass torts including whether they involved federal MDLs.

Often, however, cases comprising an MLE are filed in courts in various states as well as in federal courts. Unless all of the state claims are removed to federal court, there is no formal mechanism for consolidating such cases in a single court. It is not uncommon, however, for judges in various jurisdictions to cooperate informally (Rheingold 2007:chapter 4). Examples include a national meeting in 1987 of state and

to allocation of shares in initial public offerings from 1998 through 2000 (Koppel 2006). Third, as described below, two U.S. Supreme Court decisions during the late 1990s (namely, *Amchem Prods. Inc. v. Windsor* 1997 and *Ortiz v. Fibreboard Corp.* 1999) have made it much more difficult to certify federal class actions even if the class is formed solely for settlement purposes (so-called “settlement classes”). Fourth, we believe that analysis of class actions that are not part of a larger mass litigation are better studied as a distinct phenomenon from mass litigation episodes involving multiple claims. Hensler et al. (2000) and Pace et al. (2007), for example, provide descriptions and analyses of various class actions that seem not to be part of larger mass litigation episodes as we define them.

federal judges handling Dalkon Shield claims just prior to A. H. Robins declaring bankruptcy (Bacigal 1990:41-42) and coordination of trial dates in federal and state courts in the manganese welding rod mass tort (Frankel 2006). In the Vioxx MLE more than 90 percent of the individual cases were being overseen by four judges; one of them was the federal MDL judge in New Orleans and the others state-court judges in California, Texas, and New Jersey. Coordination among these judges was instrumental in developing a settlement of most of the pending Vioxx cases (Tesoriero, Rubenstein & Heller 2007).

Another form of coordination that seems largely peculiar to mass litigation is cooperation among plaintiffs' attorneys at different firms with different clients within the same MLE. Coordination among plaintiffs' firms in mass exposure torts dates back to at least the 1960s with the MER/29 litigation (Rheingold 1968) and is standard practice today (Erichson 2000b; Silver & Baker 1997:743-749). And when there are multiple, legally unrelated defendants in an MLE, it is not uncommon for defense firms representing different defendants to cooperate as well (Erichson 2000b).

Another important phenomenon largely unique to mass litigation is aggregate settlement in which many cases are settled under a single agreement. Such agreements can take many forms, including "inventory" settlements, in which a plaintiffs' firm agrees to settle all of its cases, and "global" settlements that resolve (almost) all pending cases, in some instances including claims filed as class actions (Rheingold 2007:chapter 9; Silver & Baker 1997; Erichson 2005).

Some mass litigation episodes succeed for plaintiffs in the sense of leading to substantial compensation for many of the claimants; examples include asbestos, breast

implants, Dalkon Shield, Fen-Phen, PCBs, Vioxx, and several other drugs. Other MLEs largely fail from the plaintiffs' point of view;¹⁸ examples include tort claims for repetitive stress injuries connected with computer keyboards (Szabo & King 2000), Bendectin (Green 1996; Sanders 1998), firearms (Cook & Ludwig 2002) and lead paint (Lutter & Mader 2002).

Defendant Behavior and Claimant Injury

Despite much commentary suggesting, for example, that plaintiffs often prevail when they are not truly injured or that mass litigation outcomes are driven primarily by strategy and tactics of legal adversaries, it seems that often what the defendant did and what injuries (if any) resulted are crucial factors determining MLE outcomes. As depicted in Figure 1, defendant behavior can affect litigation activity in two general ways, namely, indirectly through injuries (actually or allegedly) caused by defendant's actions (arrows B and C) or directly (arrow D). We consider the indirect, and apparently more familiar, route in this sub-section and the direct route in the next sub-section.

The basic idea that defendant behavior is central for understanding mass litigation is illustrated by general negligence doctrine in tort.¹⁹ In all negligence claims, a defendant is alleged to have done something or to have failed to do something, thereby

¹⁸ Often a failed attempt by plaintiffs' lawyers to obtain substantial amounts of compensation in a particular MLE seems better described by an MLE being "dormant" than "dead." For example, Galanter (1990:383, fn. 18) reports that some asbestos litigation against Johns Manville was settled in 1933, more than three decades before the emergence of mass-scale asbestos litigation. See also, Galanter (1990:390).

¹⁹ Our definition of mass litigation does not require that claims be based on negligence allegations. Even in instances in which legal doctrine requires only that the defendant caused the injury to establish liability (and not whether defendant's behavior met a legal standard for care)—variously described by different researchers, lawyers and commentators, as "strict," "absolute," or "enterprise" liability—defendant behavior is relevant to the question of injury causation.

violating a legal requirement or duty—i.e., the defendant’s behavior was alleged to be negligent—and that negligent behavior is alleged to have caused injury to one or more plaintiffs. The injury category in our framework subsumes the number, nature, and severity of the harms allegedly caused by the defendant’s behavior. In a simple negligence example, a defendant’s behavior might involve mopping a floor and leaving it wet, while the plaintiff’s injury might involve a broken wrist sustained from slipping and falling on the wet floor. In the context of an ML episode, by contrast, the nature of allegations regarding defendants’ behavior, and plaintiffs’ injuries, are often far more complex, particularly in the context of exposure to potentially toxic substances.²⁰

Within the context of a particular MLE, defendant behavior of interest would be the specific actions or inactions of the defendant that led (or are alleged to have led) to harm to the plaintiffs.²¹ In similar fashion, the injury category would include information about the people exposed to risk as well as more or less elaborate details on the type and scope of harms alleged, including (in some instances) technical background information concerning relevant forms of illness or disease and potential or actual exposure-injury pathways.

²⁰ Our examples include many such mass torts. In this article we largely ignore mass litigation related to mass disasters or accidents (e.g., airplane crashes, building collapses), in which the proximate causes of plaintiffs’ injuries are obvious (although legal responsibility may not be obvious). We do not emphasize mass accidents and disasters because the key issues and dynamics of the resulting litigation appear often to be very different from those involved in so-called “toxic torts.”

²¹ A central issue in many MLEs is whether plaintiffs’ injuries were caused by exposure to particular toxic substances. For overviews of issues and legal principles related to injury causation related to toxic substances, see Goldstein and Henifin (2000) and Green, Freedman, and Gordis (2000).

Direct Effects of Defendant Behavior on Litigation Activity

Defendant behavior that substantially affects litigation activity within an MLE episode sometimes is not related to the injuries suffered by the plaintiffs. Defendant behavior that can substantially affect the course and outcomes of an MLE may also include, for example, behavior about which plaintiffs can discover evidence and use to depict the defendant as irresponsible or worse. Such depictions—sometimes in the form of “smoking gun” e-mails or documents—can be effective in distracting jurors from weak elements of the plaintiffs’ cases or in inducing juries to impose punitive damages. An example is the Bendectin litigation, in which several juries found for the plaintiffs despite what most observers agree was a lack of adequate evidence that Bendectin could cause birth defects (Sanders 1998:chapter 5). Sanders (1998:130-139) argues that such plaintiff successes at trial were due in part to plaintiffs’ ability to obscure this difficulty by constructing a “persuasive story” emphasizing problems in the testing of Bendectin on animals performed by the defendant company.

An Example: Polychlorinated Biphenyl (PCB) Contamination

Litigation over injuries allegedly caused by PCB contamination illustrates many issues involved in the core of an MLE. Prominent defendants include Monsanto and its corporate successors (collectively, the sole U.S. manufacturer of PCBs before production was banned (Amon 2002)) as well as major manufacturers that used PCBs as inputs in manufacturing (for example, General Electric and General Motors). Defendant behavior central to the PCB litigation is what defendants allegedly did that was alleged to cause injury—namely, dumping polychlorinated biphenyls, chemicals which are widely

believed to be both toxic and carcinogenic (National Institute for Occupational Safety and Health 1986). The relevant alleged injuries are various types of cancer, concomitant harms, and related deaths; fears of future injury and emotional distress; as well as property damage associated with PCB contamination (e.g., Fisk 2001).

U.S. litigation activity surrounding PCBs could support a lengthy case study. In a nutshell, PCB litigation dates back at least to the late 1970s (Solutia 2003), and has tended to involve sets of related claims arising from the discovery of specific sites where PCB contamination has occurred. One such site in Anniston, AL resulted in several major class action claims against Monsanto and its successors, some of which were settled in 2003 for nearly \$700 million (Reeves 2003). Another PCB site in Schenectady, NY has involved massive class action claims against General Electric, with more than \$20 billion dollars in damages sought as of late 2007 (US District Court, Southern District of New York 2007). Claims brought in PCB litigation have included negligence, private nuisance, trespass, strict products liability, breach of duty to warn, wrongful death, and medical monitoring. Claims for property clean-up costs under the federal Superfund program (authorized by the Comprehensive Environmental Response, Compensation, and Liability Act) have also been important in some PCB cases (e.g., Legal Intelligencer 1998).

Influences on Mass Litigation Episodes

From a social science perspective, understanding a particular MLE or drawing lessons from several MLEs requires consideration of events that occur outside of the core of the MLE or MLEs. More specifically, social scientists are likely to be especially interested in factors outside the core of an MLE that affect the litigation activity in that

MLE or are affected by that litigation activity. As described in discussing Figure 1, we distinguish between those outside factors that are exogenous or unaffected by what occurs within the core—namely, *influences*—and those outside (of the core) factors that are endogenous to or affected by what occurs within the core—namely, *outcomes*. In this section we focus on influences on the core of an MLE; outcomes of a focal MLE that occur outside the core of that MLE are the subject of the following section.

Figure 2 embodies two major assumptions about influences. First, we assume that these influences fall into five categories, namely, legal doctrine and processes, other litigation, regulation, media reports, and market factors. Second, we assume that there are two types of routes by which influences affect litigation activity within a particular MLE, namely, directly or indirectly through effects on defendant behavior. In the remainder of this section we discuss the five categories of influences, and for each category we consider effects on defendant behavior and direct effects on litigation activity. We also offer examples from selected U.S. mass litigation episodes to illustrate the concepts and to establish that the general phenomena highlighted do, in fact, occur in at least some MLEs.

Insert Figure 2 about here

Legal Doctrine and Processes

By “legal doctrine and processes” we mean substantive standards and procedural rules under both statutory or common law. For our purposes the key indirect effects of

law on litigation activity operating through effects on defendant behavior include (1) general deterrence effects,²² and (2) statutes that directly constrain defendant behavior.²³

Deterrence of behavior that imposes more risk of injury than is socially desirable is widely accepted, along with compensation, as one of the two fundamental social purposes of a civil liability system.²⁴ The fundamental idea is that civil law—for example, tort law—introduces the possibility of paying damages for injuries and thereby alters the cost-benefit calculus of potential defendants when making decisions that affect the injury risk to which they expose their customers (e.g., Cooter & Ulen 2000:chapter 8; Kaplow & Shavell 2002:section 5).

General deterrence effects are very difficult to establish empirically for at least three reasons. First, many of the legal doctrines and procedures of main interest to policy makers—e.g., products liability—vary little across states; thus, estimating deterrence effects by comparing corporate decisions or safety levels across states is not likely to be feasible. Second, in the products context, a product that is marketed nationally generally

²² By “general” deterrence effects, we refer to effects on behavior of potential defendants broadly, not only the defendant in a particular instance.

²³ By “statutes” we mean to exclude rules promulgated by regulatory agencies and other regulatory actions (such as enforcement), which comprise their own category of influences.

²⁴ It seems largely uncontroversial that civil law can affect the behavior of those who might harm others. There is great controversy, however, about two major issues. (Cf., “Although the extent of these preventive effects is the subject of great controversy, it seems clear that it is of major significance.” (Galanter 1990:379).) First, there is fundamental disagreement about how to conceptualize the socially desirable level of risk, with economists generally arguing for that level that is consistent with or promotes the social goal of economic efficiency and many others, including many consumer advocates, arguing for higher than economically efficient levels of safety. Second, there is great controversy about how liability exposure affects (e.g.) corporate decisions and whether, on balance, the social effects of liability exposure are desirable, either generally or more narrowly in the context of particular industries such as pharmaceuticals, medical devices, chemicals, financial services, and health services.

has the same physical features and carries the same warnings in all states.²⁵ Thus, such decisions are effectively made at the national level, presumably on the basis of an assessment of the overall or average liability climate nationally. Third, researchers cannot observe what potential defendants would have done if the legal rules had been different.²⁶ Thus, specific examples of deterrence effects on particular MLEs would be speculative.

Various *failures* of deterrence are apparent, however. An important class of deterrence failures is “under deterrence” namely, instances in which safety-enhancing actions were not taken that, with the benefit of hindsight, would have been socially advantageous (and also in a defendant’s interest). One example is provided by litigation involving hip and knee implants defectively manufactured by Sulzer (*Journal of Law and Health* 2001-2002). This MLE involved thousands of products-liability claims filed in the late 1990s, and resulted in a global, limited-funds settlement for approximately \$1 billion in damages. Serious injuries, litigation, and compensation payments were the result of a manufacturing defect, namely failure by Sulzer (during a limited time period) to clean implants that had been contaminated by oil. Other examples include failure to adequately study injury risks in instances such as breast implants (Angell 1997:54-55) and MER/29 (Rheingold 1968).

²⁵ In some contexts statutes or regulations (e.g., FDA regulations in the context of pharmaceuticals) require that the product and its warnings be uniform across the states.

²⁶ Researchers have nonetheless pursued various strategies for attempting to learn about real-world deterrence, which may or may not well serve social goals. Many such attempts would be best described as case studies (e.g., various chapters in Huber & Litan 1991, Hunziker & Jones 1994, and Viscusi 2002a; Garber 1993), and others take statistical or econometric approaches (e.g., Ringleb & Wiggins 1990; Viscusi & Moore 1993; Viscusi 1998).

The PCB MLE illustrates the possibility of statutes directly constraining defendant behavior. Concerns about possible adverse health effects associated with PCBs led Congress to impose a ban on PCB manufacturing during the late 1970s, pursuant to the Toxic Substances Control Act of 1976 (TSCA). As a result, Monsanto, the only manufacturer of PCBs in the United States, was foreclosed from any further production of these chemicals after 1979.²⁷ At the least, this ban affected subsequent PCB litigation by limiting the amount of PCB that might be disposed of in ways that could cause injury.

That law directly affects litigation activity is obvious—after all, legal doctrine and procedures are the rules for litigation.²⁸ One of the major ways in which it does so is by establishing the procedural framework within which litigation takes place. Law dictates the requirements for a class action to be certified, for example, and for conducting discovery or introducing scientific evidence of injury causation in the courtroom. Such

²⁷ Notwithstanding the ban, PCBs already produced and incorporated into a range of industrial products continued to present opportunities for human exposure and legal liability, as did dumping sites and contamination from periods prior to the enactment of the TSCA.

²⁸ Notably, courts sometimes “bend” applicable legal standards and procedures in efforts to ensure fairness of outcomes or to achieve administrative efficiency. Schuck (1995:948) writes, for example, “Once courts began to realize that they were confronting a new, quite different phenomenon [namely, mass torts], they entered a period of desperate improvisation...” [footnote omitted] Among the best-known examples of judicial activism in managing mass litigation is Judge Jack Weinstein’s management of the MDL in Agent Orange (Schuck 1987) and Judge Merhige’s management of the Dalkon Shield claims within the bankruptcy reorganization proceedings of A. H. Robins Company (Bacigal 1990; Sobol 1991). A more recent, striking example occurred in the Sulzer implant litigation, where a federal MDL judge took the controversial step of staying independent state court proceedings and claims, to avert the possibility that Sulzer’s funds would be entirely exhausted by state cases and leave the majority of plaintiffs (whose cases were in federal court) without relief. The judge’s action was instrumental to the eventual global settlement of the Sulzer claims, but her interpretation of the law was unorthodox, and was subsequently overturned by the 6th Circuit Court of Appeals (*Journal of Law and Health* 2001-2002).

standards have major effects on how and where claims are brought, on which potential claims are most attractive to plaintiff attorneys, and on the litigation strategies of the various parties.

Other Litigation

Sometimes, events occurring in litigation that is not part of the litigation activity in the ML episode under consideration nevertheless affect that episode, influencing its trajectory and outcomes. Here we are concerned not with the law itself, which we just discussed, but with other aspects of litigation. As with the other categories of influences, “other litigation” may affect the litigation activity within core of the focal MLE indirectly through the behavior of defendants as well as directly.

Turning to the effects on defendant behavior, potential defendants should be expected to make decisions affecting customer safety based not only on applicable legal doctrine and procedures, but also based on their *perceptions* of how the civil justice system operates in practice. Perceptions of discrepancies between how the law is supposed to be applied and how it is applied in practice may be largely accurate. For example, many believe that some injured plaintiffs evoke special sympathy from jurors—such as children and the grievously injured—and this may, in fact, be the case.²⁹ Lawsuits brought against landlords over lead-paint contamination in old housing stock, in which some juries have found for the plaintiffs—children afflicted with learning disabilities—may illustrate these possibilities.³⁰ If the lead paint litigation leads potential defendants to infer that products that pose major risks to children greatly increase their

²⁹ We know of no empirical literature, however, bearing directly on the accuracy of such beliefs.

³⁰ For example, landlords were held accountable for lead-paint poisoning of tenants’ children in *Forrest v. P & L Real Est. Inv. Co.* (2000) (Petry 2001).

liability exposure, it stands to reason that manufacturers of other products that expose children might take notice, and to respond by making such products safer than they otherwise would.³¹

Other relevant perceptions, however, may be substantially distorted (i.e., out of line with reality) because of the lack of readily available and representative information about litigation activity, psychological heuristics and biases, or both. Regarding available information about tort litigation, Bailis and MacCoun (1996) and Garber and Bower (1999) present empirical evidence that reports about litigation in print mass media (magazines and newspapers, respectively) invite distorted views of, for example, probabilities of plaintiffs prevailing at trial and the prevalence of assessments of punitive damages, in each case suggesting that defendants typically fare less well in tort litigation than is suggested by more representative information.

Regarding the role of psychological heuristics and biases, it has been argued that potential defendants are likely to overestimate the likelihood of being held liable when the law is on their side—for example, when their behavior did not cause the relevant injuries—or being assessed punitive damages in inappropriate circumstances.³² More specifically, the availability heuristic from behavioral psychology suggests that perceived probabilities of legally inappropriate liability costs being imposed on defendants in various situations are likely to be higher than the corresponding true probabilities. This is because, for example, litigation events that plausibly illustrate the possibility of

³¹ Such an effect may or may not be socially advantageous, at least by the standard of economic efficiency.

³² For example, punitive damages being assessed for conducting cost-benefit or risk-benefit analyses in deciding on product designs. See, Viscusi (2000) and comments by Garber (2000) and MacCoun (2000).

inappropriate liability costs are widely and often recounted (sometimes inaccurately) by advocates for reducing liability exposure of American businesses. Such accounts make such events easier to imagine, in which case the availability heuristic suggests that their likelihoods are overestimated by potential defendants.³³

Regarding effects of “other litigation” on litigation activity within the core of a focal MLE, obvious examples are when precedents are set in litigation outside that MLE and then applied to cases within that MLE. An example is the *Daubert* decision (*Daubert v. Merrell Dow Pharmaceuticals* 1993) in a Bendectin case, which has been very influential in many subsequent cases. A related example, although not clearly one of binding precedent, is that Judge Weinstein’s views in the Agent Orange litigation on the relative merits of different types of scientific evidence—particularly the superiority of epidemiology to laboratory and animal studies—was highly influential with trial- and appeals-court judges in Bendectin (Sanders 1968:183).³⁴

There are several other, seemingly less obvious types of potential effects of “other litigation” on litigation activity within a (focal) MLE under consideration. We consider six of these, namely effects that involve (1) lawyer knowledge and skill, (2) funding available to plaintiffs’ attorneys, (3) ability of plaintiffs’ attorneys from different firms to cooperate to their mutual benefit, (4) major lessons learned, (5) “coattail” litigation, and (6) beliefs or attitudes of potential jurors.

³³ Garber (1993:72-73) makes this argument in the context of medical products liability. A succinct statement of the availability heuristic is “People using this heuristic judge an event to be likely or frequent if instances of it are easy to imagine or recall” (Slovic, Fischhoff & Lichtenstein 1987:19).

³⁴ More specifically, Sanders (1998:183) writes “Judge Weinstein began the movement toward judicial recognition of epidemiological superiority...”

Mass tort litigation involving products such as MER/29,³⁵ the Dalkon Shield intrauterine device, asbestos, and the state attorneys' general Medicaid tobacco litigation illustrate the first three of these six possibilities. More specifically, plaintiff successes in these MLEs enabled plaintiffs' attorneys to develop considerable skill and experience in conducting complex mass tort litigation, ultimately provided some of the same attorneys with large fees that were then invested in other MLEs, and helped various plaintiffs' firms to learn to work together to their mutual advantage (Erichson 2000b:392-4). Clearly, effects of past litigation on lawyer knowledge and skill can be important on the defense side of the bar as well.

An important example of a "major lesson learned"—our fourth category—pertains to defense efforts to end MLEs by settling virtually all claims in so-called "global settlements." Several such attempts have failed because of large numbers of opt-outs, many more claims being filed than were anticipated at the time that compensation levels were negotiated, or both. Examples of such failed attempts include silicone-gel breast implants (Angell 1997:192-195; Hersch 2002:173-5) and Fen-Phen (Rheingold 2006:section 2:84; Nagareda 2007:135-151). It appears that Merck, the main defendant in the Vioxx MLE, learned from such experience, and in negotiating a settlement of the recent Vioxx mass tort succeeded in largely preventing opt-outs and new claims (Tesoriero, Rubenstein & Heller 2007).

The fifth way enumerated above for other litigation to affect litigation activity in a focal MLE is what Erichson (2000a) calls "coattail" class actions. More specifically, this term refers to litigation brought by private plaintiffs' attorneys that benefit from related

³⁵ MER/29 was a drug approved by the FDA in April 1960 that was intended to reduce cholesterol; it was withdrawn from the market two years later (Rheingold 1968:120).

litigation brought by public entities. An example is discussed by Erichson (2000a:9-17), namely, the lawsuits brought by state attorneys general against tobacco companies to recoup costs to Medicaid programs of illnesses caused by smoking subsequently helping private plaintiffs pursuing personal-injury claims against the same companies. Erichson emphasizes that the former litigation aided plaintiffs in the later litigation by providing “an arsenal of information and arguments to use against tobacco defendants” and by changing public “attitudes about tobacco liability” (Erichson 2000a:11-12).

Finally, the possibility of other litigation affecting attitudes and beliefs of potential jurors is illustrated by a 1999 \$4.9 billion Los Angeles jury verdict (subsequently reduced by the trial judge) in the *Anderson* automobile product liability case, described by Viscusi (2000:576-78). At the time of the verdict, knowledgeable observers opined that this large verdict reflected effects of the massive settlements in the state Medicaid tobacco suits.³⁶ For example, Victor Schwartz—a prominent lobbyist for defense interests in product liability litigation—commented that “This just shows that the new figures of billions of dollars that have begun to be tossed around in the tobacco cases have changed the perspectives of American jurors.” (Swoboda & Mayer 1999:A1).

Regulation

By “regulation” we refer to the activities—such as standard setting and enforcement³⁷—of federal and state agencies and private organizations that attempt to

³⁶ On the state Medicaid tobacco litigation see, for example, Viscusi (2002b).

³⁷ Enforcement responsibilities may be undertaken by a regulatory organization or by separate organizations such as the U.S. Department of Justice or offices of state attorneys general.

protect the personal or financial safety of consumers of products and services. As described presently, forms of such regulation vary.³⁸

Mass litigation involves mass injuries or at least allegations of mass injuries. Not surprisingly, many products and services that have potential to cause mass injury are regulated in the United States by a federal agency. Some regulatory agencies attempt to prevent injuries before the relevant product or service is offered for sale. One example is the Food and Drug Administration (FDA), which reviews data on safety and approves warnings before allowing prescription drugs and relatively risky medical devices to be sold in the U.S. A second example is the National Highway Traffic Safety Administration (NHTSA), which promulgates motor vehicle safety standards that must be met for a new vehicle to be sold in the U.S. Other regulatory agencies, such as the Environmental Protection Agency (EPA) and the Consumer Product Safety Commission (CPSC), typically take action—e.g., banning products or requiring recalls—only after products are marketed and safety problems become apparent. In addition, the Securities and Exchange Commission is responsible for regulations aimed at protecting investors from financial injury related to publicly offered and traded securities.

Regulatory standards establish legally binding codes of conduct for potential defendants, and evidence for violations of applicable regulations can enter into, or even provide the basis for, civil claims brought by plaintiffs' attorneys on behalf of private parties. Regulatory agencies are involved in monitoring certain categories of products

³⁸ In this article, we focus on activities of public regulatory bodies. In the securities context, private regulatory and enforcement activity—exemplified by the Financial Industry Regulatory Authority (FINRA) in the securities arena—that can complement the activities of the Securities and Exchange Commission, the public body.

and services, in overseeing related business activities, and in protecting the public. Consequently, regulations can affect defendant behavior and ML episodes.

PCBs offer an example of the direct influence of regulation on defendant behavior, with effects on potential injuries and PCB litigation activity. As described above, the Toxic Substances Control Act of 1976 laid the groundwork for removing PCBs from the U.S. market, but the ban on PCB manufacture and distribution was effected by EPA regulations promulgated in 1979. This ban took Monsanto out of the business of producing PCBs by 1980—a result that directly limited the potential for future PCB claims. EPA regulations instituted in 1978 and 1979 also exerted substantial controls over the continued use of PCBs, ultimately restricting them to certain types of electrical equipment, as well as over waste-disposal processes (U.S. Environmental Protection Agency 1979). A second example pertains to lead-based-paint litigation—see for example, Lutter & Mader (2002:106-107). More specifically, sale of lead-based paint in the United States was banned in 1978 by the CPSC, which seemingly reduces to some degree the ultimate liability exposure of paint manufacturers (along with limiting an acknowledged public health problem).

In fact, regulatory influence on defendant behavior prior to an ML episode is widespread. For example, FDA regulations and processes involved in pre-market approval of prescription drugs almost surely influence the behavior of prescription-drug manufacturers in terms of studying the safety of their products and proposing to the FDA the content of warning labels. Mass torts alleging serious personal injuries caused by prescription drugs are fairly common, however. For example, Hensler & Peterson (1993:997-986) discuss mass torts involving prescription drugs MER-29, Bendectin, and

DES; and Hensler (2007:897-903, 913-916) tabulates basic descriptive information about many personal injury, product-related mass torts including several involving other drugs (e.g., Fen-Phen diet pills, Norplant, Baycol, Meridia, Prempo, Rezulin, Vioxx and Zyprexa).³⁹

Similar observations pertain outside the context of products and personal injury. For example, SEC regulation almost surely influenced the conduct of various investment banks and issuers in their initial public offering (IPO) allocation practices during the late 1990s, which culminated in a wave of IPO litigation during the early 2000s.

Regulation can also directly influence litigation activity within particular ML episodes. One general way that this occurs is in connection with *negligence per se* arguments, where the violation of an applicable regulatory standard is used by plaintiffs in civil cases to help establish negligence. This kind of argument is commonly made in toxic-tort litigation; e.g., in benzene cases, where the argument is made that benzene exposures are unsafe and negligent, partly by virtue of having exceeded EPA or Occupational Safety and Health Administration (OSHA) tolerance levels (or both).⁴⁰ A similar argument has often been made in mass litigation over nursing-home abuse and neglect claims. More specifically, nursing homes are subject to substantial oversight by state and federal regulators, both in the form of quality-of-care requirements and in “bills of rights” for nursing home residents. When these regulatory standards are violated by nursing-home operators, the violations often provide a ground for civil claims under

³⁹ See also Spiro et al. (1999) for descriptive information about many other mass torts.

⁴⁰ See, e.g., *Shelby vs. Exxon Mobil Corporation* (2008) and *Billie Jean Perez v. Chevron U.S.A. Inc. et al.* (2002).

negligence per se or under state-level statutory provisions concerning nursing-home abuse (Bennett et al. 2000).

Regulatory actions related to one MLE may also damage the reputation of a company, thereby making that company seem to plaintiffs attorneys to be a better litigation target in another MLE, other things equal. An example is FDA investigation of the accuracy and completeness of safety information submitted by the manufacturer of MER/29, which led to a criminal indictment and *nolo contendere* pleas (Rheingold 1968:120-121) and encouraged some plaintiffs' attorneys to take on the first Bendectin plaintiff because the same company had manufactured Bendectin and MER/29 (Sanders 1998:7).

Regulators can also affect litigation activity within particular ML episodes through their investigative activities, which in at least some instances predates the commencement of the focal MLE. For example, in the IPO allocation cases, the SEC (as well as the New York State Attorney General) undertook investigations beginning in May 2000 into alleged misconduct of investment banks and issuers (Smith & Pulliam 2000a)—investigations which fed fuel to the fire of private litigation, in which the first lawsuit (a class action) was filed in January 2001 (U.S. District Court, Southern District of New York 2004). In the drug and medical device arenas, product recalls or withdrawals that are influenced by FDA investigations often appear to trigger large numbers of product-liability claims. An example is the Fen-Phen MLE, in which a product withdrawal in September 1997 resulting from FDA pressure (Neergaard 1997) predated all but a handful of personal-injury claims, the first of which was filed a few months earlier (Seufert 1997). Another example is Baycol, a cholesterol-lowering drug that was

withdrawn from the market in August 2001 amid safety concerns, and “[f]ollowing the recall, some 7,800 lawsuits were filed in federal courts across the country.” (*Andrews Pharmaceutical Litigation Reporter* 2003).

Finally, a focal mass litigation episode can be spurred by regulatory investigations that are exogenous to that episode. For example, the IPO MLE—in which the first lawsuits were filed in January 2001—may not have occurred in the absence of December 2000 *Wall Street Journal* reports of violations of SEC rules (described below) and a joint investigation of the U.S. Securities and Exchange Commission, the New York State Attorney General’s office, and the National Association of Securities Dealers that began in mid-2000 (Smith & Pulliam 2000a,b).

Media Reports

This category of influences comprises reports in a broad range of information media that affect the core of the focal MLE but are not themselves influenced by events within that MLE.⁴¹ The relevant media include mass or popular media such as general newspapers (e.g., *New York Times*, *Wall Street Journal*), magazines (e.g., *Time*, *Business Week*), radio, and television; publications read primarily by insiders in the legal and insurance industries (such as the *National Law Journal*, litigation reporters published by companies such as Andrews and Mealey); publications primarily read by insiders in industries whose products or services are not infrequently embroiled mass litigation such as pharmaceuticals and chemicals; and scientific and medical journals (such as *Epidemiology*, *Toxicological Sciences*, and the *New England Journal of Medicine*). As is

⁴¹ Media reports on *litigation activity* within the core of the MLE under consideration are endogenous within our framework and thus are categorized as *outcomes* of the MLE, which is the subject of the following section of the article.

the case for other categories of influences, such media reports can affect litigation activity within the MLE of interest either indirectly through effects on defendant behavior or directly.

Regarding effects on the behavior of defendants, one seemingly important role of media reports was discussed above in the context of effects of “other litigation.” These are effects of what media report and how they report it on perceptions of business decision makers of their liability exposure and, in turn, their decisions that affect the potential for their products or services to cause personal injury, property damage, or financial injury.

In addition, potential ML defendants who believe that the demand for their products or services is sensitive to unfavorable publicity may take this into account in making decisions affecting the injury risks of their products and services. This observation is likely to be most salient for producers of well-known consumer products, because “prominent principles” is an often-cited element of what makes a story newsworthy⁴² and (we speculate) consumers are more likely than business customers to infer blameworthiness or risks from the mere existence of litigation alleging the same.

Media coverage that is not itself an outcome of the MLE under consideration can also directly affect the course of that ML episode *after* injuries have occurred. Three general possibilities, discussed presently, come to mind in this regard: (1) reports on injury risks, injuries or defendant culpability that lead individuals to consider claiming or plaintiffs’ attorneys to consider initiating litigation; (2) mass media reports about results of scientific or medical studies—or the scientific accounts of the studies themselves—

⁴² See, for example, Metz (1991:6).

alert plaintiffs' attorneys to possibility of successful litigation or make them more optimistic about the prospects of such litigation; and (3) media reports on civil justice generally can affect attitudes of judges and jurors.

First consider potential effects of reports on risk on litigation activity. One example is Agent Orange, in which at least one important plaintiff contacted an attorney after his wife read about "unusual physical symptoms associated with herbicide use" (Schuck 1987:47-48; see also Hensler & Peterson 1993:1021). The Bendectin MLE offers another example. Specifically, Sanders (1998:10) reports that an article appeared in the *National Enquirer* in October 1979—after only one Bendectin lawsuit had been filed—likened its risks to that of thalidomide and "soon there were hundreds" of such suits. Other MLEs that exemplify this general phenomenon apparently include the Dalkon Shield and L-tryptophan (Hensler & Peterson 1993:1022).

The IPO allocation MLE provides an example of media reports suggesting culpability on the part of potential defendants. More specifically, in December 2000, the *Wall Street Journal* published two extensive articles (Smith & Pulliam 2000a,b) indicating that many practices commonly used in allocating shares in IPOs violated SEC regulations, and the first related class-action lawsuit was filed in the following month (United States District Court, Southern District of New York 2003:4).

Regarding the second of the categories enumerated above, scholarly journals also represent an important medium, and reports of newly discovered risks of products can spur plaintiffs' attorneys to action. A prominent example is provided by the early history of the Fen-Phen (diet pills) mass tort, which involved using phentermine and either Pondimin or Redux in combination. First, in January 1997 Kaiser Northeast (a health

maintenance organization) stopped paying for Redux because of safety concerns (Johannes 1997). The first lawsuit involving claims of primary pulmonary hypertension was filed in May 1997 in a Massachusetts state court (Seufert 1997). Next, in July, the Mayo Clinic released a study of 24 adverse case reports involving Fen-Phen users that was to be published the following month (Haney 1997), and on the same day the FDA issued an advisory to the public and physicians about adverse case reports and potential risks (United States Food and Drug Administration 1997a). The first federal class action lawsuit was filed in California the following day (Associated Press 1997a). Research articles reporting on adverse Mayo Clinic cases were published in the prestigious *New England Journal of Medicine* in August (Mark et al. 1997; Connolly et al. 1997), along with a related editorial (Curfman 1997), and in that same month the FDA received additional adverse case reports (Associated Press 1997b). In late August, the FDA announced it would require black-box warnings (the most prominent form) for the drugs (United States Food and Drug Administration 1997b), asked Wyeth to withdraw Pondimin and Redux from the market, and Wyeth did so in mid-September (Neergaard 1997). The day after the products were withdrawn, the first state class-action suits were filed in Texas and Florida, and, within one week, class actions were also filed in New York, Utah, Colorado, Hawaii, and California (Powell 1997).

Finally, media reports can affect the views of potential judges and jurors involved in MLEs, thereby directly affecting the litigation activity. For example, advocates of “tort reform” appear to have succeeded in making many potential judges and jurors skeptical of the social desirability of civil litigation (Daniels & Martin 2000; Haltom & McCann 2004:297-301).

Market Factors

Our fifth category of influences comprises both markets for the products or services offered by potential ML defendants and the financial markets for the debt and equity of such firms. As elaborated presently, both types of markets can, in principle, impose substantial costs on defendants in mass litigation and thereby increase the incentives of businesses to take actions that would reduce injury risks.⁴³

While a defendant's primary financial costs related to an MLE may typically be direct litigation costs such as costs of legal defense and compensation payments, there may be substantial other "indirect" costs to ML defendants that are related to market responses. The fundamental idea here is that mass litigation alleging product- or service-related injuries has the potential to reduce demand for those products and services—and perhaps even demand for other products⁴⁴ and services offered by the same companies. Stock prices—to which corporate decision makers are believed to be very attentive—would reflect (along with expected direct litigation costs) anticipations of such demand effects to the extent that they are expected to affect future profits.⁴⁵ Moreover, there is

⁴³ Most of the discussion of market incentives in mass-litigation related literature focuses on the normative or prescriptive issue of the scope for liability to improve social performance given the safety of (e.g.) products that should be expected to result from market incentives and administrative regulation; see, for example, American Law Institute (1991:chs 7,8). Our focus in this article is positive or descriptive analysis.

⁴⁴ Several case studies of automobile and light truck models (e.g., the Ford Pinto, Jeep CJ-5 and CJ-7, Audi 5000, GM C/K pickup trucks) suggest that effects of litigation on product demand can be substantial (see Garber & Adams 1998:5 for details). Garber & Adams (1998) examined econometrically effects of trial verdicts in automotive product liability cases on sales of the models involved in the trials but failed to find such effects, thus suggesting that substantial demand effects are not ubiquitous or that individual trial verdicts do not typically have quantitatively discernible effects on product demand.

⁴⁵ Empirical ("event") studies of stock-price effects of events (e.g., filings, verdicts, settlements) in product liability litigation include Garber & Adams (1998), Prince & Rubin (2002), and Govindaraj, Lee & Tinkelman (2007). All three of these studies

substantial anecdotal evidence that the uncertainty about how an MLE will ultimately be resolved depresses the stock prices of the defendants. For example, the *Wall Street Journal* attributed a 2.1% increase in Merck's stock price to the announcement of the Vioxx settlement (Tesoriero, Rubenstein & Heller 2007).

Avoiding potential effects on demand and stock prices fortifies incentives to avoid mass litigation that are rooted in the direct costs of litigation. As with the general deterrence effects of “legal doctrine and processes” discussed earlier in this section, effects of market incentives on safety-relevant decisions of potential defendants cannot be observed, and we refrain from speculating about particular instances of this phenomenon. And also in line with that previous discussion, we observe that market incentives—even in combination with regulation and liability incentives—sometimes fail to prevent potential mass-litigation defendants from becoming actual mass-litigation defendants.

Regarding direct market effects on litigation activity within an MLE, the litigation strategies of defendants in ML episodes can be influenced by their desire to protect the reputations of their products or the reputations of their companies. Thus, the recent behavior of major soft-drink manufacturers—including such well-known companies as PepsiCo and Coca Cola—in rapidly moving to settle class action claims for alleged benzene contamination in soda may represent the influence of both types of reputation concerns.⁴⁶

consider automotive litigation; Prince and Rubin (2002) also consider pharmaceutical litigation.

⁴⁶ Several other defendant companies such as Sunny Delight Beverages Co., Rockstar Inc., Polar Beverages Inc., and Shasta Beverages Inc. were also involved in the settlement. The class action and its settlement is described in Shepherd (2007).

Outcomes of Mass Litigation Episodes

Activities within the core of an MLE often have important effects on events that occur outside that MLE. We refer to such external events as (endogenous) *outcomes* of the MLE. Figure 3 adds to the right-hand side of Figure 2 boxes depicting the five categories or types of outcomes. These five categories refer to the same five sets of social institutions as the categories of influences discussed in the previous section, but they are conceptually distinct because—unlike influences depicted on the left-hand-side of Figures 2 and 3—they are *endogenous*.⁴⁷

In Figure 3, each of the boxes depicting a category of outcomes is connected to the core of the MLE by a two-headed arrow. The heads pointed towards the boxes represent (as just described) that events within these categories can be—and, seemingly, often are—affected by litigation activity within the MLE under consideration. The arrow heads pointed away from these boxes represent that outcomes of events within the core of a particular MLE can “feed back” and affect litigation activity in that same MLE. Finally, the arrows indicating a feedback point to the litigation activity within the MLE under consideration but not to defendant behavior. This is because defendant behavior underlying the litigation activity is generally determined before the associated litigation activity begins and, if so, outcomes of the litigation cannot affect the (pre-determined) defendant behavior.⁴⁸

⁴⁷ Galanter suggests a similar feature of his categories (some of which are implicit in his exposition) writing “But if litigation can in turn influence these influences...” (Galanter, 1990:379).

⁴⁸ Of course, outcomes can affect defendants’ *litigation* behavior; however, within our framework litigation behavior of defendants is in the *litigation activity* part of the core of the MLE.

Insert Figure 3 about here

In the discussion that follows, we consider each of the five categories of outcomes and offer examples how mass litigation activity can affect events external to the cores of focal MLEs. We also offer examples of ways that these events can feed back and affect litigation activity within the same MLE.

Legal Doctrine and Processes

As discussed in the previous section, this category of outcomes refers to statutory and common law, including both substantive standards and procedural rules. It appears fairly common for litigation activity within an ML episode to result in new common law precedents that come to affect litigation outside that MLE; such precedents are primary examples of outcomes. Moreover, such legal rulings (feed back to) affect the litigation activity within the focal MLE itself. By way of example, we highlight here four decisions of the United States Supreme Court, all of which in the first instance affected the particular MLEs that led to the decisions.⁴⁹

⁴⁹ The effects on law that we emphasize here have ramifications for both mass and individual litigation. More specifically, Rheingold (2006:sec.1:6) reports that “in many instances, the decisions and practices developed in [mass tort litigation] have advanced the doctrines which then are reapplied to individual litigation.” Rheingold then offers the following examples, which are elaborated later in the monograph: procedures for complex trials such as bifurcation; innovative ways to organize class actions; handling of scientific testimony on injury causation; methods of combining cases; claiming for medical monitoring; and punitive damages doctrine.

First, the decision in *Daubert v. Merrell Dow Pharmaceuticals* (1993), arose from a mass tort involving alleged injuries from the drug Bendectin.⁵⁰ This decision specified guidelines for federal judges to use in determining the admissibility of scientific evidence. *Daubert* has been applied far beyond the Bendectin litigation (Kassirer & Cecil 2002; Berger 2005; Heinzerling 2005). Second, the decision in *General Electric Co. Et Al. v. Joiner Et Ux.* (1997), which involved litigation over PCBs, focused on the scope of appellate review over trial court decisions about admissibility of expert evidence.⁵¹ Third and fourth, the Supreme Court decisions in *Amchem Prods. Inc. v. Windsor* (1997) and *Ortiz v. Fibreboard Corp.* (1999) decertified asbestos class actions previously certified by district judges for settlement purposes and greatly increased the hurdles for certifying mandatory (i.e., no opt-out) class certification for settlement purposes (Hensler 2002; Carroll et al. 2005:47-48; Powell 2006; Rheingold 2006:secs 2:12, 2:13; Nagareda 2007:chapter V). Nagareda (2007:115) states the situation starkly: “The Court’s decisions in *Amchem* and *Ortiz* have foreclosed the use of mandatory class actions as peacemaking vehicles for mass torts.”

Beyond common law precedents, putative socially undesirable effects of product-related mass litigation have led Congress to pass narrowly targeted legislation modifying the scope of liability in some instances. So, for example, in response to widespread concerns about shortages of childhood vaccines that were at least partially attributable to products-liability exposure (Congress of the United States, Office of Technology Assessment 1979; Institute of Medicine 1985), the *National Childhood Vaccine Injury*

⁵⁰ In fact, the Bendectin litigation resulted in three U.S. Supreme Court decisions (Sanders 1998:23).

⁵¹ In fact, *Joiner* is often referred to as one of the three Supreme Court decisions that comprise the “Daubert trilogy.”

Act of 1986 was adopted. This Act authorized a no-fault compensation program for some injuries emerging after vaccinations and protected vaccine manufacturers from liability in hope of assuring national access to new vaccines (Mariner 1992; Johnson, Drew & Miletich 1998; Mello & Brennan 2005). Likewise, products-liability litigation over the Vitek jaw implant—a medical device that included Teflon supplied by DuPont, which was sued hundreds of times when the device manufacturer ran out of money—was a major factor leading to passage of the *Biomaterials Access Assurance Act of 1998* in response to widespread concerns about liability-induced shortages of materials used in the manufacture of implantable medical devices (Garber 1998:267-268; Kerouac 2001). In both instances, the federal statutes reduced exposure to liability for some manufacturers of particular categories of products—with impacts beyond the scope of any single mass litigation episode.⁵²

State-level legislation that is at least partly a response to particular mass-litigation episodes is not uncommon. Examples include state legislation establishing rights for nursing home residents, adopted in the wake of widespread litigation alleging abuse or neglect of nursing-home residents (Stevenson & Studdert 2003; Studdert & Stevenson 2004), as well as passage of state laws connected with lead-paint notification and

⁵² There have also been several unsuccessful attempts obtain federal legislation to limit liability exposure of defendants in ongoing MLEs. Most prominent in this regard is asbestos, about which Carroll et al. (2005:130) write “Since the inception of asbestos litigation in the 1970s, more than 15 bills have been introduced in the U.S. Congress proposing to change the nation’s approach to resolving asbestos claims.” Carroll et al. (2005:132-33) also briefly discuss related legislative activity at the state level. Carroll et al. (2005:66) also report, however, that “Congress amended the bankruptcy statute to facilitate the creation of post-bankruptcy trusts to resolve asbestos injury claims...” Other examples include attempts by A. H. Robins to spur Congressional action that would protect the company from multiple punitive damages awards in the Dalkon Shield litigation (Bacigal 1990:38) and, more recently, MTBE, guns and some vaccines (Frankel 2006).

abatement in residential buildings,⁵³ which passed in the presence of increasing concerns and tort claims over lead-related injuries to children.⁵⁴ In both instances, the statutes changed the legal playing field in connection with related tort claims, which subsequently affected on-going ML episodes.

Other Litigation

Just as litigation activity within the core of a focal ML episode can be affected by developments in other (external) litigation, as discussed in the preceding section, so too can a focal ML episode exert its own effects on the course of other (external) litigation. We have discussed the examples of asbestos, MER/29, the Dalkon Shield, and the Medicaid tobacco litigation, which generated substantial experience, knowledge and financial awards for some plaintiff attorneys—resources which were later brought to bear in other mass-litigation opportunities. Analogous spillover effects likely pertain to the defense side of the bar as well, i.e., where experience, reputation and skill gained by legal practitioners in one context are then applied by them in other contexts.

Another general way that events in a focal ML episode lead to other litigation involves what might be called “spin-off” litigation or disputes. We discuss two fairly common types of such litigation, namely, securities-fraud litigation (usually in the form of class actions), and bankruptcy.⁵⁵

⁵³ Many states, including Arizona, California, Colorado, Georgia, Minnesota, and Wisconsin, have passed such laws. A recent listing of such statutes is provided by Gray & Faulk (2008: fn.7).

⁵⁴ Galanter (1990:381) cites another example: workers’ compensation programs instituted as a substitute for tort in the context of workplace injuries.

⁵⁵ Another type of “spin-off” litigation that can set precedents with broad applicability is insurance-coverage disputes. See, for example, American Re-insurance Company (2006) and Anderson, Farrell & Rheingold (2007).

Regarding spin-off securities-fraud class actions, it is fairly common for the stockholders of defendant companies in an MLE to file lawsuits against the defendants' corporate officers and directors alleging that they misled stockholders about their loss exposure in the focal ML. Examples of shareholder litigation secondary to an ML episode include the Dalkon Shield (Bacigal 1990:113, fn.9), the Shiley heart valve (Hensler & Peterson 1993:989), Fen-Phen diet pills (*Andrews Securities Litigation and Regulation Reporter* 2000), Guidant defibrillators (*Andrews Securities Litigation and Regulation Reporter* 2008), Baycol (*Andrews Pharmaceutical Litigation Reporter* 2003), and Vioxx (Barris 2008).⁵⁶

Another kind of spin-off litigation occurs when financial pressure from an ML episode and, perhaps other factors, lead ML defendant firms to file for bankruptcy. The subsequent bankruptcy proceedings will generally affect the value of the unresolved claims in the focal MLE because within bankruptcy proceedings tort claimants must compete for funds with the creditors of the bankrupt company. A prominent example involves the tort litigation over silicone breast implants, which led Dow Corning to file for Chapter 11 bankruptcy in 1995 (Vairo 2004:121-127). That bankruptcy moved the tort claims against Dow Corning into a broader proceeding which also included various unrelated creditor claims against the company. The bankruptcy also (fed back to the focal MLE and) contributed to the unraveling of an attempted global settlement of the breast-implant litigation involving Dow Corning and three other defendant companies (Angell 1997:192-195). Other prominent examples of mass-tort defendants declaring

⁵⁶ In May 2009 the U.S. Supreme Court agreed to hear an appeal by Merck of the certification of a securities class action involving Vioxx (Johnson 2009).

bankruptcy are Johns-Manville in asbestos (Vairo 2004:100-111)⁵⁷ and A.H. Robins in the Dalkon Shield (Bacigal 1990; Sobol 1991; Vairo 2004:111-121).

Sometimes, when a defendant company in an ML files for bankruptcy many of the injury claims within the MLE are resolved through a widely applicable settlement schedule and the institution of a trust and a facility to pay claims under the settlement. For example, asbestos litigation has caused or contributed to bankruptcies of dozens of companies (Carroll et al. 2005:chapter 6,151-155), and Carroll et al. (2005:66-68) discuss some of the resulting bankruptcy litigation and its effects on the asbestos product-liability litigation. For example, the Manville trust created as a result of the 1982 bankruptcy filing of Johns-Manville “became a model for resolving asbestos personal injury claims through reorganization” (Carroll et al. 2005:110-111). Moreover, Carroll et al. (2005:66) report that availability of relatively easy compensation through claims trusts may have funded on-going asbestos litigation by some plaintiffs’ attorneys, attracted additional plaintiffs firms to participate in the asbestos mass tort, and affected the course of the asbestos litigation in other ways.⁵⁸

Regulation

It also seems fairly common for regulators to take action at least partly in response to litigation activity within an on-going MLE and for those actions to have major effects on the future course of that MLE. One example is the breast-implant litigation, in which documents discovered as part of the litigation activity contributed to the process leading to a product ban (Hensler & Peterson 1993:994-996; Hersch

⁵⁷ Galanter (1990:391) describes the Manville Personal Injury Settlement Trust as “an entirely new kind of creature”.

⁵⁸ Another prominent example is the trust set up to pay Dalkon Shield claims (Kritzer 1988-89; Bacigal 1990; Feinberg 1990; Sobol 1991).

2002:176), and the “FDA ban was followed by a tidal wave of litigation” (Angell 1997:69).

Litigation activity within other MLEs has led to additional regulatory scrutiny that resulted in product withdrawals or recalls, whether officially voluntary or not. This appears to be somewhat common in the cases of prescription drugs. For example, in March 2000 the diabetes drug Rezulin was withdrawn from the market at the request of the FDA “amid mounting lawsuits,” and its manufacturer referred to “media reports sensationalizing the risks associated with Rezulin therapy” (*Andrews Pharmaceutical Litigation Reporter* 2000a). The withdrawal of Rezulin was followed by an upsurge in lawsuits filings (*Andrews Pharmaceutical Litigation Reporter* 2000b). And even when a drug embroiled in mass litigation remains on the market, safety-relevant information of which the FDA had been unaware has been uncovered through discovery proceedings in various recent pharmaceutical mass torts, resulting in a variety of other regulatory responses leading to outcomes such as public release of information about risks and changes in product labeling (warnings) and promotion (Kesselheim & Avorn 2007).⁵⁹

While it seems more common for regulatory activity triggered by mass litigation to disadvantage ML defendants, sometimes such activity works to the benefit of the defendant. An example is the Bendectin mass tort in which the litigation raised safety concerns, the FDA investigated, and their conclusion that “Bendectin was safe”

⁵⁹ The extent to which product liability failure-to-warn litigation has helped the FDA pursue its mission was a central, contentious issue in a pharmaceutical preemption case (*Wyeth v. Levine*) decided by the U.S. Supreme Court in March 2009 (Kessler & Vladeck 2008).

contributed to the resolution of this MLE with trial and appeals courts overturning jury verdicts finding liability (Green 1996:315-316; Sanders 1998:87,143-174).⁶⁰

Media Reports

It is fairly common for litigation activity within an MLE to generate extensive coverage by popular or mass media. Examples include Fen-Phen diet drugs (Schultz 1999; Lenzner & Maiello 2006), environmental contamination with PCBs (Kitchens 2004; CBS News Transcripts 2003); tobacco (ABC News Transcripts 1994), and several models of automobiles and light trucks (see Garber & Adams 1998:5).

News reports about a mass litigation in progress, in turn, can (feed back to and) influence the course of that same episode. A prominent, and seemingly somewhat common, feedback effect is on the number of claims made within the MLE.⁶¹ The Advisory Committee on Civil Rules & the Working Group on Mass Torts (1999:17) describes this phenomenon as:

The increase in filing rates begins when potential claimants are encouraged by learning of the possibility of successful litigation. Knowledge is spread through judicial procedures, such as notices of class actions or bankruptcy proceedings, as well as through media coverage and attorney advertising.

Media coverage of settlement agreements, for example, can lead to surges in claims that may qualify for compensation. Sanders (1998:27) reports that publicity about the first

⁶⁰ Some might argue that regulatory responses leading to a product withdrawal or recall benefits defendants by reducing the number of people injured and, as a result, limiting their future liability exposure. While this is the case *other things equal*, other things are not equal—for example, removing the product from the market reduces a company's sales and, presumably, profits as well as damaging its reputation and stock value.

⁶¹ The possibility that media coverage of litigation can result in substantially more claims is an example of what McGovern (1995:1827) calls “elasticity,” about which McGovern (1995:fn. 26) writes “A tort is elastic if it can be expanded to include more plaintiffs or more damages.”

Bendectin trial—including articles published in the *New York Times Sunday Magazine* and in *Mother Jones*—attracted additional Bendectin claimants.⁶²

Another example of effects of media coverage on claiming involves the Dalkon Shield MLE. This example is of special interest because it helps clarify the line between media coverage that is part of the litigation activity in the focal MLE and media coverage that lies outside the core of that MLE. In particular, as described by Bacigal (1990:51-52), as part of the A. H. Robins bankruptcy proceedings, Robins was ordered to engage in a media campaign—involving news conferences, television advertisements, and advertisements in various newspapers—to notify women who had received the Dalkon Shield that they may have a legal claim.⁶³ We would classify this media activity, which was directed and funded by A. H. Robins, as being part of the Dalkon Shield litigation activity rather than being external to that litigation activity. In addition, the Dalkon Shield risks and litigation generated massive amounts of unpaid newspaper and magazine coverage (Bacigal 1990:55); we would classify this unpaid media coverage as being an outcome of the Dalkon Shield litigation, rather than being a part of that litigation.

Litigation activity within an ML episode can also lead to new information reported in specialized media such as scientific and medical journals. For example, Sanders (1998:89) reports that “From the mid-1970s onward the study of Bendectin was strongly influenced by the law. As the litigation heated up, research on Bendectin became a hot topic and articles on the subject were relatively likely to find their way into print...”

⁶² Green (1996:183) reports that this publicity also contributed substantially to declining sales of Bendectin.

⁶³ Kritzer (1988-89) provides detailed information about the notification campaign and analyzes its effects on awareness of risks posed by the Dalkon Shield and its role in bringing forth massive numbers of additional claims.

And Sanders (1998:233, fn. 37) elaborates: “As Jasanoff (1995, 50) notes, this is not at all uncommon. In a number of areas, including the effects of silicone implants and electromagnetic radiation, litigation helped spur research.” And, as detailed by Green (1996:306-311) and Sanders (1998:175-192) the resulting epidemiology literature on Bendectin and birth defects played a crucial role in bringing the Bendectin litigation to a close. Another example is litigation over musculoskeletal injuries (such as repetitive stress injuries) alleged to be caused by use of computer keyboards that provided at least some of the impetus for a literature review by a committee of the National Academy of Sciences (Szabo & King 2000:1318).

Market Factors

The fifth and final category of endogenous responses to events within the core of a focal ML pertains to markets for products and services as well as financial markets.

There are various ways that events within the core on an MLE can lead to responses in markets for products and services, and concerns about such responses can affect the litigation strategies of plaintiffs, defendants, or both. We discuss three such possibilities.

First, when potential purchasers learn about the litigation, this may lead them to increase their assessments of the risks and as a result shy away from future purchases of the product or service directly involved in the litigation, with the result that the product is withdrawn from the market. Examples include MER/29, an apparently dangerous product that was withdrawn after “reports of side effects increased and sales diminished” (Rheingold 1968:120), and Bendectin (Green 1996:chapter 11; Sanders 1998:31-32) despite the defendant company’s firm belief (eventually supported by substantial

research) that Bendectin did not cause the injuries alleged in the litigation. The decision to withdraw Bendectin fed back into the litigation activity, at least in the form of “an increase in claims against the pharmaceutical company” (Sanders 1998:32; see also Green 1996:191).

Second, when they are developing litigation strategies defendant companies may place a high priority on protecting their reputations or goodwill and thereby protect demand for products or services of the defendant that are not central to the MLE under consideration. For example, protection of the company’s reputation was reportedly a major goal of defendant Sulzer in acknowledging liability for its defectively manufactured hip and knee implants and in funding a more generous settlement than was likely required under the law (*Journal of Law and Health* 2001-02:193). In addition, concerns about company’s reputation and effects on sales of other products seems to have been a consideration in defendant Merrell’s decision to withdraw Bendectin (Sanders 1998:11).

Finally, unanticipated major events in mass litigation, such as terms of global settlement agreements or verdicts in bellwether trials, can positively or negatively affect a defendant’s stock price depending on whether the newly disclosed information is more or less favorable to the defendant company than had been expected. Econometric analyses of this phenomenon include Garber & Adams (1998), Prince & Rubin (2002), and Govindaraj, Lee & Tinkelman (2007).⁶⁴

⁶⁴ Anecdotal examples of effects on stock prices of events within MLEs include settlement agreements in Vioxx (Tesoriero, Rubenstein & Heller 2007). Regarding PCB litigation, Monsanto shares rose 2.1 percent upon announcement of Solutia bankruptcy reorganization plan setting forth that Solutia would bear some litigation costs that Monsanto might otherwise have borne (Leonard 2006). And in the Fen-Phen ML, a

Here again, negative reactions of markets to events that spill out of an ML episode (or anticipation or concern about such reactions) can also, in principle, feed back into the litigation activity within that episode. Plaintiff verdicts in bellwether trials, for example, can reduce a defendant company's stock price, resulting in additional pressure on the company to settle further claims in the ML episode. Even major procedural developments in an ML episode, e.g., in judicial decisions to certify class actions or to permit scientific evidence to enter MDL proceedings, sometimes might be viewed as strong signals of future liability risk, with corresponding impact on the defendant's stock price, and subsequent pressure to respond to that risk in terms of future litigation strategy (for example, by more actively seeking settlements).

Conclusion

During the past few decades, mass litigation has become a familiar feature of the U.S. civil justice landscape. The effects of how mass litigation is managed and resolved can be profound. These effects include physical or financial injury to millions of Americans, patterns of compensation that appear in some instances to approximate rough justice and in other instances appear to depart greatly from that standard, billions of dollars in resource or transactions costs required for disputing and resolving claims, and long-lasting impacts on law and regulation.

Improving our understanding of the causes and consequences of mass litigation poses daunting intellectual challenges. We have proposed an explicit conceptual framework for analyzing social causes and consequences of mass litigation in the United

report in the *Wall Street Journal* that the number of lawsuits were multiplying was followed by a decline of 5.1 percent in the stock price of the main defendant, American Home Products (Associated Press 1997d).

States, taking a mass litigation episode (or “litigation” or “case congregation”) as the unit of observation. The framework distinguishes among three major components of mass litigation episodes, namely, (1) the *core* of an MLE, which encompasses the activities and events that are central to disputing and resolving claims, (2) various phenomena that are not parts of the core but often *influence* disputing and claims resolution, and (3) social, legal and economic *outcomes* of litigation activity within the core. The activities and events within the core of an MLE are organized into three categories, namely, defendant behavior, actual and alleged injuries, and litigation activity. Both influences—which are exogenous to activities and events within the core—and outcomes—which are endogenous to the litigation activity within the core—are organized into (1) legal doctrine and processes, (2) other litigation, (3) regulation, (4) media reports, and (5) market factors.

To develop our framework we relied to a considerable degree on collection and interpretation of phenomena that previous researchers—such as authors of the various case studies cited in this article, Galanter (1990) and Hensler & Peterson (1993)—have found sufficiently interesting to comment upon. We have also drawn upon information that we have collected about MLEs that have not been studied extensively, such as several pharmaceutical mass torts, PCBs, litigation alleging abuse and neglect of nursing-home residents, and allocation of shares in initial public offerings. Besides synthesizing large quantities of empirical information, we have developed coherent categories to organize numerous and diverse phenomena, provided examples, and in many instances proposed sub-categories of the five categories of influences and outcomes. The framework appears capable of serving the four purposes presented in the Introduction,

namely, (1) helping researchers organize their thinking, (2) facilitating communication within and across research teams, (3) providing a checklist of factors and relationships for researchers to consider in collecting data and analyzing MLEs, and (4) providing a foundation for searching for empirical patterns and suggesting hypotheses for further study. No doubt, this framework can and should be refined as more data and analysis are brought to bear.

We envision our conceptual framework being useful for two kinds of studies of mass litigation in the United States. First, such a framework could be used to support analyses of individual mass litigation episodes (i.e., individual case studies). More specifically, the general phenomena highlighted in our framework offer guidance concerning phenomena that may be important to a particular MLE under study, and discussions of these phenomena in the context of other MLEs could add richness to individual case studies. Second, our framework could be invaluable for efforts to draw lessons from comparing and contrasting histories of several mass litigation episodes; in fact, this potential is our primary motivation for developing the framework. The effort to draw broader lessons than a case study can offer would be greatly aided if these case histories were guided by, and their expositions we organized according to, our framework. Somewhat broad lessons might emerge, for example, from studies focusing on roles of events within particular categories of influences and outcomes such as regulation, media or market factors.

Most ambitiously, comparing and contrasting information encompassing major events from *all* of the components of our conceptual framework across MLEs of diverse types could enable us to answer general questions such as (1) What are the main factors

determining whether plaintiffs' attorneys succeed or fail in obtaining substantial compensation for their clients? (2) What are the major contributors and obstacles to providing rough justice when there are too many cases to be adjudicated individually? (3) How have the answers to such questions evolved over time as the law has changed, plaintiffs' attorneys have become better capitalized and have had more experience in working together, and plaintiffs' and defendants' attorneys have more historical experience to draw upon? We conclude this article by considering challenges in conducting analyses of collections of mass litigation episodes.

Detailed, narrative cases studies of individual mass litigation episodes provide useful information for those seeking to draw lessons that apply to many MLEs. It is doubtful, however, that broad lessons can be reliably derived from such case studies alone. This is because there is every reason to expect that case-study researchers will continue to focus their efforts on MLEs that are particularly interesting, which seems tantamount to saying that such MLEs will be atypical in one or more important respects. (After all, who would want to write—or even read—a detailed case study of a mass litigation episode that isn't particularly interesting?) Thus, it is doubtful that such case studies—by themselves—will provide a reliable basis for drawing inferences about the world of mass litigation. It seems that the proper response to the lack of typicality is not to ignore information from detailed, narrative case studies; rather, it seems more appropriate to augment such studies with data from other MLEs in an effort to develop a sample of MLEs that is more representative of the entire world of mass litigation. This is the strategy that we are currently pursuing by collecting data for dozens of mass-litigation

episodes—including attempts to develop mass litigation by plaintiffs’ attorneys that have not resulted in substantial recoveries for claimants.

Such an endeavor is challenging for several reasons, including the following. First, it seems difficult to construct a sample of MLEs that may reasonably be viewed as representative of the world of mass litigation in the United States. Such a sample may be reasonably approximated, however, by a sample including almost all relevant MLEs during the past few decades in which there were substantial recoveries for clients together with a selection of MLEs in which plaintiffs’ attorneys failed to obtain substantial recoveries. For some purposes, useful lessons might be developed through detailed consideration of only MLEs of particular types such as mass torts, pharmaceutical mass torts or financial-injury litigation. Second, as various MLEs have played out over the past three decades or so, many of the social institutions of interest—such as legal doctrine and processes, regulatory processes and the number and variety of mass-media outlets—have changed. Reliably distilling general lessons from case histories spanning this era will require careful consideration of how exogenous evolutions of such institutions has affected mass litigation activities and outcomes. Third, data that can be developed by researchers are likely to be incomplete in some important respects unless they take the very costly step of interviewing multiple participants in each sample MLE.

As daunting as these and other challenges are, the effort required to meet them could be well spent. The alternatives—such as accepting that general lessons will remain unavailable for the foreseeable future or that research and policy will be grounded in generalizations from anecdotes and case studies of atypical mass litigation episodes—are quite unsatisfactory.

References

ABC News (1994) "Day One" Transcript, February 28. available at <http://legacy.library.ucsf.edu/tid/qtd42d00>.

Advisory Committee on Civil Rules & the Working Group on Mass Torts (1999), *Report on Mass Tort Litigation*, February 15.

American Law Institute (1991), *Reporters' Study, Enterprise Liability for Personal Injury, Volume I, The Institutional Framework*, Philadelphia, PA: American Law Institute.

American Re-insurance Company (2006), *A Review of Environmental coverage Case Law*, Princeton, NJ.

Amon, Elizabeth (2002), "Monsanto's PCB Woes," *The National Law Journal*, Volume 24, Number 23, February 11, p. A1.

Anderson, Eugene R., Jean M. Farrell & Paul D. Rheingold (2007), "Insurance Coverage for Mass Tort Litigation," chapter 14A in Rheingold, *Litigating Mass Tort Cases*, ATLA Press, Thomson West.

Andrews Pharmaceutical Litigation Reporter (2000a), "Rezulin Pulled in Wake of Mounting Liability Suits," vol. 15, no. 11, April, p. 3.

_____ (2000b), "Warner-Lambert Faces Rash of Lawsuits on Heels of Rezulin Recall," vol. 15, no. 12, May, p. 3.

_____ (2003), "Shareholder Suit Alleges Bayer Hid Baycol Problems for Several Years," vol. 19, no. 2, May, p. 11.

Andrews Securities Litigation and Regulation Reporter (2000), "Third Circuit Affirms Dismissal of Fraud Suit Against AHP Directors," vol. 6, no. 5, October 25.

_____ (2008), "Guidant Investors' Fraud Suit Dismissed," vol. 13, no. 24, April 8.

Angell, Marcia (1997), *Science on Trial*, paperback edition, London: W.W. Norton.

Associated Press (1997a) "A day after Mayo Clinic warning, diet pill makers sued," July 10.

_____ (1997b) "More cases of heart damage linked to diet drugs," August 27.

_____ (1997c) "Class-action lawsuits blame recalled diet drugs for ailments," September 17.

_____ (1997d), “Big Movers in the Stock Market,” September 17.

Bacigal, Ronald J. (1990) *The Limits of Litigation—The Dalkon Shield Controversy*, Durham, NC: Carolina Academic Press.

Bailis, Daniel S., & Robert J. MacCoun (1996), “Estimating Liability Risks With the Media as Your Guide,” *Law and Human Behavior*, vol. 20, pp. 419-29.

Barris, Mike (2008), “Panel Reinstates Vioxx Lawsuit,” *Wall Street Journal Online*, September 9.

Bennett, Richard G., Joan O’Sullivan, Eric M. DeVito, & Robin Remsburg (2000) “The Increasing Medical Malpractice Risk Related to Pressure Ulcers in the United States,” *Journal of the American Geriatrics Society*, vol. 48, no. 1, January, pp. 73-81.

Berger, Margaret A. (2005), “What Hath *Daubert* Wrought?” *American Journal of Public Health*, vol. 95, no. S1, pp. S59-S65.

Carroll, Stephen J., Deborah R. Hensler, Jennifer Gross, Elizabeth M. Sloss, Matthias Schonlau, Allan F. Abrahamse, & J. Scott Ashwood (2005), *Asbestos Litigation*, RAND: Santa Monica, California, MG-162-ICJ.

CBS News Transcripts (2003), “Toxic town; town of Anniston, Alabama, is contaminated due to the manufacture of PCBs,” *60 Minutes*, August 31.

Congress of the United States, Office of Technology Assessment 1979, *A Review of Selected Federal Vaccine and Immunization Policies*, Washington, D.C.: U.S. Government Printing Office, September.

Connolly, Heidi M., et al., (1997) “Valvular Heart Disease Associated with Fenfluramine–Phentermine,” *The New England Journal of Medicine*, August 28, vol. 337, no. 9, pp. 581-88.

Cook Philip J., & Jens Ludwig (2002), “Litigation as Regulation: Firearms,” chapter 3 in Viscusi ed., *Regulation Through Litigation*, Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, pp. 67-93.

Cooter, Robert, & Thomas Ulen (2000), *Law and Economics*, 3rd ed., Reading, MA: Addison, Wesley, Longman.

Curfman, Gregory D. (1997) “Diet Pill Redux,” *New England Journal of Medicine*, vol. 337, no. 9, August 28, pp. 629-630.

Daniels, Stephen & Joanne Martin (2000), "The Impact That It Has Had is Between People's Ears: Tort Reform, Mass Culture, and Plaintiffs' Lawyers," *DePaul Law Review*, vol. 50, no. ?, pp.453-496.

Erichson, Howard M. (2000a), "Coattail Class Actions: Reflections on Microsoft, Tobacco and the Mixing of Public and Private Lawyering in Mass Litigation," *U.C. Davis Law Review*, vol. 34, no. ?, pp. 1-48.

_____ (2000b), "Informal Aggregation: Procedural and Ethical Implications of Coordination Among Counsel in Related Lawsuits," *Duke Law Journal*, Vol. 50, No. 2, November, pp. 381-471.

_____ (2005) "A Typology of Aggregate Settlements," *Notre Dame Law Review*, vol. 80, pp. 1769-1820.

Feinberg, Kenneth R. (1990) "The Dalkon Shield Claimants Trust," *Law and Contemporary Problems*, vol. 53, no. 4, pp. 79-112.

_____ (1998), "Reporting from the front line—one mediator's experience with mass torts," *Loyola of Los Angeles Law Review*, Symposium on Mass Torts, January.

Fisk, Margaret Cronin (2001), "Settling Late Costs Monsanto \$2.7m," *The National Law Journal*, Volume 23, Number 37, May 7, p. A1.

Frankel, Alison (2006) "Tort Reformers, Business Interests, and Plaintiffs Lawyers Themselves Have Helped Kill the Mass Torts Bonanza—And It's Not Coming Back," *American Lawyer*, vol. 28, no. 12, December.

Galanter, Marc (1990) "Case Congregations and Their Careers," *Law & Society Review*, vol. 24, no. 2, pp. 371-396.

Garber, Steven (1993), *Product Liability and the Economics of Pharmaceuticals and Medical Devices*, Santa Monica, CA: RAND Corporation, R-4285-ICJ.

_____ (1998), "Product Liability, Punitive Damages, Business Decisions and Economic Outcomes," *Wisconsin Law Review*, no. 1, pp. 237-295.

_____ (2000), "Punitive Damages and Deterrence of Efficiency-Promoting Analysis: A Problem Without a Solution?" *Stanford Law Review*, vol. 52, no. 6, July, pp. 1809-1820.

Garber, Steven & John Adams (1998), "Product and Stock Market Responses to Automotive Product Liability Verdicts," *Brookings Papers on Economic Activity: Microeconomics*, pp. 1-44.

Garber, Steven & Anthony G. Bower (1999), "Newspaper Coverage of Automotive Product Liability Verdicts," *Law & Society Review*, 33, pp. 93-122.

Goldstein, Bernard D. & Mary Sue Henifin (2000), "Reference Guide on Toxicology," in Federal Judicial Center, *Reference Manual on Scientific Evidence*, second edition, pp. 401-436.

Govindaraj, Suresh, Picheng Lee & Daniel Tinkelman (2007), "Using the Event Study Methodology to Measure the Social Costs of Litigation—A Re-Examination Using Cases from the Automobile Industry," *Review of Law and Economics*, Berkeley Electronic Press, vol. 3, no. 2, pp. 341-382.

Gray, John S. & Richard O. Faulk (2008), "Negligence in the Air? Should 'Alternative Liability' Theories Apply in Lead Paint Litigation?" *Pace Environmental Law Review*, vol. 25, no. ?, pp. 147-209.

Green, Michael D. (1996), *Bendectin and Birth Defects—The Challenges of Mass Toxic Substances Litigation*," Philadelphia, PA: University of Pennsylvania Press.

Green, Michael D., D. Michal Freedman & Leon Gordis (2000), "Reference Guide on Epidemiology," in Federal Judicial Center, *Reference Manual on Scientific Evidence*, second edition, pp. 333-400.

Haltom, William & Michael McCann (2004), *Distorting the Law: Politics, Media, and the Litigation Crisis*, Chicago, IL: University of Chicago Press.

Haney, Daniel Q. (1997), "More cases of heart damage linked to diet drugs ," Associated Press, August 27.

Heinzerling, Lisa (2005), "Doubting Daubert," *Journal of Law and Policy*, vol. XIV, no. 1, pp. 65-83.

Hensler, Deborah R. (2001a), "The Role of Multi-Districting in Mass Tort Litigation: An Empirical Investigation," *Seton Hall Law Review*, vol. 31, pp. 883-906.

_____ (2001b), "Revisiting the Monster: New Myths and Realities of Class Action and Other Large Scale Litigation," *Duke Journal of Comparative & International Law*, vol. 11, no. ?, pp. 179-213.

_____ (2002), "As Time Goes By: Asbestos Litigation After Amchem and Ortiz," *Texas Law Review*, vol. 80, no. ?, June, pp. 1899-1924.

_____ (2007), "Has the Fat Lady Sung? The Future of Mass Toxic Torts," *Review of Litigation*, vol. 26, no. 4, pp. 883-926.

Hensler, Deborah R. & Mark A. Peterson (1993), "Understanding Mass Personal Injury Litigation" *Brooklyn Law Review*, vol. 59, no. 3, Fall, pp. 961-1063.

Hensler, Deborah R., Nicholas M. Pace, Bonita Dombey-Moore, Beth Giddens, Jennifer Gross & Eric K. Moller (2000), *Class Action Dilemmas: Pursuing Public Goals for Private Gain*, Santa Monica, CA: RAND Corporation, MR-969-ICJ.

Herrmann, Mark, Geoffrey J. Ritts & Brian Ray (2005), "Creating Mini-MDL Statutes," *Litigation*, Vol. 32, No.1, Fall, pp. 39-43.

Hersch, Joni (2002), "Breast Implants: Regulation, Litigation, and Science," chapter 5 in Viscusi ed., *Regulation Through Litigation*, Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, pp. 142-182.

Huber, Peter W. & Robert E. Litan, eds. (1991), *The Liability Maze: The Impact of Liability Law on Safety and Innovation*, Washington, D.C.: Brookings.

Hunziker, Janet R. & Trevor O. Jones eds. (1994), *Product Liability and Innovation: Managing Risk in an Uncertain Environment*, Washington, D.C.: National Academy Press.

Institute of Medicine 1985, *Vaccine Supply and Innovation*, Washington, D.C.: National Academy Press.

Jasanoff, Sheila (1995) *Science at the Bar: Law, Science, and Technology in America*. Cambridge, MA: Harvard University Press.

Johannes, Laura (1997), "Redux sales stop growing as dieters and insurers balk," *Wall Street Journal*, May 12, p. B1.

Johnson, Linda (2009) "US high court to decide on allowing Vioxx suits," Associated Press, May 26.

Johnson, Molly Treadway, Carol E. Drew & Dean P. Miletich (1998), *Use of Expert Testimony, Specialized Decision Makers, and Case-Management Innovations in the National Vaccine Injury Compensation Program*, Federal Judicial Center.

Journal of Law and Health (2001-2002), "A Novel Approach to Mass Tort Class Actions: The Billion Dollar Settlement in the Sulzer Artificial Hip and Knee Litigation: A Symposium," vol. 16, no. ?, pp. 169-251.

Kaplow, Louis & Steven Shavell (2002), "Economic Analysis of Law," chapter 25 in Auerbach, A.J. & M. Feldstein, *Handbook of Public Economics*, volume 3, [city?]: Elsevier Science, BV, pp. 1661-1784.

- Kassirer, Jerome P. & Joe S. Cecil (2002), "Inconsistency in Evidentiary Standards for Medical Testimony—Disorder in the Courts," *Journal of the American Medical Association*, vol. 288, no. 11, pp. 1382-1387.
- Kerouac, James D. (2001), "A Critical Analysis of the Biomaterials Access Assurance Act of 1998 as Federal Tort Reform Policy," *Boston University Journal of Science and Technology Law*, vol. 7, no. ?, pp. 327-371.
- Kesselheim, Aaron S. & Jerry Avorn (2007), "The Role of Litigation in Defining Drug Risks," *Journal of the American Medical Association*, vol. 297, no. 3, pp. 308-311.
- Kessler, David A. and David C. Vladeck (2008), "A Critical Examination of the FDA's Efforts to Preempt Failure-to-Warn Claims," *Georgetown Law Journal*, vol. 96, no. ?, pp. 461-495.
- Kitchens, Susan, (2004) "Money Grab," *Forbes*, November 15, p. 162.
- Koppel, Nathan (2006) "Wall Street Wins Ruling Blocking IPO Class Action," *Wall Street Journal*, December 6, p. C4.
- Kritzer, Herbert M. (1988-89) "Public Notification Campaigns in Mass Litigation: The Dalkon Shield Case," *Justice System Journal*, vol. 13, no. 2, pp. 220-239.
- Lenhoff, D. R. (2005), "LTC Regulation and Enforcement: an Overview from the Perspective of Residents and Their Families," *Journal of Legal Medicine*, vol. 26, no. 1, March, pp. 9-40.
- Leonard, Christopher (2006), "Monsanto, Solutia to shoulder PCB costs under bankruptcy plan," The Associated Press, February 15.
- Lenzner, Robert & Michael Maiello (2006) "The \$22 Billion Gold Rush," *Forbes*, April 10.
- Lutter, Randall & Elizabeth Mader (2002), "Litigating Lead-Based Paint Hazards," chapter 4 in Viscusi ed., *Regulation Through Litigation*, Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, pp. 106-141.
- MacCoun, Robert J. (2000), "The costs and benefits of letting juries punish corporations: Comment on Viscusi," *Stanford Law Review*, vol. 52, no. 6, pp. 1821-1828.
- Mariner, Wendy K (1992) "Legislative Report: The National Vaccine Injury Compensation Program," *Health Affairs*, Spring, 255-265.
- Mark, Eugene J, et al. (1997) "Fatal Pulmonary Hypertension Associated with Short-Term Use of Fenfluramine and Phentermine," *The New England Journal of Medicine*, August 28, vol. 337, no. 9, pp. 602-606.

- McGovern, Francis E. (1995), "Symposium: National Mass Tort Conference: An Analysis of Mass Torts for Judges," *Texas Law Review*, vol. 73, pp. 1821-73, June, pp. 1821-45.
- Mello, Michelle M. & Troyen A. Brennan (2005), "Legal Concerns and the Influenza Vaccine Shortage," *Journal of the American Medical Association*, vol. 294, no. 14, October 12, pp. 1817-1820.
- Metz, William (1991), *Newswriting from Lead to "30,"* 3rd ed., Englewood Cliffs, NJ: Prentice Hall.
- Mullenix, Linda S. (2004), "Taking Adequacy Seriously: The Inadequate Assessment of Adequacy in Litigation and Settlement Classes," *Vanderbilt Law Review*, vol. 57, no. 5, pp. 1687-1744.
- National Institute for Occupational Safety and Health (1986), "Polychlorinated Biphenyls (PCB's): Potential Health Hazards from Electrical Equipment Fires or Failures," *Current Intelligence Bulletin* 45, February 24. available at http://www.cdc.gov/niosh/86111_45.html.
- Nagareda, Richard A. (2007), *Mass Torts in a World of Settlements*, Chicago: University of Chicago Press.
- Neergaard, Lauran (1997), "Diet drugs removed from market," Associated Press, September 15.
- Olson, Susan M. (1988-89) "Federal Multidistrict Litigation: Its Impact on Litigants," *Justice System Journal*, vol. 13, no. 3, pp. 341-364.
- Ostolaza, Yvette & Michelle Hartmann (2007), "Overview of Multidistrict Litigation Rules at the State and Federal Level," *The Review of Litigation*, vol. 26, Winter, pp. 47-75.
- Pace, Nicholas R., Stephen J. Carroll, Ingo Vogelsang & Laura Zakaras (2007) *Insurance Class Actions in the United States*, Santa Monica, CA: RAND Corporation, MG-587-ICJ.
- Petry, Brian (2001) "Forrest v. P & L Real Est. Inv. Co.: Landlords Held Accountable for Lead Paint Poisoning of Tenant's Children" *University of Baltimore Journal of Environmental Law*, vol. 8, no. 2, Spring, pp. 203-207.
- Powell, Beth (1997) "Class-action suits demand monitoring for diet-drug users," Associated Press, September 21.
- Powell, Lewis F. III (2006) "Class Settlement of Mass Tort Cases," *Sedona Conference Journal*, vol. VII, Fall, pp. 259-273.

Prince, David W. & Paul H. Rubin (2002), "The Effects of Product Liability Litigation on the Value of Firms," *American Law and Economics Review*, vol. 4, no. 1, pp. 44-87.

Rabin, Robert L. (1992), "A Sociological History of the Tobacco Tort Litigation," *Stanford Law Review*, Vol. 44, April, pp. 853-878.

Reeves, Jay (2003), "\$700 million deal announced in Anniston PCBs cases," *The Associated Press*, August 21.

Rheingold, Paul D. (1968), "The MER/29 Story—An Instance of Successful Mass Disaster Litigation," *California Law Review*, vol. 56, no. 2, pp. 116-148.

_____ (2006) *Litigating Mass Tort Cases*, ATLA Press, Thomson West.

_____ (2007, supplement) *Litigating Mass Tort Cases*, ATLA Press, Thomson West.

_____ (2008, supplement) *Litigating Mass Tort Cases*, ATLA Press, Thomson West.

Ringleb, Al H. & Steven N. Wiggins (1990), "Liability and Large-Scale, Long-Term Hazards," *Journal of Political Economy*, vol. 98, no. 3, pp. 574-595.

Sanders, Joseph (1998), *Bendectin on Trial*, Ann Arbor, MI: University of Michigan Press.

Schuck, Peter H. (1987), *Agent Orange on Trial*, enlarged edition, Cambridge, MA: Belknap Press of Harvard University Press.

_____ (1995), "Mass Torts: An Institutional Evolutionist Perspective," *Cornell Law Review*, vol. 80, May, pp. 941-989.

Schultz, Stacey (1999) "A big fat settlement," *U.S. News & World Report*, October 18, p. ?.

Seufert, Dan (1997), "Woman's family filed suit in alleged diet pill death," *Associated Press*, May 6.

Shepherd, Lauren (2007) "PepsiCo, soft drink manufacturers settle benzene lawsuit," *Associated Press, Business News*, July 12.

Shook, Hardy & Bacon L.L.P. (2006), "Tobacco Class Actions: Their Evolution and the Prevailing Trend Against Certification," January 30.

Silver, Charles & Lynn A. Baker (1997) "Mass Lawsuits and the Aggregate Settlement Rule," *Wake Forest Law Review*, vol. 32, pp. 733-780.

Slovic, Paul, Baruch Fischhoff & Sarah Lichtenstein (1987) "Behavioral Decision Theory and Perceived Risk," in Weinstein, Neil D. (ed.) *Taking Care: Understanding and Encouraging Self-Protective Behavior*, Cambridge, UK: Cambridge University Press.

Smith, Randall & Susan Pulliam (2000a) "U.S. Probes Inflated Commissions for Hot IPOs," *Wall Street Journal*, December 7, p. C1.

_____ (2000b) "Tradeoffs: Seeking IPO Shares, Investors Offer to Buy More in After-Market," *Wall Street Journal*, December 7, p. A1.

Sobol, Richard B. (1991) *Bending the Law—The Story of the Dalkon Shield Bankruptcy*, Chicago, IL: University of Chicago Press.

Solutia (2003), *Form 10-K for the Fiscal Year Ended December 31, 2002*, March 6, p. 10.

Spiro, Rebecca, Carol Witcher, Philip Egelston, Suzanne Hruby & Melissa Deckman Fallon (1999), "Individual Characteristics of Mass Torts Case Congregations," Appendix D of *Report to the Mass Torts Working Group*, Federal Judicial Center, January.

Stevenson, David, Brian Burwell & Michael Schaefer (2006), *The Nursing Home Liability Insurance Market: a Case Study of Texas*, report prepared for the U.S. Department of Health and Human Services (HHS), Office of Disability, Aging and Long-Term Care Policy (DALTCP) and Medstat, (Available at <<http://aspe.hhs.gov/daltcp/reports/2006/NHliab-TX.pdf>>)

Stevenson, David G. & David M. Studdert (2003), "The Rise of Nursing Home Litigation: Findings from a National Survey of Attorneys," *Health Affairs*, vol. 22, no. 2, March/April, pp. 219-229.

Studdert, David M. & David G. Stevenson (2004), "Nursing Home Litigation and Tort Reform: A Case for Exceptionalism," *The Gerontologist*, vol. 44, no. 5, pp. 588-595.

Swoboda, Frank & Caroline E. Mayer (1999), "A \$4.9 Billion Message: Jury Hits GM with Historic Crash Verdict," *Washington Post*, July 10, p. A1.

Szabo, Robert M. & Kenneth J. King (2000) "Repetitive Stress Injury: Diagnosis or Self-Fulfilling Prophecy?" *Journal of Bone & Joint Surgery*, vol. 82, pp. 1314-1322.

Tesoriero, Heather Won, Sarah Rubenstein & Jamie Heller (2007) "Merck's Tactics Largely Vindicated as it Reaches Big Vioxx Settlement," *Wall Street Journal*, November 10, p. A1.

The Legal Intelligencer (1998), "GM And Michigan Cities to Pay \$28 mil. for Cleanup of PCBs," Vol. 219, No. 104, November 25.

United States District Court, Southern District of New York (2003) "Opinion and Order, In re: Initial Public Offering Securities Litigation," February 19.

_____ (2004) "Opinion and Order, In Re: Initial Public Offering Securities Litigation," October 13.

_____ (2007), "Notice of Removal," 07 CV 3258, April 23, p. 3.

United States Environmental Protection Agency (1979) "EPA Bans PCB Manufacture; Phases Out Uses," press release, April 19. (available at <http://www.epa.gov/history/topics/pcbs/01.htm> last visited May 24, 2009)

United States Food and Drug Administration (1997a), "FDA Public Health Advisory," July 8 (available at <http://www.fda.gov/cder/news/phen/phenfen.htm>).

_____ (1997b), "Fen-Phen Update," August 28. (available at <http://www.fda.gov/cder/news/phen/fenphenupdate.htm>).

Vairo, Georgene (2004) "Mass Tort Bankruptcies: The Who, the Why and the How," *American Bankruptcy Law Journal*, Winter, pp. 93-152.

Viscusi, W. Kip (1998), "Why There is No Defense for Punitive Damages," *Georgetown Law Journal*, vol. 87, no.?, pp. 381-395.

_____ (2000), "Corporate Risk analysis: A Reckless Act?" *Stanford Law Review*, vol. 52, no. ?, pp. 547- ?.

_____, ed. (2002a), *Regulation Through Litigation*, Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.

_____ (2002b), "Tobacco: Regulation and Taxation Through Litigation," chapter 2 in Viscusi ed., *Regulation Through Litigation*, Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, pp. 22-66.

Viscusi, W. Kip, & Michael J. Moore (1993), "Product Liability, Research and Development, and Innovation," *Journal of Political Economy*, vol. 101, no. 1, pp. 161-184.

Weinstein, Jack B. (1994), "Ethical Dilemmas in Mass Tort Litigation," *Northwestern University Law Review*, vol. 88, Winter, pp. 469-.

_____ (1995), *Individual Justice in Mass Tort Litigation*, Evenston, IL: Northwestern University Press.

Cases cited

Amchem Prods. Inc. v. Windsor, 521 U.S. 591 (1997)

Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993)

General Electric Co. Et Al. v. Joiner Et Ux., 522 U.S. 136 (1997)

Ortiz v. Fibreboard Corp., 527 U.S. 815 (1999)

Wyeth v. Levine (U.S. Supreme Court, March 4, 2009, no. 06-1249)

Figure 1: Overview of Conceptual Framework—A Depiction of One Mass Litigation Episode

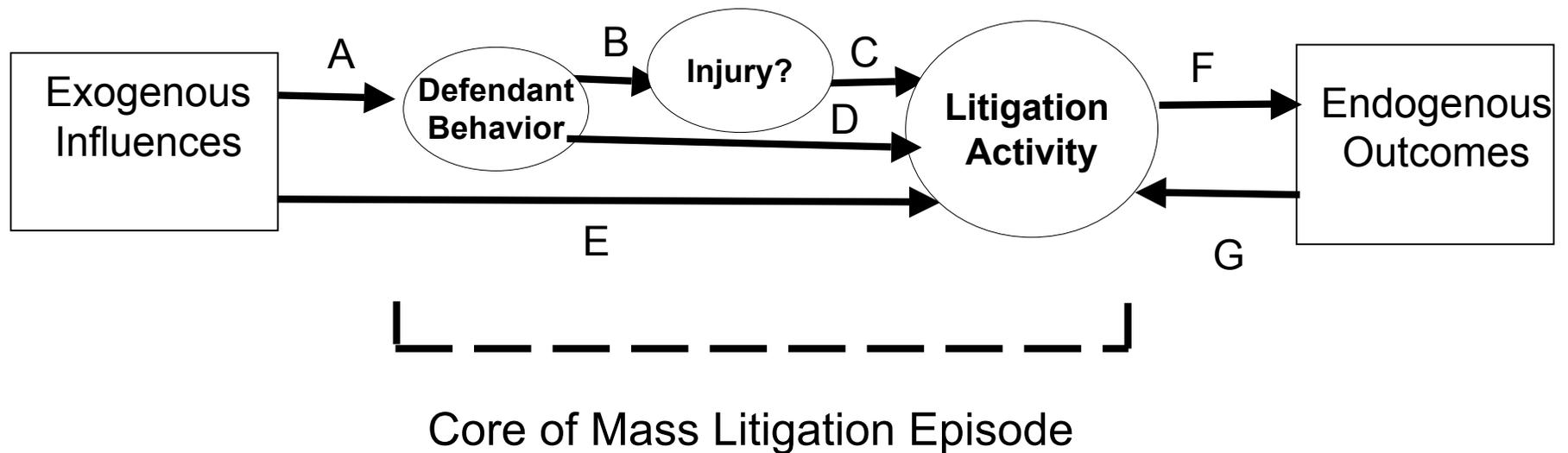


Figure 2: Exogenous Events Can Affect the Litigation Activity Directly or Indirectly Through Defendant Behavior

Influences

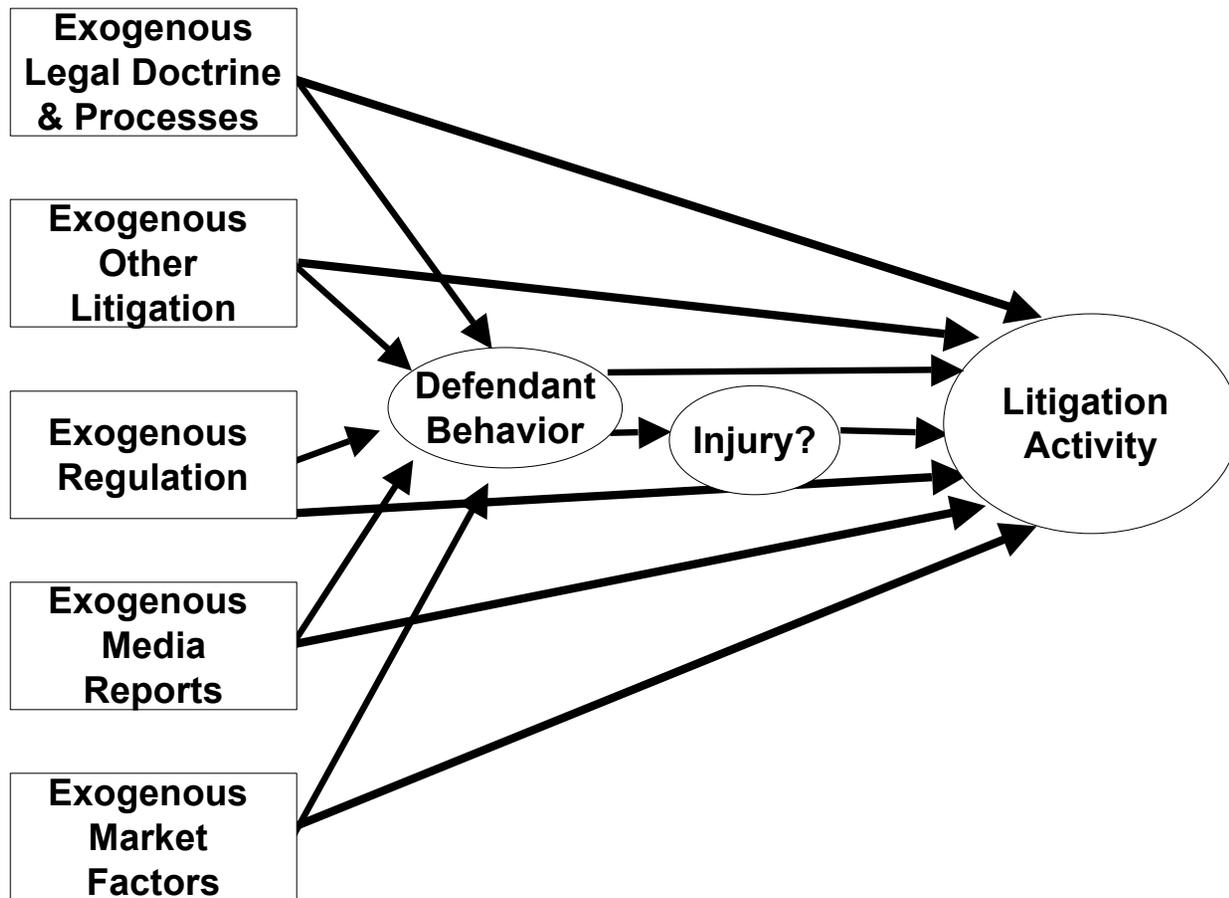


Figure 3: Mass Litigation Activity Can Have Broader Effects, Which Can Feed Back and Affect the Litigation Activity

Influences

Outcomes

