

Progress on the Casual Chain Gang: Some Approaches to Causation in Tort Law and Steps toward a Linguistic Analysis

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Progress on the Casual Chain Gang: Some Approaches to Causation in Tort Law and Steps toward a Linguistic Analysis

Abstract

The problem of causation impinges upon virtually every area of the law. In this article, Mr. Pincus takes a novel approach to this complex problem in the context of tort law. He begins by highlighting some of the difficult causal issues that emerge from the Chernobyl nuclear disaster and a recent test case on nuclear experiments conducted in Nevada a number of decades ago. He identifies ten prototype cases of causation through the rich doctrinal history in this area, arguing that fundamental problems arise not only at the margin, but permeate even "simple" cases of causation. Three theoretical approaches are then critically examined- the commitment to purely 'factual' causal tests; the view that causal judgments are determined by social or economic policies; and Hart and Honoré's classic attempt to avoid these "maximalist" and "minimalist" extremes. Mr. Pincus argues that none of these approaches adequately deals with the fundamental problems outlined. Accordingly, he undertakes a linguistic analysis, developing a descriptive model for understanding causation that might also be applied to other legal problems. Finally, he suggests that legislation be used to improve causal determinations within the tort system, and that in some circumstances injuries be compensated outside it.

PROGRESS ON THE CAUSAL CHAIN GANG: SOME APPROACHES TO CAUSATION IN TORT LAW AND STEPS TOWARD A LINGUISTIC ANALYSIS

BY STEPHEN N. PINCUS*

The problem of causation impinges upon virtually every area of the law. In this article, Mr. Pincus takes a novel approach to this complex problem in the context of tort law. He begins by highlighting some of the difficult causal issues that emerge from the Chernobyl nuclear disaster and a recent test case on nuclear experiments conducted in Nevada a number of decades ago. He identifies ten prototype cases of causation through the rich doctrinal history in this area, arguing that fundamental problems arise not only at the margin, but permeate even "simple" cases of causation. Three theoretical approaches are then critically examined: the commitment to purely "factual" causal tests; the view that causal judgments are determined by social or economic policies; and Hart and Honoré's classic attempt to avoid these "maximalist" and "minimalist" extremes. Mr. Pincus argues that none of these approaches adequately deals with the fundamental problems outlined. Accordingly, he undertakes a linguistic analysis, developing a descriptive model for understanding causation that might also be applied to other legal problems. Finally, he suggests that legislation be used to improve causal determinations within the tort system, and that in some circumstances injuries be compensated outside it.

"In the area of causation, nothing is ever thought out; it is only thought about."¹

| | | |
|-----|---|-----|
| I. | INTRODUCTION | 962 |
| II. | THE ISSUES | 965 |
| | A. <i>From Nevada to Chernobyl . . . and Back</i> | 965 |
| | B. <i>Some Specific Causal Problems</i> | 970 |
| | 1. Ten Cases of Causation | 971 |
| | 2. The Simple Case | 974 |
| | 3. Multiple Causation | 975 |
| | 4. The Bounds of "Cause in Fact" | 977 |

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¹ R.B. Lansing, "The Motherless Calf, Aborted Cow Theory of Cause" [1984] Env. Law 1 at 32.

| | |
|---|-------|
| III. THREE APPROACHES TAKEN | 979 |
| A. <i>Ordinary Causal Language</i> | 979 |
| B. <i>Causal Maximalism</i> | 985 |
| 1. Taking Wrights Seriously | 986 |
| 2. Where Wright Goes Wrong | 987 |
| 3. Wright on Risk | 991 |
| C. <i>Causal Minimalism</i> | 993 |
| 1. The Pervasiveness of Evaluative Considerations | 995 |
| 2. Clinging to Factual Causation | 996 |
| 3. The Cost of Causation | 997 |
| IV. STEPS TOWARD A LINGUISTIC ANALYSIS | 999 |
| A. <i>A Descriptive Model</i> | 1,000 |
| 1. Hume's Problems | 1,001 |
| 2. "Analytic" Statements | 1,003 |
| 3. A Web with Three Layers | 1,005 |
| 4. Causal Posits | 1,008 |
| 5. Judging Causation | 1,010 |
| 6. Linguistic Indeterminacy | 1,012 |
| 7. Hermeneutical Assumptions | 1,013 |
| B. <i>Tort, Legislation, and Beyond</i> | 1,016 |
| V. CONCLUSION | 1,020 |

I. INTRODUCTION

Are lawyers too dependent on language to subject it to their scrutiny? Recent interest in legal hermeneutics goes beyond attempts to get lawyers to write "plainer" English,² or to explain — in political terms — why they "can't."³ Yet most of the work in this area suffers from two limitations.⁴ First, it has focused on the ready-made constitutional and statutory texts of public law. There is no reason, however, why the analysis of language

² See, for example, R.C. Wydick, "Plain English for Lawyers" (1978) 66 Cal. Law Rev. 727, and I. Younger, "In Praise of Simplicity" (1984) N.Z.L.J. 277.

³ See, for example, S. Stark, "Why Lawyers Can't Write(?)" 97 Harv. L. Rev. 1389.

⁴ See, for example, 60 Texas L. Rev., *passim*, and 58 S. Cal. L. Rev. 1-725. There are two notable exceptions to the first limitation. M. Moore and P. Goodrich each present elaborate accounts of judicial discourse, though from radically different ideological vantage points. Moore provides a linguistic analysis of the interpretation of common law texts in "The Semantics of Judging" (1981) 54 S. Cal. L. Rev. 151 and "A Natural Law Theory of Interpretation" (1985) 58 S. Cal. L. Rev. 277. See also *infra*, note 217. Goodrich examines how the theology of law is grounded in and determined by its language: *Reading the Law* (New York: Basil Blackwell, 1986). See also *infra*, note 200.

should not be applied to the equally (if not more) text-rich common law. Second, this work has mostly theorized about the potential application of the philosophy of language to law, rather than actually *applying* it to a particular legal problem. This article attempts to go beyond these two limitations by examining the problem of causation in tort law from a linguistic perspective.

At the heart of the law and hermeneutics debate lies an old and fundamental question: how can a judge both create and apply the law? One explanation draws on the theory of literary interpretation and depicts the law as a "chain enterprise."⁵ In adding a link to this chain, each judge expresses her or his legal philosophy. This philosophy, however, comprises not only the judge's substantive political values, but also her or his sense of how the new link can best fit the formal pattern established by the previous links in the chain. The thrust of this explanation is to steer a path between legal positivism⁶ and judicial anarchy, but it escapes neither. The idea of making the new link fit with doctrine or statute is little more than what less sophisticated minds thought of "as applying the law,"⁷ while "any judge's opinion about the best interpretation will . . . be the consequence of beliefs other judges need not share."⁸ Thus, it has been suggested that these schizophrenic judges are "working on the chain gang."⁹

It is difficult to imagine a stronger catalyst of these formalist aspirations and nihilist declamations than the problem of causation. Determining the causal chains within a set of events is widely assumed

⁵ See R. Dworkin, "Law as Interpretation" (1984) 60 Texas L. Rev. 527 at 548, and also "Natural Law Revisited" (1982) 34 U. Florida L. Rev. 165 at 168.

⁶ Legal positivism differs from textual positivism, though legal and textual positivists have the same views on many issues. S. Fish appears to conflate the two in arguing that R. Dworkin's "Law as Interpretation" (*supra*, note 5) "depends on the 'positivist analysis' he rejects . . ." S. Fish, "Working on the Chain Gang: Interpretation in Law and Literature" (1984) 60 Texas L. Rev. 551 at 566. Clearly, Dworkin's argument leads to an untenable epistemological paradox (see *infra*, note 207); in fairness to Dworkin, however, it should be pointed out that the following statement of Fish's is not completely accurate: "In general Dworkin's confusions have the same form: he argues against positivism, but then he has recourse to positivist notions" (Fish, *ibid.* at 567, fn. 23).

As I argue in Part IV.A.7, *infra*, Dworkin's theory of legal interpretation — despite his protestations otherwise — is committed to a form of objectivity. This identifies him unmistakably as a textual positivist. However, the pervasiveness of naturalism throughout his work makes it very difficult to locate him in the camp of legal positivism. As Fish demonstrates, Dworkin's attack on legal positivism from a textual positivist stance leads to various contradictions; but this does not make Dworkin a legal positivist.

⁷ See *infra*, note 217.

⁸ See Dworkin, "Law as Interpretation", *supra*, note 5 at 545.

⁹ See Fish, *supra*, note 6.

to be a purely factual undertaking,¹⁰ but it reveals a judge's fundamental assumptions about the physical, social, and moral universes within which these events occur. The problem has been most extensively dealt with in tort, which is also, perhaps, the area of law most replete with concepts expressed in apparently ordinary language.¹¹ Yet causation is either explicitly or implicitly involved in almost every set of facts brought before a court in any area of the law.

In Part II of this article, some of the central issues associated with the problem of "cause in fact" in tort law are highlighted. It is suggested that the difficulties involved in grappling with the problem of causation are not confined to an obscure set of marginal cases, but permeate every situation in which we attempt to locate causal relationships. In Part III, three theoretical approaches to the issues outlined in Part II are examined. This discussion begins with Hart and Honoré's "ordinary language" analysis,¹² and then turns to the positions Hart and Honoré attempt to avoid: causal maximalism and causal minimalism.¹³ A causal maximalist views causation as comprising a maximum of "factual" content.¹⁴ A causal minimalist, in contrast, infuses causation with a minimum of factual content and a maximum of legal policy. Causal minimalism deals with the problem of causation by ignoring it and views causal language as a tool of legal policy, without any power to determine that policy.

Against the backdrop provided by the critique of these approaches, an alternative approach is proposed in Part IV. This linguistic model is a descriptive account of how causal decisions are made by judges in tort cases. The model uses a metaphor depicting causal reality, our

¹⁰ This article does not deal directly with issues generally subsumed under the heading "proximate cause." Hart and Honoré argue that the use of the expression 'proximate cause' today is a mere reminder that demonstration of "cause in fact" is an insufficient condition for the imposition of liability (see *infra*, note 12 at 86-87), thus suggesting that even if defendant's tort was indisputably a cause of plaintiff's injury, it may not be a legally relevant cause. R. Wright criticizes Hart and Honoré for not further distinguishing "proximate cause" from "tortious conduct" (see *infra*, note 14 at 1745-50). R. Epstein would want to eliminate both these latter notions and rely entirely on "cause in fact" for the imposition of liability within a strict liability regime (see *infra*, note 11). Although my linguistic analysis is focused on "cause in fact," "proximate cause" is susceptible to the same treatment. Moreover, the analysis of *CASE 10* in Part II.B.4, *infra*, suggests that the boundaries between "cause in fact" and "proximate cause" are far from clear.

¹¹ See R.A. Epstein, "A Theory of Strict Liability" (1973) 2 J. Leg. Stud. 151. Consider also the following comment: "Tort law is the paradigmatic law of the mixed society; an industrial community that opts for the middle ground between the individualistic, laissez-faire policy which prefers contracts and the truly collective state which favours criminal sanctions.": A.C. Hutchinson and P. Monahan, *Modern Legal Thought: Cases and Materials* (Osgoode Hall Law School, Winter 1984) at 11.

¹² See H.L.A. Hart and T. Honoré, *Causation in the Law*, 2nd ed. (Oxford: Clarendon Press, 1985).

¹³ See *ibid.* at xxxiv-xxxvi and lxxvii-lxxviii.

¹⁴ See R.W. Wright, "Causation in Tort Law," [1985] Cal. L. Rev. 1735.

discourse about that reality, and our perception and understanding of it, as a web within which language is used to posit particular causal relationships. It is argued that in making causal decisions, this web must be dissected along lines that are vague or even arbitrary. Accordingly, this model implies that while the tort system generally provides a practical framework for compensating injuries, legislation may be used to make clearer and better causal determinations within that framework. Moreover, it is suggested that in some circumstances a legislature may be required to venture beyond the tort system to ensure the compensation of injuries that are in a very real sense *caused* by the aggregate of physical, chemical, social, economic, and political events constituting the web of causation.

II. THE ISSUES

A. *From Nevada to Chernobyl . . . and Back*

On or about April 26, 1986, a series of events occurred at the Chernobyl nuclear power plant, located 130 kilometres north of Kiev in the U.S.S.R. In the weeks following these events, clouds of radioactive material were observed in the atmosphere over Eastern Europe and unusually high levels of radioactive iodine were detected in rainwater in Ottawa, Canada.

The Soviet Union reported that a certain number of people had died in the accident.¹⁵ Few people would see any difficulty in the claim that these victims died *from* the accident. Judging from newspaper treatment of the issue, most people do not appear to have difficulty inferring from the occurrence at Chernobyl and the detection in Canada, that the nuclear accident *caused* the 10,000-fold increase over background levels of iodine-131 in Ottawa's rainwater.¹⁶ Yet these events — of profound scientific, political, and legal¹⁷ significance — present other

¹⁵ See, for example, *The Globe and Mail* (Toronto): April 29, 1986 at A1 and A13; April 30, 1986 at A1-2; May 1, 1986 at A1-2; May 9, 1986 at A10 and May 15, 1986 at A1 and A9.

¹⁶ See *ibid.* The language of the reports about the milk, however, is a little less certain. For example, according to *The Globe and Mail* (Toronto), May 15, 1986 at A9, the Minister of Health stated that there was "nothing to be concerned about, but there was a trace [of radioactive-iodine] . . . suggesting the milk was *likely contaminated* from grass eaten by cows after radioactive rain fell in the Ottawa area last week" (emphasis added).

¹⁷ Consider this reaction: "In the Commons yesterday, External Affairs Minister Joe Clark said the Government would consider filing claims with the Soviet Union for compensation if any financial damages result from the elevated levels of radioactivity in the Canadian environment springing from the Chernobyl accident" (*ibid.*).

Assuming a causal link between the Chernobyl accident and the increased levels of iodine-131 in Ottawa cannot be or are not "proved," it is interesting to reflect on whether there still might be a causal link between the accident and the "financial damages" arising from the precautions taken by the Canadian government *in light of* the accident.

causal issues that cannot be as easily disposed of. Such issues have implications that may undermine the certainty with which we make the "easy" causal judgments.

These issues may best be approached, not by speculating on the possible aftermath of Chernobyl over the next few decades, but by considering a recent case arising out of the United States government's experiments with nuclear fission, conducted above ground in the brushlands of Nevada a number of decades ago. In May 1984, the U.S. District Court handed down a 225 page judgment explaining why it found that ten of the twenty-four bell-weather cases brought in *Allen v. United States*¹⁸ merited compensation. The court found that the defendant failed to adequately warn the plaintiffs or their predecessors of "known or foreseeable long-range biological consequences" from exposure to fallout radiation from open-air atomic testing prior to 1963, and that such failure was negligent.¹⁹ One of the court's major problems in reaching this conclusion was to determine whether and in what sense there was a causal link between this negligent breach of duty, and the many serious injuries sustained by the plaintiffs or their predecessors. The crux of this problem is how to give meaning to the court's phrase "known or foreseeable long-range biological consequences."²⁰

The difficulty is most obvious in an *ex ante*, scientific context. In the Chernobyl situation, the only response Canadian Health Department officials can give to the question of whether the radioactive iodine in Ottawa's rainwater will cause injury is of this form: "A person drinking the contaminated rainwater for a lifetime would increase the risk of cancer by only one chance in one million."²¹ In this scientific context, it appears to be accepted that the making of an *ex post* causal assertion involves an arbitrary definitional decision. For example, a public health scientist pointed out in regard to the Chernobyl disaster that

by international standards it is accepted that one hundred deaths will occur among one million people upon one rem exposure to ionizing radiation . . . exposure can depress the immune system, which . . . allows the cancerous cells in the body to grow. But because the origin of cancer may be from causes other than radiation, *such deaths are not counted as being directly caused by exposure to radiation*²² (emphasis added).

¹⁸ 588 F.Supp. 247 (Dist. C.). All references to the *Allen* case in this article are to this judgment, which was reversed by the U.S. Court of Appeals, 816 F.2d 1417 (10th Cir. 1987). The Court of Appeals did not consider the causation issue because it found that the "discretionary function" exception of the Federal Tort Claims Act precluded government liability. *Cert.* was denied by the United States Supreme Court, January, 1988.

¹⁹ *Ibid.* at 447.

²⁰ *Ibid.*

²¹ *The Globe and Mail* (Toronto), May 10, 1986 at A1.

²² Dr. Bertell, Director of Research, International Institute for Public Health, Toronto, in *The Globe and Mail* (Toronto), May 5, 1986.

The *Allen* case shows that precisely the same meaning of causation may apply in an *ex post*, legal context. For instance, the court cited one medical authority who points out that “when we refer to radiation as a cause . . . we simply mean that a population exposed to a certain dose of radiation will show a greater incidence of cancer than that same population would have shown in the absence of the added radiation.”²³ This is a quite different use of the word ‘cause’ from that which most people would associate with the following sentence: “the Chernobyl accident *caused* the 10,000-fold increase over background levels of iodine-131 in Ottawa’s rainwater.” If there were some way to track a particular particle of iodine-131, it would be easy to construe this sentence probabilistically. One might be less comfortable with a probabilistic interpretation of causation in this sentence: “the Chernobyl accident *caused* the clouds of radioactive material observed over Kiev during the weeks after the accident.” The meaning of ‘cause’ seems to be even more clearly different from the *Allen* usage in this sentence: “the Chernobyl accident *caused* the clouds of radioactive material observed over Chernobyl immediately after the accident.” Accordingly, there is a continuum running from those causal assertions about which we feel more certain to those that appear to be completely tenuous. Is it possible in principle for there to be any limiting cases at the extreme of absolute certainty?

Suppose we were able to track a particle of iodine-131 from the Chernobyl reactor to Ottawa, Kiev, or even the skies over Chernobyl. It seems indisputable that the nuclear accident could then be said to have “caused” this particle to hover in the atmosphere. By pointing to any other physical, chemical, social, economic, or political conditions that constitute necessary antecedents of this event, we recognise that the “nuclear accident” is an insufficient cause, not that it is not a cause.

We know from Heisenberg, however, that “no events, not even atomic events, can be described with certainty, that is, with zero tolerance.”²⁴

²³ J. Gofman, M.D., “Radiation and Human Health” (1981), 54-55, quoted in *Allen, supra*, note 18 at 405.

²⁴ See J. Bronowski, *The Ascent of Man* (London: British Broadcasting Corporation, 1976) at 365. Bronowski’s source is W. Heisenberg’s *Über den anschaulichen Inhalt der quantentheoretischen Kinematik und Mechanik, Zeitschrift für Physik*, 1927. Bronowski’s anecdotes on the history of science provide simple but powerful illustrations of the coextensivity of the natural sciences and metaphysics. Consider, for example, the backdrop against which he sets his description of Heisenberg’s principle (at 362-64):

Did physics in the 1920s really consist of argument, seminar, discussion, dispute? Yes, it did. Yes, it still does . . . that requires, not calculation, but insight, imagination — if you like, metaphysics. I remember a phrase that Max Born used. . . . He said: “I am now convinced that theoretical physics is actual philosophy.” Max Born meant that the new ideas in physics amount to a different view of reality. The world is not a fixed solid array of objects, out there, for it cannot be fully separated from our perception of it. It shifts under our gaze, it interacts with us, and the knowledge that it yields has to be interpreted by us. There is no way of exchanging information that does not demand an act of judgment.

For Heisenberg, atomic events involve particles whose location, on one hand, and path and speed of motion, on the other, cannot ever be concurrently specified. This suggests that tracking a particle, while not impossible, may not yield results which will add certainty to our causal assertions. Some of the atomic models proposed by other physicists suggest that tracking a particle of iodine-131 might be an inappropriate way of attempting to confirm the cause of a shift in the substance's position because iodine-131 is composed of waves or probabilities rather than particles.²⁵ In short, the most obvious empirical method of confirming the certainty of our causal assertions leads us directly to an awareness of the probabilistic character of causation. Indeed, probability itself is only one imperfect approximation of causation. This point has vividly been made in a comparison of Heisenberg's atomic model with the models of his colleagues: ". . . whatever fundamental units the world is put together from, they are more delicate, more fugitive, more startling than we catch in the butterfly net of our senses."²⁶

As the spatio-temporal distance between "causes" and "effects" increases, the probabilistic character of causation becomes more obvious. Thus, the court in *Allen* stated: "Like statistical significance, mathematical probability aids in resolving the complex questions of causation raised by this lawsuit, but is not itself the answer to those questions."²⁷ What the court does regard as answering those questions is not clear. At least at a formal level, the court in *Allen* followed the traditional common law approach of separating the question of factual causation from the legal issues of duty, breach, and damages.²⁸ After an eclectic sampling of pronouncements on causation,²⁹ the judgment adds yet another vague, open-ended verbal formula to the well-saturated judicial lexicon of tests of "cause in fact":

Where a defendant who negligently creates a radiological hazard which puts an identifiable population group at increased risk, and a member of that group at risk develops a biological condition which is consistent with having been caused by the hazard to which he has been negligently subjected, such consistency having been demonstrated by *substantial, appropriate, persuasive, and connecting factors*, a fact finder *may* reasonably conclude that the hazard caused the condition absent persuasive proof to the contrary offered by the defendant³⁰ (emphasis partly added).

²⁵ *Ibid.* at 362-64.

²⁶ *Ibid.* at 364. The electron is viewed as a particle in Bohr's atom, as a wave in de Broglie's, and as a wave of probability in Max Born's model.

²⁷ *Supra*, note 18 at 419.

²⁸ See *ibid.* at 404-43.

²⁹ From those of Prosser (see, e.g., *ibid.* at 405 and 412; cf. Prosser, *infra*, note 42) to those of Malone see for example, *ibid.* at 410 and 411; cf. Malone, *infra*, note 70.

³⁰ *Ibid.* at 415.

The language here is instructive. Couched in the traditional phraseology of the common law, this formulation attempts to maintain the separation between breach of duty (“negligently creates a . . . hazard”), causation (“consistency . . . demonstrated by substantial . . . connecting factors”), and damage (“a biological condition”). Those familiar with this type of language would assume that this rule involves at least the three distinct questions of “hazard,” “condition,” and “demonstrated consistency.” Upon reflection, the third question melts into the first two. All substantial, appropriate, persuasive, or connecting factors between the hazard and the condition are a part of the hazard, or the condition, or of both. The examples that the court gives of such factors include: “that [the] plaintiff resided in geographical proximity to the Nevada Test Site for some time between 1951 and 1962,” and “the probability that [the] plaintiff was exposed. . . .” These are obviously an integral part of the “hazard.” The other example — “that [the] plaintiff’s injury is of a type consistent with those known to be caused by exposure to radiation” — is no less essential to defining the “condition.”

The “connecting factors” are internal and not external to the events they are supposed to connect. If these were external, the court would not say that “a fact finder *may* reasonably conclude,” after consistency has been demonstrated by such connecting factors, “that the hazard caused the condition.” If the connecting factors existed independently of the hazard and the condition, there would be no room for judicial discretion in concluding whether there was causation, although the court would have to decide whether the plaintiff had satisfactorily demonstrated the existence of such independent connections. Underlying the traditional language of the *Allen* formula is the admission that determining causation is really a matter of taking a closer look at the hazard and the harm than the court takes in considering the breach of duty and the damages.

To say that the “connecting factors” are internal is not to imply that they are weak. On the contrary, by collapsing the divisions between the breach and causation issues and between the causation and damages issues, the distinction between breach and damages is undermined. Without such a distinction, it is difficult to avoid compensating the injured party. Yet the court in *Allen* not only attempted to maintain the separation between the three issues, but split the causation issue itself into two sets of connections. In the first category were the three specific factors listed above: geographical proximity, probability of exposure, and injury consistent with exposure to radiation. In twenty-one of the cases, these three connections were found to have been established. The second category required proof of additional factual connections indicating that exposure

to fallout materially augmented the plaintiffs' risk of injury and resulted in actual somatic injury to the plaintiffs.³¹

The search for such connections was geared to "determining" whether the hazard was a "substantial factor" in causing the harm. The connections in the first category are actually subsumed under the second category. If there are factors which the court considers "substantial" — such as the location of the victim in the direct path of significant fallout from a particular nuclear test event³² — then the causal link will be regarded as established. Thus, the court refers to "a legally 'substantial' factor."³³ Here the court's language is highly misleading. "Substantial factor" may imply no more than an intuitive, perhaps arbitrary, judgment on the part of the court, which seems to be the basis upon which the twenty-four cases in *Allen* were ultimately determined. "Legally 'substantial' factor," however, connotes something more technical, substantive, even scientific; at the very least it implies that the court is relying on some rationally grounded standard that can be articulated in a form applicable in other cases. This standard would be external to hazard and harm, but the court's actual approach was to look at hazard and harm internally.

No such standard is articulated in *Allen*, not because the judgment failed to engage in rigorous analysis, but because it is not possible in principle to create such a standard. Our physical, chemical, social, economic, and political universe is densely packed and tightly interconnected. So inextricable is the web of events in which we are caught, that to separate a cancer discovered in the 1960s from a nuclear test held in the 1950s, or to separate a cancer discovered in the 1990s from a nuclear accident occurring in the 1980s, would be as artificial as separating the radioactive material hovering over Chernobyl from the nuclear accident in the reactor below. To illustrate why this is so, some specific causal problems in tort law are considered.

B. *Some Specific Causal Problems*

No case on cause in fact can aspire for inclusion in the galaxy of momentous tort decisions of the august style. In this area the soil is too dry to sustain great structures.³⁴

³¹ *Ibid.* at 430.

³² *Ibid.* at 437.

³³ See, for example, *ibid.* at 434 and 441.

³⁴ E. J. Weinrib, "A Step Forward in Factual Causation" (1975) 38 Mod. L. Rev. 518 at 534.

1. Ten Cases of Causation

The following set of hypothetical situations reflects some of the problems confronted in a wide variety of common law decisions.³⁵ Suppose there is a drug called 'D' which is made in both liquid and tablet form from two ingredients called 'X' and 'Y.' Every person who has ever ingested X alone has thereafter lost his or her sight, but the incidence of blindness after taking D is negligible. There are many companies (C1, C2, etc.) that make and sell bottles of D (D1, D2, etc.). P is a person, a patient, a purchaser of D, and a potential plaintiff.

CASE 1: P buys D1 from C1 and after taking it, goes blind.³⁶

CASE 2: P buys D1 from C1 and D2 from C2, both drugs being in tablet form. P empties the tablets into one jar, takes one tablet, and then goes blind.³⁷

CASE 3: P buys D1 from C1, takes the drug, and starts to go blind. When P's sight has almost disappeared, P buys D2 from C2 and takes it. P thereafter goes completely blind.³⁸

CASE 4: P buys D1 from C1 and D2 from C2, both drugs being in liquid form. P pours the drugs into one jar, takes one spoonful, and then goes blind.³⁹

³⁵ By stripping the common law cases of shooting, fires, noise, and the like, and setting the issues in a products liability context, these situations stress the greater socio-political significance of the latter in a technological world. See A.C. Hutchinson, "The Many Pasts and Futures of Enterprise Liability: 'Critical' Comments on a Priestly Tale" (April, 1985) [unpublished] at 23. They also highlight the uncertainty inherent in the very nature of causation. It has been suggested — incorrectly, I believe — that the second reason might be a function of the first. For example, R.B. Lansing suggests:

These are muzzle sightings of cause that jurors are able to handle without aid from the likes of me or you or science or anyone with fancy theories . . . but wait! Those were the good old days. Things have changed, and law must change with it. Today we know that citizens are hurt in much more secret and mysterious ways; ways that we don't understand; ways that we can't eyeball or muzzle sight. . . (*supra*, note 1 at 24).

³⁶ Cf. *McGrath v. Irving* (1965), 265 N.Y.S. (2d) 378.

³⁷ *Basko v. Sterling Drug, Inc.*, 416 F.2d 417 (2d Cir. 1969) is closest. Cf. *Oliver v. Miles* (1926), 110 So. 666; *Summers v. Tice* (1948), 33 Cal.2d 80; *Cook v. Lewis*, [1951] S.C.R. 830; *Saint-Pierre v. McCarthy*, [1957] Q.R. 421; *Woodward v. Begbie*, [1962] O.R. 60. See also *Lange v. Bennet*, [1964] 1 O.R. 233, where the Ontario High Court refused to apply *Cook*.

³⁸ Cf. *Connellan v. Coffey* (1936), 187 A. 901; *Golden v. Lerch Brothers* (1938), 281 N.W. 249; *Huey v. Milligan* (1961), 175 N.E.2d 698.

³⁹ Cf. *Corey v. Havener* (1902), 65 N.E. 69; *Oulighan v. Butler* (1905), 75 N.E. 726; *Orton v. Virginia Carolina Chemical Co.* (1918), 77 So. 632. *Corey* is similar to the nuisance cases of *Duke of Buccleuch v. Cowan* (1866), 5 Macph. 214 (Scot.) and *Lambton v. Mellish*, [1894] 3 Ch. 163. See also *Blair and Sumner v. Deakin* (1887), 57 L.T. 522 and *Michie v. Great Lakes Steel* (1974), 495 F.2d 213. *CASE 4* involves a single event with two "causes" (D1 and D2 in the text, two motorcyclists in *Corey*). A closely related — but distinguishable — situation arises where two simultaneous events, each a "sufficient cause," is followed by a single "effect," as in the criminal cases of *Wilson v. State* (1893), 24 S.W. 409 and *People v. Lewis* (1899), 57 P. 470; see also *Glick v. Ballentine Produce Inc.* (1965), 396 S.W. 2d 609, aff'd 385 U.S. 5.

CASE 5: P has some liquid D in a jar. P has never used this D and cannot remember where it was purchased. P buys some D1 from C1 and adds it to the jar. P takes a spoonful of D, and then goes blind.⁴⁰

CASE 6: P buys D1 from C1 and takes it. P starts to go blind. Hoping to forestall the loss of sight, P goes to C2 and asks for some Y. C2 sells P some X in error, which P takes. P goes completely blind.⁴¹

CASE 7: C1 buys its Y from C2 in sealed containers that are attached to a pipe on its production line. C2 supplies C1 with a container that has X instead of Y inside it. C1 does not attach this (or any) container to the pipe when D1 is made. P buys D1 from C1 and takes it, going blind thereafter.⁴²

CASE 8: P buys D1 from C1, takes it, and starts to go blind. Later, P's eyes are completely gouged out in an accident.⁴³

CASE 9: P has a genetic condition: at age forty P will go blind. At age thirty-nine P buys D1 from C1 and takes it. P goes blind before P's fortieth birthday.⁴⁴

CASE 10: After a world-wide drought, there is a shortage of Y, and the price of D increases to many times its usual value. P — who has been unemployed for several months — is told by a doctor that unless P continues taking D on a regular basis, P is likely to die. P has barely sufficient money to buy food, and decides to stop purchasing D, dying shortly thereafter. Actually, all the D sold by C1 — P's supplier — was

⁴⁰ Cf. *Anderson v. Minneapolis* (1920), 179 N.W. 45 and *Seckerson v. Sinclair* (1913), 140 N.W. 239. In *Cook v. Minneapolis* (1898), 74 N.W. 561, the Wisconsin court, facing almost the identical situation to that of the Minnesota court in *Anderson, ibid.*, came to the opposite result. *Cook, ibid.* was essentially overruled in *Kingston v. Chicago & Northwestern Rlwy.* (1927), 211 N.W. 913.

⁴¹ Cf. *Dillon v. Twin State Gas and Electric* (1932), 163 A. 111.

⁴² See J.G. Fleming *The Law of Torts*, 5th ed. (Sydney: Law Book Co., 1977) at 174 fn. 19, and W.L. Prosser, *Prosser and Keeton on Torts*, 5th ed. (Minn.: West Pub. Co., 1984) at 267 fn. 27. Prosser points out that this situation is suggested but not considered by *Saunders System Birmingham v. Adams* (1928), 117 So. 72 and *Rouleau v. Blotner* (1931), 152 A. 916.

⁴³ Cf. *Baker v. Willoughby*, [1970] 2 W.L.R. 50 (H.L.). See also *Harwood v. Wyken Colliery*, [1913] 2 K.B. 158; *Stene v. Evans* (1958), 14 D.L.R. (2d) 73; *Dingle v. Associated Newspapers*, [1964] A.C. 371; *Long v. Thiessen* (1968), 65 W.W.R. 577; *Hicks v. Cooper* (1973), 41 D.L.R. (3d) 454. *Baker* was distinguished by the House of Lords in *Jobling v. Associated Dairies*, [1981] All E.R. 752.

⁴⁴ Cf. *Smith v. Cawdle Fen Comrs.*, [1938] 4 All E.R. 64 and *Cutler v. Vauxhall Motors*, [1970] 2 All E.R. 56 (C.A.).

made without Y, and everyone who ingested any D from that batch went blind immediately thereafter.⁴⁵

It might be argued that these cases are special in two respects. First, they are set in a products liability context, where causal relationships are less obvious than in most negligence situations. It is particularly difficult to make causal statements about chemical products. Second, *CASE 2* through *CASE 10* are *prima facie* multiple causation situations, which are more complex than the single causation cases that comprise the vast majority of everyday causal situations. The “regular,” “everyday” causal situations, however, are — once analyzed — no more clear and no less complex than the ten cases presented above.

If cases lie, in varying degrees, outside the reach of “ordinary causal concepts,” they must lie along a continuum rather than in discrete realms of easy and hard cases.⁴⁶ Moreover, the uncertainty that appears most obvious at one extreme of this range of cases will to some extent permeate the entire continuum. As we become more familiar with products liability cases involving chemical products in particular, such cases will be assimilated into the fabric of our ordinary conceptual scheme, not because the causal links will come to appear more certain to us, but rather because the scheme is itself indeterminate. Familiarity and indeterminacy seem to be at the “core” of our “ordinary causal concepts.”

The objection that nine of the cases are “penumbral” because they deal with multiple causation is similarly inaccurate. The significance of multiple causation was recognised in 1866: “Now, in this world there are but few important effects, I take it, either in physics or in morals, that may not be said to have been occasioned by several causes. It is in general from a combination of causes that most great events are produced. . . .”⁴⁷ As both the natural and social sciences unearth ever more complex relationships between physical, psychological, cultural, and

⁴⁵ This is the reverse of the “Titanic” conundrum, which runs as follows: P is injured on D’s quay while about to board the Titanic; as a result, P cannot go on the journey and (assuming survival was impossible, which is untrue) P’s life is saved as a result. The law appears to be that D is liable for P’s injury. In *CASE 10*, the problem of the hypothetical alternative cause (*cf. CASE 9*) is blotted out because death prevents blindness from occurring (*cf. CASE 6*). However, the structural similarity between *CASE 10* and the “Titanic” conundrum becomes clear when the terms ‘blindness’ and ‘death’ are switched: P is told that P is likely to go blind if P stops taking D, and those who take D from C1’s latest batch die immediately thereafter. The ease with which the switch may be made demonstrates the substantive vacuousness of our notion of cause, and suggests the plausibility of the linguistic analysis of causation in Part IV, *infra*.

⁴⁶ This is a reversal of Hart’s idea that all cases are either easy (at the core) or penumbral. See, for example, H.L.A. Hart, “Positivism and the Separation of Law and Morals” (1958) 71 *Harv. L. Rev.* 593 at 607 and *infra*, note 72. See also Part III.A, *infra*.

⁴⁷ *Buccleuch, supra*, note 39, *per* Lord Benholme at 232.

economic phenomena, it becomes more and more difficult to link events in linear causal chains.⁴⁸

It might still be argued that these reflections may have scientific relevance at the level of general causal laws, but that single causes are legally relevant in particular concrete cases.⁴⁹ The problem with this argument is that those who insist that multiple causation presents "certain anomalous situations" also characterize "cause in fact" as "scientific."⁵⁰ Just as causal situations form a continuum from the point of view of the uncertainty inherent in their content, so they may be placed on a continuum according to the complexity of their structure, where complexity is a function of the number of possible different causal statements that can be made about a particular case. This number is likely to depend more on the breadth of vision of the person making the causal statements (and the analytical tools at her or his disposal) than on the nature of the causal situations themselves.

2. The Simple Case

CASE 1 is the simplest case. The causal chain seems clear. In "ordinary causal language": C1 makes D1, which produces P's blindness. Stripped of such language, the formal causal chain may be expressed as 'C1 causes D1 causes P's blindness,' where 'causes' merely expresses a link but indicates nothing about the nature of that link. To link P's blindness with D, however, an inference must be made. Contrast this, for example, with the link between the eye-gouging and the accident in *CASE 8*, which can be made by observation. Although in both cases "cause" and "effect" are sequential and consistent, they are contiguous in the latter but not the former.⁵¹ Making this inference ignores the possibility that P's blindness flowed from some internal event (e.g. the genetic condition in *CASE 9*), or some external event (e.g. something else ingested), acting alone or together, or in combination with D1.

Since the incidence of blindness after taking D1 is greater than zero, but "negligible," it is difficult to pin P's blindness on D1 without invoking a third factor. Moreover, because this is a "factual" rather than

⁴⁸ As a result, the view that the universe is held together by ascertainable, linear Newtonian forces has given way to that of a universe bound by tightly packed cement. See notes 183 and 184, *infra*. Cf. J. Mackie, *The Cement of the Universe* (Oxford: Clarendon Press, 1974).

⁴⁹ Cf. Hart and Honoré, *supra*, note 12 at 10.

⁵⁰ See, for example, Fleming, *supra*, note 42 at 170. He also refers to instances of multiple causation as "certain anomalous situations" (*ibid.* at 173).

⁵¹ These terms, Humean in origin, are taken from Lansing, *supra*, note 1 at 7. See also Part IV.A.1, *infra*.

a logical inference,⁵² an *explanation* of why P's blindness should flow from D1 would be helpful — though not conclusive — in making the leap of faith from one to the other. One explanation is that in making D1, C1 left out Y; since ingestion of X alone has always been followed by blindness, we infer that P's blindness flowed from X. Yet all this tells us is that it is *rational* to say that D1 caused P's blindness. And all "rational" means in this context is that the connection is *possible*. Of course it is possible that any number of phenomena led to the blindness: for example, if P had a genetic condition that was undetected both before and after going blind, there is no *prima facie* difference between *CASE 1* and *CASE 9*. The distinction between "single" and "multiple" causation is a very fuzzy one indeed.

Nor is *CASE 1* simple insofar as the link between C1 and D1 is concerned. Ignoring issues of C1's legal liability, and assuming D1 is the "cause" of P's blindness, there remains the problem of defining the sense in which C1 is the "cause" of the D1 aberration. Is the "cause" omitting to put Y into D1, putting X into D1, making D1 in the first place, inventing D1, or (to shift from a deontological to a teleological perspective⁵³) the reason why D1 was invented? If all the alternatives in this list except the first and the last are removed, the last appears highly artificial. Once the intermediate alternatives are raised, however, it becomes apparent that the point at which we decide to break the causal chain is quite arbitrary.

3. Multiple Causation

Let us assume that the problems involved in *CASE 1* can be resolved, and that the 'C1 causes D1 causes P's blindness' chain is unassailable. Moreover, let us characterize C1's conduct in this chain as tortious, and posit a legal rule which, given the chain, imposes liability on C1. What are the difficulties now in determining "cause in fact" in *CASE 2* through *CASE 10*?

⁵² Logical inferences do not require — at least within the system of logic itself — any leaps of faith. For example, a logical inference would be of the form: " $p \vee q$, $\neg q$, therefore p ." That is: if there are two events p and q , such that if one or the other always occur, but never both (for example, night and day), and q is not happening, then p is happening. See, for example, J.D. Carney and R.K. Scheer, *Fundamentals of Logic* (New York: Macmillan, 1974) ch. 9.

⁵³ The two approaches to causation differ fundamentally. Though both are concerned with the reason for an occurrence, deontology looks backwards at where the occurrence came from, while teleology looks forwards to the motive, objective, or purpose of the occurrence. In ethics, the former corresponds to rule-driven theories, the latter to utilitarian ones. See W.F. Frankena, *Ethics*, 2d. ed (New Jersey: Prentice-Hall, 1973) esp. at 14-17. The minimalists I consider *happen* to take a teleological approach; there is nothing about causal minimalism that precludes a deontological approach. In the context of proximate causation, e.g., E.J. Weinrib shows how a duty to rescue may be justified in causal minimalist terms of both a teleological and deontological variety. See "The Case for a Duty to Rescue" (1980) 90 Yale L.J. 247. See also *infra*, note 168.

Where tablets are bought from two companies as in *CASE 2* there is no empirically grounded rational basis for linking P's injury with one rather than the other of two tortious acts. The leading decisions treat the issue as essentially one of proof. In *Cook v. Lewis*, Cartwright J. relied on the American rule in *Summers*, for the reason in *Oliver*:⁵⁴ it is easier for the defendants than the plaintiff to show who caused the injury. Why this should be so is not clear, particularly in the hypothetical where P put the tablets into the jar. Yet Locke J.'s dissent offers little assistance: that the onus should be on the plaintiff to show "cause in fact" in non-joint tortfeasor situations, but on the defendants where they act jointly,⁵⁵ may be a tenable moral proposition but does little to ease proof of causation. One writer takes up Rand J.'s suggestion that the defendant who did not "cause" the plaintiff's physical injury, nevertheless did injure the plaintiff by "mudd[ying] the proof of cause."⁵⁶ This may achieve a satisfactory legal result, but it does so by positing a fourth element (P's lack of compensation), to add to the set comprising C1, C2 and P's blindness, and is unable to identify two causal couplings within the set.

The other cases also illustrate the arbitrariness of both reasoning and result in the common law's treatment of causation. *CASE 3* through *CASE 8* are examples of what Hart and Honoré call "additional causes."⁵⁷ In *CASE 3* through *CASE 5* the presence of "additional combinatory causes" — because these are "sufficient" to bring about the result — renders the "cause" associated with the defendant non-necessary. The leading cases indicate that the defendant is liable where the "additional cause" cannot be linked to another defendant, as in *CASE 5*; that both defendants are liable where the injury appears to flow from a combination of their separate acts, as in *CASE 4*; but that the first defendant is not liable where her or his contribution to an already "caused" harm is insignificant, as in *CASE 3*.⁵⁸ *CASE 6* and *CASE 7* involve "additional neutralizing causes."⁵⁹ *CASE 6* was treated as a damages issue in *Dillon*,⁶⁰ while *CASE 7* does not appear to have been judicially resolved.⁶¹

⁵⁴ *Supra*, note 37.

⁵⁵ *Cook v. Lewis*, *ibid.* at 843.

⁵⁶ Lansing, *supra*, note 1 at 27.

⁵⁷ *Supra*, note 12 at 235-49.

⁵⁸ *Ibid.* at 237-39.

⁵⁹ *Ibid.* at 239-45.

⁶⁰ *Supra*, note 41.

⁶¹ See *supra*, note 42.

CASE 8, involving successive or “additional overtaking causes,”⁶² appears to depend on whether the accident is tortious (as in *Baker*) or non-tortious (as in *Jobling*).⁶³ Again, the House of Lords treated the issue in these decisions as one of damages, without trying to determine what harm flowed from each “cause.” It might be argued that by determining damages, the court implicitly decided the causation issue, but this introduces circularity: to insist that there is something such as “cause in fact” is to argue that something has been proved prior to the award of damages on the basis of such proof. The genetic condition in CASE 9 presents the problem of an additional hypothetical or “alternative cause.”⁶⁴ Hypothetical causes explode the “but for” test that has been used as the central common law test for causation: but for D1, P would still have lost his sight.⁶⁵

4. The Bounds of “Cause in Fact”

The indeterminacy of causation is best exemplified by CASE 10, where a plethora of scientific, political, and linguistic issues may be exposed by peeling off the formal legal conundrum.⁶⁶ Aside from the blindness issue, it is unclear what caused P’s death. It may have been not taking D, not *continuing* to take D, deciding to stop purchasing D, impecuniosity, unemployment (or the events leading to this), the increase in the price of D, the shortage of Y, or the world-wide drought. Each of these possibilities may be related to a number of the others but a list of causal statements based on these questions can be formulated in a linear causal chain, suggesting that the “cause in fact” determination is simply a matter of fixing a cut-off point. Yet the “causal” interrelationships are clearly not linear. What is the cause, for example, of P’s unemployment? What is the cause of P’s illness? It is conceivable that there may be a common social “cause” underlying both these phenomena, and that each of these phenomena have a number of other “causes.”

Now suppose that the first sentence in CASE 10 is removed. Is there any difference between the causal determination in this truncated CASE 10 and that in the complete CASE 10? Could the “laws of economics,” or the community’s failure to counteract those “laws,” count

⁶² *Supra*, note 12 at 245-49.

⁶³ *Supra*, note 43.

⁶⁴ *Supra*, note 12 at 249-53.

⁶⁵ See Part IIIA and Part IIIB.1, *infra*.

⁶⁶ See *supra*, note 45.

as a cause in the complete *CASE 10* insofar as the shortage of Y led to an increase in the price of D? Could the "laws of economics" also count as a cause in the truncated *CASE 10*, insofar as P's shortage of money *entailed* his foregoing D, or is the "cause" here the "social system" rather than the "laws of economics"? Where does the latter end and the former begin? Did P have the choice to choose death by starvation instead of death by illness or does the community have a duty to rescue P?⁶⁷ The issues become even more complex when the implications of C1's failure to include Y in its D is considered, and particularly when the case is turned around so that P goes blind after stopping his dosage of D and those who take D die immediately thereafter.

If all the possible causal forces impinging upon P's death or P's blindness were charted, using a thin line to depict each "cause" and "effect," the resulting diagram would be a very dense web indeed; viewed from a certain distance, this picture may in fact look like a solid blotch. This suggests two things. First, it is inaccurate to try to slot causal situations into a one-dimensional framework. Determining whether there is causation in a particular case is not a matter of drawing a cut-off point at the *next* link in a simple causal chain, but drawing the bounds around the *nearest* impinging forces in a dense causal web. Second, not only is the process of drawing these causal bounds influenced by policy considerations, but the very web of events itself is value-laden. Political, social, economic, cultural, and philosophical perceptions and prejudices are entangled and embedded within it.

It is easier to see how policy may influence the decision-making process: clearly, we have to at least consider the reasons for P's impecuniosity in *CASE 10*. The value-laden character of the events that we posit as causes can best be understood in linguistic terms. In order to posit such causes we have to express them in statements. It certainly makes a difference, for example, whether we refer to a certain vague notion we have as 'laws of economics' or 'the social system.' The linguistic expressions we choose both are influenced by, and in turn influence, the values that we hold and the causal decisions that we make. This is the central idea behind the model proposed in Part IV for approaching the issues raised by *CASE 1* through *CASE 10*. First, however, three other approaches to these issues are considered.

⁶⁷ The issue of a duty to rescue is formally subsumed under "proximate cause," not "cause in fact," though *CASE 10* suggests that these two categories melt into each other. See also *supra*, note 10. E.J. Weinrib argues in "The Case for a Duty to Rescue" *supra*, note 53, that such a duty may be grounded in "a coherent and growing pattern in the common law" (at 268-79) and in both teleological (at 279-87) and deontological (at 287-92) ethics. The model of causation presented in Part III.A makes it unnecessary to advance such elaborate arguments for duties to rescue (or compensate), as suggested in Part III.B.

III. THREE APPROACHES TAKEN

If a simple model can explain a great deal then it is superior to a more comprehensive model that explains only marginally more.⁶⁸

The principle of Occam's razor values the simplicity of general abstractions over the accuracy of complex, concrete particulars. It seems to run counter to the very essence of legal methodology. A system predicated on limiting the generality of universal principles in distinguishing cases "on the facts" would appear to have scant tolerance for the broad strokes of Occam's razor. Yet in the tide of enthusiasm for the law and economics approach to legal issues, the legal community has been carried along by powerful currents of sweeping general laws, and many of the interesting anomalies of particular fact situations have inevitably been washed away.

Occam's razor is double sided: it can be used to shave away both fact and policy. "Causal maximalists" wish to shave "non-factual" considerations off the face of the causal inquiry.⁶⁹ Conversely, policy maximalists prefer to shave the causation doctrine to the bone of very trivial contentions (only making claims about events in the external world on the basis of completely shared sense data), if not eliminate causation altogether.⁷⁰ In this Part of the article, three uses of the razor in approaching the issues outlined above are examined.

A. Ordinary Causal Language

Hart and Honoré's account of causation — formidable if only for the expanse of its canvass⁷¹ — rests on a philosophical model of the law that envisions a "core" concept of "cause" at the epicentre of a family of related causal concepts.⁷² Hart and Honoré explain that the

⁶⁸ C.G. Veljankovski, *The New Law and Economics: A Research Review* (Oxford: SSRIC Centre for Social-legal Studies, 1982) at 20.

⁶⁹ The label is Hart and Honoré's: see *supra*, note 13. Interestingly, the rise of causal maximalism has been explained as a reaction to the policy-based approach to causation in the nineteenth century. See M.J. Horwitz, "The Doctrine of Objective Causation", *The Politics of Law* ed. D. Kairys (New York: Pantheon, 1983). Horwitz says that "without objective causation, the problem of assigning liability had become . . . 'a concealed half-conscious battle on the question of legislative policy'" (*ibid.* at 211). Of course, this policy can go either way, depending upon one's ideology.

⁷⁰ See, for example, W.S. Malone, "Ruminations on Cause in Fact" (1956) 9 *Stan. L. Rev.* 60.

⁷¹ Cf. F.H. Newark's remark on the first edition of *Causation in the Law* (Oxford: Clarendon Press, 1959): "There is no other like full-length work on one legal conception published in this country, and the reader will pause in respectful awe at the range and depth of research which was a preliminary to the book's making," (1960) 76 *L.Q. Rev.* 592.

⁷² See, Hart, *supra*, note 46. There is a striking structural similarity between Hart's model of law and the "descriptive metaphysics" presented by P.F. Strawson in *Individuals: An Essay in Descriptive Metaphysics* (London: Methuen, 1974), which was first published in 1959 and played a central role in the development of Anglo-American analytical philosophy. Strawson's model envisions a central core of human thinking that does not change, comprising the least refined of our concepts (the domain of "descriptive" metaphysics), surrounded by a penumbra of relatively refined concepts which are subject to change (the domain of traditional or "revisionary" metaphysics). Not surprisingly, Strawson acknowledges his "great indebtedness to . . . Professor H.L.A. Hart" in the Preface at 3.

“core” comprises primary and secondary “causes”: the former involve instances of impact upon the environment that can be expressed through simple transitive verbs; the latter involve the causing of primary causes.⁷³

This seems to indicate that “C1 caused P’s blindness,” an example of a secondary change,⁷⁴ forms part of the “core.” Yet it could plausibly be argued that this causal statement is “penumbral” in the model. For example, C1 might have provided an opportunity for P to make himself blind, and opportunities, along with explanations, reasons and generalizations are in the penumbra. Hart and Honoré admit that “mixed and borderline cases” distort the model,⁷⁵ but insist that a “core” remains distinguishable and that the imposition of liability is a function of the particular usage of the term “cause” that is appropriate in a particular case. The taxonomy that occupies most of Hart and Honoré’s book is primarily illustrative of the *legal* uses of “cause,” which are determinative in the liability decision.

This taxonomy is of little practical use without a set of legal tests to determine whether there is “cause in fact” in any particular case. Hart and Honoré’s “core” test for causation can best be understood by envisaging two intersecting circles: one labelled ‘but for’ and the other labelled ‘cause.’ The common law has traditionally made use of the “but for” test for causation.⁷⁶ This is a counterfactual test which states that event x is not regarded as the cause of event y if y would have occurred in the absence of x. For example, the causal relation in *CASE 1* might be expressed as follows: “if P’s blindness would not have occurred but for D1 being an aberration, and if D1 would not have been an aberration but for C1, then C1 caused P’s blindness.”

In that part of the ‘but for’ circle not intersecting with the ‘cause’ circle are analytical connections devoid of factual information and “‘incidental’” connections.⁷⁷ Hart and Honoré do not view these connections

⁷³ *Supra*, note 12 at 28-29.

⁷⁴ “D1 caused P’s blindness” and “C1 caused D1” also exemplify secondary changes, since we cannot link P’s blindness and D1, or D1 and C1 by transitive verbs that would express anything more than a tautologous causal relationship (as would ‘blinded’).

⁷⁵ *Supra*, note 12 at 57-59.

⁷⁶ See, for example, Denning L.J.’s formulation in *Cork v. Kirby Maclean*, [1952] 2 All E.R. 402. One of the problems with using a counterfactual test in a legal context is that proof in law — in contrast to proof in science — deals with actual rather than hypothetical events. See *supra*, note 49 and accompanying text, and Samuel Gorovitz, “Causal Judgments and Causal Explanations” (1965) 62 J. Phil. 695 at 709f. See also Thode, “The Indefensible Use of the Hypothetical Case to Determine Cause in Fact” (1968) 46 Texas L. Rev. 423, and the following comment in *Allen, supra*, note 18 at 412 fn. 155: “Use of any kind of ‘but-for’ analysis . . . to determine factual causation is problematical at best; where likely ‘causes’ co-exist, it is wholly inadequate to the task.”

⁷⁷ *Supra*, note 12 at 114-21. Cf. N.K. Smith, ed., *Immanuel Kant’s Critique of Pure Reason* (London: Macmillan, 1976) at 48ff.

as causes, and they find fault with judges who disregard the fact that analytic connections are “logically entailed by the description of the event with which we start and whose cause we may seek.”⁷⁸ An example of the connections that they regard as analytic is that between any assertion about a person and the fact that she or he was born. Thus they argue that there is no place for an injured person’s birth in the set of possible causes of that person’s injury.

Nevertheless, Hart and Honoré provide no means of determining what counts as an analytical connection and what does not, in the description of any event whose cause we wish to determine. They appear to regard both the existence and the truth of analytic connections to be self-evident. The description of a plaintiff’s injury logically entails a defendant’s action just as much as it entails the fact that the plaintiff was born. If the realm of analytic connections is broadened in this way, then Hart and Honoré’s position that these connections are without factual content implies that all causal statements are without such content.⁷⁹ Similarly, the very purpose of the “but for” test is to distinguish relevant from “incidental” connections: it is singularly unhelpful to be told that there are “incidental” connections that pass the “but for” test but are not relevant connections.

In Hart and Honoré’s model, that part of the ‘cause’ circle not intersecting with the ‘but for’ circle contains reasons, opportunities, omissions, and additional causes. Since *CASE 2* through *CASE 10* involve multiple causation, the ‘but for’ label is irrelevant to these in the Hart and Honoré model. The model suggests that the “core” test for causation is located in the intersection of the ‘cause’ circle with the ‘but for’ circle. Within this intersection there are three types of necessary condition:⁸⁰ first, a condition that is a necessary element of a set of conditions jointly sufficient for the consequence; second, a condition that is a necessary element of every set of conditions jointly sufficient for the consequence; and third, a condition that is a necessary element of every set of conditions jointly sufficient for the consequence, but *not necessary on the particular occasion* of that consequence.

Hart and Honoré’s example of the first type of necessary condition is the action of throwing a lighted cigarette into a waste-paper basket. This acton is both a *sine qua non* for, and causally relevant to, the ensuing fire. Hence this first condition might be regarded as Hart and Honoré’s

⁷⁸ *Supra*, note 12 at 115.

⁷⁹ See *infra*, Part IV.A.2, where it is argued that all causal statements may be viewed as analytic.

⁸⁰ *Supra*, note 12 at 112-13.

“core” sense of causation. Their example of the second type of condition is the presence of oxygen, where the context of the fire does not render this presence abnormal. This is a mere condition which is usually causally irrelevant. In contrast, the presence of oxygen in a factory where the manufacturing process requires the exclusion of oxygen is more than a mere condition,⁸¹ but still appears to fall within the second of their three categories of necessary condition. Since they cannot provide a basis for distinguishing between the first two types of condition (apart from a case by case contextual explanation), they are unable to define what they mean by “causal relevance.”

Yet it is the difficulty of distinguishing the first from the third type of necessary condition that more clearly undermines Hart and Honoré’s model of causation. They illustrate the third type by describing a situation where two people, each holding a lighted candle, simultaneously approach escaping gas. Here Hart and Honoré recognise that “the normal assumption that on any given occasion only one sufficient cause is present may break down.”⁸² They dispose of this problem, however, with these rather peculiar words:

*But if, as we ordinarily assume, for every such event there is present on any given occasion one and only one independent set of conditions sufficient to produce it, then every member of this set will be necessary on that occasion for the occurrence of the event and hence a condition sine qua non of it*⁸³ (emphasis partly added).

Why would we ordinarily make this assumption? In *CASE 2* through *CASE 10*, more than one necessary element of a sufficient set is explicitly presented; in *CASE 1*, as pointed out above, alternative sets are implied. Indeed, if all causation is multiple causation, then the first type of necessary condition is transformed into the third, the “core” becomes the penumbra, and Hart and Honoré’s model is turned inside out.

In setting up their model on the middle ground between the causal maximalists and minimalists, Hart and Honoré attempt to avoid both the formalist’s claim that legal causation can be isolated and insulated from impurities alien to the world of unadulterated fact, and the realist’s view that “cause in fact” is somehow informed by science or morality. Thus three general propositions appear to underlie the Hart and Honoré model: (a) that legal causation is grounded in the ordinary person’s ordinary use of language;⁸⁴ (b) that scientific and philosophical models of causation are irrelevant to the causal problems of the lawyer and

⁸¹ See *supra*, note 12 at 11-13 and 34-41.

⁸² *Supra*, note 12 at 113.

⁸³ *Ibid.*

⁸⁴ *Ibid.* esp. Preface and ch. II.

the historian;⁸⁵ and (c) that legal causation can be bifurcated into factual and policy components, and that questions of value have no bearing on the former.⁸⁶

These three propositions cannot stand together. As was pointed out in criticism of the first edition of *Causation in the Law*,⁸⁷ the ordinary person's use of 'cause' invariably fuses fact and moral sentiment.⁸⁸ Hart and Honoré view "moral blame" theories of causation as useful in throwing "salutary light . . . on those dark corners where the vagueness inherent in the concept of cause logically permits a decision either way."⁸⁹ The incompatibility of the first and third propositions set out above is exacerbated by the second, as the same critic goes on to suggest: "enlightened common-sense causal appraisal, which is based on experience of an inductive character, can never be far removed from science if it is to attempt to avoid being infected by non-causal considerations."⁹⁰ Hart and Honoré's separation of ordinary language from science arises directly out of a linguistic philosophy which, they admit, is a relic of "the philosophy of the fifties, [and] has since become absorbed into a wider conception of philosophy."⁹¹

⁸⁵ *Ibid.* esp. at 9-13.

⁸⁶ *Ibid.* esp. ch. V.

⁸⁷ *Supra*, note 71.

⁸⁸ H. Fain, "Hart and Honoré on Causation in the Law" (1966) 9 *Inquiry* 322 at 335. Surprisingly, most responses to the first edition had little to say about the incompatibility of the three propositions identified in the text accompanying notes 84, 85, and 86, *supra*. See, for example, R.D. Childres, "Review" (1961) 32 *Mississippi L.J.* 222; L.K. Cooperider, "Review" (1960) 58 *Michigan L.R.* 951; M.P. Golding, "Causation in the Law" (1961) 59 *J. Phil.* 85; R. Hancock, "Review?" (1961) 6 *Natural L. Forum* 143; Newark, *supra*, note 71; and M. White, "Review" (1960) 60 *Colum. L. Rev.* 1058. If critical at all, commentators took issue with the application of Hart and Honoré's principles to particular cases. See, for example, J.H. Mansfield, "Comment" (1964), 17 *Vand. L. Rev.* 487.

⁸⁹ *Supra*, note 12 at 299-300.

⁹⁰ Fain, *supra*, note 88 at 337. But *cf.* a philosophical perspective in S. Gorovitz, *supra*, note 76 at 709-10:

Philosophers of history have often argued that historians, unlike scientists, are concerned with unique events and thus seek a different sort of explanation. The untenability of any such distinction has been amply enough demonstrated; every event is unique, and every event is an instance of a type about which generalizations may be made or sought. But perhaps a case can be made out all the same for the view that historical explanation differs from scientific explanation. If the historian is at least in part concerned with finding the cause of an event and if we view that concern as a desire for differentiation from a particular standard or class of standards that is limited in some specific way, then the historian can quite legitimately be satisfied with explanations that do not meet Hempel's [scientific explanation] standards.

⁹¹ *Supra*, note 12 at xxxiv. The "wider conception" to which Hart and Honoré allude was already set out well before publication of the first edition of *Causation in the Law*. See W.V.O. Quine, *From a Logical Point of View* (Cambridge: Harvard University Press, 1953), which presented an extensive argument why sense data, language, science, and philosophy were integrated into a single "web of belief."

The most fundamental reason why Hart and Honoré's analysis fails to provide a compelling account of causation is that it is rooted in a highly dubious ontology:

The idea that individuals are primarily responsible for the harm *which their actions are sufficient to produce* without the intervention of others or of extraordinary natural events is important, not merely to law and morality, but to the preservation of something else of great moment in human life. This is the individual's sense of himself as a separate person whose character is manifested in such actions. . . . If we had to share the authorship of such changes with numerous prior agents, of whom it could be said that, had they not acted as they did, we should not have been able to bring about the change, we could no longer think of ourselves as separate authors in the way we now do. . . . For . . . there would be nothing that we could unequivocally claim to be *our doing*.⁹² (emphasis partly added)

An attack on the ethical consequences flowing from this argument is beyond the scope of this article; it is appropriate, however, to point out two even more basic problems with the view expressed in the above remarks.

First, having heard causation described by Hart and Honoré in terms of the three types of necessary condition outlined above, it is rather strange to hear them speak of individuals' actions being "*sufficient to produce*" a particular harm. There are two possible senses in which Hart and Honoré may wish this claim to be understood. Clearly it does not stand up as a *descriptive* statement about the world. Hart and Honoré's extensive taxonomy of multiple causation cases like *CASE 2* through *CASE 10* above would be completely redundant if the actions of the individual defendants within them could be said to be "*sufficient to produce*" the harms these cases describe. Even an extreme causal maximalist admits that "*few if any acts are sufficient by themselves to produce any particular consequence.*"⁹³

Perhaps Hart and Honoré hope in the above passage to *prescribe* an ontology which — if widely held — would generate good social behaviour. This raises the second problem. If their belief in something "*we could unequivocally claim to be our doing*" is wishful thinking rather than an expression of their understanding of how the world works, then it appears that Hart and Honoré are grounding their descriptive account of causation in a body of evaluative considerations.

In short, the first problem suggests that Hart and Honoré have failed to escape the absolutism of causal maximalism (indeed, talk of *sufficient* causes goes beyond the maximalist position), while the second problem indicates that they are drawing on the methods of causal minimalism.

⁹² *Supra*, note 12 at lxxx-lxxxii.

⁹³ *Supra*, note 14 at 1776. *Cf.* text accompanying *infra* notes 126-29.

In attempting to defend their title to the middle ground between maximalism and minimalism, they embrace the weaknesses of both these approaches.⁹⁴ Hart and Honoré's linguistic approach may provide a useful analytical path, but must be integrated within, not cut off from, the surrounding countryside that they call a "wider conception of philosophy."⁹⁵ Before this path is explored, the two positions that Hart and Honoré seek to avoid are outlined.

B. Causal Maximalism

The idea that "cause in fact" questions can be shaved clean of all "non-objective," "non-factual" considerations is embedded in the structure of legal talk and education.⁹⁶ It has been pointed out that by separating the "factual" and "legal" functions in the adjudication of a negligence case, "the doctrinal framework of the negligence system becomes a device for allocating power," and entrenches the notion that these two functions can be conceptually separated.⁹⁷ Perhaps it is not surprising that contemporary legal theorists — in the face of an onslaught by philosophers of social and natural science insisting that all fact is "theory laden"⁹⁸ — continue to cling to a maximalist position.

Richard A. Epstein endeavors to shave all "non-factual" considerations from his strict liability regime by establishing four paradigms that capture the "ordinary usage" of 'cause' and are wholly determinative of which party should bear the loss.⁹⁹ While social and cultural interpretive schemes render the pure factuality of the "easy" paradigms questionable,¹⁰⁰ the difficulty with Epstein's fourth paradigm is evident from *CASE I*. Where do we draw the line with regard to C1 creating a "dangerous"

⁹⁴ Cf. Fish's criticism of Dworkin, *supra*, note 6.

⁹⁵ See *supra*, note 91.

⁹⁶ See, for example, Fleming, *supra*, note 42, ch. 9 (s. 2 deals with "cause-in-fact" prior to delving into other causal issues); Prosser, *supra*, note 42, ch. 7 (s. 41 deals with "causation in fact" separately from "proximate cause"); C.A. Wright and A.M. Linden, *Canadian Tort Law: Cases, Notes and Materials* (Toronto: Butterworths, 1980), chs. 8 and 9 ("causation" is treated in a totally separate chapter from "proximate cause").

⁹⁷ R.L. Rabin, *Perspectives on Tort Law* (Boston and Toronto: Little, Brown and Company, 1983) at 82.

⁹⁸ See, for example, P.K. Feyerabend, "On the 'Meaning' of Scientific Terms," 66 *J. Phil.* 266; I. Lakatos & A. Musgrave, *Criticism and the Growth of Knowledge* (Cambridge: Cambridge Univ. Press, 1970); T.S. Kuhn, *The Structure of Scientific Revolutions*, 2d ed., (Chicago: Univ. of Chicago Press, 1975); Quine, *supra*, note 91 and W.V.O. Quine, *Word and Object* (Massachusetts: M.I.T. Press, 1969).

⁹⁹ See *supra*, note 11. Epstein's four paradigms are "A hit B," "A frightened B," "A compelled B to hit C," and "A created the dangerous condition that resulted in harm to B."

¹⁰⁰ Consider how the meanings of 'hit,' 'frighten,' and 'compel' vary among different linguistic communities. See *infra*, notes 201-202 and accompanying text.

situation: at conclusive proof that C1 omitted Y from D1, at C1 using X at all, or at C1 being in the business of making D1? Clearly such determinations are evaluative.

1. Taking Wrights Seriously

In 1948, Dean C.A. Wright wrote: "Cause and effect are pure questions of fact. Did the defendant's conduct cause the injury . . .? In not one case in a thousand is there any question that it did."¹⁰¹ Richard W. Wright is still trying to support essentially the same claim.¹⁰² At first glance, his view of causation appears to be simple, logical, and unassailable. His argument runs as follows. In everyday situations, the "but for" test is a workable proxy for determining causal relationships. In situations like *CASE 2* through *CASE 10*, however — which Wright would call cases of "duplicative" and "preemptive" causation¹⁰³ — a more "subtle and complex" approach is required.¹⁰⁴ This approach defines the cause of an event not as a necessary condition for the event's occurrence but as a necessary element of a set of antecedent actual conditions that was itself sufficient for the event's occurrence. Wright calls this the NESS test and sees himself picking it up where Hart and Honoré left it, "submerged and weakened by their attempt to treat the tortious-conduct and proximate-cause inquiries as part of the causal inquiry."¹⁰⁵

Wright develops his version of the NESS test to deal with cases of "overdetermined causation,"¹⁰⁶ which the "but for" test is unable to explain.¹⁰⁷ Wright believes that the "but for" test works "in the vast majority of cases,"¹⁰⁸ although he mentions¹⁰⁹ the problem with the nature of counterfactual inquiries which J.G. Fleming described as follows:

Another problem is that the hypothetical inquiry . . . frequently fails to elicit a confident answer, being a matter of conjecture rather than capable of direct proof. Though factual in the sense of dependent on the evidence available, it offers a certain latitude which may occasionally be exploited by judge or jury to introduce

¹⁰¹ C.A. Wright, "The Law of Torts: 1923-1947" (1948) 26 Can. Bar Rev. 46 at 58.

¹⁰² *Supra*, note 14.

¹⁰³ *Ibid.* at 1775-77.

¹⁰⁴ *Ibid.* at 1792. It is ironic that Wright contrasts his approach with Newtonian mechanics and aligns it with the theory of relativity and quantum mechanics. See *infra*, note 184.

¹⁰⁵ *Ibid.* at 1740.

¹⁰⁶ *Ibid.* at 1775. Wright considers two types of "overdetermined causation": "preemptive causation" where an intervening cause renders a prior "cause" impotent, and "duplicative causation" where a concurrent cause renders another cause unnecessary.

¹⁰⁷ See *supra*, note 76 and accompanying text.

¹⁰⁸ *Supra*, note 14 at 1775 and 1805. *Cf. infra*, note 184.

¹⁰⁹ *Ibid.* at 1776 and 1804-07.

policy views into what is ordinarily regarded as a purely factual issue (footnote omitted).¹¹⁰

Wright nevertheless argues that counterfactual analysis can be insulated from value judgments. He appears to recognize two stages in the counterfactual inquiry at which such insulation is required. First, in "setting up the counterfactual situation," a judge may be thought to require non-factual criteria of inclusion or exclusion.¹¹¹ Wright narrows the "setting-up" process to changing "*only* the tortious condition,"¹¹² implying that this involves purely factual considerations. Yet he ignores in this context what he argues elsewhere:¹¹³ that specification of the "tortious condition" itself involves considerations of legal policy. If specifying the "tortious condition" is not purely factual, how can changing it be purely factual?

The second stage at which Wright senses a possible onslaught by non-factual considerations on the counterfactual inquiry is in determining "the hypothetical consequences of that change."¹¹⁴ Wright shrugs off this problem with these words:

. . . in most cases there is little difficulty, for example, when the change is removing the *explosive character of a substance or the act of firing a gun*. The analysis becomes more complicated when *human reactions* to the changed situation must be estimated. Again, however, the analysis is usually *fairly easy and not too speculative* (emphasis added).¹¹⁵

Are the "fairly easy and not too speculative" cases susceptible to non-factual counterfactual inquiries or does Wright view speculation as a factual enterprise? Does Wright view the breakdown of human immune systems as part of "human reactions," and how would he factually estimate such variables? Wright's focus on explosives and guns trivializes the nature of counterfactual inquiries. It also fails to insulate these inquiries from evaluative considerations. Counterfactual causal inquiries counter the possibility of factual causal inquiries.

2. Where Wright Goes Wrong

The three stage model of causal inquiry proposed by Wright has intuitive appeal: first, all "non-tortious possible causes" are eliminated;

¹¹⁰ See Fleming, *supra*, note 42 at 172.

¹¹¹ See R.H. Cole, "Windfall and Probability: a Study of 'Cause' in Negligence Law" (1964) 52 Cal. L. Rev. 459 at 769-71.

¹¹² *Supra*, note 14 at 1806.

¹¹³ *Ibid.* at 1741-58.

¹¹⁴ *Ibid.* at 1806.

¹¹⁵ *Ibid.*

second, the NESS test is applied to determine “actual causation”; and finally, “reasons of policy or principle” are considered to decide legal responsibility.¹¹⁶ This model is, however, susceptible to a number of attacks. The separation of the first and third steps is artificial. Wright’s enthusiasm about the “power” of the first step¹¹⁷ — although barely recognized in the literature on causation in tort law¹¹⁸ — compels us to distinguish the sort of policy considerations relevant to step one from those relevant to step three. Wright’s intimation that step one eliminates “non-tortious possible causes” is revealing: step one presupposes that the “causes” have already been determined. It may be argued that Wright is only talking about “possible causes” prior to step two, but this does not break the circularity: to identify a “possible cause” is to engage at least partially in the sort of causal determination that Wright includes under step two. In criticizing Hart and Honoré for conflating steps one and three¹¹⁹ Wright fails to show why we should not collapse all three steps, as would Malone.¹²⁰

The major weakness in Wright’s analysis, however, is the NESS test he prescribes for step two, which he inaccurately claims “incorporates the traditional Humean philosophic account of the meaning of causation, as modified by John Stuart Mill.”¹²¹ Hume wholly rejected the idea of necessary connection in the external world,¹²² and anyway, why is Wright interested in Hume’s account when he asserts that “both lawyers and philosophers often conclude that this scientific or philosophic concept of causation is of little relevance or use in the law”?¹²³ Hart and Honoré understand Hume’s view of necessity, noting that it “comes nearer [than the Humean concern with whether some events occur with or without a cause], *though not very near*, to the problems of the lawyer”¹²⁴ (emphasis added). They therefore use this definition as a backdrop against which to develop their analysis of necessity which they find at the “core” of

¹¹⁶ *Ibid.* at 1744.

¹¹⁷ *Ibid.* at 1771-74.

¹¹⁸ *Ibid.* at 1766-67.

¹¹⁹ *Ibid.* at 1745.

¹²⁰ *Ibid.* at 1742-45 and 1807-13. See Part III.C.1.

¹²¹ *Supra*, note 14 at 1774.

¹²² See, for example, D. Hume, *A Treatise of Human Nature*, ed. by L.A. Selby-Bigge (Oxford: Clarendon, 1967) at 172:

If we define a cause to be *an object precedent and contiguous to another, and where all the objects resembling the former are plac'd in like relation of priority and contiguity to those objects, that resemble the latter*, we may easily conceive, that there is no absolute nor metaphysical necessity . . . (emphasis in source)

¹²³ *Supra*, note 14 at 1776.

¹²⁴ *Supra*, note 12 at 14. Malone observed that the “but for” test was “discredited . . . by David Hume.” *Supra*, note 70 at 67.

“ordinary causal language.”¹²⁵ Wright ignores the linguistic guideposts of Hart and Honoré’s account, and, in pursuit of a purely factual account of causation, falls headlong into the trap exposed by Hume over two centuries ago.

The NESS test is advanced by Wright as the solution to the sorts of problems presented by *CASE 2* through *CASE 10* above. For example, if D1 is a necessary element of a set of conditions sufficient for the occurrence of P’s blindness in *CASE 4* and *CASE 5*, then D1 is a cause of P’s blindness under the NESS test, regardless of whether D2 in *CASE 4*, or the left-over D in the jar in *CASE 5* also satisfy the test. Wright finds Hart and Honoré’s view of the NESS test too restrictive.¹²⁶ Whereas they would require proof that D1 be sufficient by itself, Wright points to the court’s requirement in *Anderson*¹²⁷ and *Corey*¹²⁸ that the plaintiff show only that the factor contributed to the injury. The question that the NESS test does not address is how this “contribution” is to be determined. Wright insists that this involves a “factual” determination: “Although our judging and evaluating faculties are involved here, the inquiry is a factual one in which we judge or evaluate on the basis of empirically derived causal generalizations that are independent from and not affected by the purpose of the particular causal inquiry.”¹²⁹

If Wright is implying here that he believes “factual” inquiries involve values, then his entire argument is meaningless. On the other hand, if Wright views “factual” inquiries as untouched by values, it is not clear how “our judging and evaluative faculties” can be involved therein. Judgment and evaluation by definition presume the existence of criteria (either rational or intuitive) for selecting and comparing pieces of evidence. In *CASE 4* and *CASE 5*, for instance, a determination of what happens to the D in the jar is entirely dependent on a choice between competing theories of chemistry.

Wright’s quoted assertion regarding the factual nature of the inquiry into “contribution” is accompanied by the following footnote: “Although there are undertones of epistemological skepticism in this portion of Malone’s article, I do not believe that he is arguing that there are no real facts, or that we cannot perceive or agree on the existence of any facts because of our subjective filtering of sense data.”¹³⁰ Having failed

¹²⁵ *Supra*, note 12 at xlvi and ch. V. See also *supra*, Part III.A.

¹²⁶ *Supra*, note 14 at 1791-92.

¹²⁷ *Supra*, note 40.

¹²⁸ *Supra*, note 39.

¹²⁹ *Supra*, note 14 at 1808-09.

¹³⁰ *Ibid.* at 1809 fn. 308. The reference to Malone’s article is to *supra*, note 70 at 65.

to explain what a purely factual determination would involve, Wright resorts here to a statement of faith in "real facts" and a warning that questioning such faith is a sure route to an underworld of "epistemological skepticism."

Wright's argument is built around a paradox. Although he admits that "the notion of necessity is fundamental to the concept of causation,"¹³¹ the purpose of his NESS test is to avoid requiring proof of necessity (demanded under the primitive "but for" test) for proof of causation. The NESS test, however, requires proof that the "element of the sufficient set" is itself necessary. This necessity is hardly easier to establish than that demanded under the "but for" test. Without the *construct* of the "sufficient set" interposed between the cause in question and its alleged effect, the other elements of this "set" might be viewed as intervening, concurrent, or other antecedent causes, and peeled away, leaving the cause in question standing alone again. Ultimately, therefore, proof is still required of the necessary connection between cause and effect that Hume rejected. Wright's confusion is illustrated by the following paragraph:

The causal question is not simply "What happened?" but rather "*How* did it happen?" Since Hume, it has generally been accepted that there is no inherent causal force or quality in objects which can be directly observed. We observe only certain successions of events and conditions, and we infer a causal relation in a particular succession if we believe that it instantiates an accepted causal law or generalization. Causal generalizations, in turn, incorporate the notion of necessary conditions. Thus, as legal and nonlegal philosophers have noted, the necessary condition criterion and its implicit counterfactual assertions are part of the very meaning of causation.¹³²

This passage makes complete sense until its penultimate sentence. Indeed, the last two sentences completely contradict what goes before. How can "causal generalizations . . . incorporate the notion of *necessary* conditions" when we have to "*infer* a causal relation" where "*we believe*" such a generalization is instantiated?

Trying to establish necessary connections, apart from its lack of philosophical support, is highly problematic. Unless we embrace a deterministic vision of the world,¹³³ we must admit that as we look forward

¹³¹ *Ibid.* at 1803.

¹³² *Ibid.* at 1803-04.

¹³³ *Cf.* Lansing *supra*, note 1 at 31. The literature on determinism is voluminous, most philosophers fighting for the middle ground between absolute free will and absolute determinism. An account in the same tradition as Hart and Honoré's "ordinary language" approach is J.L. Austin's "Ifs and Cans," Proceedings of the British Academy, 1956. Perhaps the problem with determinism is most cogently summed up in the old limerick:

There was a young man who said: "Damn!
It grieves me to think that I am
Predestined to move
In a circumscribed groove
In fact, not a bus, but a tram."

everything is possible. If any “effect” could flow from a given “cause,” no particular effect flows *necessarily* from that “cause.” The lawyer may say that this is irrelevant because she or he has the benefit of hindsight; but this itself is a contingent phenomenon, and does not make the causal link more necessary. Once it is accepted that there is no necessary “cause in fact” it is difficult to see how “cause in fact” is possible at all.

3. Wright on Risk

The final part of Wright’s article deals with problems on what he calls “the frontiers of tort liability.”¹³⁴ His analysis here is particularly instructive, as it requires him to venture out into territory where the impossibility of a purely factual account of causation is most blatant. It also reveals him in a desperate effort to shield such an account from the obvious implications of the sort of causal situations described in Part II.A above.

Wright begins by considering cases where a plaintiff can prove that the defendant’s conduct increased the risk of the occurrence of injury or reduced the chance of avoidance of the injury. He argues that the question of protecting the plaintiff’s interest in not being exposed to any particular risk¹³⁵ or in having the chance to avoid injury from such a risk¹³⁶ is a matter of legal policy. Once this issue has been settled, the purely factual question of the impact of the defendant’s conduct on the plaintiff’s legally protected interest must be addressed.

A little scrutiny, however, indicates that this argument is far from compelling. What is involved in determining the impact of a hazard on a harm? Wright speaks of whether the hazard “more likely than not” contributed to the harm.¹³⁷ Yet the only way to assess the hazard’s contribution is by examining the hazard and the harm: the causal connection is not external to what it connects.¹³⁸ The decision of what evidence about the hazard and the harm is relevant to the “contribution” involves a process of selection, which in turn requires a set of evaluative criteria. In short, the factuality of the second issue in Wright’s increased-

¹³⁴ *Supra*, note 14 at 1813-26.

¹³⁵ *Ibid.* at 1814. Wright does not explicitly explain the increased-risk cases in this way, but implies that their treatment is similar to that of the reduced-chance cases. Wright no doubt dismisses the increased-risk cases so summarily because he believes that their factual dimension is obvious. It is far from clear, however, that judgments like *McGhee v. National Coal Board* (*infra*, note 149) — which Wright regards as illustrative of the increased-risk causal determinations (Wright, *ibid.* at fn. 336) — can be said to involve any factual inquiries at all. See *infra*, Part III. C.2.

¹³⁶ Wright, *ibid.* at 1815.

¹³⁷ *Ibid.* at 1814.

¹³⁸ See *supra*, Part II.A.

risk and reduced-chance cases is an illusion because evidence cannot be selected on the basis of pure facts alone.

Wright distinguishes increased-risk and reduced-chance cases from what he calls alternative-causation cases. The former sorts of cases are not different in kind from — and cannot be insulated from the problems of — the latter. Interestingly, the distinction is collapsed in Wright's resolution of the decisions in the alternative-causation cases.¹³⁹ Wright is bothered by the imposition of liability in the DES cases¹⁴⁰ on the basis of causation of a certain proportion of injuries, particularly because a proration of the damages among the defendants who happen to be joined results in “. . . only a very rough correlation between *the injuries actually caused in the aggregate by a particular firm* and those for which it is held liable under the probabilistic market-share approach”¹⁴¹ (emphasis added).

Wright's move is to view these cases as imposing liability for “a new legal injury: tortious exposure to a risk that possibly led to a subsequent injury.”¹⁴² Presumably Wright sees room for two “cause in fact” determinations here: did the defendant cause the risk-exposure and did the risk-exposure possibly lead to the injury? This shows the internal nature of causation even more clearly than the increased-risk and reduced-chance cases. Moreover, the need for evaluative considerations in examining the hazard and harm is just as pressing here. Wright's attempt to forestall the entry of probability into his realm of pure “cause in fact” actually facilitates this entry via the new tort he creates. We now need probability not only to resolve whether a particular hazard caused a particular harm; the terms ‘risk-exposure’ and ‘possibly lead’ each clearly import an explicit use of probability into causal determinations.

Wright concludes his discussion of risk with some comments on the distinction between plausible “causal explanations” and “mere probabilistic statements.”¹⁴³ He views probabilistic statements based on causal generalizations as helpful in adjudicating among rival causal explanations, although he refuses to allow the former to replace the latter. “Naked statistical data,” on the other hand, have no place at all in Wright's causal determinations.¹⁴⁴ What appears to distinguish admissible prob-

¹³⁹ *Supra*, note 14 at 1820 fn. 353.

¹⁴⁰ Wright deals in particular with *Sindell v. Abbott Labs* (1980), 26 Cal. 3d 588 (Cal. S.C.) *cert. denied* (1980), 449 U.S. 912.

¹⁴¹ *Supra*, note 14 at 1819.

¹⁴² *Ibid.* at 1819-20.

¹⁴³ *Ibid.* at 1821-26.

¹⁴⁴ This is Wright's general thesis on pure statistical data whose usefulness, he believes, is confined to mere betting. Wright admits, however, that statistical evidence may be the basis for a causal determination where it “is so compelling that it precludes any possible alternative explanation.” *Ibid.* at 1826.

abilistic statements from inadmissible statistical data is the association of the former with “particularistic evidence” that supplies the “attributive element” Wright believes is essential to causation.

In the Chernobyl example, “particularistic evidence” would arise out of our ability to track particles of iodine-131 from the nuclear reactor to the skies above Chernobyl, or to rainwater in Ottawa. An example of “naked statistical data” might be the number of particles of iodine-131 emitted by the reactor per second as compared with background levels of the substance in the various locations under consideration. Yet the “particularistic evidence” could conceivably depend upon statistical evidence. While Wright rejects the view that “all evidence, whether it is ‘particularistic’ empirical data or pure statistics, is ultimately probabilistic,”¹⁴⁵ he provides no account of what evidence devoid of probabilistic content would look like, or how it would be gathered.

Wright’s argument for the essentiality of an “attributive element” in causal explanations is ultimately reducible to his normative preoccupation with a system of liability “based on individual responsibility.”¹⁴⁶ A probabilistic view of causation threatens to blur the bounds of individual responsibility by attributing causation to wider segments of the community, or even the community as a whole. Yet it is ironic that the maximalist Wright should base his treatment of causation on the very evaluative considerations he wants to shield that treatment from. A further irony is that the probabilistic approach he seeks to avoid may be viewed, not as a form of causal minimalism, but as a prime challenger to the NESS test’s title as the dominant account of causal maximalism.¹⁴⁷ However probability is characterized, it considerably reduces the distance between causal maximalism and minimalism.

C. Causal Minimalism

Dissatisfaction with the myth that causation can be separated into fact and policy components is not confined to radical legal policy theorists: no less a bastion of formalism than the House of Lords did “violence

¹⁴⁵ *Ibid.* at 1822.

¹⁴⁶ *Ibid.* at 1822 and 1827.

¹⁴⁷ Hart and Honoré argue that Calabresi’s probabilistic theory of causation (see Calabresi, *infra*, note 169) while it may *appear* to differ from the minimalist approach of the other law and economics theorists, is essentially a form of causal minimalism. *Supra*, note 12 at lxxi-lxxiii. While a probability theorist may be a utilitarian, however, he may not want to deny the pure factuality of probability (though of course there might be no such thing as purely factual probability); thus, a probability theorist may at least aspire to causal maximalism.

to this neat bifurcation”¹⁴⁸ in the *McGhee* decision.¹⁴⁹ Although the defendant’s employee could not show that his dermatitis would not have occurred “but for” the absence of showering facilities at his place of employment, it was held that the causation requirement was met. This result was reached by applying tests of “increased risk” and “material contribution.”¹⁵⁰ These relative tests were formulated in response to cases where the “but for” test appeared clearly inappropriate to the courts concerned. Leon Green insisted that such tests are factual, but somehow cannot be further analyzed.¹⁵¹ Yet these tests also reflect the willingness of the courts to explicitly introduce “non-factual” considerations into the making of causal decisions. As Judge Learned Hand put it: “the single tortfeasor cannot be allowed to escape through the meshes of a logical net. He is a wrongdoer; let him unravel the casuistries resulting from his wrong.”¹⁵²

The crucial difference between the “but for” test or the NESS test, on one hand, and the “increased risk” test, “material contribution” test or “substantial factor” test, on the other, is linguistic. Under the former tests, which are absolute, the causal universe in *CASE 1* comprises two discrete compartments — ‘D is a cause’ and ‘D is not a cause’ — and it is a logical impossibility for D to be in both or neither compartment. The latter tests are relative: the language of *McGhee* and Green implies a continuum running between ‘D is a cause’ and ‘D is not a cause.’ Of course, relative tests are open to the attack that their terms are indefinable and their results indeterminable.¹⁵³ Green’s response would not be to provide a precise definition of the terms in his test, nor a set of rules for the determination of particular cases, but rather to say that if this criticism is true of causation, it is also true of (but does not and should not prevent us from applying) other legal tests.¹⁵⁴

¹⁴⁸ See Weinrib, *supra*, note 34 at 529.

¹⁴⁹ *McGhee v. National Coal Board*, [1972] 3 All E.R. 1008 (H.L.).

¹⁵⁰ These tests are similar to the “substantial factor” test in *Bonnington Castings v. Wardlaw*, [1956] 1 All E.R. 615 (H.L.).

¹⁵¹ See L. Green, “The Causal Relation Issue in Negligence Law” (1962) 60 Mich. L. Rev. 543. Wright points out that this is the position of the later Green; in his earlier writings Green viewed the “substantial factor” formula as the repository of substantive causal content. See *supra*, note 14 at 1784.

¹⁵² *Navigazione Libera T.S.A. v. Newton Creek Towing Co.* (1938), 98 F.2d 694 at 697 (2d Cir.).

¹⁵³ See, for example, Hart and Honoré, *supra*, note 12, ch. IV, on L. Green’s “modern approach.” See also Lansing, *supra*, note 1 at 16: “that substantial factor test leads to *mu* . . . Japanese word meaning roughly ‘not answerable’ — neither yes, nor no.”

¹⁵⁴ Green gives the example of “reasonableness” tests. See *supra*, note 151 at 570-71.

1. The Pervasiveness of Evaluative Considerations

Wex S. Malone appears to bridge the gap between the “absolute” and “relative” approaches by arguing that “factual” causation is susceptible to considerations of legal policy. Recognising the failure of the “but for” test to “afford even an approximate expression of the minimal requirement for imposing legal liability,” Malone says it “has a marked peculiarity which recommends it strongly for legal usage . . . it is not self-executing.”¹⁵⁵ In Malone’s view, the judge brings evaluative faculties to bear in first-order “conjecture” and — given the procedural devices of nonsuits, directed verdicts, and appeals — in second-order “conjecture upon the very process of conjecture itself.”¹⁵⁶

In this process of conduct valuation, Malone finds language a very effective tool. Whereas Hart and Honoré view language as given — a starting point for judges, lawyers, and legal theorists — Malone’s model of judicial decision-making accords language the status of co-conspirator with the judge, lawyer, and legal theorist who seek a legal formula in which to express a policy-based decision:

The permissible range for conjecture is unlimited. We can never be absolutely certain that our estimate is correct. The point at which we might be satisfied can be expressed in many ways, such as “barely possible,” “possible,” “not unlikely,” “as possible as not,” “probable,” “highly probable,” or “virtually certain.” *Language is very rich for this purpose and demands but a minimum of commitment on our part.*¹⁵⁷ (emphasis added)

Malone, unlike Hart and Honoré and Wright, recognises that “cause itself is not a fact and must necessarily be an inference drawn from data . . .,”¹⁵⁸ and that the process of drawing this inference is informed by the “paradigm” of the judge.¹⁵⁹ This recognition avoids the problem of proving necessary causal relations, which faces the two approaches discussed above. Malone’s account, however, presents a number of its own problems.

The first problem, Malone’s distribution of the power to make causal determinations between judge and jury,¹⁶⁰ does not inevitably flow from his theory of causation. Alternatives to this distribution are explored in

¹⁵⁵ *Supra*, note 70 at 67.

¹⁵⁶ *Ibid.* at 68. For example, if C1 and C2 in *CASE 2* were shown to be wrongdoers, and particularly if they were in violation of an especially “exacting” rule protecting against hazardous accidents, judicial policy considerations might lead to the decision that both C1 and C2 caused P’s blindness. Malone discusses (*ibid.* at 84) *Summers v. Tice*, *supra*, note 37. The distinction between more and less innocent instruments of harm has been questioned by Rabin, *supra*, note 97 at 107.

¹⁵⁷ *Supra*, note 70 at 67.

¹⁵⁸ *Ibid.* at 69.

¹⁵⁹ See *ibid.* at 62-64. I use ‘paradigm’ loosely to describe the composite of prejudices, ideas, beliefs, emotions, experiences, *etc.*, which determine the “world view” of a judge. Cf. generally Kuhn, *supra*, note 98 and *infra*, note 196.

¹⁶⁰ *Supra*, note 70 at 98-99.

Part IV of this article. The second problem is more fundamental: if "cause in fact" is emptied of the notion of "necessity" and its accompanying tests, what are the legal standards for making causal decisions? Does Malone's causal minimalism inevitably degenerate into causal anarchy? Finally, the third and most fundamental problem concerns what it means to be a causal minimalist. If causation has *no* factual content, then to what does the judge apply her or his evaluative faculties in "conjecture"? This problem is considered below.

2. Clinging to Factual Causation

Among those who view "factual" causation as tied to considerations of legal policy, there is a good deal of confusion regarding the formal character of this relationship. This is quite separate from substantive disagreements over the policy considerations themselves. The starting point of the causal minimalist is often the inadequacy of the "but for" test.¹⁶¹ One comment on the *Baker* case,¹⁶² for example, concludes:

It is particularly in this context of the liability of the first tortfeasor in the case of successive torts that the inadequacies of the "but for" test are revealed — the strictly causal test falls to the obvious demands of justice. As has been said in a different context, logic does not always have the last word in law and when it leads to morally unjustifiable results, moral considerations have prevailed.¹⁶³

The obvious assumption underlying this statement is that there is a logical "strictly causal test" distinct from the "demands of justice." If this is so, the law decides that x "logically" caused y, but ignores this decision because of another decision that y was "morally" caused by z. Is the argument rather that x caused y but that *causation* must be ignored in the interests of justice? This, however, is not causal minimalism at all, but causal maximalism combined with a particular approach to the "proximate cause" issue. Yet the commentator quoted above insisted that he was "concerned here only with the causation-in-fact inquiry."¹⁶⁴

This confusion is particularly evident in Ernest Weinrib's discussion of *McGhee*.¹⁶⁵ Weinrib argues that *McGhee* undermined the conception of factual causation as "a non-evaluative requirement."¹⁶⁶ Yet Weinrib gives conflicting signals regarding his view of what *McGhee* accomplished, and fails to explain whether he sees causation as permeated by policy

¹⁶¹ See, for example, Malone, *ibid.*, D.M.A. Strachan, "The Scope and Application of the 'but for' Causal Test" (1970) 33 Mod. L. Rev. 386, and Weinrib, *supra*, note 34.

¹⁶² *Supra*, note 43.

¹⁶³ Strachan, *supra*, note 161 at 395.

¹⁶⁴ *Ibid.* at 386.

¹⁶⁵ *Supra*, note 34.

¹⁶⁶ *Ibid.* at 533.

or as a factual phenomenon distinct from, but coexisting with (and applied via), such evaluative considerations.¹⁶⁷ Wherever he and other causal minimalists stand on this formal issue, they still face the problem of identifying evaluative standards: either standards for applying the test of “factual” causation, or standards for determining causation itself.

3. The Cost of Causation

Most theories of causal minimalism are teleological in character.¹⁶⁸ This is hardly surprising, since the causal minimalist seeks to link events for a purpose reflecting her or his values. The following examples illustrate the potential diversity of the values found in the causal minimalist camp, and two ways in which considerations of cost impinge upon causal decisions and decision making.

The law and economics approach to causation imposes liability on *x* where the probability that an accident will occur if care is not taken by *x* exceeds the probability that the accident will occur even if *x* does take care.¹⁶⁹ Thus, causation is approximated by the probability variable

¹⁶⁷ On one hand Weinrib says that “it was sensible for the court to refuse clearly to delineate between breach of duty and causation.” On the other hand, he says that *McGhee* “shows a high admixture of policy in the handling of the cause in fact problem.” Weinrib’s reluctance to loosen his grip on the anchor of factual causation for fear of drifting into the stormy waters of a value-laden epistemology is evident in the following remark:

Given the existence of the cause in fact requirement, denial of its essentially value-free nature would be as futile as attempting to prove the internal inconsistency of a tautology. The determination of what happened is in a judicial context not in itself a process that is infected with the higher views of policy (*supra*, note 34 at 530).

Viewed in isolation, this assertion would no doubt convey the impression that Weinrib is a causal maximalist. Thus Wright lists Weinrib among “writers who rely on tests other than the but-for test [and] treat only the most difficult overdetermined-causation cases as policy-based exceptions to the actual causation requirement” (*supra*, note 14 at 1777 fn. 175). Wright also lists Weinrib as one of the writers who accept Malone’s causal minimalism (*ibid.* at 1738 fn. 7). Given Weinrib’s equivocal language, Wright’s confusion is hardly surprising.

Yet it is interesting to speculate on how Weinrib understands the term ‘tautology.’ In the same article he labels the “substantial factor” test of factual causation a “tautology.” *Supra*, note 34 at 523. If the statement “factual causation is value free” is tautologous in the same way that “substantial factor is cause” is tautologous, then perhaps Weinrib might be willing to allow values to permeate his realm of “factual” causation after all.

¹⁶⁸ See *supra*, note 53. The value of characterizing a theory as teleological or deontological lies in making legal scholars and practitioners aware of potential avenues toward the development of new causal standards for achieving the same results. Thus the teleological approach noted above can be contrasted with Epstein’s rule-based standards (see *supra*, note 99 and accompanying text), just as the law and economics approach to freedom of contract can be contrasted with Fried’s deontological “will theory,” which leads to essentially the same results. See R.A. Posner, “Epstein’s Tort Theory: A Critique” (1979) 8 *J. Leg. Stud.* 457. Fried appears to be Epstein’s analogue in the law of contract. See C. Fried, *Contract as Promise* (Cambridge: Harvard University Press, 1980).

¹⁶⁹ See, for example, G. Calabresi, “Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.” (1975) 43 *U. Chi. L. Rev.* 69; M.J. Rizzo and F.S. Arnold, “Causal Apportionment in the Law of Torts: An Economic Theory” (1980) 80 *Colum. L. Rev.* 1399; S. Shavell, “An Analysis of Causation and the Scope of Liability in the Law of Torts” (1980) 9 *J. Leg. Stud.* 463; and W.M. Landes and R.A. Posner, “Causation in Tort Law: An Economic Approach” (1983) 12 *J. Leg. Stud.* 109.

in Judge Learned Hand's well-known formula: "... if the probability be called P; the injury L; and the burden B; liability depends upon whether B is less than L multiplied by P; i.e. whether B is less than PL."¹⁷⁰

The cost element is subsumed under 'B.'¹⁷¹ In order to achieve the least-cost result, the law and economics approach uses the probability factor in a completely different way to the causal maximalist use referred to above.¹⁷² Causal maximalism posits a causal link *because of* a certain level of probability. Law and economics uses probability as a proxy for a causal link *in order to* reach a cost-effective result. Thus, one law and economics theorist has remarked that "questions about causation are to an important extent resolved by resort to intuitions about the justness of applying a rule of liability."¹⁷³

Somehow this intuitive approach does not seem to square with the precision that law and economics theorists have sought in attempting to pin down causal relationships.¹⁷⁴ This suggests another of the difficulties in the law and economics approach: how is the probability variable to be quantified? In commenting on why there should be joint liability in a situation like *CASE 2*, where one jar contained tablets made by two companies, Posner and Landes claim: "we can analyze this type of case using a modified Hand formula without explicitly discussing causation."¹⁷⁵ In short, law and economics seeks to deal with causation by avoiding it.

A quite different set of causal minimalist values is reflected in a "communally-based approach to death and injury."¹⁷⁶ The holistic metaphysics underlying these values differentiates communalists from both the law and economics theorists and the causal maximalists, who share a particularistic conception of the spatio-temporal universe. A holistic view of the physical universe is incompatible with both the "but for" and the "substantial factor" tests, which treat events "as unique and dichotomous rather than probabilistic and continuous."¹⁷⁷ One way of treating causation from a holistic perspective is to arbitrarily assign causes and effects to each other to ensure the social results one wants to achieve, on the basis of a Humean test for causation. Under such a treatment,

¹⁷⁰ See *United States v. Carroll Towing Co.* (1947), 159 F.2d 169 at 173.

¹⁷¹ See A.M. Linden, *Canadian Tort Law* (Toronto: Butterworths, 1977) at 83.

¹⁷² See *supra*, Part III.B.3.

¹⁷³ Shavell, *supra*, note 169 at 502.

¹⁷⁴ Landes and Posner, *supra*, note 169 at 122-23.

¹⁷⁵ *Ibid.* at 124.

¹⁷⁶ See Hutchinson, *supra*, note 35 at 23.

¹⁷⁷ *Ibid.* at 22.

an event must be “contiguous,” “sequential,” and “consistent” with its effect to be the cause of that effect; in short, consonance of “place, time, and type of risk” is required.¹⁷⁸ The problems with this treatment of causation are examined below.¹⁷⁹

Since a holistic view of society is at odds with the adversarial process, communalists argue that the practical consequence of a community's commitment to the welfare of its members is a compensation scheme outside the tort system.¹⁸⁰ Like the law and economics theorists, the communalists take cost considerations into account, but rather than focussing on the cost of the causal *decision* made, they regard the cost of *making* the causal decision as being determinative. Unlike the tort system, the communalists' administrative compensation scheme does not require an explicit verbal formula for determining causation. Apart from its failure to account for causation, however, the problems with such a scheme are that it does not deal with the funding of compensation or the deterrence of hazardous behaviour. Accordingly, this minimalist approach is ultimately no more satisfactory than the other approaches to causation examined above, and a different type of analysis is proposed below.

IV. STEPS TOWARD A LINGUISTIC ANALYSIS

A consideration of the nature of law suggests that perhaps an appropriate philosophy of law has not been found because it has been sought in the wrong places. Theories of jurisprudence, of the nature of man, of the nature of society, can provide no such philosophy, for these are the very points of contention in judicial debates. But law, whatever else it may be, is language, and perhaps in the philosophy of language can be found a more manageable, less metaphysical subject for discussion.¹⁸¹

¹⁷⁸ See Lansing, *supra*, note 1 at 10.

¹⁷⁹ See *infra*, Part IV.A.1.

¹⁸⁰ See, for example, A.C. Hutchinson, “Beyond No-Fault” (1985) 72 Cal. L. Rev. 755.

¹⁸¹ D.G. Stroup, “Law and Language: Cardozo's Jurisprudence and Wittgenstein's Philosophy” (1984) 18 Val. U.L. Rev. 331. Though Stroup and I share this same starting point, we use the philosophy of language route to reach very different destinations. Stroup is concerned to avoid the arbitrariness, inconsistency, and perhaps injustice of the “absolutist” view of language implicit in Austin's legal positivism, without committing himself to an inflexible naturalism. He finds comfort in the parallel between the later Wittgenstein's performative view of language (words take their meaning from their contexts) and Cardozo's acceptance of the necessity and inevitability of judicial legislation (legal terms take their meaning from their context of social mores). The problem with Stroup's “contextual theory” of legal language is that it does not provide for any consistency or predictability in the law. Stroup's judge is free to legislate the meaning of any rule, bound only by some vague notion of “context.” Far from reconciling progress and stability of the body of the law, which is Stroup's objective, this theory explodes the possibility of their being a body of law at all.

In explaining the reason for their ordinary language approach to causation, Hart and Honoré remark:

To isolate the main features of the concepts latent in causal language, though it certainly involves the study of the dominant trends of usage, is not to provide a code for the use of that language: still less is it to construct rules from which legal decisions on causal questions can be deduced.¹⁸²

By stopping short of the full implications of a linguistic approach, Hart and Honoré fail to transcend the weaknesses of the causal maximalist and minimalist positions they criticize. In this Part of the article, some steps are taken toward a linguistic analysis of causation in tort law. Since the use of causal language determines causal decisions, a linguistic analysis *ipso facto* reconstructs the “rules from which legal decisions on causal questions can be deduced,” and consequently such an analysis may indeed be able “to provide a code for the use of that language.”

The primary purpose of the analysis set out below is to provide an account of the process involved in making causal decisions. This account acknowledges the linguistic indeterminacy of causation, which must be grappled with in the context of a particular theory of legal interpretation. Accordingly, the presentation of the descriptive model in Part IV.A concludes with a discussion of the model’s hermeneutical assumptions. The linguistic analysis also has a prescriptive dimension, and in Part IV.B the normative alternatives suggested by the descriptive model are outlined.

A. *A Descriptive Model*

In spite of the subtle and sophisticated reshaping of our “ordinary” understanding of causation — via approaches as varied as Wright’s, Posner’s, and Malone’s — we seem to be ultimately pulled by a gravitational force toward Hart and Honoré’s characterization of causal language.¹⁸³ From within the prevailing judicial paradigm, it may appear

¹⁸² *Supra*, note 12 at 3.

¹⁸³ This image is perhaps more appropriate here than may first be apparent. Gravitational forces are, after all, constructs posited to facilitate an understanding of the movement of matter in a linear, Newtonian world. Einstein’s positing of a relationship between matter and energy put the limits of a Newtonian cosmology into perspective. Nevertheless, just as Newtonian physics still somehow seems intuitive, Hart and Honoré’s account of ordinary causal language seems to accord with what one might feel is our “common sense” understanding of causation. See also *infra*, note 192.

One might speculate on whether this is due to something inherent in the structure of the human mind, to a social and political process of cultural conditioning, or simply to the fact that these explanations of reality are, superficially at least, the easiest to grasp. Just as Newton’s constructs are somehow easier to grasp than Einstein’s, so Strawson’s descriptive metaphysics (see *supra*, note 72) might be more acceptable to the “ordinary person” than Quine’s web of belief (see *infra*, note 191 and accompanying text). Strawson would probably argue, along with Kant, that his metaphysics seems intuitively correct because of the very conceptual structure he presents within that metaphysics.

that even though Hart and Honoré's approach may not be the only approach — or even the best one — this approach is nevertheless “good enough” for our legal purposes, just as committed Newtonians may insist on the adequacy of their physics.¹⁸⁴ Yet just as scientific progress required transcending the Newtonian paradigm, so the law may well be advanced by considering (if not accepting) approaches that differ from Hart and Honoré's analysis of ordinary language.

A view of the world predicated on linear causal chains is inadequate to explain the forces at work in *CASE 1* through *CASE 10*. Clearly we can get by with a linear universe. It seems ironic, however, that the energy invested in legal theory by Hart and Honoré carries us no further than to the point of accepting that we are able to get by with the simplistic and sometimes deceptive understanding of causation enshrined in our “ordinary language.” Underlying the model presented here is the notion that causes can be described more accurately as strands in a multi-dimensional web than as links in a linear chain, and the belief that a more accurate description of causation will lead to clearer, more consistent, and ultimately better law.

Unlike Hart and Honoré, I do not find the insulation of legal theory from its philosophical underpinnings to be helpful: while legal cases clearly involve particulars (which may or may not be usefully dealt with by general principles), the critical theory in which Hart and Honoré are themselves engaged belongs to that realm of generalization they purport to avoid. The analysis set out below draws on three philosophical insights: Hume's account of causation; the distinction between analytic and synthetic truths; and the idea that language, science, and reality are holistically structured and interrelated.

1. Hume's Problems

Hume still turns up in most discussions of causation because the issues he raised have not yet been satisfactorily resolved. Hume's definition of causation requires a cause to be “contiguous,” “sequential,” and

¹⁸⁴ This is Wright's view of the adequacy of the “but for” test:

Just as Newtonian mechanics serves as an adequate substitute for the more accurate and comprehensive theories of relativity and quantum mechanics in ordinary physical situations, the but-for test serves as an adequate substitute for the NESS test in ordinary causal situations.

In each context, however, the substitute must give way to the more accurate and comprehensive concept when the situation is more subtle and complex (*supra*, note 14 at 1792).

The problem with this view is the NESS test cannot by any stretch of the imagination be said to represent the sort of break from the “but for” test that relativity theory and quantum mechanics made with Newtonian mechanics. Indeed, the notion of necessity — the touchstone of the “but for” test — is essential to the NESS test. See *supra*, Part III.B.2. Wright is correct to view the “but for” test “as an adequate substitute for the NESS test”; unfortunately this is precisely because NESS is not the “more accurate and comprehensive concept” that Wright argues is suited to dealing with “more subtle and complex” situations.

consistent with its effect.¹⁸⁵ This raises two problems. The first is that it renders any distinction between causal and accidental sequences of events impossible. Imagine that there are two clocks alongside each other on the mantelpiece. Suppose that clock X chimes every hour on the hour, and clock Y chimes every hour at one second past the hour. The first chime *precedes* the second; the two chimes are *contiguous* in space and time; yet there is no *necessary* connection between these two events. All three of Hume's criteria for a causal relation are satisfied, yet somehow we are uncomfortable about claiming that clock X's chime *causes* clock Y's chime, because the connection has no explanatory power. In fact, our intuitive sense of causation clings desperately to the notion of necessity.

The second problem goes to the contiguous element of Hume's account. Consider two events:¹⁸⁶ "A hits B" is the "cause" and "B feels pain" is the "effect." Here cause precedes effect, and the connection between the two appears to be necessary. Yet the two events are not contiguous, since each can be broken up into an infinite number of other events, at mechanical, physiological, and chemical levels of analysis. Indeed, any event can be split into more than one event by a shift in level of analysis, and can thus be removed from contiguity with another event. When faced with the events "A's brain emitted an electro-chemical impulse" (component of "A hit B") and "B's brain received an electro-chemical impulse" (component of "B feels pain"), we not only fail to see contiguity, but we have difficulty making any more of a necessary connection (in the internal sense of "necessary" that Hume insists upon) than between the two clocks' chimes.

The second of these problems can be avoided by retaining the Humean definition but shifting it to a linguistic level of analysis.¹⁸⁷ Instead of talking about the events "A hits B" and "B feels pain," we talk of the events described by the linguistic statements 'A hits B' and 'B feels pain.' These statements only describe the events taking place at what one might call the social level of observation; they do not refer to events at mechanical, physiological, chemical, or other levels. Of course, we could adjust our linguistic statements to take such other events into account, but then we would be describing a different causal situation.

¹⁸⁵ See *supra*, note 122. For a helpful analysis of Hume's account of causation, see J. Bennett, *Locke, Berkeley and Hume: Central Themes* (Oxford: Clarendon Press, 1971) ch. XII.

¹⁸⁶ This is Epstein's first paradigm, which he presents as his "simplest case of causation." See *supra*, note 11 at 166 and text accompanying notes 99 and 100. If it emerges that "A hit B" is a Pandora's box of epistemological, linguistic, and ontological problems, then clearly the "hard" cases require a more thorough causal analysis than the causal maximalists offer.

¹⁸⁷ See, for example, C. Taylor, "Causation" in *The Encyclopaedia of Philosophy*, ed. P. Edwards (New York: Macmillan, 1967).

The linguistic definition of causation might therefore be framed as follows: (a) there is some linguistic statement S1 that truly describes an event; (b) there is another linguistic statement S2 that truly describes another event; and (c) S3 is the statement 'S1 causes S2,' such that S3 describes a linguistically true causal proposition. One might object that this is merely hiding the causal problem in a linguistic package. It is true that the trick here is packaging, but not *merely* hiding the problem. The power of the linguistic approach lies in its creation of a self-contained causal package purified of the chunks of cemented events that inhabit our intellectual, social, physical, and chemical universes. This account is plausible only to the extent that there are such things as events to which linguistic statements refer.¹⁸⁸ On the other hand, since nothing can intervene between S1 and S2 within S3, the linguistic definition avoids the contiguity problem described above.

The linguistic definition does not, however, solve the first problem: it is unable to quench our intuitive thirst for necessity or to distinguish causal from accidental connections. This requires closer scrutiny of the relationship between S1 and S2 within S3, using another philosophical insight — the distinction between analytic and synthetic truths.

2. "Analytic" Statements

Analytical and synthetic truths have been distinguished as follows:

Either the predicate B belongs to the subject A as something which is (covertly) contained in this concept A; or B lies outside the concept A, although it does indeed stand in connection with it. In the one case I entitle the judgment analytic, in the other synthetic.¹⁸⁹

¹⁸⁸ As D. Davidson remarked in "Causal Relations" (1967) 64 J. Phil. 691 at 703: "... the assumption, ontological and metaphysical, that there are events, is one without which we cannot make sense of much of our most common talk; or so, at any rate, I have been arguing. I do not know any better, or further, way of showing what there is." Of course, these events may be posits; the insistence that there must be events does not imply anything about them.

¹⁸⁹ Kant, *supra*, note 77 at 48. I use Kant's distinction by way of analogy only to explain my notion of "cause" as copula, which has nothing to do with Kant's own account of causation. See *infra*, note 190. Kant did not accept Hume's definition of causation without necessity. The two approaches are compared by A.N. Whitehead in *Symbolism: Its Meaning and Effect* (Capricorn, 1959) at 35ff., and by J. Bennett in *Kant's Analytic* (London: Cambridge University Press, 1966) ch. 11. Kant's account appears to have two essential features. First, cause must precede effect. In Kant's words, no "lapse of time" is needed between them; the issue is the "order of time." Kant, *ibid.* at 228. This avoids the problem of finding a place for causal cement in a tightly-bound universe. Second, there is more than an external relation of necessity between a cause and its effect: "the effect not only succeeds upon the cause, but . . . is posited *through* and arises *out of* it." Kant, *ibid.* at 125. Interestingly, there appears to be a structural similarity between this second feature of Kant's view of causation and his definition of analytic truths, although these two notions are drawn from very different parts of Kant's *Critique of Pure Reason*. For an excellent analysis of Kant's treatment of causation see P.F. Strawson, *The Bounds of Sense* (London: Methuen, 1966) ch. III.

Where two events (or two linguistic expressions which describe them) are connected so that their combination — including the ontological or linguistic connective — consists of more than the sum of the two events or expressions, this combination is a synthetic truth or statement. Suppose the expressions S1 and S2 are being combined. The combination will be synthetic where S2 “lies outside” S1; thus an independent connective, with its own content, is required to connect the two expressions. For example, S4 is a synthetic statement where S4 = ‘S2 because S1.’ The term ‘because’ adds something to the sum of S1 and S2, and S1 cannot therefore be said to contain S2. Moreover, S4 is true or false as a matter of “fact,” even if it is not clear how the truth values would be determined here.

Where, on the other hand, two events or linguistic expressions are combined so that their connective adds nothing to the sum of the two events or expressions, the combination is an analytic truth or statement. S3 is an analytic statement if S3 combines S1 and S2 using a copula which has no content of its own. For example, where S1 = ‘a bachelor’ and S2 = ‘an unmarried man,’ the statement S3 is analytic where S3 = ‘a bachelor is an unmarried man.’ S2 is “(covertly) contained” within S1, not observably as a matter of contingent fact, but necessarily as a matter of linguistic decision.¹⁹⁰

The deep-rooted character of the tension between formalism and the conceptual scheme envisaged by Kant may be traced back to the beginnings of formalism in America in the 1870s by young legal philosophers who felt “deep distrust and antagonism for the *a priori* categories of Kant. . . . A philosophy of law . . . which was built on Kantian . . . foundations must be repudiated and cast aside.” M. DeWolfe Howe, *Justice Oliver Wendell Holmes: The Proving Years* (Cambridge: Belknap Press, 1951) at 151.

¹⁹⁰ I do not believe in analytic truths in the way Kant would have understood them. The causal statements I am examining are only analytic in the way ‘a bachelor is an unmarried man’ is analytic: as a matter of linguistic convention. Thus Quine’s vehement rejection of the analytic/synthetic distinction (see *supra*, note 91 at 46) does not make this juxtaposition of Kantian and Quinean (see *infra*, note 191) insights altogether inappropriate. Indeed, my use of the notion of “analyticity” probably violates Kant’s own understanding of the analytic/synthetic distinction, though the latter runs into serious problems. See, for example, A. Quinton, “The *a priori* and the Analytic,” *Proceedings of the Aristotelian Society* (1964), and D.A. Gasking, “The Analytic-Synthetic Controversy” (1972) 50 *Aust. J. Phil.* Given the indeterminacy of translation (see *infra*, note 196), it is conceivable that ‘a bachelor is an unmarried man’ might be false. Even F. Maher, who argues that “probability is enough for the law,” comes close to suggesting this: see “Words, Words, Words” (1985) 14 *Melbourne U.L. Rev.* 468 at 482. Like Stroup, *supra*, note 181, Maher draws on the later Wittgenstein’s view of meaning, and somehow manages to be a disciple of both Dworkin (Maher, *ibid.* at 496) and Hart (*ibid.* at 507). So it is hardly surprising that after a lengthy and unfocused survey of word usage, Maher comes to the unexplained conclusion (*ibid.* at 511) that: “The ideas even as to puzzling ideas and paradoxes usually get through. Otherwise, lawyers could never talk to one another — and we do!” One purpose of the linguistic analysis in this article is to avoid this sort of trite escape route from formalism that Maher takes: “. . . inflection, gestures, examples discussed at length in court, are often more convincing than cold formal deduction” (*ibid.* at 507).

This distinction may be applied to the linguistic definition of causation proposed above. In S3, the term 'causes' is undefined. This copula does not add anything to S1 and S2; it connects the two statements because S2 is "(covertly) contained" in S1. Thus S3 is true as a matter of linguistic convention, and is an analytic truth. If S1 = 'A hits B' and S2 = 'B feels pain,' then S3 is an analytic statement where S3 = "'A hits B' causes 'B feels pain.'" In contrast, where S4 = 'B feels pain because A hits B,' S4 is a synthetic statement.

The linguistic definition of causation — with the assistance of the analytic-synthetic distinction — addresses the second as well as the first Humean problem. If all causal assertions could be formulated as analytic causal statements, causal and accidental relations could be distinguished: from a linguistic viewpoint, the analytic statements express "necessary" connections. This is the only role that necessity plays in the linguistic model. But what happens to this necessity when we stumble upon another statement that seems to require revision of S3? Just as the analytic-synthetic distinction helped in internally structuring the linguistic package 'S3,' a third philosophical insight provides a framework for explaining the external relationships between each such linguistic package.

3. A Web with Three Layers

If D is a masochist, we might then create S5, such that S5 = "'C hits D' causes 'D feels pleasure.'" Let us assume that 'pain' and 'pleasure' are analytically as mutually exclusive as 'bachelor' and 'married'. S3 is entirely compatible with S5. It is also compatible with S6 = "'C hits B' causes 'B feels pleasure.'" But what about S7 = "'A hits B' causes 'B feels pleasure'"? Can S3 and S7 only coexist if we revise our assumption about the mutual exclusivity of 'pain' and 'pleasure'? Of course not: all that has to be done is to revise S3 to read "'A hits B' sometimes (or at a particular time) causes 'B feels pain.'" In fact, we continually revise our language, body of scientific knowledge, and view of reality, as new experiences cast doubt on the accuracy, validity, or universality of our statements, concepts, and perceptions.

An especially powerful metaphor captures this idea that no part of our legal or factual universe is insulated from revision when it does not square with another part. According to this metaphor, all discourse takes place within a web.¹⁹¹ It is helpful to distinguish three layers within

¹⁹¹ This metaphor originates from the earlier work of Quine: see *supra*, note 91, particularly at 42ff., and also W.V.O. Quine and J.S. Ullian, *The Web of Belief* (New York: Random House, 1970). Although Quine has advanced a number of conflicting positions on various issues since the 1940s, some unifying themes are discernable in his work. See for example, A. Reeves, "The Foundations of Quine's Philosophy" (1976) 30 *Phil. Stud.* 75, and C.F. Presley, "Quine," in *The*

this web: a perceptual/conceptual scheme for absorbing data from physical and intellectual experiences (epistemological layer); a framework for using language (linguistic layer); and a view of reality (ontological layer). These layers are superimposed: the holism extends laterally within each layer and vertically between layers.¹⁹² Of course, identifying each layer is merely a means of depicting one way in which we grapple with the world. Yet this is also true of the use of the web itself.

As the centre of the web is approached, the areas of discourse, thought, or experience become more “fundamental”: thus, mathematics would be close to the centre of the epistemological layer of our web, and sense data near its periphery. At first this may seem reminiscent of Hart’s metaphor of the core and penumbra, but in fact the two metaphors suggest opposite views of the relationship between particular statements. The web metaphor grows out of the disintegration of the distinction between core and penumbra. The distinction between the more and less fundamental is one of degree; its hallmark is the absence of any sacred enclaves whose claim to privilege is so self-evident as to assure immunity from revision. Within this metaphor, meaning is completely relativized: removed from a particular linguistic context, a legal statement is meaningless. This metaphor is, therefore, a direct assault on Hart’s distinction between the easy cases at the core of legal doctrine and the indeterminacy at the penumbra. In one sense, all cases are “hard,” because the metaphor has no room for absolute truths. Insofar as every statement has meaning in the context of a particular web, however, all cases are determinable.

Encyclopaedia of Philosophy, *supra*, note 187. I have stretched Quine’s web a fair distance. Although he writes of one web only, there does seem to be support for distinguishing three layers within this web, in his discussions on epistemology (see W.V.O. Quine, “Epistemology Naturalized” in *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969)), language (see *Word and Object*, *supra*, note 98), and ontology (see “Ontological Relativity” in *Ontological Relativity and Other Essays*, *ibid.* The crux of the Quinean metaphor I am using is the idea that our scientific, philosophical, legal, and linguistic worlds have to be reconstructed from within. Quine uses Neurath’s image of “a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it”; Quine says “the philosopher and the scientist are in the same boat,” (*Word and Object*, *ibid.* at 3). So are the linguist and the lawyer!

¹⁹² The formulation of a new relationship between energy and matter, for example, would not only be accompanied by the revision of some “fundamental” concepts in physics, but also by a shift in the way we perceive the universe, and in our use of words such as ‘energy.’ Einstein’s insight is particularly appropriate here because his vision was one of holistic relativism:

... the great paper ... “The Electrodynamics of Moving Bodies” ... goes on ... to a postscript saying energy and mass are equivalent. ... To us it is remarkable that the first account of relativity should instantly entail a practical and devastating prediction for atomic physics. To Einstein, it is simply a part of drawing the world together, like Newton and all scientific thinkers, he was in a deep sense a unitarian (Bronowski, *supra*, note 24 at 254).

The model presented in this article might be viewed as an attempt to replace the linear Newtonian chains of the causal maximalists with a holistic and relativistic causal web.

Although this analysis is confined to the problem of causation, the web metaphor is useful in analyzing any field of discourse. A web is comprised of nodes and strands. The nodes are posits. In the ontological layer of our causal web, we might posit S3 to describe the causal link between two events described by S1 and S2. Other nodes like S5, S6, and S7 coexist with S3 in this web. The strands that link them are the causal cement of our ontological universe. The strands of each layer — unlike the posited nodes — are without content; their function is simply to link the posits.¹⁹³ The nodes, on the other hand, are filled with all the meaning their positer gives them. Viewing a causal statement as a ‘posit’ does not belittle its importance.¹⁹⁴ Unlike ‘S1’ and ‘S2,’ ‘cause’ is not a true description of any posited event: it is merely a linguistic device for linking ‘S1’ and ‘S2.’ Without this device, our language — and our law — would be unmanageable.

Of course there are important differences between ‘is’ and ‘cause’ in their roles as connectives, but these are irrelevant here. The analogy between the two serves to emphasize both the vacuousness of the concept “cause in fact” and the utility of the linguistic term ‘cause.’ In some contexts we could do without ‘is’¹⁹⁵ but this would be very limiting. Similarly, if there exist cases of absolute liability where the causal requirement is waived, we might manage with ‘S1’ and ‘S2’ and without ‘cause’; for the rest of tort law as we understand it, the connective is a very useful device. Since there is nothing except a copula linking ‘S1’ and ‘S2’ within S3, S3 is an analytic statement. Moreover, the posited events, descriptions, and statements do not exist in isolation; they are part of the ontological, epistemological, and linguistic layers of our causal webs in a way that will be explored below.

¹⁹³ There is no compelling reason why what Quine calls “considerations of equilibrium” (*supra*, note 91 at 43) should have any content. It has been suggested that “logical analysis must yield jurisdiction to psychology, psychoanalysis or some allied discipline” in explaining “the mechanism [of determining position within the web] that is passed over by the metaphor”: W.R. Bishin and C.D. Stone, *Law, Language and Ethics* (New York: The Foundation Press, 1972) at 332. Perhaps in creating that metaphor, Quine did paint over psychological processes with the brush of logic. Yet if we view our causal statements as the nodes in our ontological (and linguistic) webs, there is no need for a psychological account of the links between them, provided that we can account for how these statements come to occupy and shift their positions. The model presented in this article locates this “psychological” process at the level of the epistemological web, and thus avoids reducing causation to “the clash between [a person’s] desires and the social and personal forces that are working to manipulate them and bring them under control,” which Bishin and Stone see at the root of the coherence theory of meaning (*ibid.* at 345).

¹⁹⁴ As Quine points out: “To call a posit a posit is not to patronize it” (*supra*, note 98 at 22).

¹⁹⁵ Quine’s article “On What There Is” in Quine, *supra*, note 91, is still useful in explaining the implications of ‘is’ as copula.

4. Causal Posits

One of the implications of a holistic relativism is that not everyone shares the same web.¹⁹⁶ The causal posits enable individual participants in the legal process to bridge the “communication gap” by using linguistic packages such as S3. How do these posits deal with *CASE 1* through *CASE 10*? By shifting from events through descriptions to a linguistic package such as S3, causal rules can be formulated to deal with each of the fact situations in these cases. Such rules would spell out where the law recognises and where it does not recognise causation. For example, *CASE 1* could be formulated as a linguistic package looking something like this:

S3 indicates (or does not indicate) a causal relation where:

S3 = ‘S1 causes S2’;

S1 = ‘C1 makes D1 from X and Y, where every person who has ever ingested X alone thereafter goes blind’; and

S2 = ‘P buys D1 from C1 and ingests it, and thereafter P goes blind.’

This is a highly specific rule for *CASE 1*. The specificity of the linguistic rules formulated will depend on the cost of refining the law, the degree of refinement a community can afford, and the relative advantages and disadvantages of more or less specificity. S1 and S2, for example, might be reformulated for *CASE 1* as follows:

S3.1 = ‘S1.1 causes S2.1’;

S1.1 = ‘C1 produces D1, where X, a component of D1, has been followed by a certain incidence of a certain injury, I’; and

S2.1 = ‘P suffers injury I after being exposed to D1.’

The increased generality here is more than formal. Under S3.1, for instance, the law recognises a causal relationship where P obtains D1 made by an untraceable manufacturer. S3.1 applies equally to drugs manufactured, to radiation emitted from nuclear tests, and to bullets discharged from a hunter’s gun. ‘D1’ is merely a variable that can take on any value that accords with the linguistic context provided by the three statements. *CASE 2* through *CASE 9* would be similarly (and more easily) defined,

¹⁹⁶ For Kuhn, a single set of webs would be shared by a “scientific community.” See Kuhn, *supra*, note 98 at 176ff. When communication breaks down, people should “recognize each other as members of different language communities and then become translators.” *Ibid.* at 202. Quine has shown that translation between speech communities is indeterminate. See “Ontological Relativity,” *supra*, note 191 and *Word and Object, supra*, note 98, ch. II. He puts this down to the inscrutability of reference itself rather than epistemological, cultural, or political differences:

One frequently hears it urged that deep differences of language carry with them ultimate differences in the way one thinks, or looks upon the world. I would urge that what is most generally involved is indeterminacy of translation (*ibid.* at 77).

By using ‘cause’ only as a copula, we minimize its field of reference, and thus lessen the impact of the inscrutability problem. Viewed in this way, the model presented in this article is a translation manual that helps one to cope with the indeterminacy of translation.

since they would be multiple causation extensions of S3 in *CASE 1*, capable of application to all other similarly structured linguistic descriptions. For example, in *CASE 2*, S1 and S2 could be formulated by using S1.1 and S2.1 to describe the more complex situation:

S1(*CASE 2*) = 'S1.1(*CASE 1*) is true of C1 and C2'; and
 S2(*CASE 2*) = 'S2.1(*CASE 1*) is true of P where D is substituted for D1 and P cannot know whether he was exposed to D1 or D2.'

CASE 10 shows clearly how the selection of S1 and S2 may not only determine the causal relationships, but also redefine the case itself in a myriad of different ways. There should be nothing surprising about this: it is generally accepted that lawyers and judges are faced with the problem of drawing the bounds of relevance in every case they deal with. The power of the linguistic model is in exposing this process in its pristine form. One way of formulating a rule for *CASE 10* might be as follows:

S1(*CASE 10*) = 'P is unemployed and has barely sufficient money to cover daily expenses'; and
 S2(*CASE 10*) = 'P decides to cease purchasing D and dies shortly thereafter, where P's doctor warned P that if P ceased the dosage of D, then P would be likely to die.'

By excluding the drought, the shortage of Y, the price increase in D, and the blindness factor from this rule, the lawmaker has decided — on the basis of a certain set of social policies — that a certain chunk of the causal web is relevant. This decision can only be implemented through the lawmaker's use of language. A minor modification of S1 (*CASE 10*) makes this clear:

S1.1(*CASE 10*) = 'P has barely sufficient money to cover daily expenses.'

Removal of the term 'unemployed' indicates a decision to broaden the net of community responsibility. Suppose this rule were formulated in a full-employment community that had no term in its vocabulary roughly translatable into 'unemployed.' Such a community would be *unable* to formulate S1(*CASE 10*) and hence to make the policy distinction between S1(*CASE 10*) and S1.1(*CASE 10*). For this reason the process of drawing the bounds of relevance within a causal web is determined by both language and policy, just as the web itself consists of both statements and values.¹⁹⁷

¹⁹⁷ In all ten cases presented in Part II.B.1, causation has a temporal dimension. The temporal succession of events is one of the basic elements of our Humean starting point. The linguistic model does not ignore the temporal dimension, but treats it metaphorically in spatial terms. While the three layers are general analytical constructs that could be applied to any legal problem, when applied to causation they form the layers of a web of causation. Just as the analytical constructs are metaphorical, so is the web of causation: it depicts part-spatial and part-temporal causal relationships in purely spatial terms.

5. Judging Causation

Every tort case *must* involve causation as an issue, although in many cases this issue is not articulated. The steps that a judge takes in approaching this issue can be linked to the layers of a causal web.¹⁹⁸ The three steps are logical, not chronological: they overlap and can occur concurrently.

First the judge “hears the evidence.” Suppose an action is brought in damages for a new tort labelled “inflicting a feeling of pain.” The plaintiff (B) brings two events before the court as pieces of evidence. E1 = A hit B, and E2 = B felt pain. The judge absorbs E1 and E2 as pieces of knowledge; in the terms of our metaphor, the judge posits E1 and E2 as nodes in the *epistemological* layer of her or his causal web. As new pieces of evidence are posited (for example, the defendant (A) may bring into the web E3 = B felt pleasure), the content and positioning of the current nodes may be adjusted and some posits may be thrown out of the web altogether.

The strands that link these nodes together consist of a crude, intuitive notion of “cause.” If causation is not raised explicitly as an issue in the case, then these strands may not be articulated. Thus, the plaintiff alleges E1 and E2, and defendant asserts E3, without either party talking about whether E1 caused E2 or E3. In this situation, the “trier of fact” is asked to determine the truth values of E2 and E3, but she or he cannot conceptualize the problem without using an intuitive notion of “caused.” If, on the other hand, the defendant argues that E1 could not have “caused” E2 *because* it caused E3, the judge is presented with an explicitly causal issue. Again the judge will first draw on her or his unrefined sense of causation in “hearing the evidence.”

The second step occurs when the judge “formulates the facts.” This step begins as soon as the judge starts to assimilate a web into which the “facts” of all the cases she or he hears will be integrated, and this coincides with her or his learning of language itself.¹⁹⁹ It is to this step that the linguistic modification of Hume’s definition of causation is addressed. From the point of view of causation this is the crucial step, for although step one delineates the universe from which the judge selects the building blocks for her or his causal reality, this universe is potentially infinite, and step two is the selection process. Two or more events are

¹⁹⁸ This account may be applied to cases other than those on causation.

¹⁹⁹ Perhaps the most fundamental question of linguistic philosophy is that of how language is learned: if this can be explained, a complete epistemology should flow from it. For example, Quine’s *Word and Object*, *supra*, note 98, might be viewed as an account of learning to talk. See especially pp. 5-8, 10-17, 80-85, and 105-10.

selected from all the evidence. The articulation of these events requires a set of linguistic labels. By selecting E1 and E2, the judge automatically pastes the labels S1 and S2 onto the body of evidence before the court. In the metaphor, the judge is positing S1 and S2 as nodes in the *linguistic* layer of her or his casual web.

“Formulating the facts” is an ongoing process, and as the content and structure of the epistemological layer evolves, there are corresponding changes in its linguistic counterpart. The crucial difference between these two layers lies in their treatment of causation. While the epistemological layer is bound together by some unrefined notion of “cause,” the strands in the linguistic layer consist of a completely refined, but undefined term: ‘cause.’ A judge listening to or thinking about the evidence understands the causal relationships linking this evidence together in a particular (if unclear) way. This understanding of “cause” may, however, be slightly or entirely different from that of other people. When judges have to communicate their view of the evidence, they need a bridge between themselves and their listeners or readers. Just as it links the linguistic nodes, so the term ‘cause’ provides this bridge. The judges may *mean* something quite substantive when using this term; but they will not be referring to anything more than the emptiness inside the shell of this formal copula.²⁰⁰

The act of linking S1 and S2, the linguistic descriptions of the selected pieces of evidence before the court, takes the judge to the third and final step: “making a causal judgment.” This judgment is expressed in linguistic terms, but involves the judge in nothing less than the creation of her or his causal reality. To complete the metaphor, she or he posits S3 (the statement ‘S1 causes S2’) as a node in the *ontological* layer of her or his causal web. The judge’s ontology will change whenever shifts occur in the epistemological and linguistic layers. The ontological layer also changes internally, which means that the other two layers must adjust to it. Suppose, for example, that a number of posits accumulate in the judge’s ontology: S3, S4, S5, and so on. Each of these causal statements has its own underlying linguistic components which in turn are descriptions of events brought as evidence before the court. If S5 is incompatible with S3 then one or both must be adjusted or rejected.

²⁰⁰ ‘Mean’ and ‘refer’ here correspond roughly to Frege’s distinction between “sense” and “reference.” See “On Sense and Reference,” in P. Geach and M. Black, eds., *Translations from the Philosophical Writings of Gottlob Frege* (1972). The semantic meaning or “sense” of a linguistic term concerns the use of the term as part of a wider chunk of language. Its lexical meaning or “reference” is what the term denotes. The distinction is fundamental and crucial, and yet easily overlooked. P. Goodrich points out that Hart’s entire model of the core and penumbra is based upon a conflation of these two categories of meaning: “The Role of Linguistics in Legal Analysis” (1984) 47 Mod. L. Rev. 523 at 525-26 fn. 16.

What links S3 and S5? The strands in the ontological web comprise the cement that binds our causal universe. This cement is what we are referring to when we talk about causes as if they somehow exist in reality. If the concept “cause” is knowable but unrefined, and the term ‘cause’ is so refined that there is nothing to know about it, then cause itself is completely inscrutable. If we could step outside our web and look at it from some Archimedian vantage point then we might be able to know what this business of causation is all about. Because we must rebuild this web from within, we have to be satisfied with using our limited linguistic tools to transform the causal links we perceive into our causal reality, just as a judge has to use the linguistic technique of formulating the facts to jump from hearing the facts to making a causal judgment.

6. Linguistic Indeterminacy

What are the implications of this account of judging causation for tort law? Suppose two judges, X and Y, hear the same evidence, E1, E2, and E3. Judge X may focus on the defendant’s pain, locating S1 and S2 at the centre of her or his linguistic web, and relegating the statement ‘B feels pleasure’ to the periphery. Thus S3 (the statement “A hits B’ causes ‘B feels pain’”) will be at the centre of judge X’s ontology, and S5 (the statement “A hits B’ causes ‘B feels pleasure’”) will be at the periphery. S3 and S5 are not inconsistent, but in making the causal judgment, judge X has to extract from the ontology a particular chunk of causal reality. Judge X extracts S3 and holds plaintiff liable for the tort of “inflicting a feeling of pain” on B. Judge Y, in contrast, locates E3 at the centre of her or his epistemology, and accords the statement ‘B feels pleasure,’ and hence S5, positions of priority. When it comes to making her or his causal decision, judge Y extracts S5 from her or his ontology and holds plaintiff not liable.

There is another, more unsettling route by means of which judges X and Y may arrive at contradictory decisions. Suppose both judges accorded the same weight to the evidence and the statements describing it. The two judges may still perceive E1 and E2 differently, and hence S1 and S2 may *mean* different things to each of them. Just as ‘cause’ may mean different things for judge X and judge Y, so may the term “hit.”²⁰¹ If ‘hit’ means a hard slap for judge X and a mild pat for judge Y, judge X may posit a causal link where judge Y does not. What is

²⁰¹ See *supra*, note 196. As Stanley Fish suggests, *supra*, note 6 at 554-55:

It is entirely possible that the parties to our imagined dispute might find themselves pointing to the same “stretch of language” (no longer the same, since each would be characterizing it differently) and claiming it as “fact” in support of opposing interpretations.

most disturbing is that judge X and judge Y really have no way of knowing that their fields of reference for the term 'hit' differ, because they have no means of translating their varying usages into a commonly understood language.²⁰² If these judges cannot translate for each other, they cannot translate for anyone else. Yet while one can never be sure of the precise field of reference of someone else's language, the richer the language available the greater the likelihood that its users' fields of reference will overlap or even coincide. Since the indeterminacy of translation cannot be eliminated, the best that a judge can do is to use as rich a language as possible. The role of the lawmaker is to articulate as precisely as possible the approximate bounds of reference for a causal ontology.

None of this should be surprising to anyone familiar with the view that one can only understand and interpret the world through a particular "paradigm."²⁰³ The key to progress under this theory is the idea that the members of a linguistic community share the same paradigm. Glancing at the esoteric words and arcane style that fill the volumes of most law reports, it would appear that judges do constitute such a community.²⁰⁴ There are, however, widely varying views on the nature of this community and the way it creates and applies the law. Most of these views fall into one of two major camps and the clearest way to distinguish these camps is to look at their assumptions about the nature of judging.

7. Hermeneutical Assumptions

In the first camp are the textual positivists.²⁰⁵ They may permit an element of subjectivity to mediate between the judge and his statutory or common law texts, but cling to the notion that objectively true or good values are embedded in the paradigm of the judicial community. Owen Fiss is one member of this camp. He calls this set of values "a commitment to uphold and advance the rule of law itself."²⁰⁶ Another textual positivist is Ronald Dworkin. He seems to recognise a plurality

²⁰² See Quine, "Ontological Relativity," *supra*, note 191. *Cf. supra*, notes 196 and 200.

²⁰³ See, for example, G.E. White, who observes the effects on legal theory of the "growing momentum in contemporary academic life of Kuhnian logic" in "The Text, Interpretation, and Critical Standards" (1982) 60 *Texas L. Rev.* 569 at 569.

²⁰⁴ Much attention has recently been given to the question whether judges are members of the same community. See, for example, O.M. Fiss, "Objectivity and Interpretation" (1982) 34 *Stan. L. Rev.* 739.

²⁰⁵ Textual positivism should not be confused with legal positivism. See *supra*, note 6.

²⁰⁶ *Supra*, note 204 at 746. As S. Levinson points out in "Law as Literature," (1982) 60 *Texas L. Rev.* 393 at 394-95, it is difficult "to understand Fiss' embrace of Kuhn, given that the key element in Fiss' program is his defense of the objective truthfulness of claims about public and constitutional values."

of political paradigms within the judicial community, but is committed to objectivity at least at the formal level of fitting new links to the existing “chain of law”: “an interpretation of any body or division of law, like the law of accidents, must show the value of that body of law in political terms by demonstrating the best principle or policy it can be taken to serve.”²⁰⁷

All textual positivists are committed to maintaining a separation between what textual positivist one calls “linguistic” and “moral” intuitions.²⁰⁸ While they each have different recipes for the judicial mixture of statutory interpretation and political lawmaking, none of them question the assumption that these two enterprises might in theory be disentangled. Apart from its many other flaws,²⁰⁹ textual positivism is unable to explain why two judges may reach opposite causal decisions. This is because this camp insists that “interpretation is itself an activity which is in need of constraints” whereas actually “interpretation is a *structure* of constraints, a structure which, because it is always and already in place, renders

²⁰⁷ “Law as Interpretation,” *supra*, note 5 at 544-45. In responding to Fish’s assault (see *supra*, note 6) upon his theory of interpretation, Dworkin argues that “the question of objectivity” is separate from the question of how interpretation takes place. See R. Dworkin, “My Reply to Stanley Fish . . . : Please Don’t Talk about Objectivity Any More” in W.J.T. Mitchell, ed. *The Politics of Interpretation* (Chicago: University of Chicago Press, 1983). He questions the value of advancing substantive arguments for the objectivity of a particular interpretation where such arguments are external to the interpretive theory itself (*ibid.* at 297-303). Yet, Dworkin clings to objectivity with respect to the formal process through which interpretations are made. Accordingly, he criticizes Fish for “bringing an a priori theory of objectivity to the enterprise of interpretation instead of taking it from the enterprise” (*ibid.* at 291). Dworkin appears to accept a plurality of “best” principles and policies for the judge to believe in, but insists that the judge nevertheless be in a position to “make the distinctions and discriminations the right-wrong picture requires” (*ibid.* at 290-91). Thus the epistemological paradox that Fish identifies: “. . . Dworkin imagines a two-stage process in which one first has a belief and then must determine whether or not to believe it.” S. Fish, “Wrong Again” (1983) 62 *Texas L. Rev.* 299 at 312.

²⁰⁸ See M. Moore, “The Semantics of Judging” and “A Natural Law Theory of Interpretation,” *supra*, note 4. Moore is a good example of the common ground underlying textual positivism because within one page (Moore, “Semantics,” *ibid.* at 293) he manages to sound like both Hart — “. . . [a judge’s] obligation is to apply the statutory language and moreover, to take into account in his decision his intuitions about what language ordinarily means” — and Dworkin: “. . . [interpretation of a statute is] an application of it to the facts of the case in a way that promotes the intention the judge sees ‘in’ the statute.”

For Moore, “linguistic” intuitions are “provisional,” setting the bounds within which the judge invokes his “moral intuitions.” Thus there is, in Moore’s view, an inevitable trade-off between the two. The obvious problem with this is that if a judge is necessarily — according to Moore — influenced by moral considerations in interpreting a statute, how can this judge prevent these considerations from infiltrating into his “linguistic intuitions”? Conversely, though perhaps less obviously, are not one’s “moral intuitions” linguistically determined? “A judge who knows the Oxford English Dictionary by memory” may indeed “not know nearly enough to resolve cases” because “he must know what is fair, just, and right” (Moore, “Semantics,” *ibid.* at 293). On the other hand, a judge cannot begin to know the latter until he knows the terms ‘fair,’ ‘just,’ and ‘right’ — and at least a bit more of the Oxford Dictionary — in order to put these terms into some linguistic context and resolve cases.

²⁰⁹ See, for example, Levinson, *supra*, note 206.

unavailable the independent or uninterpreted text and renders unimaginable the independent and freely interpreting reader.”²¹⁰

The second camp collapses the distinctions between interpretation and creation, insisting that the very act of reading statutes and judgments involves the judge in lawmaking. This is the camp of textual relativism.²¹¹ Its approach accords with my model of how a judge deals with causation: the very acts of “hearing the facts” and “formulating the facts” involve positing epistemological and linguistic entities and relationships that themselves are creative of the judge’s causal reality. There is a more fundamental reason why this model falls into the second and not the first camp. By building into its paradigm a core of objectivity, the first camp must allow for the possibility that judges will deviate from their paradigms: a judge whose links do not “fit” the chain of previous decisions is “striking out in a new direction.”²¹² The second camp wholly rejects this possibility:

A judge who decided a case on the basis of whether or not the defendant had red hair would not be striking out in a new direction; he would simply not be acting as a judge, because he could give no reasons for his decision that would be seen *as* reasons by competent members of the legal community.²¹³

Similarly, a judge cannot step outside the collective linguistic web²¹⁴ of the legal community because she or he would not be able to communicate with other judges and lawyers. Such an inability to communicate would cut short the process described above at the first step: “formulating the facts” or “making a causal judgment” could not

²¹⁰ Fish, *supra*, note 6 at 562. Fish insists that his approach has no normative implications for literary criticism: “As soon as you descend from theoretical reasoning about your assumptions, you will again inhabit them.” See S. Fish, *Is There a Text in this Class? The Authority of Interpretive Communities* (1980). Unlike Paul Brest (see “Interpretation and Interest,” 34 *Stan. L. Rev.* 765 at 773), I do not think that the power of judicial interpreters should in principle limit the relevance of Fish’s approach to legal interpretation. Indeed, this power simply increases the significance of the interpreter’s “assumptions.”

²¹¹ It may be argued that the division between the two camps is artificial, superficial, and distracting. G.L. Bruns argues, for example, that “there’s not much room for disagreement between Dworkin and Fish” because they both fall onto the same side of the divide between “grammarians” and “pragmatists”: “. . . how loose things get depends on whether we think of conventions grammatically in terms of mental constraints or socially in terms of prevailing customs. . . .” G.L. Bruns, “Law as Hermeneutics: A Response to Ronald Dworkin” in *The Politics of Interpretation*, *supra*, note 207 at 317-18.

The problem with Bruns is that he sees the relation between law and its social context as *the* subject-matter of legal interpretation, rather than one part of this subject-matter. Bruns avoids the epistemological issue of *how* a society comes to the meaning of a text, which must be prior to the issue of *what* that meaning is. Bruns correctly observes the proximity of some of Dworkin’s stances to Fish’s position; this is not because they are both “grammarians,” however, but because Dworkin tries, at times, to have a foot in each of the two camps.

²¹² Dworkin, *supra*, note 5.

²¹³ Fish, *supra*, note 6.

²¹⁴ See *supra*, notes 196, 204, and 206.

be done in any meaningful way. Textual relativism accounts for a judge's ability to communicate causal decisions, but it does not align the content of these decisions in any way. Even within a given paradigm the decisions may be completely inconsistent: the content of a judge's causal decisions depends on a selection of posits from her or his ontological web. That selection is determined by the judge's political paradigm.²¹⁵ This process of selection is the locus of power of the judicial community, who are, in this context, a causal chain gang.

B. *Tort, Legislation, and Beyond*

"Let all laws be clear, uniform and precise: to interpret laws is almost always to corrupt them" — Voltaire²¹⁶

How, then, *should* causation be dealt with? My linguistic analysis has to this point been concerned with providing an account of how causal decisions are actually made in tort law. The model presented suggests that linguistic analysis is a matter for whoever is charged with the task of making causal decisions. There are a number of normative routes leading from this model and there is no necessary reason why any linguistic form should or should not constitute a causal law.

The problem of linguistic indeterminacy undermines the traditional approach of giving the judicial community a free hand in determining causal relationships. Although such determinations take place within the context of linguistic and political paradigms, many judges tend to articulate their causal decisions in the quasi-scientific guise of causal maximalism. Accordingly, the question arises as to whether legislation can and should constrain this power to create causal chains, by entering what has until now been a purely common law area.

It is possible to impose a statutory framework upon the process of judging causation. The role of the legislator would be to create a catalogue of causal statements like S3 that cover as many as possible of the descriptions of events that might pertain to injuries. In a cost-free world, this would be the route to clarity and consistency; it might also be the route to justice, insofar as "justice" reflects the political will of the community whom, in theory at least, the legislators represent. Legislation thus reduces linguistic indeterminacy with respect to both the weaning of legal prescriptions and their policy underpinnings.

²¹⁵ See A.C. Hutchinson, "From Cultural Construction to Historical Deconstruction" (1984) 94 *Yale L.J.* 209, and "Alien Thoughts: A Comment on Constitutional Scholarship" (1985) 58 *S. Cal. L. Rev.* 701 at 711-13.

²¹⁶ Voltaire, *Philosophical Dictionary* (1764), quoted in H.L. Mencken, *A New Dictionary of Quotations* (New York: Alfred A. Knopf, 1942) at 658.

A legislature could intervene by reversing the three-step process outlined above. It would start at the ontological level by defining the bounds of causal reality in terms of its political mandate: a libertarian parliament would define these bounds narrowly; a communalistic parliament would define them broadly. Then, shifting to the linguistic level, the legislature would posit linguistic causal chains on the basis of its selected causal reality. These chains would be rules in the pristine sense: linguistic packages within which the pieces of evidence of particular cases can be fitted. Finally, the judges would undertake the epistemological process of fitting their perceptual and conceptual courtroom experiences to these formal linguistic structures. At this third and final level the indeterminacy is unavoidable: in a world of textual relativism, each judge recreates the linguistic rule by reading it.²¹⁷ This is a long way, however, from the indeterminacy of a system of tort case *ratios* dealing with “cause

²¹⁷ The indeterminacy involved in a judge’s statutory interpretation may be no less than in her or his interpretation of precedent. As Fish puts it: “. . . a statute no more announces its own meaning than does the case to which it is to be applied, and therefore cases where statutes figure are no more or less grounded than cases where no statutes exist” (Fish, *supra*, note 6 at 566 fn. 21).

The way in which the term ‘apply’ has been refashioned by lawyers provides a vivid example of how linguistic usage determines one’s conceptual framework. The relevant definition in *The Shorter Oxford English Dictionary*, 3rd ed. (Oxford: Oxford University Press, 1973) seems to accord with a lay, intuitive understanding of ‘apply’: “to bring . . . a law . . . into contact with facts, to put into practical operation.” This suggests that applying a statute involves a process of fusing law and fact, and that a law derives its meaning by being “applied” to a set of facts. Yet *Black’s Law Dictionary*, 5th ed. (St. Paul, Minn.: West Publishing Company, 1979) presents an entirely different picture in the following “legal” definition: “When construing a statute, in describing the class of persons, things or functions which are within its scope; as that the statute does not ‘apply’ to transactions in interstate commerce.” This implies that law and fact are two separate entities with mutually exclusive and independent meanings. Either this statute is applicable to this set of facts or it is not: whatever the judge decides, there is no further process of “applying,” because the independent meaning of the statute will indicate the result. In short, by using ‘apply’ in this way, lawyers avoid confronting the hermeneutical problem altogether, much like the use of ‘cause’ as copula in the linguistic model presented in this article avoids digging into the problem of causation.

One attempt to confront the ‘apply’ problem has been made by Moore, *supra*, note 4. Moore examines the structure of a formalist’s syllogism (see Moore, “Semantics,” *ibid.* at 171), observing that the formalist is unable to supply the “crucial third premise” to link legal predicates and factual descriptions. He concludes that this must be created by the judge, for “it is not a legal rule” (*ibid.* at 172). This is consistent with his metaphysical realism and legal naturalism (see Moore, “Natural Law,” *supra*, note 4 at 397). Yet there is no compelling reason why the “third premise” should not be a legal rule. Consider Moore’s example:

Premises:

- (1) Objects that are not manufactured products may be carried without an ICC certificate.
- (2) These things are eviscerated chickens.
- (3) All eviscerated chickens are not manufactured products.

Conclusion: These things may be carried without an ICC certificate.

By defining manufactured products to exclude eviscerated chickens we do not need to embrace formalism, though the formalist may, of course, also want to do this. Such a definition would, however, allow the judge to limit the unavoidable indeterminacy of meaning without having to fall back on a dubious essentialism and a vague notion of “moral reasoning.” Of course, the indeterminacy remains with respect to the fields of reference of ‘eviscerated chickens’ and ‘manufactured products.’

in fact.” The inconsistency and unpredictability has been confined to one of the three steps in the legal process, and the primary locus of political power has been shifted from the judges to a broader political community.

There are two general problems with this legislative route through the tort system. Given unlimited resources, could a catalogue of permissible causal statements be created quickly enough to cover new tort situations that arise as both technology and society changes? This difficulty assumes considerably less significance when one perceives the structural similarity of causal situations, illustrated in *CASE 1* through *CASE 10*. Society’s resources, however, are not unlimited. The costs of the legislative route cover not a one-time effort but an ongoing process of revisions in accordance with even subtle changes in a legislature’s political mandate. The impact of such changes is felt throughout the web. The benefits of the process, on the other hand, involve a relative reduction of indeterminacy, not its elimination. While this represents a considerable advance over the purely common law approach, the costs must be weighed against its benefits.

The second problem with the legislation of causation in tort is even more fundamental. Because the descriptive linguistic model presented above indicates a way to avoid the maximalists’ reliance on *necessity*, it may be used as the tool of a legal system endeavouring to avoid *responsibility*. A legislature is free to draw the bounds of causal reality as broadly or narrowly as it pleases — or at least as its political mandate permits — and the linguistic causal copula will serve all such mappings equally well. This linguistic model, however, is grounded in a view of both epistemology and ontology as layers of a web. This implies that both the *process* of observation, knowledge, and reflection, and the *object* of that process are interconnected and indivisible. It makes little sense to speak of “Nevada injuries” or “Chernobyl injuries.” An injury belongs no more and no less to Nevada or Chernobyl than to the myriad of other physical, chemical, social, economic, and political events in which the victim of an injury is entangled. The web of events linking continents and decades is not easily dismantled: in making causal decisions, a legislature is forced to dissect this web along lines that are vague or even arbitrary.

Accordingly, the linguistic model goes beyond dispelling the notion that particular injuries occurring after the Nevada and Chernobyl disasters may be compensated — and others may not — on the basis of the presence or absence of factually ascertainable “connecting factors” between harms and hazards. It also suggests that the bounds of causation must be drawn sufficiently broadly to ensure the compensation of all harms — and the

prevention of all hazards²¹⁸ — within the categories of harms (or hazards) that may be compensated (or enjoined) at law. The following normative conclusion thus flows from the descriptive linguistic model presented above: a community should be ultimately responsible for compensating the injuries that it determines should be compensated as a matter of law, since within its complex and indivisible web of causation, the community must recognise itself as the cause of those injuries.

The tort system serves as a practical framework for awarding compensation, and at the same time provides a direct mechanism for funding such compensation and deterring hazardous behaviour.²¹⁹ Legislation may be used to inform the tort framework with causal definitions to the extent that the costs of creating and adjusting such definitions are exceeded by the benefits of more refined causal determinations. In *CASE 1* through *CASE 9*, for example, a court may order C1 and/or C2 to compensate P on the basis of a causal connection legislatively created between particular types of activities (or members of the community who engage in them) and various possible events or conditions. Where the tort system breaks down, however, it may be appropriate for a legislature to establish an administrative compensation scheme. This safety net would operate, for example, when C1 and C2 are insolvent or unreachable, or where the legislature has determined that the web of causation is simply too difficult to dissect, as perhaps is the situation in *CASE 10*.

²¹⁸ Although this article discusses causal problems in the context of the retrospective compensation of injuries, similar problems arise with respect to the enjoining of potential hazards. The use of legislation is perhaps even more crucial in the latter context than the former. Where the stakes are so high, it is difficult to see how the indeterminacies of the common law could be preferred to the clarity, coherence, and likely activism of legislation. Cf. B.H. Wildsmith, "Of Herbicides and Humankind: Palmer's Common Law Lessons" (1986) 24 O.H.L.J. 161 at 162. Wildsmith argues that in an action for an injunction restraining the use of "suspect chemicals," a judge should reverse the burden of proof:

. . . it is appropriate for a judge to respond to cases involving suspect chemicals in the face of scientific uncertainty by finding the chemicals presumptively unsafe, despite the inability of the plaintiff to demonstrate the likelihood of harm, unless the defendant is able to prove on the balance of probabilities that the chemicals are safe. Note that *this view circumvents problems of causation in fact*, but does, in its reference to 'suspect' chemicals, retain a need for some minimal rational connection between the chemicals and harm; there must be some reason to regard the chemicals as unsafe before reversing the burden of proof (*ibid.* at 179, emphasis added).

Wildsmith refers with approval to the injunction granted against discharges from a taconite processing plant in *Reserve Mining Co. v. Environmental Protection Agency* (1975) 514 F.2d 492 (U.S.C.A., 8th Cir.), which he says illustrates the approach to causation taken in *Cook* (*supra*, note 37) and *McGhee* (*supra*, note 149). Surely clear and direct legislative intervention is preferable to the vagaries of this minimalist approach in ensuring that the law does not "prefer herbicides to humankind" (*cf.* Wildsmith, *ibid.* at 186)?

²¹⁹ Cf. text following *supra*, note 180.

The technical details of a compensation system that deals with the manifold difficult problems of causation are beyond the scope of this article. Nevertheless, the steps taken here toward a linguistic analysis of causation suggest a compensation system that would operate both within and beyond the realm of tort. Within the tort system, legislation may be used — where cost effective — to reduce the linguistic indeterminacy inherent in the process of judging causation. In some circumstances, however, the legislature may have to go beyond the tort system to meet the responsibility imposed upon a community by the linguistic model of causation presented in this article.

V. CONCLUSION

The journey into the law of causation in tort is profoundly disquieting. Not only does a causal question turn up — explicitly or implicitly — in almost every case brought before a court (whether in tort or not), but the stakes involved in the outcome of a causal determination are very high indeed. The deeper one ploughs through the jungle of arbitrary, irreconcilable, and sometimes incoherent common law decisions on causation, the more one senses both the importance and the difficulty of finding a safe route out. Some, like Hart and Honoré, will choose to return along the same path by which they entered, neatly documenting their progress along the way in terms of a catalogue of “ordinary causal language.” Such a strategy certainly gives to this jungle an appearance of order, but it advances one no further than the point from which one set out. Others, like Richard Wright, will get sucked into the jungle itself in search of an elusive test of pure factual causation. Still others will take the earliest exit, giving up on causation altogether.

The approach suggested in this article is directed toward providing one means of facing causal issues by capturing that middle ground between causal maximalism and minimalism that appears to elude Hart and Honoré. This approach attempts to avoid either falling back on an opaque notion of necessity, or jumping to the conclusion that language is merely a transparent prism through which to refract a particular legal ideology. My linguistic model is not grounded in the assumption that meaning can be cajoled,²²⁰ coaxed,²²¹ or carved²²² out of legal texts, nor is it swept away in a current of textual nihilism: legal discourse may be no less

²²⁰ See, for example, the description of John Hart Ely in Levinson, *supra*, note 206 at 380-81.

²²¹ See, for example, Dworkin, “Law as Interpretation,” *supra*, note 5.

²²² See, for example, Fiss, *supra*, note 204.

contingent than “human attempts to link the stars,”²²³ but it is the imperative of those who engage in legal discourse to build causal constellations that are as clear and coherent as possible.

“Cause in fact” decisions are permeated by non-factual considerations. The model presented above attempts to explain how these considerations can be integrated into a coherent legal system. It draws on a linguistic modification of Hume’s account of causation, on the distinction between analytic and synthetic statements, and on a metaphor of holistic relativism. It describes the process that underlies the verbal formulae a judge uses in dealing with the “cause in fact” problem as the positing of a linguistic copula to link two posited statements within her or his causal web. Finally, it invites the lawmaker to create a systematic catalogue of such statements for the judge to apply to particular tort cases, and in some circumstances to venture outside the tort system to compensate particular victims caught within a community’s causal web.

Like any theory of the way the law does or should work, aspects of this model are incomplete, difficult to apply, and perhaps even dangerous. It would be foolish to aspire to descriptive and prescriptive exhaustiveness, as did the earlier law and economics movement.²²⁴ Of course, one crucial difference is that the linguistic model by definition recognises that it is entrapped within the bounds of language, admits that its explanatory and normative force is limited, and accepts the economic school as a legitimate language community. For these very reasons, the linguistic analysis developed in this article might be usefully applied in other legal contexts.

The choice of causal statements is ultimately an ideological one. Divorced from an understanding of the ideological context of the epistemological, linguistic, and ontological layers of a community’s causal web, a linguistic analysis may easily be manipulated.²²⁵ Informed by such an understanding, however, it may clarify what the “causal chain gang” does and perhaps even lead toward the creation of better causal “chains” in the future. Ronald Dworkin concludes his account of the law as a

²²³ Cf. Levinson, *supra*, note 206 at 402.

²²⁴ See, for example, R. Posner, *Economic Analysis of Law*, 1st ed. (1972).

²²⁵ A.C. Hutchinson argues that by according transcendent status to ahistorical or metalinguistic “truth,” Fish’s approach tends to legitimize the hierarchy of liberal society by obscuring the “grubby facts of social history” with a pseudo-scientific characterization of meaning as an interaction between reader and text. Life is more important than truth, and thus a political account of the power structure underlying the hermeneutical question is required. In short, “politics, art and law are not so much united in philosophy as art, law and philosophy are united in politics.” A.C. Hutchinson, “Power and Interpretation” (March, 1985) [unpublished]. Cf. Dworkin, “Law as Interpretation,” *supra*, note 5 at 550.

“chain enterprise” with these words: “I end simply by acknowledging my sense that politics, art, and law are united somehow in philosophy.”²²⁶ If politics, art, law, and philosophy are united in anything apart from the web of belief itself, they are united in language, the material in which that web consists. In talking about the language of causation we are doing no more and no less than exploring the causal web within which we are entrapped.

²²⁶ *Ibid.*