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Explaining Tort Law: The Economic Theory of Landes and Posner

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THE ECONOMIC STRUCTURE OF TORT LAW. By *William M. Landes* and *Richard A. Posner*. Cambridge, Mass.: Harvard University Press. 1987. Pp. ix, 329. $27.50.

I. INTRODUCTION

In 1825, Chief Judge Best hypothesized that "there is no act which Christianity forbids, that the law will not reach."[1] This hypothesis would appear readily testable. One need only resolve a few minor details such as which version of Christianity provides the baseline.[2] In 1987, Professor William Landes and Judge Richard Posner declared that "the common law of torts is best explained as if the judges who created the law . . . were trying to promote efficient resource allocation" (p. 1). Unlike Chief Judge Best, Landes and Posner then offer nearly 300 pages of somewhat eclectic argument in an effort to justify their all-inclusive hypothesis. The claim of hegemonic power for this hypothesis is ultimately no more convincing than the one for Christianity.[3] Nevertheless, in the process of trying to prove their sweeping claim, the authors demonstrate some of the strengths and weaknesses of using articulated, testable theories to explain law. It is a great strength of this type of scholarship that the weaknesses of specific theories can be concretely identified and critiqued. In fact, the critical nature of much of this essay is proof of the strength of the method Landes and Posner employ. In addition, they provide interested scholars with a vast array of ideas worthy of further examination.

As one who has always understood tort law as involving funda-

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1. Bird v. Holbrook, 4 Bing. 628, 641, 130 Eng. Rep. 911, 916 (C.P. 1828). The Chief Judge's proof was that "if it were otherwise, Christianity would not be . . . part of the law of England." *Cf.* Van Cise, *Religion and Antitrust*, 23 ANTITRUST BULL. 455 (1978) (arguing that the Sherman Act is consistent with Christian theology).

2. Landes and Posner face a comparable selection problem with respect to the elements of economics that they will use. They, however, justify only particular criteria, *e.g.*, the Kaldor-Hicks measure of efficiency, pp. 17-18, and not the basic style of economic analysis which assumes long-run equilibrium, and no dynamic interaction between liability rules and technological change. In fact, the authors never expressly justify their decision to limit concern to allocative efficiency to the exclusion of productive efficiency.

3. *See, e.g.*, Yania v. Began, 397 Pa. 316, 155 A.2d 343 (1959); Bolton v. Stone, 1951 A.C. 850.

mental economic issues, I am neither offended nor surprised by the assertion that economic analysis and theory can explain and reconcile aspects of tort law. Moreover, there are several reasons why expressly stating economic or other theories behind an aspect of a legal rule, a doctrine, or a case is a worthy project. First, it can facilitate prediction of outcomes. Second, theory can aid in the identification of the results, processes, and implications of the pursuit of certain legal goals, if it describes or identifies these goals articulately and directly. Third, theory can identify goals, and define ways to achieve them — or at least explain how law aids or hinders their achievement. Fourth, theory can help evaluate the costs to goals ignored in single-minded pursuit of other goals. Fifth, specific theory is amenable to testing, validation, and critique in a way that loose generalizations and ad hoc conclusions are not. Finally, good descriptive theory can instruct lawyers, at a very practical level, in the sorts of arguments and evidence that will make particular claims more or less persuasive. In sum, treating law as if it has or could have theoretical rationality is useful for advancing scholarly and practical understanding, which in turn can facilitate both descriptive and prescriptive approaches to law.

Relevant theories about law can come not only from economics but also from theology, sociology, history, philosophy, political science, and literature. Moreover, the most basic tasks of legal analysis demand theory of some kind. Without a theory, it is impossible to organize information and present it in any coherent form.[4] Not all legal scholars seem to appreciate this fundamental truth, and so they deny, obscure, or ignore the theory or theories they employ to order and explain legal reality. This frustrates scholarly and practical understanding of law. A sound understanding of law requires the express recognition of the theories used to explain, interpret and critique it. Hence the Landes and Posner effort to explain tort law by reference to a single economic theory is a worthwhile project.

Even while approving Landes and Posner's work as an example of the potential usefulness of economic theory in explaining law, I find myself unconvinced by the expansive claims the authors make, and troubled by their apparent unawareness of the latent and patent problems in not acknowledging that the kind of theory they offer, even if valid, has but limited uses. Moreover, the particular economic theory which the authors present as the "only" positive theory of tort law is a very narrow construct.

Hence, I defend Landes and Posner's method of scholarship even as I see the many flaws in this example. This is not self-contradictory. Tort law, as well as other areas of the law, needs more and better theories. Indeed, this book illustrates the difficulty of fitting the law of

4. *Cf.* Lachman, *Knowing and Showing Economics and Law* (Book Review), 93 YALE L.J. 1587 (1984).

torts to a specific economic theory, strongly suggesting that other (and better) theories, economic as well as noneconomic, should be explored. In addition, the way the authors apply social scientific statistical techniques to legal rules suggests ways for testing other positive theories about law.

At this point, a brief sketch of the book may be helpful. The first two chapters broadly survey the development of economic theories of tort law and present some key analytic tools. The third chapter presents the central analysis of accident law with the intent of showing that, although both negligence and strict liability (subject to a contributory negligence defense) yield comparable efficiency, negligence is the preferred method because of transaction cost considerations. In this chapter, Landes and Posner also provide an algebraic proof that comparative negligence does not improve efficiency. In the next two chapters they argue that a number of accident law doctrines are consistent with their efficiency theory. They then extend the theory to explain intentional torts in chapter 6. The next four chapters focus on particular topics (joint and multiple actor torts, causation, catastrophic injuries, products liability, and workers' compensation) which serve as topics for testing the theory and using it to explain and illuminate the law. The book concludes with a brief chapter suggesting the need for further research.

Overall, the book suggests, discusses, and evaluates so many ideas about tort law that it is hard to give a balanced account in a review. Rather than trying to describe it in more detail, I shall focus here on a more selective set of concerns which this book raised for me. The next two parts of this review will discuss the interrelated problems of the construction and use of theories about law. The following two sections will address a few specifics of the Posner and Landes analysis that illustrate its particular problems or that have special utility. I will conclude with a brief discussion of the future of "law and economics" analysis.

II. The Uses of Theory

Landes and Posner call their theory a positive theory (p. 1). That is, it is a theory whose stated function is to explain some observed phenomenon. This is distinct from a normative theory which asserts what ought to be done. The two types of theory are linked in many, often subtle, ways.[5] While the dichotomy between positive and normative theories is generally recognized, the links between them are frequently less clearly discerned. For example, normative theory must be grounded in some sort of positive theory of how the world can or

5. *See* Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 VA. L. REV. 451 (1974).

does work. Since claims for normative theories are ultimately judged on the persuasiveness of the arguments on their behalf, a powerful argument for any normative vision is that it is the crystallization and articulation of human experience as revealed in a validated positive theory of reality.

More importantly, there is little awareness that different positive theories themselves have quite distinct functions, which affect their use for various positive purposes as well as their normative relevance. One such distinction is that between descriptive and predictive positive theories — exemplified by the difference between history and economics.[6] Historians use descriptive theory to explain why events occurred, why ideas or forces combined to produce particular results. It is essential to such theories that they correctly describe the causes of events and of changes over time. Whether, for example, slavery or sectionalism was at the heart of the Civil War is important even if both theories would predict war. To explain why events occurred and therefore to explain historical change requires theory grounded in a rich and complex appreciation of reality. The function of predictive theory, on the other hand, is to allow an observer to predict or forecast outcomes. Some branches of economics emphasize this type of positive theory. Unlike descriptive theory, useful predictive theory can rest on totally false assumptions of causation, as well as incorrect specifications of motivation, knowledge, and the values or goals of participants, so long as the predicted result is sufficiently well correlated with the observed outcome to be acceptable.

The importance of the distinction between predictive and descriptive theories depends at least in part on what sorts of uses will be made of the theory. For instance, for strictly predictive purposes, it makes no difference how "unrealistic" the "assumption" of the model may be (p. 12). Thus, one might assume an earth-centered universe (as astronomers did at one time) and still have a "model [which] is quite good at predicting things" (p. 12), such as the location of stars or the time of a sunrise. Concededly, "[m]ore refined models may yield even better predictions but the simple, unrealistic model does quite well" (p. 12). However, such an unrealistic positive model might be unacceptable for other uses. For example, a program of launching space vehicles would require not only a more refined model[7] but also a more

6. Of course, if Professor McCloskey is right that economics is only a specialized form of history, then perhaps purely predictive economic theory is poor economics, given that it is poor history. *See* McCloskey, *Economics as an Historical Science,* in ECONOMIC HISTORY AND THE MODERN ECONOMIST 63 (W. Parker ed. 1986).

7. Astronomers using the Ptolemaic (earth-centered) model did in fact "refine" their model by the addition of epicycles (orbits within orbits) and so improved the accuracy of their predictions. Indeed, Ptolemaic predictions were more accurate than those based on sun-centered models for some years during which the two theories competed. Yet, these improvements in the Ptolemaic model, while enhancing its predictive accuracy, did not solve its key failings as a "positive" description of reality.

accurate one.

The failure to recognize the distinction between predictively useful and descriptively valid positive theory can lead to disingenuous or naive claims. When a proponent of a predictively useful theory can persuade others that the theory also has descriptive validity, the theory can be thus endowed with a significance for normative policy and historical use that its mere predictive utility does not justify.

Descriptively valid theory about law can tell participants, lawyers, judges, legislators, and academic observers how law should be understood and evaluated as a conscious creation of human actors. Descriptively valid theories must also underlie normative concerns. Whether the law can or ought to concern itself with particular issues, and how the law can be better structured to achieve its descriptive purposes require such descriptively valid theories.

A legal theory with only predictive utility has no comparable relevance and so is of much less interest. The example above, of a descriptively invalid but predictively useful theory about astronomy, may not illustrate the full scope of the problem. Perhaps the destructive experience of Russian life sciences with Stalin's endorsement of Lysenko's biological theories is more apposite.[8] At a hypothetical level, the classic correlation between storks and babies provides an even better illustration.[9] Given that correlation, one can propose a "positive" model that assumes storks deliver babies. Such a model may rest on a "false" assumption,[10] but it may be "quite good at predicting" population change. Yet public policy toward population based on improving (or destroying) the nesting conditions for storks, based on a concededly unscientific examination of the causes of baby production, would be unlikely to have any particular effect. Neither would use of such a theory be very helpful to describe the process of population growth in any analysis of reality for scientific, medical, sociological, political, historical, or any other positive descriptive purpose.

Landes and Posner fail to make clear what uses they have in mind for their economic theory of tort law. At the outset they assert that it will provide only a predictive theory (p. vii). The prediction is that in

8. Soviet scientists were forced to employ a descriptively invalid theory of environmental effect on hereditary attributes, which largely stifled scientific progress. S. GOULD, HEN'S TEETH AND HORSE'S TOES 134-44 (1983).

9. I could also illustrate this problem with more patently absurd economic examples based on conversions of predictive models resting on the extreme assumptions of competitive market conditions into descriptive claims about the actual operation of our economic system. *Cf.* p. 12. I wish to avoid the level of controversy involved in distinguishing descriptively useful economic theories from ones having only predictive value. *Cf.* Carstensen, *Antitrust Law and the Paradigm of Industrial Organization,* 16 U.C. DAVIS L. REV. 487 (1983); Wang, *Some Arguments that the Stock Market is Not Efficient,* 19 U.C. DAVIS L. REV. 341 (1986).

10. The only evidence I know of to negate the theory is purely anecdotal, which disqualifies it from use in rigorous social science. Hence, I must limit myself to suggesting that the assumed relationship "may" be false.

all (or most, or some — the target shifts) areas of tort law, the result one determines to be allocatively most efficient is the result the law will reach (pp. 3, 12). The fact that judges neither consciously nor unconsciously seek for efficiency has no bearing on such a predictive model (p. 23) and so it can rely on "unrealistic" or "false" assumptions (p. 12). Yet such a strictly predictive model is of only mild relevance to legal scholarship. If one can predict outcomes, but not explain why or how they occur (*i.e.*, if one has no descriptively valid theory), legal reasoning and public policy issues will remain unilluminated. Moreover, a purely predictive theory that "cannot . . . explain[ ] [all tort doctrines] on efficiency grounds" (p. 24) and which cannot predict when efficiency will or will not shape a doctrine[11] does not have much predictive value in hard cases.

Indeed, Landes and Posner subtly shift the focus of their theory and implicitly claim that it does have descriptive power, noting that "throughout the history of the common law efficiency has been the dominant value embodied in tort law" (p. 23). Their theory is then that "most rather than all tort doctrines are efficient" (p. 24). If this were only a weak prediction, it would be uninteresting; but it is clear that Posner and Landes would have us conclude that judges have "pursue[d] efficient ends" (p. 24).

As description of the fundamental, and therefore self-conscious (if unarticulated) goal of tort law, this theory must be held to a more rigorous test. It is not sufficient that it generally predict outcomes; it must explain how and why courts have reached outcomes and show that alternative explanations are less adequate for describing the results reached by the common law.

In particular, Landes and Posner claim that over time the only factor in the choice among tort law doctrines is their relative allocative efficiency. They posit that wealth allocation effects have been untouched by changes in the common law — a very strong claim of continuity for hundreds of years of legal change. Why do they even try to explain all of tort law as the manifestation of a single policy goal? Those who have thought critically about law recognize that it serves many goals.[12] Of what utility is such a single, hegemonic theory for tort law?

There are several plausible explanations. One is the pure intellectual fun of trying to show that very little can explain a great deal. All the doctrines and rules that students must learn and courts employ collapse into a single idea, which makes tort law "more elegant" (p.

11. The authors do not directly concede this second point, but their failure to account for the nonefficiency explained doctrines by any sort of theory that would predict when other values are relevant limits even further the predictive utility of their economic theory.

12. *See, e.g.*, Calabresi & Malamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

viii). It is fun to see how far one can push an idea, and Richard Posner has exhibited a bent towards intellectual playfulness before. But if that were the primary purpose of this study, one would expect a more critical examination of the problematic areas, here strict liability and intentional tort, to see just how well or how badly the theory works as actual description. As I will discuss later, the authors have not been as careful as they should have been in their analysis of these areas, and thus they have reached erroneous conclusions.

A more plausible explanation for their insistence on the descriptive validity of their single theory is the possibility that a hidden normative agenda is at work. If ones's preferred normative theory can claim positive descriptive validity, then it has the power that comes from being the accepted (but until now concealed) wisdom of untold generations. Posner's politics are outspokenly conservative and protective of the established order. Perhaps the ambiguity of the positive claims he makes for the efficiency theory (whether it is predictive or also descriptive) provide a subtle means to buttress a conservative normative agenda. However, the authors' insistence on the efficiency of joint and several liability (as opposed to apportioning damages) (pp. 191-219) and on imposing liability for increased risks of future harm even when the victim has not yet experienced actual harm (pp. 256-72) suggests that any conscious normative agenda is either extremely subtle, or more ideological than political.[13]

Economic analysis is not the source of this problem. The problem, if it is one, results from the ambiguity of what the authors mean by positive theory, and the unavoidable links between certain types of positive theory (descriptive theory) and normative issues. A clearer statement of the uses of theory would therefore be most helpful. It might, among other things, make clearer that economic analysis as positive description can be linked to a wide range of normative conclusions,[14] which would disclose to those with various political agendas and normative goals that economic theories do not necessarily yield only one set of results. Economics is just as indeterminate as any other analytic tool.[15]

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13. While Posner and presumably Landes have normative goals, so does every other legal scholar of any interest. Consequently, I do not think it suffices to point to a normative agenda lurking in the background of an effort at positive analysis and then conclude that, ipso facto, the positive analysis is wrong or irrelevant. Before debating the normative issue, careful scholars should deal with positive theory on its own merits.

14. That many results can follow from economic analysis is illustrated by concrete reformist works such as Cooter & Rubin, *Consumer Payments,* 66 TEXAS L. REV. 63 (1987). More radical and speculative uses of economic theory also exist. *See, e.g.,* Schlag, *An Appreciative Comment on Coase's The Problem of Social Cost: A View from the Left,* 1986 WIS. L. REV. 919. Historically, economic analysis has been associated both with progressive legal reform and with law enforcement, *see* E. HAWLEY, THE NEW DEAL AND THE PROBLEM OF MONOPOLY (1966); T. MCCRAW, PROPHETS OF REGULATION (1984); and more radical social analysis, *see, e.g.,* K. MARX, CAPITAL (B. Fowkes trans. 1977).

15. *Cf.* McCloskey, *The Rhetoric of Law and Economics,* 86 MICH. L. REV. 752 (1988).

III. THE CONSTRUCTION OF THEORY

Landes and Posner, following the general conventions of economics, refuse to postulate alternative theories. They instead focus on developing and testing one efficiency theory. But no matter how good that tactic may be in economic analysis, it has distinct drawbacks for legal analysis. The efficiency theory, however weak, wins by default "because no rival positive economic theory of tort law has been proposed."[16]

This refusal to postulate plausible alternatives creates a more fundamental problem for the descriptive validity of the theory. At various points Landes and Posner suggest that efficiency, fairness, and corrective justice are the same (*e.g.*, p. 14), as if "efficient" may be an alternate label to describe fair or just outcomes. They may mean one of two things. On the one hand, the dynamic of legal evolution can flow from a social appraisal of both costs and benefits to some appropriate rule of law which produces or protects the more socially valuable result. In this case, a rule is "efficient" because it is just. On the other hand, legal results may efficiently balance costs and benefits, defined externally to the legal problem. In that case, the result is "just" because it is efficient. In the first formulation, values are themselves economic variables defined by some ongoing social process. The "just" result will therefore tautologically be "efficient" because the values are so "priced" as to make the socially desirable result economically optimal.[17] The hard theoretical questions then will involve mapping, describing, and evaluating the social process of valuation. If it is possible to have discrepancies between the price assigned to a social gain or loss and the rightness or wrongness (*i.e.*, the justness) of allowing one or another person to bear the cost of the consequences, then efficient results will differ from fair ones at least some of the time. Yet if being efficient defines being just, some reevaluation process will occur on the social side to redefine the fairness of the outcome after its efficiency is proved. The working out of theories to test the causal flow between fairness and efficiency would be difficult, but if we are to have descriptively valid theory, it is vitally important.

The authors test some of their theories by use of regression analysis. In regression analysis, a rule of law or the change in a rule is the variable to be explained. Measures of various social characteristics are independent variables which might explain the change. This is an interesting and useful technique for identifying social explanations for

16. P. 1. *See also* p. 21: "[T]here is no well-developed theory of what motivates or explains tort law besides efficiency."

17. *Cf.* Heller, *The Importance of Normative Decisionmaking: The Limitations of Legal Economics as a Basis for a Liberal Jurisprudence — As Illustrated by the Regulation of Vacation Home Development*, 1976 WIS. L. REV. 385; *Symposium: The Chicago School of Political Economy*, 9 J. ECON. ISSUES 585 (1975), and 10 J. ECON. ISSUES 1 (1976), *reprinted in* THE CHICAGO SCHOOL OF POLITICAL ECONOMY (W. Samuels ed. 1976).

legal change. But such analysis requires carefully thought-out hypotheses and critical examination of the resulting statistics. On these two scores, Landes and Posner are not very successful.

Their analysis of the rejection of the privity requirement in products-liability law both illustrates these problems and suggests the virtues of express construction and testing of a theory. Because Landes and Posner start with the proposition that the law has always sought efficiency, they must explain when and why a privity requirement would be efficient. They advert to a number of considerations, but suggest that consumer information about the type of goods available in the nineteenth century was key: "it would probably have been as easy . . . for the consumer . . . to prevent an accident . . . as for the manufacturer . . ." (p. 285). Today, however, the consumer is "more helpless" in the face of "the technical complexity of products" (p. 285). Also, in the nineteenth century, "producers were smaller than the middlemen . . . and were judgment-proof" (p. 285). Finally, better technical information made it easier to prove when a product became defective.

Landes and Posner then hypothesize that the more urban and mechanized a state was in 1920, the sooner it would reject privity. They test this theory by use of a regression equation in which a series of variables describing characteristics of the states in 1920 are correlated with the dates of change in state privity law. Two variables, the percentage of urbanization in 1920, and the percentage of the population which was black as of 1920, emerge as statistically significant. Six other variables, including measures of automobile ownership, do not have statistical significance. Overall, the variables chosen explain roughly half of the actual variation in the dependent variable (the date of change). Landes and Posner interpret the outcome as supporting their hypothesis, although they concede that their theory cannot explain the significance of the black population variable. Indeed, that variable is quantitatively quite substantial.[18] And it is independent of income, literacy, and manufacturing variables. In addition, measures of automobile and agricultural intensity, while statistically insignificant, have the "wrong" sign for the efficiency theory.[19]

The idea that changes in the law correlate with social and economic variables is hardly novel. What is interesting about Landes and Posner's approach is their effort to be more rigorous about the rela-

18. P. 288. Landes and Posner multiply the percentage of urban population by -.74 to arrive at the contribution to the year in which the change occurs. The more urban the population of a state, the sooner the law will change. The percent of black population is multiplied by 47 to get its significance. Thus, the greater the black population, the longer would be the period before there is a change in the law. Put in different terms, a unit increase in urbanization would "hasten" abandonment of privity by 9 months while a unit increase in the black population of a state would "delay" change by 47 years!

19. It is interesting that the authors take comfort in the fact that the sign for the illiteracy variable is "correct," but seem unconcerned that other, arguably more significant variables, have the wrong signs. P. 290.

tionships. Use of regression analysis as a way to test assumed correlations and hypothetical causation is a good idea. But it must be done with more care and with better theoretical grounding than Landes and Posner employ. An important factual flaw appears in the premise that rural America after the turn of the century was still a haven of artisans and local craftsmen (p. 285). In fact, the makers of farm equipment were among our earliest industrial giants.[20] Rural America was engaged in production of agricultural goods for sale essentially from the mid-nineteenth century on. Moreover, many farms were, by 1920, highly mechanized with reapers, threshers, tractors, and other equipment. Other rural activities such as mining and logging were also not free from technological safety problems.[21] Beyond historical speculation, Landes and Posner provide no basis for assuming that their urban/rural dichotomy is correct. Landes and Posner, whose casual use of history is conspicuous at many points, rely on pre-Civil War data to draw conclusions about early twentieth-century America.[22] The relevance of such data seems highly questionable.[23]

In fact, a plausible alternative explanation for the correlations is that urban America was exploiting rural and underclass America. The flow of technically complex and, thus, dangerous products would have been one way, from urban America to rural. By convincing rural courts not to abandon privity, the urban, nonresident manufacturer externalized the cost of accidents onto the victim and the rural community. No comparable wealth transfer advantage would exist within

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20. *See* B. MARSH, A CORPORATE TRAGEDY 15-92 (1985); *see also* 1 T. WILLIAMS, R. CURRENT & F. FREIDEL, A HISTORY OF THE UNITED STATES 467-71 (1964) [hereinafter WILLIAMS, CURRENT & FRIEDEL] (describing the growth and change, especially in mechanization, of pre-Civil War agriculture).

21. *See* 2 WILLIAMS, CURRENT & FRIEDEL, *supra* note 20, at 172-75, 443-44; D. SHANNON, TWENTIETH CENTURY AMERICA 75 (1963) ("Tractors began to be used in significant numbers during [the] period [1900-1917]."); A. PROUTY, MORE DEADLY THAN WAR: PACIFIC COAST LOGGING, 1827-1981 (1985).

22. Landes and Posner cite three studies. P. 285 n.14. Two deal only with pre-Civil War issues. R. TRYON, HOUSEHOLD MANUFACTURERS IN THE UNITED STATES 1640-1860 (1917); Wooster, *A Forgotten Factor in American Industrial History,* 16 AM. ECON. REV. 14 (1926). The third source deals with relevant data in part, but two of Landes and Posner's three page citations are to chapters on food preparation. 1 V. CLARK, HISTORY OF MANUFACTURES IN THE UNITED STATES 438 (1929); 2 *id.* at 504. The only chapter referred to which relates to the period Landes and Posner purport to consider starts thus: "During the decades immediately preceding and following the turn of the [twentieth] century, the preparation of food was transferred . . . from the kitchen to the factory . . . ." 3 *id.* at 263.

23. Another more minor but annoying aspect of this work is the recurrent misattribution of gender to parties in leading cases. Barbara Helling, not a "he," was the victim of the dubious ophthalmological work of Dr. Thomas Carey. P. 138. R. POSNER, TORT LAW: CASES AND ECONOMIC ANALYSIS 286-87 (1982) (reporting, in edited form, Helling v. Carey, 83 Wash. 2d 514, 519 P.2d 981 (1974)). Similarly Miss O'Brien's gender is manifest in most reports of her encounter with the Cunard Line, but is misstated in the book. P. 172. *See also* R. POSNER, *supra,* at 129 (reporting, in edited form, O'Brien v. Cunard S.S. Co., 154 Mass. 272, 28 N.E. 266 (1891). While one might postulate more complex or invidious reasons for these errors, the most plausible is an unusual degree of casualness about description.

the urban state if we postulate that one way or another the total population would have to pay the bill. Hence, no comparable wealth advantages would exist to justify protecting the privity rule within urbanized states. Moreover, as Posner and Landes urge, assigning costs to particular causes would have some efficiency advantages.

One might also treat urbanization as a proxy for capacity to achieve political organization by which consumers overturned a wealth transfer doctrine which did not serve their interests.[24] The statistical significance of the proportion of blacks in a state's population strongly supports the wealth allocation hypothesis, suggesting that, in the southern states, victims were poor blacks and the use of a privity rule would help protect an existing wealth allocation. My suggestion is that, taken as a whole, the Landes and Posner results are more consistent with a claim that changes in the privity rule reflected changes in wealth allocation choices rather than continued pursuit of a constant, over-arching policy of efficiency.

Thus, the flaws in the Landes/Posner analysis are twofold. First, the key factual claim that the nature of product risk is or was differentiated between urban and rural areas in the relevant historical period is unproved and perhaps wrong. Second, the authors, using an unproved factual claim and emphasizing only one of the statistically significant variables, claim that they have validated their theory. Yet this is questionable because they did not develop and test any plausible alternative theory in which privity served nonefficiency, wealth allocative goals.[25]

A central point about the construction and testing of theory in this kind of analysis is that the options need to be articulately developed so that they can be tested. In this instance, there are at least three plausible theories to explain the privity rule and its rejection. Additional variables with better historical justification would permit a much more useful effort to explain when and why change in product liability law has occurred. The results would then not only have predictive usefulness but also greater descriptive validity.

Landes and Posner trivialize their theory in another important way. They present it only as a theory of the law on the books rather than the law in action (p. 13). They claim only that the rules and outcomes of decisions are efficient in some sense even if these results have no effect on behavior. Yet if the law in action achieves contrary results or pursues other goals, what is the relevance of a predictively or even descriptively valid theory of how those outcomes will be ar-

24. *Cf.* Komesar, *Paths of Influence — Beard Revisited,* 56 GEO. WASH. L. REV. 124 (1987) (suggesting that the Constitution reflects contending views about minoritarian and majoritarian biases in our political-legal system).

25. Interestingly, even my reinterpretation of the data could suggest that rejection of the privity rule has an efficiency explanation. At some point, courts have to abandon inefficient class protections. What remains unproved is only the claim of a continuous goal of efficiency in the law.

ticulated? It may allow one to state how judges will rationalize their results. But if the rationalization has no bearing on the results as they operate in the world, then the economic efficiency theory is only about literary style and not legal substance.

The refusal to consider law in action also creates a large blind spot in the efficiency analysis itself. In practice, law enforcement involves both the costs of processing claims which vary greatly with the complexity of the standards employed and the costs of strategic conduct which can arise when parties use their legal rights opportunistically. Landes and Posner show only fitful concern for transactional costs.[26] Moreover, their analysis of processing costs is very unsystematic and ignores institutional reality.

For example, having conceded that strict liability (with a contributory negligence defense) is as efficient as negligence (p. 65), Landes and Posner break the "tie" by claiming that, under a strict liability rule, every accident would produce a strict liability claim with high processing costs, but that only the victims of negligence (who in an optimal world would not exist because there would be no negligence) would claim under a negligence rule.[27] Hence, the many fewer claims to be processed justify preferring a negligence rule. The total number of claims probably would differ between a negligence and a strict liability standard, although not in the extreme way Landes and Posner postulate. But the costs and accuracy of claims processing would vary greatly under the alternate standards. Under a strict liability standard, especially if contributory negligence were only a factor reducing rather than barring claims and if damages were largely computed by some formula, the chances for prompt settlement at low processing costs would be very good because the strictly liable class would have limited strategic options and the issues requiring judicial determination would be limited and easily defined. In a negligence system the greater ambiguities of the standard make even nonstrategically oriented decisions very costly and increases the probability of false results. The fact that the claiming process is more complicated also means that the parties have more opportunity for strategic and opportunistic behavior. These risks further inflate the cost of claims

26. Indeed, at times at least, Landes and Posner consider as transaction costs only those that result from strategic use of relational power. P. 36. Yet transaction costs by definition include all the costs of transacting. If Landes and Posner assume no processing costs, a position their discussion of Coase would permit, pp. 31-38, then including some strategic transaction costs is inconsistent with this assumption. Moreover, if transactions are costless, changes in the number of transactions cannot be a basis for policy choices. The partial recognition of transaction costs, therefore, allows such real world considerations to be used merely as ad hoc weights to justify particular results.

27. Pp. 65-66, 72-73. Landes and Posner also point to a higher "insurance" component in strict liability, p. 66, which is another way to describe wealth transfer. Finally, they point out that strict liability may be preferable when the quantity of activity is an important variable. P. 69. This last is an important contribution to the analysis of tort law.

processing. Hence, from the perspective of total cost, a strict liability system may be more efficient even if it generates many more claims. Landes and Posner simply do a less than adequate job of constructing a consistent theory. Not only do they make an unproved assumption that all claims have equal processing costs, but they ignore other aspects of real world transactional problems.[28]

In contrast, by ignoring transaction costs, Landes and Posner conclude that comparative negligence and apportionment of joint liability are "inefficient" elements of tort law. In a nonstrategic, costless world (*i.e.,* law on the books) that might be correct, but in a world of strategic, costly litigation (*i.e.,* law as a real process of dispute processing), these rules may have much greater efficiency justification.

The efficiency case for comparative negligence in a world of strategic transactional costs is strong. If a defendant can avoid all liability for a negligent act by proving that the victim was at least somewhat at fault, the "all-or-nothing" nature of the opportunity can induce strategic behavior such as prolonging discovery in search of evidence of negligence, refusals to settle, and similar opportunistic conduct. If, on the other hand, the extent of plaintiff's negligence is at most a discount to defendant's liability, the value of proving some negligence will be much reduced and the advantages of prompt settlement increased. The shift from all-or-nothing to incremental changes in liability will thus alter rational strategic behavior and so should induce less costly transactions.

A similar argument for transactional efficiency exists to justify defined rules for contribution among joint tort-feasors. Once again, a less bookish view of the tort process might have strengthened the efficiency argument for the ways in which the law has evolved. A basic problem in the traditional world of joint and several liability without contribution is that the strategic options for defendants and plaintiffs are multiple and complex. The result is a classic situation for gamesmanship with its attendant delays and costs. By setting a formula (almost any formula, one suspects) to distribute liability, the law eliminates a large portion of the potential gain from strategic behavior. Thus rules of appointment could be rational, efficiency-enhancing legal responses once one moves from law in the books to reality.

The inconsistent use of transaction costs in Landes and Posner's book is illustrative of the problems that arise from constructing a theory around one stated concern (law on the books) while trying to explain and interpret a different situation (law in action). It is not invalid, of course, to approximate one context by analysis of another. However, theories so constructed need articulate premises about the relationship between the context being expressly modeled and the

28. In an earlier discussion of the relative values of property rights they show a keen awareness of strategic conduct problems, but they ignore them here. *See* pp. 25-31.

other context which this model is to explain.[29] Moreover, the movement between the contexts needs always to be expressly recognized and explained. The failure to do this leads to the kind of ad hoc modeling that exists in parts of Landes and Posner, where elements of realism are introduced to explain some but not all deviations of the law on the books from what a transaction costless analysis would have predicted.

A final problem with their construction of theory is the way Landes and Posner often construct proofs using hypothetical numbers. Such proofs are really illustrations whose persuasive power rests on the plausibility of the numbers chosen. This in turn requires careful attention to analytic detail. Yet at that level Landes and Posner seem sometimes deficient.

For example, a central claim is that strict liability exists only when it is an optimal means to achieve economically efficient deterrence. Landes and Posner illustrate this with the wild animal and dog bite cases. A negligence rule for these cases would not cause owners to internalize all costs of ownership and make socially optimal choices. A strict liability rule for vicious dogs, on the other hand, would cause dog owners to prefer less dangerous substitutes. Landes and Posner "illustrate" (prove) this analysis with a set of hypothetical costs and incomes (p. 109).

Table 4.1. The case of the vicious dog

Activity	I^a(\$)	I^b(\$)	p(y*)D(\$)	B(y*)	Net Combined Incomes(\$)
Keep vicious dog	100	100	25	10	165
Good substitute available	100	85	0	0	185
Poor substitute available	100	50	0	0	150

Ia and *Ib* are the gross incomes of the two parties, $p(y^*)D$ is the damage that will occur despite the exercise of due care. In other words, further increments to due care would not alter the expected loss or would change it less than the cost of the increment. $B(y^*)$ is the optimal amount of safety investment. The costs of both unavoidable accidents and accident prevention must be subtracted from *A* and *B*'s gross income to get total net income. If *B* substituted a less vicious dog, his gross income would fall 15 (he would receive less value), but, on the Landes and Posner numbers, both expected accident costs and accident avoidance costs would disappear. The total net income for *A*

29. Contemporary legal-economic scholarship commonly takes seriously law on the books and so assumes that such law governs in the world of human affairs. Sophisticated legal history has shown that assumption to be frequently untrue. *See, e.g.*, Hartog, *Pigs and Positivism*, 1985 WIS. L. REV. 899.

and *B* combined would therefore increase. If only a poor substitute existed, the income loss would be greater than the accident avoidance savings. By imposing strict liability on *B* for possession of the vicious dog, *B* is forced to suffer a loss of income to 65 (the sum of *A*'s damages and *B*'s optimal avoidance costs are both subtracted from *B*'s gross income) and so *B* will substitute the next best choice if that will improve her own net income. Using these particular numbers, therefore, Landes and Posner create an illustrative proof of how strict liability improves efficiency.

The manifest implausibility of the assumed values is in the zeros for both optimal accident costs and costs of avoidance as to the good substitute. As Landes and Posner recognize, even a well-behaved dog may engage in apparently vicious acts (p. 108). Thus, the owner of such a dog will have some costs of avoidance and some accident costs because the owner will still owe a duty of due care. With that in mind, I have chosen some values to revise Table 4.1 to show that the law of strict liability for vicious dogs may well force "inefficient" results.

Substitute Table 4.1

Activity	I^a(\$)	I^b(\$)	p(y*)D	B(y*)	Net Y
Keep vicious dog	100	100	25	10	165
Good substitute	100	85	20	5	160
Poor substitute	100	50	15	1	134

Use of strict liability for the vicious dog case under these assumptions produces *lower* and not greater net income.[30] Assuming that the law imposes strict liability and that Substitute Table 4.1 is more plausible, we have an inefficient result. Have we now disproved Landes and Posner? Clearly only evidence of actual cost and benefits would answer such a question empirically. But since courts usually do not collect such data before ruling or claim that a "good" substitute exists or yields a better overall social income, we are left with a proof which proves little or nothing. Moreover, Landes and Posner test no other theories which might explain when judicial or social preferences can override apparently efficient wealth-maximizing behavior.

The problems of construction highlighted here illustrate the difficulties of doing theoretical work well. The fact remains that it is always easier to critique such work than it is to do it. By being clear and overt about their theories and their proof, Landes and Posner at least challenge others to do better.

30. *B* still faces lower net income under the vicious dog strict liability standard than would result from the good substitute governed by a negligence rule and so switches to the good substitute with a net loss to social income.

IV. Positive Elements

The two preceding sections have stressed some of the limits to the Landes and Posner effort. This section focuses more positively on important aspects of their analysis. Three discussions struck me as particularly interesting and helpful.

First, the core claim Landes and Posner make is that the law of negligence has a strong allocative efficiency base. In developing the law of negligence, courts have pursued a strategy of maximum allocative efficiency by minimizing the combined costs of accidents and accident avoidance. The function of negligence law, therefore, is to deter socially inefficient conduct rather than to compensate accident victims. This claim is hardly novel and seems intuitively justified as at least a significant aspect of the development of negligence law.[31] Landes and Posner work out the economic logic of the position, which in turn yields a stronger case for a complete bar when any contributory negligence exists if one ignores the real-world strategic costs of such a rule.

An even more interesting effort in this discussion, because of its greater power as a positive description of negligence, is their examination of how a standard casebook presents negligence (pp. 103-07). This review is another way to establish convincingly that the efficiency analysis is at least a major factor in the working out of the negligence analysis, given that the law has adopted negligence as its primary standard.

More problematic is the claim in the discussion that the negligence analysis is the preferred method of achieving efficiency goals given the concession that strict liability will achieve a similar result. Two differences exist between strict liability and negligence. First is the question of relative transaction costs discussed earlier. The other, which Landes and Posner ignore almost entirely,[32] is that strict liability would also result in income transfers from actors who cause accidents to victims of accidents. If, as some have argued, the dominance of negligence is largely a product of nineteenth-century law, a period of rapid industrial growth, then the question why the law elected one method of achieving efficient risk control over another equally efficient

31. This essay can only hint at the broader question of how to relate deterrence to compensation. In general, negligence analysis is costly and inconsistent, a poor system for dealing with the problem of allocating accident costs. We lack a good understanding of how those costs are in fact distributed or the costs of such distribution. Tort law is but a part of the larger whole, just as tort law's deterrence function is but one instrument of social control over conduct which causes risks of harm. In time, a broader legal economic approach in accident costs and avoidance should return. *See* G. Calabresi, The Cost of Accidents: A Legal and Economic Analysis (1970). In the interim, one of the anomalies of current legal-economic analysis is that it too frequently focuses uncritically on the categories that the law has traditionally used rather than imposing some external (economic) order on those categories.

32. *But see* pp. 35, 66.

method remains. Here the wealth allocation effects might well have more explanatory power than speculative claims about transaction costs.[33]

From a modern perspective, given the choice that negligence will be the primary standard, Landes and Posner do show by a variety of methods that negligence is a poor way to resolve wealth allocation issues but is a good means, in theory, to maximize total social wealth efficiently. Implicit in this analysis is the point that if one is concerned about allocating accident costs to appropriate parties, fiddling with the law of negligence is not likely to be a very good strategy.

A second very useful discussion is that of what I would call proximate causation, but which Landes and Posner insist on calling causation (pp. 230-51). By emphasizing the declining probability that a specific wrongful act will result in a particular accident as the two events become less closely related, Landes and Posner provide a coherent explanation of why courts are drawing the lines of causal responsibility where they do. This is a real achievement and deserves careful consideration.

A final example of the positive contribution that this sort of economic analysis can make is their effort to show that all strict liability rests on efficiency analysis. For reasons discussed in the next section, I find the claim to be unproved in its sweeping form, but I also think that Landes and Posner have hit on an important explanation for some strict liability results. Strict liability will have an efficiency-enhancing purpose whenever it causes an actor to internalize discretionary control over the quantity of an activity (pp. 66-69).

The argument is that traditional negligence focuses generally on how well an activity was carried out (did the actor do something wrong?) and not on how much of the activity should have occurred. But many risks are functions of the frequency of doing something, as well as of the quality of the activity. An easy example is the steam engine-powered train. The engine, even if reasonably equipped with spark arresters, creates a risk of fire. Limiting the number of trips an engine makes is therefore an independent factor in the risk calculus.

33. The debate over the development of negligence law and its wealth allocation implications is long-standing. *See, e.g.*, Gregory, *Trespass to Negligence to Absolute Liability*, 37 VA. L. REV. 359 (1951); Roberts, *Negligence: Blackstone to Shaw to ? An Intellectual Escapade in a Tory Vein*, 50 CORNELL L.Q. 191 (1965). The Landes and Posner contribution is not very helpful. *See* pp. 2-3, 65-66. Their history is very sketchy and conclusory. Essentially they assert that negligence was always the dominant theme of the law with respect to accidents. This allows them to avoid dealing with the change in wealth distribution that would result if the law changed. *See* p. 35. There are other views of the historical record which would suggest a much more complex reworking of the law in the nineteenth century. C. DALTON, LOSING HISTORY: TORT LIABILITY IN THE NINETEENTH CENTURY AND THE CASE OF RYLANDS V. FLETCHER (forthcoming). If that were the case, then there would be a much stronger probability that wealth allocation concerns were a factor in the choice between legal rules. This once again emphasizes the difference between descriptively valid theory and predictively useful theory.

To achieve efficiency in balancing use of the engine against the risk of fire, the railroad ought to consider not only the safety equipment on the engine but the number of times it travels. Making the railroad strictly liable will cause it to consider both the quality of its engine and the quantity of use. Hence in situations in which quantity of an activity is an important independent variable, strict liability will have better efficiency characteristics than a traditional, narrow negligence analysis.

Landes and Posner not only work out this analysis but also show, convincingly in my view, that it explains a significant set of the strict liability cases. They claim, however, that this theory explains all strict liability. Their hegemonic claim for the efficiency analysis demands this. As I will argue in the next section, this is not a very convincing overall thesis. Nonetheless, as an explanation for some part of the survival of strict liability, the thesis is very plausible.

V. Efficiency, Strict Liability and Intentional Tort

A major problem with the book's hegemonic claim is that it requires the authors to prove that all of torts fit within their efficiency theory.[34] This is most problematic with respect to strict liability and intentional tort. In each instance, Landes and Posner limit the law in a way that allows it to fit in their model.

In the case of strict liability, as discussed in the prior section, they do provide a useful explanation for its use in certain situations. But the quantity control hypothesis works as an unambiguous efficiency theory only where it applies to the quantity of a particular activity. Yet, Landes and Posner try to extend this theory to incorporate situations in which the actor can substitute another method or product for the one which carries strict liability. Once there are reasonably good substitutes, there is no guarantee that the selective imposition of strict liability will produce efficient outcomes. The analysis of the hypothetical numbers for strict liability for vicious dogs discussed earlier demonstrates this. As that analysis (the deterrence theory of strict liability) showed, private actors will maximize their own income and not total social income. Imposing strict liability on one form of activity but not on substitutes will change the private cost-benefit analysis. Only if the strict liability option is clearly less socially efficient will the selective use of strict liability insure an efficient result. In the more usual case, some external social goal will cause selective strict liability with a consequent potential reduction of social wealth.

34. They do acknowledge that they cannot explain worker's compensation under their theory. Pp. 308-11. Interestingly, I think that workers compensation *is* largely explicable by an efficiency analysis that takes into account more than just accident avoidance. In general, the employer has more control over the risks and can procure group insurance at lower transaction costs than individuals can.

Because of their hegemonic claim, Landes and Posner miss the important differences between the deterrence explanation for selective strict liability and the efficient quantity theory. For the quantity theory to insure efficiency the actor should not have substitute methods available, or all available methods must be subject to the same rule.[35] The two theories thus analyzed explain two distinct sets of cases: those in which close substitutes exist and those in which substitutes do not exist or are not subject to different liability standards. Moreover, only one of these explanations has a strong efficiency basis. The other, deterrence, is more consistent with the judicial implementation of other values. The hegemonic claim for efficiency is thus seriously weakened.

In my view, a third persistent theme in strict liability is the problem of assigning costs when two unrelated activities interact. This is also a problem of wealth allocation (p. 35). Given that an accident has occurred, an initial question is who should bear the costs. In the Landes and Posner world, costs should rest with victims unless it is efficient to transfer them. This is a rule of wealth allocation: actors are made wealthier and victims made poorer. Moreover, when actor and victim are engaged in some collective endeavor, *e.g.,* using public highways, we can see that the costs will be internalized to that activity so that in the aggregate, assuming no transaction costs, third-party insurance costs will decline but first-party insurance would increase in exactly off-setting amounts. Hence the only question is which participant in the activity pays the costs. Given any uncertainty as to which participant will be actor or victim, there is no strong rational basis to assign all costs to one class or participant.[36] However, when actor and victim are in unrelated activities, the cost assignment will transfer wealth between those activities. If a reservoir owner floods a mine, or a cattle owner's herd tramples the crops of a farmer, or phosphates escape into a river, destroying a fishery business, then, depending on which party must absorb those costs, one activity will have higher costs. When courts assign strict liability to an actor in such cases, the court is assigning cost responsibility. Coase has argued that such cases involve mutual causation because the harm results from the interaction.[37] But Coase also seems to recognize that any solution depends on the existence of a reasonable law.[38] Someone must in the first instance bear the cost. After that initial assignment, bargaining can occur to achieve the optimal mix of the two activities, but it is essential

35. If only steam engines were held strictly liable but diesel engines were not, then a railroad might well substitute diesels for steam and retain more train trips a day, but if the diesel also caused fires, the end result could still be inefficient.

36. I put aside for a moment the questions of intra-activity efficiency in risk handling or cost allocation.

37. Coase, *The Problem of Social Cost,* 3 J.L. ECON. 1 (1960).

38. Coase, *The Coase Theorem and the Empty Core: A Comment,* 24 J.L. ECON. 183 (1981).

to the Coasian model that the parties know who is the buyer and who is the seller.[39] By imposing strict liability on one party or activity the courts resolve the question of ambiguous causation in the context of discrete activities.

Historically, Blackburn's opinion in *Fletcher v. Rylands*[40] is the best statement of this theory. Blackburn discerned the problem of cost assignment in cases involving discrete activities as the underlying theme of various classes of strict liability cases. He included the cattle, fire, and nuisance cases as reflective of this problem of externalization of costs. He also distinguished the classic case of joint activity: the shared use of the highway. In that context, he reasoned, it made no sense, in cost allocation terms, to make one driver strictly liable for the harm to any other. There was a shared "risk of injury" for mutual benefit. Only if one party had been unreasonable, *i.e.*, negligent, would the law need to reassign costs.[41]

The cost allocation hypothesis is a powerful explanation for a number of strict liability cases. The rules on livestock, nuisance, and trespass all are consistent with the view that in some instances the law must allocate wealth by assigning accident costs. This hypothesis also explains the stubborn survival of the idea that airplanes should be strictly liable for ground damage. The ground owner is a stranger to air travel and is involved in totally unrelated activity. By making the airplane owner strictly liable for such damage, the landowner's wealth is preserved and the cost is assigned to airplanes and those who benefit from them.[42]

There is yet a fourth basis for strict liability which finds some support in the product liability analysis of Landes and Posner, as well as in Calabresi's more general analysis.[43] Strict liability may reflect a judgment that one class of participants in an activity is better (more

39. Landes and Posner fail to appreciate this function in their discussion of Vincent v. Lake Erie Transp. Co., 109 Minn. 456, 124 N.W. 221 (1910). Pp. 178-80. They contend that this is a case in which transaction costs are "high." P. 179. In fact, the parties in *Vincent* had a regular course of dealing and so, given any set of entitlements, they would have been able at low cost to bargain for a more efficient outcome. *See* Balkin, *Too Good To Be True: The Positive Economic Analysis of Tort Law* (Book Review), 87 COLUM. L. REV. 1447, 1469-71 (1987). The importance of the outcome in *Vincent* is, first, that it creates a set of entitlements so that parties can bargain and, second, for those cases, like Ploof v. Putnam, 81 Vt. 471, 71 A. 188 (1908), in which no bargaining is possible, an actor may destroy property of another to save her own property provided the actor pays the market value of the property destroyed. Thus, the entitlement selected comes closest to the outcome which an efficient competitive market would yield.

40. Fletcher v. Rylands, L.R. 1 Ex. 265 (1866), *affd.*, L.R. 3 E. & I. App. 330 (1868).

41. L.R. 1 Ex. at 286-87.

42. This explanation for aircraft liability would also imply that if the plane damages an airport or airport-related facility, such as an airport hotel, it would not be strictly liable on cost assignment grounds because the costs would be internalized to the activity of air travel, broadly defined, regardless of who paid for the loss. Indeed, if society in general were seen as participating in and benefiting generally from air travel, one would predict movement to a negligence rule for all harms.

43. G. CALABRESI, *supra* note 31.

efficient) at handling some aspects of the accident problem. Workers compensation, product liability, and the various no-fault plans all rest on such assumptions, proved or not. The difference between this conception and that of Landes and Posner is the definition of the problem being addressed. Landes and Posner define that problem narrowly as one of efficiently maximizing social wealth. But there are other considerations such as efficiently administering a socially acceptable pattern of loss distribution. Given that broader set of problems, an efficiency-increasing solution is to identify a class of participant which has distinct cost advantages in handling any aspect of the accident problem, including loss distribution.

Strict liability also can centralize otherwise dispersed responsibility in the hands of those who can respond most effectively. Such a focusing may induce altered investment in safety and safety innovations.[44] This posits some prior market or institutional failure which precluded, in a real world context, appropriate actions. Workers compensation may illustrate both of these strands. Making the employer strictly liable for industrial accidents focuses the obligation to provide a means of loss distribution and compensation on the party most able to do so efficiently. In addition, focusing loss on the employer (and its insurer) creates stronger incentives to look for, develop, and implement promptly improved safety at least within the framework of the levels of compensation that would otherwise have to be paid. Knowing that strategic conduct, such as charging contributory negligence, will not reduce liability, the employer's real world incentive to seek improved safety is increased.

In sum, looking at strict liability as a whole, it appears implausible that a single theory can usefully predict or explain all observed outcomes. Two responses are possible: The unexplained outcomes are "wrong," (*i.e.,* bad applications of the theory), or they demonstrate that other explanations exist for some aspects of the law. Landes and Posner choose the first response, implying that the primary explanation for a high error rate is that courts are consistently and persistently irrational. Is this prima facie plausible? My own reaction is that it is not. Moreover, once other hypotheses can better explain some sets of the cases and have reasonable predictive utility and, perhaps, some descriptive validity, then the implication is that the hegemonic claims for the first theory must be rejected. Tort law is more complex than that.

Landes and Posner also claim that intentional torts are simply an extreme set of negligence cases. There are cases in which the conduct is so inefficient and so easily controlled by the actor, that, although labelled intentional, they are really examples of negligence to which no contributory negligence defense is applicable. But a theory which can

44. *Cf.* Cooter & Rubin, *supra* note 14.

only explain the easy cases does not explain much. It is easy to cast many assault and battery cases as a form of gross negligence. Indeed, a number of cases have illustrated problems of labelling at the borderline.[45] But this only shows that alternate approaches yield similar results in some set of cases. Can the theory explain the hard cases?

The medical consent cases, in which a doctor failed to obtain consent to perform what was apparently useful surgery,[46] serve as a good illustration. An efficiency analysis would have looked to what a reasonable patient would have wanted and evaluated the doctor's conduct accordingly.[47] But in these early cases the only issue was consent, so they seem to produce an inefficient result.[48] But Landes and Posner only consider the exception to the rule and not the rule (p. 172). The basic rule protected an intangible entitlement of the patient at the expense of a maximization of social wealth.[49] These outcomes make little sense in efficiency terms.[50] In general, intentional tort law's insistence on a certain state of mind (awareness of consequence) and an external review of the lawfulness of that consequence is similarly unrelated to efficiency analysis.[51] This approach seems to rest on notions of quasi-property entitlements, of which individuals may not be deprived without consent or a social license.

In the last fifteen years the law has changed its approach.[52] It now reviews such questions under the rhetoric of negligence. No longer is a doctor liable for operating without consent. The operation itself must have been unreasonable. In cases such as *Canterbury v. Spence,*[53] the court consciously converts a battery claim into one of negligence so that it can conduct the efficiency analysis that it feels is appropriate. Landes and Posner ignore the potential for what might be explained not as a continuation of a single efficiency analysis but as a transforma-

45. *E.g.,* Hackbart v. Cincinnati Bengals, Inc., 601 F.2d 516 (10th Cir.), *cert. denied,* 444 U.S. 931 (1979).

46. *E.g.,* Mohr v. Williams, 95 Minn. 261, 104 N.W. 12 (1905).

47. *See* Cobbs v. Grant, 8 Cal. 3d 229, 502 P.2d 1, 104 Cal. Rptr. 505 (1972); Canterbury v. Spence, 464 F.2d 772 (D.C. Cir.), *cert. denied,* 409 U.S. 1064 (1972).

48. *E.g.,* in *Mohr,* 95 Minn. 261, 104 N.W.2d (1905), plaintiff's more seriously infected ear was in fact treated. Moreover, at the time anesthesia was risky and so a single treatment reduced risk overall. *Cf.* R. POSNER, *supra* note 23, at 134 (suggesting the doctor's conduct was reasonable).

49. *See* Canterbury v. Spence, 464 F.2d 772, at 779-83 (duty to inform rests on considerations of human rights, but as formulated in the case those rights are more limited under the negligence analysis than they would be under battery).

50. Although Landes and Posner discuss medical malpractice at various points in their book, pp. 11, 106, 122, 131-39, they seem never to discuss the informed consent rule as a negligence topic and instead discuss it only in terms of intentional tort. P. 172.

51. *See, e.g.,* Vosberg v. Putney, 80 Wis. 523, 50 N.W. 403 (1891) (kicking another was battery even though the victim's leg was very vulnerable, a fact unknown to the actor, but presumably something which the victim could have easily protected against).

52. *See, e.g.,* Cobbs v. Grant, 8 Cal. 3d 229, 502 P.2d 1, 104 Cal. Rptr. 505 (1972).

53. 464 F.2d 772 (D.C. Cir.), *cert. denied,* 409 U.S. 1064 (1972).

tion or change in analysis from a nonefficiency-based protection of individual wealth to a focus on efficient social wealth maximization.

I do not dispute that the efficiency analysis of Landes and Posner has explanatory power beyond the confines of negligence. But they have not shown that it is a satisfying explanation for all or the bulk of strict liability and intentional tort either on a predictive or a descriptive basis. The hegemonic claim fails. As a result we need a better theory of when tort law will emphasize the goals best served by these several types of law.

VI. The Future of Economic Analysis of Law

Landes and Posner offer but one vision of what economic analysis can contribute to law, and vice versa. Theirs is an application of highly abstracted neoclassical price theory. It is, at its core, only a predictive model of human economic behavior. Ultimately, it can be little else. Its assumptions about human and economic motives, institutions, and realities are too restrictive or even false to have much useful descriptive validity. Yet the very reason that legal economic analysis is attractive is that it proposes to offer descriptively valid explanations which in turn provide the basis for historical and policy conclusions. The strict neoclassical model simply can not serve those functions.

There are, however, other economic goals and, more importantly, analyses which can be much more productive. From traditional institutionalism,[54] to transactional analyses,[55] to the new institutionalism,[56] economics can be a fruitful source of ideas, hypotheses, and insights from which legal analysis can draw. Conversely, better understanding of law and its role in economic order should make it possible to develop new economic models, pieced, as such things always are, from parts of older models, which take more express account of the need for some assignment of rights (property law), claims (contract law), and accident costs (tort law). Such an economics would in turn have a descriptive utility that the existing dominant model lacks. Dean Calabresi's work on tort law is a beacon illuminating some of that broader landscape, as is the much earlier work of John R. Commons.

Scholars in law and economics, competitive intellectual markets being what they are, will eventually resume exploring some of these other visions. As they do, and as the dominance of Chicago-style economics wanes, the utility of economic analysis will greatly increase

54. *E.g.*, J. Commons, Legal Foundations of Capitalism (1924).

55. O. Williamson, The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting (1985).

56. *E.g.*, Komesar, *In Search of a General Approach to Legal Analysis: A Comparative Institutional Alternative*, 79 Mich. L. Rev. 1350 (1981).

even as its capacity to yield only a single conclusion will decline markedly.

VII. CONCLUSION

Although long critical of much of Judge Posner's analysis of legal-economic problems, I find myself more than a little offended by the broad-brush critiques of his work which seem to reject any use of economic theory because it may lead to normative results with which the critic disagrees. First, as anyone versed in economics knows, there is a broad range of economic theories to choose from and most theories can support various normative conclusions if used appropriately. Second, economic analysis historically has been an important tool of progressive law reform and law enforcement at various times, especially during the New Deal.[57] Its capture at the moment by ideologies of the right ought not to blind scholars with other normative agendas to its utility.[58] The proper response to badly done theory and to poorly formulated applications is to critique them on their merits.

Some years ago a reviewer of Posner's *Law and Economics* fretted that that book might give economic analysis a bad name.[59] *The Economic Structure of Tort Law* gives the same reviewer that same disquieting feeling. This book attempts to prove too much, too casually, as has been repeatedly stressed in this review. Yet it is also far better to have a theory, expressly defined so that it can be tested and criticized, than to be submerged in uninformative rhetoric. More than that, economic analysis of various kinds, and efficiency analysis in particular, are in fact useful predictive tools and for at least some areas of the law may even have considerable descriptive power. In the end, despite my reservations, I prefer the work of Landes and Posner to the more ephemeral and evasive posture of traditional legal analysis. My concern is not with the direction they have taken but with the specific ways they have chosen to proceed.

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57. *Cf.* E. HAWLEY, *supra* note 14.

58. *Cf.* Cooter & Rubin, *supra* note 14.

59. Carstensen, Book Review, 19 ANTITRUST BULL. 867 (1974); *see also* Polinsky, *Economic Analysis as a Potentially Defective Product: A Buyer's Guide to Posner's Economic Analysis of Law,* 87 HARV. L. REV. 1655 (1974).