Nuisance, Ultrahazardous Activities, And The Atomic Reactor

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INTRODUCTION

In the words of President Eisenhower, "... The atom stands ready to become man's obedient, tireless servant, if man will only allow it." A new day, artificially irradiated by nuclear power, is about to dawn.

But there is a radioactive cloud on the horizon. However real or fanciful the hazards attending atomic reactors may be, the public has come to equate "atomic" with "bomb." Although everyone wants lower utility rates and the obvious financial benefits of living near a taxable utility, there will be a cautious few who would forego these advantages to avoid the concomitant risks. This latter group would undoubtedly grow to substantial proportions if there should be even a minor, much less a major, atomic reactor accident.

The ancient common law doctrine of nuisance and its modern counterpart, zoning, would be among the first legal resorts to which these people would turn. Their immediate concern, of course, would not be recovery of damages for harm actually suffered, but avoidance of harm through preclusion of the risk itself. Their chance of success is the primary concern of this paper.

The analysis will fall into four parts. The first will review generally the law of nuisance; the second will consider the relationship between nuisance and those activities designated "ultrahazardous"; the third will deal with atomic reactors in terms of the factors determined to be relevant in the first two sections; and the fourth will consider the power of a state court to enjoin a reactor as a nuisance, in view of possible preemption of the field by federal legislation and regulation.
I. The Law of Nuisance

Although the word "nuisance" is an expression of deprecation, it is, even so, more abused than abusive. It has been reviled by Dean Prosser as "a sort of legal garbage can" and snubbed, as a word, by the Restatement of Torts. Its best friends, on the other hand, have blown it up to grotesque proportions. One authority states that nuisance is "regarded as incapable of precise definition so as to fit all cases," but nevertheless wades helpfully in: "... In its broadest sense, it is that which annoys or gives trouble or vexation, that which is offensive or noxious; anything that works hurt, inconvenience or damage." This does, of course, "fit all cases," and it is little wonder that "nuisance" was the successfully asserted cause of action when a cockroach was baked into a pie. The need for a less inclusive definition is clearly indicated.

Nuisance dates back in English law fully eight centuries with the development of the assize of nuisance, "a criminal writ affording incidental civil relief, designed to cover invasions of the plaintiff's land due to conduct wholly on the land of the defendant." This was superseded by the action on the case for nuisance, limited to interference with the use or enjoyment of land.}

2. Prosser, Nuisance Without Fault, 20 Tex. L. Rev. 399, 4110 (1942). By way of contrast, the Supreme Court of the United States has referred to nuisance as "the great principle of the common law, which is equally the teaching of Christian morality, so to use one's property so as not to injure others."

3. Restatement, Torts, § 882 (1939). See scope note to c. 40. Professor Seavey has criticized this, and it is difficult to disagree with him: "I can understand the desire to avoid a term like nuisance, but since nuisance is a word which is and will be used by the courts, it would seem better to ascertain the way in which they use it than to avoid its use." Seavey, Nuisance: Contributory Negligence and Other Mysteries, 65 Harv. L. Rev. 984, 985, n. 4 (1952).


5. 66 C.J.S. Nuisances, § 1 (1950). Compare "anything that worketh hurt, inconvenience or damage," 3 Blackstone, Commentaries *216; "anything wrongfully done or permitted which injures another in the enjoyment of his legal rights." 3 Cooley, Torts 398 (4th 1932). As Judge Kenworthey has wryly commented, "This [Cooley's] definition could well be applied to the cause of action which arises in favor of a husband when another alienates the affections of his wife." Kenworthey, The Private Nuisance Concept in Pennsylvania: A Comparison with the Restatement, 54 Dick. L. Rev. 109, 110 (1949).


7. Restatement, Torts, scope note to c. 40 (1939).


9. Ibid.
At the same time, the crime of nuisance was developing to protect the public generally from interference with the use and enjoyment of public places or the use and enjoyment of property in a substantial portion of the community. By the sixteenth century civil liability had come to be imposed in favor of a plaintiff who could show that he had been injured to a greater degree than the community generally.\footnote{10}

Dean Prosser states that the best reason for barring all other individual members of the community from private actions is that "it relieves the defendant of the multiplicity of actions that may follow if everyone were free to sue for the common harm." \footnote{11} However, the reason appears to be less of sympathy for the defendant than of consideration of the interests of the community as a whole. If the injury is to the community or to its members generally, the community might want to weigh, through its representatives, the desirability of the offensive enterprise and the prohibitive effect upon it if heavy damages were to be levied. A community decision not to sue on the grounds that the activity should not be burdened by multiple damages \footnote{12} can only be effective if individual members of the public are barred from bringing separate actions. On the other hand, it would be unfair to any minority who might suffer specially to deny its members separate actions. Otherwise, they would in effect be taxed at a higher rate than other members of the community in support of an enterprise beneficial to the community at large. At the same time, the burden of damages on the enterprise, as well as the number of actions, are kept at a minimum.\footnote{13}

Dean Prosser decr\-ies the inclusion of public and private nuisances under a single classification, on the grounds that it creates confusion and that "the two have almost nothing in common." \footnote{14} Professor Seavey, on the other hand, has properly pointed out that the only difference between the two subcategories is that a public nuisance is an interference on a larger scale and is criminal, as well as being tortious to those specially damaged.\footnote{15} In other respects, he writes, the principles

\footnotesize{\begin{itemize}
\item 10. PROSSER, op. cit. supra note 8, at 403.
\item 12. This would be, in effect, a general tax on the members of the community in the public interest. A similar decision is made when statutory authorization of an activity such as a railroad prevents actions by all except those who have suffered specially. Cf. Richards v. Washington Terminal Co., 233 U.S. 546 (1913).
\item 14. PROSSER, TORTS 391 (1955).
\end{itemize}}
applying to one should apply to the other as well. "In either case the interference may make the use of the affected area unpleasant or dangerous or may prevent its utilization. In addition . . . it may cause physical harm to persons or to chattels." 10

Another difference of opinion among the authorities is with regard to whether nuisance is "a field of tort liability," having "reference to the interests invaded," 17 i.e., use and enjoyment of land, or is, as Professor Seavey would have it, "wrongful conduct which causes such interference." 18 Again we are inclined to Professor Seavey's view. As he points out, to define solely in terms of the consequences is not consistent with customary usage of other terms in torts; defamation, for example, is not an effect upon someone's reputation, but conduct affecting reputation. An injunction may be concerned primarily with the consequences, but it is the conduct, insofar as it brings them about, that is enjoined. 19

To emphasize the conduct as well as the consequences is essential to sound analysis, since the heart of the concept of nuisance is the tortiousness of the conduct—that is, the fact that the defendant, either negligently or intentionally, has committed a harmful act. This means, of course, that the function of the court becomes one of balancing the social value of the defendant's conduct against the social interest in preserving the plaintiff's free use and enjoyment of his property. 20 We may smile at the quaintness of expression of the ancient holding regarding candle-making in a residential area: "Le utility del chose excusera le noisomeness del stink," 21 but it was good law then and remains so today.

As summarized in the Restatement of Torts, the general considerations weighed by the courts include (a) the social value which the law attaches to the primary purpose of the conduct, (b) the suitability of the conduct to the character of the locality, and (c) the impractica-

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16. Seavey, supra note 15, at 985. The Restatement of Torts has no sections dealing specifically with public nuisances, although several illustrations of public nuisances are found in the chapter on negligence. See Seavey, id. n. 4.

17. PROSSER, TORTS 391 (1955); RESTATEMENT, TORTS, scope note to c. 40 (1939).


19. Cf. Elliott Nursery Co. v. Du Quesne Light Co., 281 Pa. 166, 170, 126 Atl. 345 (1924): "Appellant's request for an injunction restraining defendant from discharging cinders, dust, smoke, and sulphur dioxide was in effect a demand to close down the plant, as it is physically impossible to operate a plant in which bituminous coal is consumed without depositing some of the product of combustion upon neighboring property."


bility of preventing or avoiding the invasion.\textsuperscript{22} In short, "the ultimate question in each cause is whether the challenged use is reasonable in view of all the surrounding circumstances." \textsuperscript{23}

Two cases, both involving a similar enterprise, help to illustrate the conscious manner in which the courts balance the social utility of the conflicting interests. In the first,\textsuperscript{24} plaintiff was owner of a drive-in movie theater and brought suit to enjoin a nearby horse-race track from using bright lights at night that interfered with motion picture screening. Finding on the facts presented that "neither party can claim any greater social utility than the other," \textsuperscript{25} the court dismissed the complaint. In the second,\textsuperscript{26} a drive-in theater was operated near a residential area, so that neighboring homeowners spent their nights engulfed in sounds of mob scenes, musical extravaganza, and air and sea battles. On balance, the "normal enjoyment of [plaintiffs'] homes" \textsuperscript{27} was found to hold the higher social value.

The process of judicial evaluation in such cases has sometimes been distorted, however, from a process of balancing the positive social interests involved into one of comparing the financial loss to each party and "balancing the injuries." \textsuperscript{28} As was held in Evans v. Reading Chemical & Fertilizing Co.,\textsuperscript{29} "a refusal of an injunction upon the ground that plaintiff cannot suffer as great a loss from the continuance of the nuisance as defendant would from its interdiction, would be as far removed from equity as can be." \textsuperscript{30}

\textsuperscript{22} Restatement, Torts § 828 (1939). In section 826 there is a general discussion of weighing the gravity of the harm against the utility of the enterprise.


\textsuperscript{24} Amphitheatres, Inc. v. Portland Meadows, 184 Ore. 336, 198 P. 2d 847 (1948).

\textsuperscript{25} Id. at 362, 198 P. 2d at 858.

\textsuperscript{26} Anderson v. Guerrin Sky-Way Amusement Co., 346 Pa. 80, 29 A.2d 682 (1943).

\textsuperscript{27} 29 A.2d at 684.

\textsuperscript{28} This can properly be done only in considering the advisability of a preliminary injunction. Evans v. Reading Chemical & Fertilizing Co., 160 Pa. 209, 28 Atl. 702, 709 (1894). Cf. Hulbert v. California Portland Cement Co., 161 Cal. 239, 118 Pac. 928 (1911), denying a stay pending appeal although the loss to the defendant far outweighed the loss to the plaintiff. Pennsylvania Lead Co.'s Appeal, 96 Pa. 116, 127 (1880): "Where justice is properly administered, rights are never measured by their mere money value, neither are wrongs tolerated because it may be to the advantage of the powerful to impose upon the weak."

\textsuperscript{29} 160 Pa. 209, 224, 28 Atl. 702, 709 (1894).

Unfortunately, however, the Evans court distinguished an earlier case, Richards's Appeal, on the grounds that the plaintiff's injury there was such "as to be capable of adequate compensation at law." This was in fact an expressed grounds in Richards's Appeal, but the case is indefensible in those terms. The court there found that bituminous smoke and soot from the defendant's iron factory "materially operates to injure the dwelling home as a dwelling," and "blackens [plaintiff's cotton] stock and renders the fabrics less saleable." It would be difficult to imagine a more appropriate case for the intercession of equity, on grounds of inadequacy of legal remedy, than one in which a dwelling is made less livable, or in which an industry of importance to the community is impaired.

The proper rationale of Richards's Appeal, therefore, cannot be that legal damages are adequate, but that the positive social value of the manufacture of iron in the particular community in question is of greater, or at least of equal, social value than either residential or cotton manufacturing interests. As the court itself takes pains to point out, equity should be reluctant to enjoin "the use of a material necessary to the successful production of an article of such prime necessity as good iron." In a region in which coal mining and iron refining are the primary industries, and in view of the court's extensive consideration and rejection of alternative methods of production, the holding is well within the Restatement formulation summarized above.

Where, in the foregoing analysis, is there room for the proposition that nuisance and negligence are "clearly distinguishable" or that

sometimes said that the doctrine of laches will not preclude a suit against a "continuing nuisance." This phrase is meaningless, however, since it conveys nothing either by literal implication nor by judicial interpretation. See 66 C.J.S. Nuisances, § 119 (1950). But cf. the doctrine of "continuing trespass." Prosser, Torts 63 (1955).

31. 57 Pa. 105 (1868).
34. 57 Pa. 105, 112 (1868). Note that this does not mean that plaintiff would not be entitled to damages if the burden thereby imposed upon the defendant would not be prohibitive. Although the damages would not be "adequate" in the equitable sense, this is no reason to deny them as well as the injunction. Cf. Elliott Nursery Co. v. DuQuesne Light Co., 281 Pa. 166, 126 Atl. 345 (1924); Robb v. Carnegie Bros. & Co., Ltd., 145 Pa. 324, 22 Atl. 649 (1891).
35. One might well expect a different result on the same facts in a case arising in Lowell, Massachusetts.
38. 65 C.J.S. Negligence § 1 (1950).
negligence is "not essential to the cause of action" \(^4\) for nuisance? As Professor Seavey has demonstrated,\(^4^0\) since reasonableness is the touchstone of nuisance, negligence and nuisance are separable only where intent to bring about the injury can be made out.\(^4^1\) It is therefore highly misleading to say that a case involves "not a question of negligence but of nuisance," \(^4^2\) since this implies (as is often intended) that something less than foreseeable and undue harm will suffice.\(^4^3\) That such is not the case is illustrated by Broyles v. Speer,\(^4^4\) where the plaintiff, while walking on the sidewalk, was injured when a door was thrown open and struck her. The court held that the maintenance of a door that opens outward over a sidewalk can be found a nuisance only upon proof of negligent use and interference with public travel.\(^4^5\)

The distinction stressed by some authorities \(^4^6\) between nuisance and trespass is also misleading. Nuisance and trespass are distinct from each other (although with considerable overlapping), but the significant difference is not between cases of "non-trespassory" inter-

\(^{39}\) 46 C.J. Nuisances § 28 (1928).

\(^{40}\) Seavey, Nuisance: Contributory Negligence and Other Mysteries, 65 Harv. L. Rev. 984, 985 (1952).

\(^{41}\) "Negligence is not requisite to liability for a nuisance . . . only where the defendant is aware of the harmful effects created by his conduct." Seavey, Nuisance: Contributory Negligence and Other Mysteries, 65 Harv. L. Rev. 984, 988 (1952). Cf. Kenworthey, The Private Nuisance Concept in Pennsylvania: A Comparison with the Restatement, 54 Dick. L. Rev. 109, 111 (1949): "Negligence is not necessary where, as in the majority of cases, tortious interference is intentional."

\(^{42}\) Pottstown Gas Co. v. Murphy, 39 Pa. 257 (1861). A requested charge that negligence must be shown was refused. Cf. Holden v. Lewis, 33 Del. Co. 458, 463 (Pa. C.P. 1945) : "Defendant's counsel expended considerable effort to show that his clients were not negligent . . . This should not have been done. The question of negligence was completely irrelevant. The bill charged the defendant with maintaining a nuisance. It did not charge negligence." But cf. Tua v. Brentwood Motor Coach Co., 371 Pa. 570 92 A.2d 209 (1952), where plaintiff was injured when a heavy metal newsstand on the sidewalk was struck by a passing bus and thrown against her. Although the case is clearly one of special harm from a public nuisance the action was decided explicitly in terms of negligence. Both majority and dissenting opinions base conclusions upon an analysis of the risk of harm as against the utility.

\(^{43}\) The unsoundness of the distinction between negligence and nuisance is best demonstrated by an examination of the attempt to justify or delineate it. For example:

"Negligence has been said to be a violation of a relative duty, nuisance of an absolute duty; that is, the creation or maintenance of a nuisance is the violation of an absolute duty, the doing of an act which is wrongful in itself, whereas negligence is the violation of a relative duty, the failure to use the degree of care required under the particular circumstances in connection with an act or omission which is not in itself wrongful." 65 C.J.S. Negligence § 1 (1950). But cf. "A nuisance in many, if not most, instances, presupposes negligence . . ." 46 C.J. Nuisances § 28 (1928), citing McNulty v. Ludwig, 153 App. Div. 206, 213, 138 N.Y.S. 84, where the court adds, "These torts may be, and frequently are, coexisting and practically inseparable. . . ."


\(^{45}\) Id. at 408, 51 A.2d at 393.

ference with use and enjoyment, and cases in which "the actor causes some physical thing to infringe the possession of another." 47

For trespass there must be a physical invasion; in nuisance there may or may not be. For nuisance there must be an unreasonable land use (that is, an unreasonable use of one’s own or of public land); in trespass there may or may not be. Nuisance is most distinctive, therefore, in that it is essentially a land-use tort. It is broader than trespass in that it embraces (1) “non-trespassory” interference with use and enjoyment through undue risk of physical harm, and through noise, vibration, odors, etc.; and (2) interference with use and enjoyment of public land.48

Nuisance, however, does not reach its outer limits, but rather it overlaps trespass, when the interference consists of a physical invasion. To take the contrary position would create highly artificial distinctions, such as between the odor, the smoke, and the soot emanating from the same smokestack. To borrow an illustration from Dean Prosser, the flooding of plaintiff’s land, which is a trespass, may deprive him of all use and enjoyment.49 In such cases there is both trespass and nuisance, and the plaintiff should be free to pursue his remedy for either.50

Trespass is, in turn, broader than nuisance in that (1) it does not require negligence;51 (2) it covers physical invasion without demonstrable damage, thereby protecting exclusive possession from prescriptive rights; and (3) it covers physical invasions of private property where there is no related issue of defendant’s conduct on his own or public property.

Judge Kenworthey is correct, therefore, in criticizing the court for “talking nuisance law” 52 in Forster v. Rogers Bros.,53 where defendants entered plaintiff’s house without permission and stored dynamite that subsequently exploded. On the other hand, his proposition that the emission of limestone dust from a factory onto neighboring land 54 should be considered trespass but not nuisance,55 seems highly questionable. The case is as much one involving conflicting interests in land as is the case of interference with use and enjoyment by noises

47. Id. at 121.
49. PROSSER, TORTS 409 (1955).
50. Ibid. Cf. RESTATEMENT, TORTS, scope note to c. 40 (1939).
51. RESTATEMENT, TORTS § 164 (1939).
53. 247 Pa. 54, 93 Atl. 26 (1915).
55. Kenworthey, supra note 52, at 121.
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or vibrations. The decision should rest to the same degree on issues of social policy, expressed in terms of balancing the utility of each use in view of all the relevant circumstances, and ultimately expressing a decision in terms of the "reasonableness" of the defendant's conduct. The fact that such a case is nominally brought as an action in trespass for damages should not and does not change this basic fact.66 "It is in the field of unreasonable use that the law of nuisance is operative." 57

Not only, therefore, is limitation of "nuisance" in preference for "trespass" artificial, but it is in fact less adequately descriptive of the function that the courts perform. In the same way, as we have seen, the excessive emphasis on the nature of the interference lends itself to confusion as to the relationship of nuisance and negligence—that is, by clouding the fact that the core of nuisance doctrine is the reasonableness of the conduct that produces interference with the use and enjoyment of land.

There remains to be considered what kind and what extent of interference with use and enjoyment is adequate to make out a prima facie case of nuisance. At the minimum, the interference caused by the alleged nuisance must be "more than fanciful," 58 and not "mere tripling annoyances or injuries." 59 If the harm is "doubtful, eventual, or contingent," equity will not interfere by injunction.60 However, inconvenience and annoyance may be sufficient, and impairment to health is not necessary, 61 although a court in the ultimate determination of reasonableness will take judicial notice of the fact that air pollution

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56. An excellent example of nuisance law properly applied to a case brought in trespass is Conti v. New Castle Lime and Stone Co., 94 Pa. Super. 321 (1927). Lime-stone was brought onto defendant's property and pulverized. Large quantities of lime-stone dust were thereby thrown into the air and carried onto plaintiff's property. The court distinguished earlier cases permitting similar injury from coal mining, on the grounds that the latter enterprise was the most natural and beneficial development of the land in question. Compare Robb v. Carnegie Bros. & Co., Ltd., 145 Pa. 324, 22 Atl. 649 (1891), with Pennsylvania Coal Co. v. Sanderson, 113 Pa. 126, 6 Atl. 453 (1886).


61. Judson v. Los Angeles Suburban Gas Co., 157 Cal. 169, 106 Pac. 581 (1910). Cf. Rhodes v. Dunbar, 57 Pa. 274 (1868). Although some of the language in this case goes too far, at least by implication (e.g., "the fears of mankind, though they be reasonable, will not create a nuisance"), the decision at pp. 290 et seq. draws these statements into focus. Cf. Dennis v. Eckhardt, 3 Grant 390, 392 (Pa. 1862): equity will protect "... the enjoyment of quiet and repose, and the comforts of home." (injunction against tin and sheet-iron workshop because of noise).
is injurious to health. On the other hand, annoyance only to one of fastidious sensibilities is not sufficient to make out a prima facie case. Nor is it enough to show without more that neighboring property values have declined, although pecuniary loss beyond that sustained by the community as a whole may establish special damages, permitting an individual relief against a public nuisance. Yet, since equity will act where relief at law would be inadequate, the plaintiff need not prove actual pecuniary loss.

Although, as a general rule, nuisance "involves an idea of continuity or recurrence," the injury need not be habitual or periodical. As Dean Prosser notes, the important thing is that the interference be substantial, and duration and recurrence are only two possible indications of this. It has been held, for example, that a court of equity "will not determine that a family shall have their dwelling place made uncomfortable to live in for twelve hours, once in two weeks, or that they shall protect themselves by closing the home tightly and remaining indoors for that time. It is surely no justification to a wrongdoer that he takes away only one twenty-eighth of his neighbor's property, comfort, or life." 

"Nuisance" unfortified by adjectives is formidable enough. However, in addition to being public or private, or both at once, it is also found "absolute", "qualified", "conditional", "per se", "per accidens, "at law", and "in fact". None of these terms is unique to this field, each is used with varying degrees of confusion, and, like the word nuisance itself, all will be used by the courts despite the vocal despair of the commentators.

64. Rhodes v. Dunbar, 57 Pa. 274 (1868).
65. Cf. supra p. 79; infra pp. 112-114.
68. That the nuisance is not constant, but only when the wind is in one direction, is immaterial. Evans v. Reading Chemical and Fertilizing Co., 160 Pa. 209, 28 Atl. 702 (1894). Ross v. Butler, 19 N.J. Eq. 294, 97 Am. Dec. 654 (1888). Cf. Price v. Grantz, 118 Pa. 402, 11 Atl. 794 (1888), where the interference was found to be rare and exceptional and the defendant prevailed.
71. The phrase "continuing nuisance" is also used, but, fortunately, only rarely. See note 30 supra. "Mixed" or "united" nuisances are those in which the interference is "both public and private in character." Comment, Real Property—The Effect of Zoning Ordinances on the Law of Nuisance, 54 Mich. L. Rev. 266, 268 (1955).
The absolute and qualified (or conditional) nuisances require little analysis. Professor Seavey has given the following "free translation of the language of the courts" in distinguishing the former from the latter: "the intentional creation of a dangerous condition (perhaps limited to public places), as distinguished from careless acts unintentionally creating a dangerous condition or a careless failure to fulfill a duty to repair." 72

These, then, are relatively useless adjectives in nuisance law, since their relevance is limited to cases in which the single words for which they substitute are more descriptive. If the interference is intentional,73 we might just as well say so. If the interference is negligent,74 we can as easily say that. This is equally true when the question is whether contributory negligence will serve as a defense, or whether negligence in the operation of an inherently risky activity must be shown. Contributory negligence, of course, is not a defense to a wilful tort,75 and negligence or wilfulness in initiating a dangerous enterprise makes negligence of operation irrelevant. 76

The phrases nuisance per se (or at law) and nuisance per accidens (or in fact) can be used to better purpose, although the temptation to cast them out as intellectual dust-collectors may at first be a strong one. 77 Some of the classic definitions are the most misleading, if not the most bewildering. For example, a nuisance per se has been defined as an "act, occupation, or structure which is a nuisance at all times and under any circumstances, regardless of location or surroundings." 78

The error in a recent law review note 79 illustrates both the inadequacy of this definition and the confusion that typifies the area. It is

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72. Seavey, Nuisance: Contributory Negligence and Other Mysteries, 65 Harv. L. Rev. 984, 991 (1952). Cf. Prosser, Torts 400 (1955): "Usually the statement that a nuisance is 'absolute' . . . means only that it does not arise out of negligent conduct."

73. An interference is intentional even when it occurs "in the pursuit of a laudable enterprise without any desire to cause harm," as long as the actor knows that the interference is resulting or that it is "substantially certain" to result from his conduct. Restatement, Torts § 825, comment a (1939).

74. An interference is negligent where the actor realizes or should realize that his conduct involves a serious risk or likelihood of causing such interference. Restatement, Torts § 825, comment a (1939).


77. Cf. Kenworthy, The Private Nuisance Concept in Pennsylvania: A Comparison with the Restatement, 54 Dick. L. Rev. 109, 114 (1949): "The law of nuisance would be much more understandable if nuisance per se and in fact were forgotten."

78. 66 C.J.S. Nuisances § 3 (1950).

there stated that the law of Pennsylvania holds a fertilizer plant to be a nuisance per se within the definition quoted in the preceding paragraph.\(^{80}\) In the case cited in support of this proposition, however, the finding adopted by the court was that “The business of boiling up the carcasses of dead animals in a thickly populated neighborhood, which causes an offensive smell, is per se a nuisance and may be enjoined . . . .”\(^{81}\) The important phrases, of course, are “in a thickly populated neighborhood” and “which causes an offensive smell.” Not only is a fertilizer plant not a nuisance “regardless of location,” but the defendant will be permitted to show that the alleged offensive odors are not substantial or that they can be controlled by more modern methods of production.\(^{82}\)

The usefulness of the per se classification, in nuisance as in other areas of the law, is in designating those factual situations in which harm will be inferred or judicially noticed upon proof of the conduct alone.\(^{83}\) It is, in short, a classification for purposes of allocating the burden of proof. The inference of harmful consequences may be conclusive,\(^{84}\) as in the field of antitrust,\(^{85}\) or it may be rebuttable by the defendant.\(^{86}\) That a fertilizer plant in a thickly populated neighborhood gives rise to a rebuttable inference of harm, was, in fact, the precise holding in the Evans case:

*The difference between a nuisance per se and [a nuisance in fact] where a lawful business is carried on so as to become a nuisance, is not in the remedy, but only in the proof of it.*\(^{87}\) In the one case the wrong is established by proof of the mere act; in the other, by proof of the act and its consequences. Testimony hav-

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81. Evans v. Reading Chemical and Fertilizing Co., 160 Pa. 209, 212 28 Atl. 702, 704 (1894). Sprout v. Levinson, 298 Pa. 400, 148 Atl. 511 (1930), cited for the same proposition, held that a gas station in a commercial zone is not a nuisance per se. In Carney v. Penn Oil Co., 291 Pa. 371, 104 Atl. 133 (1928), where a gas station was held to be a nuisance per se, it was in a residential zone.
82. Evans v. Reading Chemical and Fertilizing Co., 160 Pa. 209, 28 Atl. 702 (1894). Cf. Pennsylvania Lead Co.'s Appeal, 96 Pa. 116, 125 (1889): “...Whether a smelting house for lead is or is not a nuisance per se to adjoining land depends very much upon its situation.”
83. Ladner v. Siegel, 293 Pa. 306, 310, 142 Atl. 272, 273 (1928). “A given business will . . . constitute a nuisance per se when it is generally known to be injurious to health and to cause legal damage to property in certain localities and surroundings, regardless of how it may be carried on, for the common experience of mankind, of which the courts take judicial notice, proves this to be the result. . . .” Cf. Dennis v. Eckhardt, 3 Grant 390 (Pa. 1862).
ing been submitted by the plaintiff to prove the act, the burden is on the defendant to show that it . . . does not produce odors and stenches which are offensive and disagreeable . . . and which impairs [plaintiffs'] physical comfort, and interferes with the enjoyment of their property . . . This the defendant failed to do.”

There are few cases in which the defendant should be denied such an opportunity of rebuttal, if he is willing to try to carry the burden. However, there of course comes a point at which continuation of the offensive use, in an attempt to demonstrate reasonableness, becomes either unduly burdensome to the court or unfair to the plaintiff. Certainly the court's view of the likelihood, or lack of it, that the defendant can succeed, will be an important factor in such a case. Thus in *Lodner v. Siegel*, the court refused to appoint a master to determine whether defendant's public garage was in fact an unreasonable use in a residential neighborhood. In *Evans v. Reading Chemical and Fertilizer Co.*, on the other hand, the defendant was given time to try out a new method of odor control.

The practice is similar in cases of “anticipating” the nuisance, that is, of enjoining its erection before direct proof of harmful consequences is possible. In a clear case the injunction will issue, but more often the defendant will be permitted to proceed at his peril. This rule should not be extended, however, to allow the defendant to proceed at the plaintiff's peril—that is, in a case in which the defendant's failure to operate without harming the plaintiff would result in irreparable injury.

There are a limited number of cases in which the inference of offensive consequences should be conclusive, and the defendant will not be heard to deny them. These should be restricted, however, to those uses declared public nuisances by statute or determined public nuisances because contrary to judicially discovered public policy. An example would be a club that unlawfully sells liquor to non-members or to minors, or “a house kept for promiscuous and noisy tippling, permitting drunkenness, . . . even though the riots and disorder are not [proved to be] heard beyond the walls of the building.”

89. 293 Pa. 306, 142 Atl. 272 (1928).
90. 160 Pa. 209, 28 Atl. 702 (1894).
91. Ross v. Butler, 19 N.J. Eq. 294 (Ch. 1868). The defendant did not even deny the alleged harmful consequences.
92. Duncan v. Hays & Greenwood, 22 N.J. Eq. 25 (Ch. 1871). These and other New Jersey cases are discussed in Cowan, *Air Pollution Control in New Jersey*, 9 Rutgers L. Rev. 607 (1955). Cf. the question of laches, discussed in note 30 *supra*, which is related to the problem of anticipation of the nuisance.
To summarize, a nuisance is a land-use tort consisting of conduct on one's own or public property, that creates, in view of the interests of the two parties and the total social context, an unreasonable interference, trespassory or non-trespassory, with another's use and enjoyment of public or private property.

II. The Relationship Between Nuisance and Ultrahazardous Activities.

If there is any legal concept more confused and confusing than nuisance generally, it is "ultrahazardous activities." Not only is the language and reasoning employed in the cases conflicting, but here too considerable disagreement exists even among the leading commentators.

According to black letter in the Restatement, an ultrahazardous activity is one that "(a) necessarily involves a risk of serious harm to the person, land or chattels of others which cannot be eliminated by the exercise of the utmost care, and (b) is not a matter of common usage." In a comment, the ultrahazardous activity is distinguished from negligence or nuisance on the grounds that the risk is justified or made reasonable by an overriding social utility. At the same time, it is described along with negligence as a kind of conduct that can give rise to those consequences generally termed nuisance. Liability for ultrahazardous activities is stated to be absolute or without fault.

Dean Prosser favors the Rylands v. Fletcher doctrine, which he summarizes in terms of strict liability on the part of "one who maintains a condition, or engages in an activity, which involves a high degree of risk of harm to others and is abnormal in the community and inappropriate to its surroundings." He too conceives of this "abnormally dangerous activity for which strict liability is imposed" as a kind of conduct (similar in this regard to negligence) which can give rise to consequences described as nuisance.

He distinguishes the Restatement rule from his own formulation of Rylands v. Fletcher in that the former ignores the relationship of

94. This is true even within a single jurisdiction. For example, in Pennsylvania Coal Co. v. Sanderson, 113 Pa. 126, 6 Atl. 453 (1886), Rylands v. Fletcher [1868] L.R. 3 H.L. 330, was specifically disavowed as "arbitrary", whereas in Hauck v. Tide-water Pipe Line Co., 153 Pa. 366, 26 Atl. 644 (1893), the charge to the jury was taken verbatim from Rylands and was affirmed. Cf. Kenworthy, The Private Nuisance Concept in Pennsylvania: A Comparison with the Restatement, 54 Dick. L. Rev. 109 (1949).
95. Restatement, Torts § 520 (1939).
96. Id., comment a.
97. Restatement, Torts § 822 (1939).
98. Id., § 519.
101. Id., at 389.
the activity to its surroundings (a broader test), but insists upon extreme danger and the impossibility of eliminating it with all possible care (a narrower test).\textsuperscript{102} Also, whereas Dean Prosser adopts the English view that foreseeable injury is not compensable if brought about by an unforeseeable intervening cause,\textsuperscript{103} the Restatement, taking a broader view, follows the standard negligence test.\textsuperscript{104} The most interesting difference in the way in which Dean Prosser presents his analysis, however, lies in the fact that only twice in the section on "Abnormal Things and Activities" does he make explicit reference to the question of high social utility. These references occur when he notes social utility of the activity as the grounds for opposition to the \textit{Rylands} doctrine of strict liability,\textsuperscript{105} and as the basis of the defense of statutory authority.\textsuperscript{106}

Professor Seavey takes a quite different perspective. His entire emphasis is on the fact that in ultrahazardous activity it is social utility that justifies, or makes reasonable, conduct that otherwise would be negligent.\textsuperscript{107} Whereas the other two authorities see negligence and ultrahazardous activity as conduct that may produce a consequence called nuisance,\textsuperscript{108} Professor Seavey describes nuisance as tortious (unreasonable) conduct that is different from ultrahazardous activity (reasonable conduct) because of the existence of negligence in the former and its absence in the latter. As he puts it, "The line between ultrahazardous activity and tortious conduct is crossed at the point where the continuance of the activity is not sufficiently important to the public welfare to permit its continuation."\textsuperscript{109} Of course, Professor Seavey agrees with the others, as a necessary corollary to his analysis, that liability is imposed upon the defendant without fault.\textsuperscript{110}

None of these formulations is completely satisfactory. Nowhere do we find adequate justification or explanation of the fact that liability is imposed at all, or that although liability is imposed when harm actually occurs, the potential plaintiff will be denied an injunction against the risky conduct. If law is a prediction of what courts will do—or even if law is something more than this, but we are momentarily being pragmatic about it—the fact that an injunction will be

\begin{footnotesize}
102. \textit{Prosser, op. cit. supra} note 100 at 335.
103. \textit{Id.}, at 340.
106. \textit{Id.}, at 343.
\end{footnotesize}
denied but damages granted is one of the more significant and distinctive horns on our strange animal.

Undoubtedly the remedy at law is inadequate. If an explosives factory is constructed next door to a homeowner, it is small consolation to the latter that if there should be an explosion, he can recover the fair value of his home and, if it should come to that, his life. Why should the factory owner have a virtual power of eminent domain? But why shouldn’t he have this and more? He has done nothing wrong. The remedy of damages at law may be inadequate to the neighboring plaintiff, but why should a neighbor have a remedy at all?

Does the reason for granting damages but denying an injunction derive somehow from the element stressed in Professor Scavey’s formulation, namely, the social utility of the project? Although social utility may hold the answer, it is difficult to see why the defendant should not be protected as well from liability for actual harm as from an injunction. Certainly we cannot say that it was reasonable for the defendant to have created the risk, but that he is now unreasonable because, through no fault of his own, the risk has matured into physical harm. Since the defendant is no more at fault than is the plaintiff (note that the plaintiff may move within the area of risk after the defendant has established it) why should not the plaintiff bear any loss that may result? This is not only equally just but it is consistent with the desire to foster the dangerous but socially useful activity. The dynamite manufacturer may be quite effectively discouraged from engaging in his desirable trade by the threat of heavy damages or the expense of his insurance premiums. The prospective atomic reactor developer, at least, has found this to be a problem.

Perhaps, though, the answer lies in the insurance factor. Historically, at least, this is highly unlikely. If the courts since 1868 have given primary consideration to insurance, it has been with a maximum of foresight and a minimum of articulation. And apart from the deterrent effect on desirable though dangerous activities, the defendant

111. “... To refuse equitable relief ... and remit the plaintiff to his remedy at law, would be, in effect, giving the wrongdoer a power ... to take the injured party’s property for his private purposes upon making, from time to time, such compensation as the whims of a jury may give.” Evans v. Reading Chemical and Fertilizer Co., 160 Pa. 209, 217, 28 Atl. 702, 706 (1894).

112. “Carrying on an offensive trade for any number of years in a place remote from buildings and public roads does not entitle the owner to continue it in the same place after houses have been built and roads laid out in the neighborhood, to the occupants of which and travellers upon which it is a nuisance.” Weir’s Appeal, 74 Pa. 230, 241 (1873). See also, Daugherty v. Kittanning Mfg. Co., 178 Pa. 215, 85 Atl. 1111 (1896); (lower court opinion); Pennsylvania Lead Co.’s Appeal, 96 Pa. 116, 127 (1880).

113. Cf. note 197 infra.
is not always the more appropriate party to bear the premium burden.\textsuperscript{114} However, if the justification is social utility, is it not fair to place the burden on the defendant and through him spread the costs throughout the community? The strongest case for this line of reasoning is that in which a private homeowner is suing a public utility. But what if a large manufacturer is the plaintiff and a small manufacturer is the defendant, or if the plaintiff and defendant are both private individuals?

Another suggestion has been that the rationale lies in “the disposition to make the harm-causing activity pay its way,” on the ground that “this serves to gauge the economic value of the activity.”\textsuperscript{115} But why should it pay its way? Why shouldn’t its neighbors pay their way? Must a corner grocery in a residential neighborhood pay its way by reimbursing the neighbors for depreciated values? Would not such a requirement to an equal degree serve to gauge the economic value of the grocery as compared to the competing residential interests?

These questions suggest a line of reasoning somewhat off the main stream of thought. The defendant who has constructed the ultra-hazardous activity presumably has increased the value of his own property in so doing. At the same time he has decreased the value of his neighbors’ land, at least to the extent of actual damage once the risk has matured into harm. The defendant has been, in a word, enriched, and at the expense of others. Has he perhaps been unjustly enriched, and is that in fact the rational basis for allowing recovery?\textsuperscript{116}

One of the first objections that comes to mind is that the enrichment of the defendant may be far less in a given case than is the harm to the plaintiff or a group of plaintiffs. Yet damages are consistently measured in terms of the plaintiff’s injury. In the law of restitution, however, one who has benefited without fault need only restore the benefit received.\textsuperscript{117}

More basic, however, is the question of what makes the enrichment unjust. We might say that for some reason the actual physical harm is unjust, while the creation and maintenance of the risk itself is not unjust. But by hypothesis the defendant’s conduct has not been tortious, and it cannot become so solely because of an uncontrollable injury. Without tortious conduct there appears to be nothing to make the

\textsuperscript{114} See Morris, Hazardous Enterprises and Risk Bearing Capacity, 61 YALE L.J. 1172, 1178 (1952).


\textsuperscript{116} The same line of reasoning has been pursued by Professor Robert Keeton of the Harvard Law School in an unpublished mimeograph, Materials Concerning the Impact of Insurance on Tort Law 24 (Harvard Law School Library 1956).

\textsuperscript{117} RESTATEMENT, RESTITUTION, Introductory Note to c. 8, Topic 2 (1937).
enrichment unjust. To say that the enrichment became unjust simply because harm has actually occurred, would be inconsistent with principles of restitution, and would seem to beg the question just as much as if we were to say that there is "fault" in the ordinary tort case because the defendant has caused physical harm to the plaintiff without providing him with compensation.

Is there, then, no rational basis for imposing liability for actual harm brought about by extremely dangerous conduct, while at the same time protecting the same conduct from injunction in appropriate cases? I believe that there is such a basis. First let me state the rule as I think it should be, and then I will attempt to defend it.

When a person carries on an activity that creates, in spite of careful operation, a relatively slight but foreseeable likelihood of severe injury to another in the use and enjoyment of land, his conduct constitutes, on its face, a nuisance. The other party is entitled either to recover for such physical damage as actually occurs, or he may anticipate the physical damage by enjoining the conduct that has created the risk. However, the defendant may justify the prima facie nuisance by demonstrating that the social utility served by his conduct cannot reasonably be served otherwise and is of a sufficient degree to balance the risk created. In such a case the defendant may be said to have an incomplete privilege, that is, a privilege that is sufficient to protect the maintenance of the risk, but that is not adequate to justify any physical damage that actually results within the risk. When conduct is characterized, then, by both (a) the prima facie nuisance established by the creation and maintenance of a slight but foreseeable likelihood of severe injury to another in the use and enjoyment of land, and (b) adequate social utility to justify the granting of a privilege to maintain the risk, such conduct is referred to as an ultrahazardous activity.

This is not really very far from what the three authorities discussed above have said. With the exception of the recognition of an element of residual fault, it departs from them primarily in emphasis on the following: (1) that ultrahazardous activities are different from other nuisances only in that the variable of foreseeable likelihood is relatively slight and the variable of foreseeable injury is extremely severe; and (2) that although damages are given, injunction will be denied. Stressed in other formulations, but not always in the analyses that follow them, are these aspects of ultrahazardous activities: (1)
that the danger inheres in the activity itself, regardless of careful operation; and (2) that the social utility cannot reasonably be served otherwise.

I believe that this statement is closer to what the courts do, consciously or unconsciously, than any one of the other formulations of the rule. In addition, I think that it will prove to be more helpful in analysis of new cases, if only in making clear the fact that the defendant is held liable not "absolutely" or "without fault," but only upon proof at least of prima facie negligence and of harm within the risk. As more than one commentator has pointed out, the very thought of absolute liability has frightened many courts into rejecting the concept of ultrahazardous activities, with resulting confusion in the case law. Yet, properly defined, an ultrahazardous activity is simply a nuisance, liability for which is limited to harm within the risk, but which is protected against injunction because it can be demonstrated to be privileged by social utility. Although the language of ultrahazardous activities doctrine may be "strict liability," the practice of the courts in applying the doctrine is confined to cases of harm within a foreseeable risk.

It is extremely important, however, to bear in mind exactly what the risk is to which we are referring. By hypothesis the activity is such that the risk is inherent regardless of care in operation. In Green v. General Petroleum Corp., for example, the defendant was held liable, in spite of careful operation of an oil drill, when a "blow out" caused damage to neighborhood property. The court held that in engaging in the operation, defendant acted with knowledge that such harm could result.

Similarly in Rhodes v. Dunbar the court made clear that the maintenance of an activity that is inherently dangerous may constitute a nuisance. The holding of the case was that a planing-mill, although

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120. For example, in Madsen v. East Jordan Irrigation Co., 101 Utah 552, 125 P.2d 794 (1942), the damage was held to be outside the risk when the defendant's blasting operation frightened plaintiff's mink into killing their young. This is one of several such cases of "strict liability" cited with approval by Dean Prosser. PROSSER, TORTS 340 (1955).
121. 205 Cal. 328, 270 Pac. 952 (1928). Cf. King v. Columbian Carbon Co., 152 F.2d 636, 638-39 (5th Cir. 1945): "The existence of a nuisance does not always depend upon the degree of care used but upon the degree of danger or damage existing even with the best of care . . . The sole question presented by this appeal is whether or not a landowner is without recourse for damages caused to his land by the non-negligent, purposeful, and permanent operation of a lawful business which operation the owners knew when their plant was being constructed would continually damage the land of another." Dean Prosser cites this case as one in which "strict liability" is created via ordinary nuisance doctrine. PROSSER, TORTS 336, 337, n. 86 (1955).
122. 57 Pa. 274 (1868).
subject to fires, "does not necessarily affect health, comfort or the ordinary uses and enjoyment of property in the neighborhood." 123

The court added, however, that the holding should not be considered as grounds for the inference that a powder magazine, depot of nitroglycerine, or other like explosive materials "might not possibly be enjoined even if not prohibited, as they usually are, by ordinance or law." 124 Such activities, stated the court, may be enjoined as nuisances because of the likelihood of explosion by contact with the slightest spark of fire, and because of "the utter impossibility to guard against the consequences, or set bounds to the injury which, being instantaneous, extends alike to property and person within its reach." 125 The conduct that is negligent on its face, therefore, is not the manner in which the activity is carried on, but the very creation and maintenance of the inherently dangerous enterprise. 126

A failure to appreciate this fact may account for a good deal of the confusion regarding "strict liability." We can say that the defendant is held liable without fault only if we arbitrarily restrict our consideration of his conduct to his careful operation of the activity, and ignore the fact that he is initially responsible for creating the risk within which the harm occurred.

By way of analogy, if a person reacts instinctively in an emergency, he will not be held liable for harm resulting to another, even though it later appears that his reaction was not the wisest choice. 127 However—

123. Id., at 290.
124. 57 Pa. 274, 290 (1868).
125. Ibid.
126. Smith, Liability for Substantial Physical Damage to Land by Blasting—The Rule of the Future, 33 HARV. L.REV. 542, 667 (1920). The recognition of the fact that the ultrahazardous activity is simply another case of liability for negligence and not strict liability, helps to settle the apparent disagreement between Dean Prosser and the Restatement of Torts as to whether harm within a foreseeable consequence of the risk is compensable when it in fact comes about through an unforeseeable intervening cause. As noted above, the former takes the position that the defendant should be absolved in such a case, for example when the dynamite factory is touched off by lightning. PROSSER, TORTS 340 (1955).

The Restatement, on the other hand, adopts the usual negligence rule. RESTATEMENT, TORTS §§ 510, 522. (1930) See Johnson v. Kosmos Portland Cement Co., 64 F.2d 193 (6th Cir. 1933). The intervening cause was a lightning bolt, which exploded gas carelessly left by the defendant to collect in a barge. The defendant was held liable for negligence. Note the close relationship this case bears to nuisance and ultrahazardous activities. Note too that even those who assert that ultrahazardous activities carry "strict liability" nevertheless apply a standard of foreseeability—traditionally a negligence standard, and somewhat contradictory of absolute liability.

If the view suggested in this article is accepted as the correct one, it seems clear that the same rule should apply to an ultrahazardous activity as to any other case of negligence. Indeed, the only reason suggested by Dean Prosser for the contrary view is the assumed premise that "strict liability is in question." PROSSER, TORTS 340 (1955).

and this is as important as it is obvious—he cannot benefit from this rule if his own negligence helped to create the risk in the first instance.\textsuperscript{128} If, for example, A drives his car so close to B’s car in front of him that there is a foreseeable risk that A will not be able to avoid an accident if B’s car stops short, A cannot rely upon the emergency doctrine when his instinctive swerving to the right causes him to hit C.\textsuperscript{129} The reason is not that he was negligent in his instinctive reaction to the other driver’s stopping short, but that he was negligent in driving too close in the first place, thereby creating a risky situation, within which the harm occurred.

Certainly we would not say in such a case that the driver is held strictly liable. On the contrary, he is held liable for negligence. In the same sense, the manufacturer who builds a dynamite factory in a crowded city is held liable in negligence for harm caused by an explosion, in spite of his careful conduct in the operation of the factory. He knows, or should know, of the serious risk that he has created to others in building the factory and carrying on the manufacture of dynamite. Therein, \textit{at least prima facie}, lies the wrongful conduct, and therein is found the basis of his liability for harm within the risk he has created.

We reach the question of whether the activity is to be justified by its social utility only after we have taken the initial step of finding the prima facie tort. This is common practice in the law of negligence.\textsuperscript{130} For example, in the \textit{Palsgraf} case Justice Cardozo stated that to “make out a cause of action” in negligence the plaintiff must show, in addition to harm to himself, “that the act as to him had possibilities of danger so many and apparent as to entitle him to be protected against the doing of it...”\textsuperscript{131}

This “cause of action” or prima facie case may of course be rebutted, in one case by the defense of statutory authorization,\textsuperscript{132} in another by the defense of sudden peril\textsuperscript{133} and in the case of ultra-hazardous activities by the defense of social utility. In any case such a defense is, for purposes of analysis, a second step, even though a court in verbalizing its mental processes, may jump to an obvious conclusion, making two steps appear to be one.

\textsuperscript{128} See note 127 \textit{supra}.

\textsuperscript{129} See note 127 \textit{supra}.

\textsuperscript{130} Compare the law of defamation, where the plaintiff makes a prima facie case by showing publication of a defamatory statement. \textit{Prosser, Torts} 606 (1955).


\textsuperscript{132} \textit{Leisy} v. Northern Pacific R.R., 230 Minn. 61, 40 N.W. 2d 626 (1950).

\textsuperscript{133} See note 127 \textit{supra}.
Dean Prosser, in fact, devotes a subsection of his analysis of strict liability to certain privileges that serve as defenses. Included are the privileges of public duty and of statutory authorization, which, he says, “amounts at least to a declaration that the [ultra-hazardous] acts are not anti-social, but desirable for the benefit of the community.” This is an interesting analysis in two respects. First, is it not significant that public duty bears upon fault? If liability is really absolute, why should it matter that there is a public duty? On the other hand, if liability is indeed founded upon negligence, the fact that the defendant acted upon the sovereign’s command has a conclusive bearing upon any alleged fault in undertaking the activity.

As for the “declaration that the acts are . . . desirable for the benefit of the community,” this is exactly what the court has already decided in the process of concluding that the activity is, in the technical sense, ultrahazardous. Since the privilege of statutory authorization is a broader defense, protecting against damages as well as injunction, it must have some other and greater significance. It does, in that “the courts have interpreted the statute as condoning the consequences in advance . . .” Nor could a court very well say that that which the legislature had authorized the defendant to do is not what a reasonable man would do—not unless the court were disposed to invalidate the statute itself on due process grounds. To allow damages would reflect upon the reasonableness of the statute. Consistent with this view, the courts will, regardless of statutory authorization, grant damages for negligence committed in carrying out the authorized activity.

Dean Prosser’s test that an ultrahazardous activity must be “abnormal in the community” and the Restatement test that it not be “a matter of common usage” are also relevant to the question of

134. PROSSER, TORTS 343 (1955).
135. These are also defenses to other nuisances, of course. 39 Am. Jur., Nuisances § 203 (1942).
137. Cf., “Here the defendant is not a volunteer: he executes a duty imposed upon him by the legislature, which he is bound to execute.” Sutton v. Clarke, 6 Taunt. 28, quoted in Transportation Co. v. Chicago, 99 U.S. 635, 644 (1878).
138. It might be argued that the public duty privilege is not inconsistent with the concept of liability without fault, since it is directed simply at protecting the actor from being placed between the devil and the deep blue sea—the choice between penalty for violation of duty or suffering strict liability. But is this not just another way of saying that a person who is compelled to act has not been at fault and therefore should not be held liable?
139. PROSSER, TORTS 343 (1955).
140. Dean Prosser, in his discussion of negligence, agrees. Id., at 164.
141. PROSSER, TORTS 344 (1955).
142. Id., at 329.
143. RESTATEMENT, TORTS §§ 519, 520 (1939).
negligence. Both of these criteria can be considered to be minimal requirements in making out a prima facie case of negligence, especially when we recall that the reasonable man "represents a community ideal of reasonable behavior." 144 As Dean Prosser says in his section on application of the standard of reasonable conduct in negligence cases, "If the actor does only what everyone else has done, there is at least an inference that he is conforming to the community's idea of reasonable behavior." 145 Here then is still another traditional negligence test that is unconsciously, and therefore somewhat roughly, worked into the "strict liability" formulation of ultrahazardous activities.146

The formulation of the rule suggested here maintains logic where other formulations break down.147 Why should the manufacturer be held liable for actual harm within the risk? As we have seen, as long as his action is viewed as reasonable from start to finish, there is no rationale for the result. We might just as reasonably require the injured plaintiff—who may be much wealthier and using his wealth in a much less beneficial fashion—to pay his own way. When we recognize, however, that the defendant's conduct has at least created the basis for a strong inference of negligence, our analytical perspective changes. The issue then is, How much of a shield is the element of social utility? Or, How much of a shield can fairly be permitted in favor of a prima facie wrongdoer against his innocent victim?

Put in this light, the problem can be seen as one of weighing the equities of the three parties involved, the ultrahazardous actor, his


145. PROSSER, op. cit. supra at 135. This explains, of course, why automobile driving is not considered ultrahazardous. Consider also the legislative recognition of "safe" standards of operation.

146. It is true that even as a minimal standard of negligence, the abnormal-in-the-community test is inadequate. Probably the vast majority of eccentric activities are non-negligent. But the test is equally inadequate for the only reasonable strict-liability justification that has been suggested: "The reason would appear to be that if the activity is one carried on by a large portion of persons in the community, the incidence of harm and the incidence of responsibility are so nearly coextensive that nothing would be gained by imposing strict liability. Unless there is a special danger created by a small segment at the expense of the general public, absolute liability would merely substitute a risk of liability for a risk of loss. This interpretation of the common usage test is borne out by the ordinary refusal to apply absolute liability in cases of accidents involving automobiles or household plumbing." Note, Absolute Liability for Dangerous Things, 61 HARV. L. REV. 515, 520 (1948). As the phrase "carried on by a large portion of persons in the community" indicates, the criterion of "abnormal in the community" is equally inappropriate to strict liability. If any number significantly less than half the total members of the community engage in the activity, there is no general substitution of a risk of liability for a risk of loss, yet the activity would not necessarily be considered "abnormal".

147. See pp. 91-94 supra.
victim, and the community as a whole. If there is substantial social utility in the activity, the highest equity is in the public, of which the plaintiff is one, in having the activity carried on. For this reason the defendant is at least protected from injunction—not for his own sake, but for society's. However, as to the equities between the other two parties, the risk-creating defendant and the innocent plaintiff, it is the defendant whose equity is considered subordinate. Therefore, he is called upon to compensate the plaintiff for actual harm within the foreseeable risk to which he has subjected the plaintiff.

The balancing of equities among the general public, the injured plaintiff, and the prima facie tortious defendant is, of course, a common one for the courts. In other nuisance cases the same procedure often produces the same result, i.e., the denial of an injunction (and even of some of the damages) but nevertheless a granting of damages. For example, in Richards v. Washington Terminal Co., the Supreme Court held that to grant damages generally (and, a fortiori, injunction) to abutters of the railroad might put the company out of business, contrary to the public interest. "But the doctrine [of general immunity on the part of railroads from actions for damages], being founded upon necessity, is limited accordingly." The plaintiff was therefore allowed to recover for that part of his injury that was peculiar to his property alone. Compare Antonik v. Chamberlain, where the court weighed the relevant factors in the light of the fact that the "life and death of a legitimate and necessary business" was at stake.

There is, in the Restatement of Torts, support for the analysis of ultrahazardous activities in terms of a privilege that is effective to overcome an injunction but ineffective to prevent damages. In a scope note on nuisance, the reasoning underlying this notion of partial or incomplete privilege is clearly set forth:

Even where there is present harm, it is one thing to say that a defendant should pay damages for the harm his factory is causing, but it is a different thing to say that he must close his factory if the harm cannot be stopped. For the purpose of determining liability for damages for private nuisance, conduct may be regarded as unreasonable even though its utility is great and the amount of

148. There is, of course, a parallel to this in other cases of nuisance. Robb v. Carnegie Bros. & Co. Ltd., 145 Pa. 324, 22 Atl. 649 (1891). In Elliott Nursery Co. v. Duquesne Light Co., 281 Pa. 166, 126 Atl. 345 (1924), deposits from the defendant's power plant smokestacks were destroying an extensive nursery. The court denied the requested injunction on the ground that the defendant supplied power to an entire metropolitan community. But there is considerable dicta suggesting the propriety of damages at law.

149. 233 U.S. 546 (1913).

150. Id., at 555.

151. 81 Ohio App. 465, 78 N.E. 2d 752 (1947).
harm is relatively small. But for the purpose of determining whether the same conduct should be enjoined, additional factors must be considered.\textsuperscript{152}

The concept of "incomplete privilege" was first verbalized and analyzed by Professor Bohlen in his illuminating article\textsuperscript{153} dealing with \textit{Vincent v. Lake Erie Transportation Company}.\textsuperscript{154} There the defendant's steamship was moored to the plaintiff's dock to unload, when an unexpected northeast storm developed. By the time the defendant had finished unloading, the wind was at fifty miles per hour and rising. The master of the ship "prudently and advisedly" remained moored to the dock, although there was a clear risk that damage to the dock would result.

At least three positions could have been taken in such a case: first, that the defendant was negligent and that the plaintiff not only is entitled to damages but could have used reasonable self-help to cast off the defendant's vessel during the storm; second, that the defendant did nothing tortious—since he acted from necessity and therefore without fault—and that therefore the plaintiff could have no redress against the defendant of any sort; third, that since the defendant knowingly subjected plaintiff's property to risk of harm, he is prima facie a wrongdoer; that defendant, however, had been privileged because of the circumstances to remain at the dock in spite of the risk to plaintiff; but that the plaintiff must nevertheless respond in damages for harm actually occurring within the risk. The \textit{Vincent} court, in a decision that has received general approval,\textsuperscript{155} took the third view.

The court referred by analogy to the \textit{Depue} case,\textsuperscript{156} also a Minnesota case, in which the plaintiff had been expelled from the defendant's

\begin{itemize}
\item \textsuperscript{152} \textit{Restatement, Torts}, scope note to c. 40 (1939). Note that there is "present harm" to which the plaintiff is subjected simply by force of the existence of an unmatured risk of physical harm. If the defendant is a bad man and the plaintiff is a good man, should not the defendant compensate the plaintiff for this harm as well as for harm from a matured risk? The answer is that he should and he does in the most appropriate way. If one's property is made less valuable by a natural hazard, such as flood tides, one attempts to restore this value by insurance. However, if the person whose property is subjected to such a risk restores the value out of his own pocket, the property value is depreciated at least to the extent of the premiums. In the ultra-hazardous activity case, the actor is, as he is frequently called, the insurer of those within the risk. \textit{Cf.} \textit{Exner v. Sherman Power Construction Company}, 54 F. 2d 510, 514 (2d Cir. 1931). By guaranteeing indemnity to other property owners, the actor thereby provides immediate compensation for the immediate harm; that is, he saves his neighbors the insurance premiums that would otherwise represent to them a depreciating burden on the value of their land.
\item \textsuperscript{153} Bohlen, \textit{Incomplete Privilege to Inflict Intentional Invasions of Interests of Property and Personality}, 39 \textit{Harv. L.Rev.} 307 (1926).
\item \textsuperscript{154} 109 Minn. 456, 124 N.W. 221 (1910).
\item \textsuperscript{155} See \textit{e.g.}, \textit{Restatement, Torts} § 197, illustration 2 (1934); \textit{Prosser, Torts} 97 (1955).
\item \textsuperscript{156} \textit{Depue v. Flatau}, 100 Minn. 299, 111 N.W. 1 (1907).
\end{itemize}
premises although he had been too ill to travel. The defendant was
held liable in damages, but, as the court points out, if he had furnished
the plaintiff with proper accommodations and medical attendance, the
defendant could have recovered reasonable value. 157

The court in Vincent also relied upon the Vermont case of Ploof
v. Putnam,158 where the owner of a dock was held liable for harm
resulting when he unmoored plaintiff's vessel, which had sought refuge
there in a storm. Again the Minnesota court stated that the vessel
owner would have been liable for actual harm to the dock.

We have in these cases, therefore, a direct analogy159 to the ultra-
hazardous activities cases. In both situations a person is permitted
to create a significant risk to the property of another. Although this
action in itself is recognized as prima facie tortious,160 the endangered
property owner is not permitted to abate the risk-creating activity
because the risk is created in the name of an interest valued by society.
However, in recognition of the fact that the social utility is fully
served by protection of the activity from abatement, the privilege ex-
tends only that far. In a sense, in serving its function of allowing

157. The Depue analogy is especially interesting because it suggests restitution as a
possible rationale of the Vincent decision. This has also been noted by Professor Robert
Keeton in an unpublished mimeograph Materials Concerning the Impact of Insurance on

158. 81 Vt. 471, 71 Atl. 188 (1908).

159. Another analogy that comes to mind is the so-called conditional privilege. In
the area of defamation, for example, the plaintiff makes a prima facie case by showing
publication of a defamatory statement. Prosser, Torts 606 (1955). However, it is said
that "the immunity is forfeited if the defendant steps outside the scope of the privilege
or abuses the occasion." Id., at 625.

It is apparent that what is really meant is that there is a defense of privilege to
an action for defamation, but that the privilege does not extend to every aspect of prima
facie defamation. A's privilege to tell B (C's prospective employer) something other-
wise defamatory about C is not "forfeited" when A tells D, who is only a mutual
acquaintance. The privilege simply never extended to D. Similarly, the privilege to
publish to C's prospective employer that which would otherwise be defamatory is not
"forfeited" if A is motivated primarily by malice. The privilege in fact never extended
to malicious publication.

It would seem, therefore, that the analogy is less than perfect. The so-called
conditional privilege is just like any other privilege. If the defendant has it, he is not
liable for damages, nor can he be enjoined from publication. If he does not have it, he
is liable to an injunction as well as in damages. The conditional privilege is, therefore,
different from the privilege to carry on ultrahazardous activities, free from injunction
but subject to liability for damages.

160. The court found the defendant guilty of a wrongful act in that he "... deliberately and by his direct efforts held the ship in such a position that the
damage to the dock resulted...." Vincent v. Lake Erie Transportation Co., 109 Minn.
456, 124 N.W. 221 (1910). It is interesting to note that the dissent in the Vincent
case makes the same oversimplification of the question of fault as do most of the
commentators on ultrahazardous activities. "The master could not, in the exercise of
due care, have left that position.... If the master was in the exercise of due care,
he was not at fault." Compare Professor Seavey's proposition that since the ultra-
hazardous activity is justified by social utility, the conduct is not unreasonable and
there is no fault. Seavey, Nuisance: Contributory Negligence and Other Mysteries, 65
Harv. L.Rev. 984, 986 (1952). Both overlook the fact that there is an element of fault
that is justified only insofar as this is necessary to the protection of the dominant
social interest.
the dangerous but desirable conduct to continue, the privilege exhausts itself. What is then left is the prima facie tortious conduct (creation of the risk), the consequential harm (the matured risk), and a privilege that has exhausted itself in preventing abatement. This is the privilege described by Professor Bohlen as "incomplete." 161

A bridge that spans any gap that may exist between the ultra-hazardous activities cases and the Vincent case, is found in illustration 3 to the Restatement of Torts, section 197. If an aviator has engine trouble and is forced to land in a field belonging to another, he is liable for any actual harm that results. In spite of the risk of harm to the field, however, he is privileged to make the landing, just as he was privileged to create a risk in the first instance by putting the plane into the air. 162 The Restatement deals with this case as being in the Vincent area, but the illustration would fit as well into the sections dealing with ultra-hazardous activities. 163

As this illustration helps to point up, no substantial distinction can be made between the Vincent rule and the ultra-hazardous activities cases on the grounds that the Vincent cases rest upon an intentional invasion of the property of another by trespass. Certainly a rule as sound as that in Vincent, resting as it does upon broad considerations of conflicting social interests, does not need the support of the thin reed of trespass. When the defendant in Ploof v. Putnam unmoored the plaintiff's sloop, his concern was not with a threat to his title or with his exclusive possession. Undoubtedly what bothered him was the fact that he had gone to a good deal of trouble and expense building a dock, and here was the plaintiff subjecting it to a risk of harm. In other words, he was in the same position as the man who doesn't want an explosives factory next door. 164 This must be so unless we are willing to say that the technicality of trespass 165 makes Ploof a "bad"

162. The Restatement was published in 1939 and took the position that aviation is an ultra-hazardous activity (Section 520, comment b).
163. See note 162 supra. Nuisance and ultra-hazardous activities are, as we have seen, land-use torts. The use of an analogy involving air-use is not for that reason far-fetched. The airspace above one's land was, in fact, an element of the rights of property ownership at common law. Cf. Yoffee v. Pennsylvania Power and Light Co., 385 Pa. 520 (1956). Today, "The air is a public highway, as Congress has declared." U. S. v. Causby, 328 U.S. 256, 261 (1945).
164. The likelihood of harm may (or may not) have been greater in the Ploof and Vincent cases, but the seriousness of the harm is not even comparable. Risk in any given case is, of course, the function of the variables of foreseeable likelihood and foreseeable injury. If the minimum quantum of risk to create negligence is, let us say, 100, negligence can be made out by a foreseeable likelihood valued at 2 and a foreseeable injury valued at 50 (the typical ultra-hazardous activities case is of this nature); or by a foreseeable likelihood of 25 and a foreseeable injury of 4 (which may be descriptive of the Vincent case).
165. In the Vincent case the trespass is all the more artificial and technical, since the defendant was moored at plaintiff's dock with the latter's permission. To find a
man (intentionally tortious) and the munitions maker a "good" man (only negligent).

Of course, the privilege of necessity swallows up a trespass in such a case. What really troubles us is not whether the safety of Ploof's family aboard the sloop is for a brief period more important than Putnam's right to exclusive possession—that is too easy—but whether Ploof's interest is so important that it justifies knowingly subjecting Putnam's property to a significant risk of harm. It is this latter question with which the Vincent court was concerned,¹⁶⁶ and it is the resolution of this question that makes the case important. The answer, of course, is identical with that given in the ultrahazardous cases: Yes, Ploof's interest is high enough to protect him in maintaining the risk of harm to Putnam's property; no, Ploof's interest is not high enough to justify actual harm within the foreseeable risk that he created.¹⁶⁷

Once again, before proceeding to consideration of the atomic reactor in this common law context of nuisance and ultrahazardous activities, it might be well to state the definition suggested earlier in this section:

When a person carries on a land use that creates, in spite of careful operation, a relatively slight but foreseeable likelihood of severe injury to another in the use and enjoyment of land, his conduct constitutes, on its face, a nuisance. The other party is entitled to recover for such physical damage as actually occurs, or he may anticipate the physical damage by seeking an injunction against the conduct that has created the risk. However, the defendant may justify the prima facie nuisance by demonstrating that the social utility served by his conduct cannot be served otherwise, and that it is of sufficient degree to balance the risk created. In such a case the defendant may be said to have an incomplete privilege, i.e., a privilege that is sufficient to protect the maintenance of the risk, but that is not adequate to justify any physical damage that actually results within the risk.

trespass, therefore, we would have to rely upon the dubious fiction of trespass ab initio. See Savaev, Keston, and Thurston, Cases on Torts 47-48 (1950); cf. McGuire v. United States, 273 U.S. 95 (1927). Or else we would have to say that defendant trespassed by adding lines—an equally unsatisfactory sophism.

¹⁶⁶. "If while attempting to hold fast to the dock the lines had parted, without negligence, and the vessel carried against some other boat or dock in the harbor, there would be no liability upon her owner. But here those in charge of the vessel deliberately and by their direct efforts held her in such a position that the damage to the dock resulted, and, having thus preserved the ship at the expense of the dock, ... her owners are responsible to the dock owners to the extent of the injury inflicted." Vincent v. Lake Erie Transportation Co., 109 Minn. 456, 124 N.W. 221 (1910). Note, however, that if the defendant had been out on the lake in the first place through negligence (for example, with knowledge of the impending storm) he would have been liable if the ship had been carried out of his control and into another vessel.

¹⁶⁷. Note how this forces Ploof to "pay his way" and thereby gauges the value of his action, just as is said to occur in the ultrahazardous activities cases.
III. The Atomic Reactor—Hazards and Utility

The importance of the foregoing discussion of the relationship between ultrahazardous activities and nuisance, apart from an academic interest in what the courts are doing, is twofold. First, it indicates the variety of factors that go into a decision that an activity is ultrahazardous in the technical legal sense. Second, it emphasizes that the doctrine entails not simply liability for damages, strict or otherwise, but immunity from injunction.

Under Dean Prosser's statement of the Rylands rule, which defines in terms of (1) “high degree of risk of harm to others”; (2) “abnormal in the community”; and (3) “inappropriate to its surroundings,” he readily decides that no court will be inclined to deny damages to one injured by escape of radiation. As we have seen, however, risk, abnormality, and surroundings are only aspects of the broad question of reasonableness.

We are less concerned here, of course, with whether damages can be obtained than with whether an injunction will be granted. Dean Prosser's placing of the reference to radiation in his chapter on Strict Liabilities implies that in his view an injunction would be denied. Whether this is so, however, will depend upon our answers to three broad questions. These are: (1) What is the nature of the risk? (2) What is the social utility of the activity? and (3) Is the latter great enough to overcome the former to the extent of precluding injunction? The related issue in this particular area, whether a state court can decide these questions at all in view of federal legislation and regulation, will be considered in the final section of this paper.

First, then, what is the nature of the risk?

As we mentioned earlier, there is an inevitable identification in the public mind of “atomic” with “bomb.” According to our leading authorities, however, “A reactor can, by no stretch of the imagination, produce any amount of energy that is at all comparable to an atomic bomb.” The blast effects, for example, even under the worst circumstances, would be local to the reactor building. It is also reassuring to note that the AEC has operated twenty-five experimental nuclear-reactors for a total of 606,868 hours without a single accident


169. *Id.*, at 336. “The first case involving damage from the escape of radiation from the use of atomic energy has yet to reach the courts. When it does, it is not difficult to predict that there is no court which will refuse to apply to it the principle of strict liability found in the cases which follow Rylands v. Fletcher.”


involving contamination of off-site property, although several minor accidents have occurred.\(^ {172}\)

We should bear in mind, however, that these experimental reactor operations, conducted as they are on a relatively small scale and under immediate government supervision, do not provide conclusive evidence of reactor safety. The reactors must now be adapted to commercial installations, "where the associated operating hazards are augmented and the problems of fuel handling and reprocessing, preventive maintenance, and waste disposal and recovery become important cost items and major economic realities."\(^ {174}\) Even if it is true that research reactors are more susceptible to accidents, the magnitude of a commercial reactor accident would certainly be greater.\(^ {175}\) As the McKinney Report points out, there have been and will be no substantial reactor hazards until 1958 or 1959, when the first large atomic power plant will begin to operate.\(^ {176}\) The atomic reactor, then, in spite of the excellent record made by the AEC, is still viewed by knowledgeable people as "a public hazard...a great public hazard."\(^ {177}\)

One authority explains the danger in terms of the following characteristics of the atomic reactor. First, "the contained radioactive materials, fission products, and some types of fuel used," create a "built-in capacity for self-destruction...in a fraction of a second."\(^ {178}\) Second, is the fact that "the plant will contain, under certain circumstances, considerably more fissionable material than the critical amount."\(^ {179}\) The significance of these two factors can be appreciated "in some small measure," writes the same authority, "if we compare the situation with, say, large-scale production of both highly poisonous gas and explosives under the same roof."\(^ {181}\)

172. We will avoid use of the euphemism "incident," which is used in the literature in the field to describe anything from brief over-exposure to a catastrophe.


175. Address by Dr. C. Rogers McCullough, Chairman, Advisory Committee on Reactor Safeguards, Conference of State Representatives on the AEC Licensing Program 6 (1955). See discussion infra, immediately following.


179. Ibid.

180. "Fission products, which include a large variety of chemical elements, if inhaled or ingested are from 3 million to 2000 million times more toxic than chlorine, the most potent industrial poison. In addition, the nuclear fuels themselves, plutonium and uranium-233, are highly toxic if inhaled or ingested." Weil, supra note 178, at 136.

Moreover, there are two additional characteristics differentiating atomic poisons from more conventional industrial poisons: first, they cannot be detected by the senses, and second, non-lethal exposure can produce permanent injuries that may not become evident until many years after the accident. It should be remembered, therefore, that anyone living in the vicinity of a reactor will be faced with a daily realization that, even though the reactor appears to be functioning properly, he may be receiving poisonous doses of radiation. This is so because among "the many ways" in which radiation accidents occur are improper shielding, rupture of containers of radioactive materials, and careless handling.

Of course, the ingenuity of our greatest scientific minds has been and will be applied to the problem of maximizing safety. The safeguards that have already been devised are impressive and reassuring. They include "fail-safe" automatic control systems; duplication of such systems; means to relieve excessive heat; use of chemically inert materials to minimize chemical reactions between reactor components; competent supervision of the operation; thorough maintenance and periodic checkouts; careful location of the reactor; containment of the reactor to prevent dispersion of poisonous fission products; and expert evaluation of hazard and safeguard reports from prospective lessees.

As reassuring as this may be, however, "... men make mistakes and accidents happen." In the often-quoted words of Edward Teller, "With all the inherent safeguards that can be put into a reactor, there is still no foolproof system that couldn't be made to work wrongly by a great enough fool." Illustrative of this truism is the error that occurred in the May 21, 1956, H-bomb test at Bikini. In spite of months of "dry runs" over the target area, a bomb with the destructive force of 10 million tons of TNT was dropped four miles off target. "Human, not technological factors" were blamed for the miss, but an automatic navigational "brain" in fact compounded the error because a single switch was not thrown. In spite of so-called fail-safe

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182. Weil, op. cit. supra note 178. Cf. Spoerl, The Lethal Effects of Radiation in Atomic Power 139 (1955); Address by Dr. John C. Bugher, Director, Division of Biology and Medicine, Conference of State Representatives on the AEC Licensing Program 7 (1955).
184. McCullough, supra note 175 at 5.
187. N.Y. Times, June 16, 1956, p.1., col.5; Life, June 25, 1956, p.34.
devices, therefore, it is not purely an academic exercise to consider the atomic reactor hazard potential at its worst.\textsuperscript{188}

Starting with a 100,000 kw. atomic plant, and emphasizing that he is, throughout, making the "most pessimistic assumptions," one authority has provided us with a picture of the runaway reactor at its most destructive.\textsuperscript{189} These most pessimistic assumptions are that the radioactive cloud remains close to the ground as it drifts slowly away from the plant, with a prevailing wind of three to four miles per hour; that it passes over populated areas; and that an hour after the accident, a rainstorm arises while the cloud is passing over farm land, drainage areas that provide the local water supply, and residential and industrial areas.

The results outside the plant area could be that the people within a path extending five or six miles from the plant would receive lethal doses. The harm would be that much greater if the cloud moved, as it might, along the ground. In addition to the many fatalities, there would be varying degrees of temporary and permanent injury well beyond the lethal radius. In the rainout area, there would be "wide-spread serious contamination" of food and water supplies. Evacuation of residential, business, and industrial areas would be necessitated for an extended period of time. Finally, "not to be discounted, are the many individuals who would be obsessed with continuing anxieties about their fate, even though they had received no observable injury at the time of the accident."\textsuperscript{190}

In terms of the variables of foreseeable likelihood and foreseeable severity, therefore, the McKinney Report briefly but adequately summarizes the nature of the risk: "The catastrophe potential inherent in the atomic industry, although it is remote, is more serious than anything that is now known in any other industry."\textsuperscript{191}

Atomic hazards should not be discussed only in terms of catastrophe. As the severity of the injury declines, the likelihood of injury apparently increases substantially. The effects of even relatively slight doses of radiation poisoning can have serious effects not only upon the individual but through him upon innumerable descendants. Even if there is never a reactor explosion, escape of radioactivity from reactor waste or from inadequate shielding—contingencies perhaps many times

\textsuperscript{188}. A human blunder produced a similar, if less dramatic, accident at an atomic reactor in Arco, Idaho. N.Y. Times, April 6, 1956, p.12, col. 5.
\textsuperscript{190}. \textit{Ibid}.
more likely than that of a runaway reactor—would substantially shorten the life expectancy of those contaminated and would, in addition, so affect their reproductive cells as to seriously damage their offspring.\(^{192}\)

We come now to the question, What is the social utility of the atomic reactor?\(^{193}\)

Sam H. Schurr, Director of the Energy and Mineral Resources Program of Resources for the Future, Inc., has summarized the findings of the Cowles Commission on the question of the economic practicalities of nuclear power. "Attempts to depict the future of the 'atomic age' have tended to two poles," he writes. At one extreme, "enthusiasts have pictured a world in which nuclear energy will drive our cars and round-the-world airplanes, blast aside mountains and break up icecaps, heat our homes and kill our germs, power our railroads and run our factories, control our weather and transport us to the moon."\(^{194}\) At the other, "pessimists have asserted that atomic power will never be practical except for a very limited kind of use."\(^ {195}\)

The Cowles Committee attempted to make a "realistic appraisal of the economic feasibility of the use of atomic power on the basis of the present estimated range of costs and present concepts of nuclear technology."\(^{196}\) The committee's main attention was directed to the heat-and-electricity generating nuclear fission reactor, and its conclusions, although not unconditionally optimistic, are extremely encouraging. Mr. Schurr makes the following points that are most relevant to our present concern.

First, in terms of kilowatt-hours per pound of fuel, one pound of uranium is the equivalent of about 2.5 million pounds, or 1,250 tons of bituminous coal. The implications of this fact, on consideration of transportation costs alone, are substantial. The cost of fuel throughout the world, regardless of distance from the source, could be substantially equalized. Second, apart from considerations of transportation, the cost of energy should be considerably lower. Mr. Schurr estimates that even if the cost of uranium were to increase one hundredfold, to


\(^{193}\) It should be remembered in the discussion in this section that reference to national interest or pronouncements of federal officials are considered at this point only as evidence to be weighed by the state court judge, and not as decisions of policy made binding upon him by federal preemption of the atomic reactor field. Cf. Section IV, infra.


\(^{195}\) Ibid.

\(^{196}\) Ibid. Any such consideration of the problem is, one should remember, in long-range terms. At the present time, of course, the atomic reactor is uneconomical.
$2,000 per pound, it would still be only about one-fourth as costly as coal per kilowatt-hour.\textsuperscript{197}

On the basis of these estimates, which admittedly rest on "assumptions which may prove invalid," the conclusion is drawn that reducing plants located in the iron ore region of northern Minnesota might be able to deliver iron to the Chicago-Gary market at a lower cost than the steel plants in that area, and could "almost match" the cost of iron in the Pittsburgh region.\textsuperscript{198}

In addition to the illustration from the steel industry, Mr. Schurr has encouraging words for the production of aluminum, where power is a substantial cost of production. He states also that for about ten percent of the national population, nuclear fuels as generators of heat will be able to compete favorably with conventional fuels in convenience to user as well as in cost.\textsuperscript{199} Finally, the use of atomic energy will be especially helpful in those areas of the world, including parts of the United States, where human resources are not fully utilized. This would be accomplished by creating new industrial activities and by counteracting immobility of the labor force to a significant degree with the increased mobility of the fuel.\textsuperscript{200}

Also to be noted is the importance of peaceful development of the atom, which has "caught the imagination of the world,"\textsuperscript{201} as an aspect of our international program.\textsuperscript{202} Whether for reasons of international prestige, enlightened self-interest, or simple humanity, we are committed as a nation to world leadership in such a program. In the words of President Eisenhower, the United States intends to expend every effort to prove the usefulness of atomic power "to serve the needs rather than the fears of mankind."\textsuperscript{203}

\textsuperscript{197} Schurr, supra note 194, at 102. Relevant to a long-range appraisal is the further fact that available supplies of fossil fuels are expected to be exhausted in less than a century. Bhabha, The Peaceful Uses of Atomic Energy, 11 Bull. At. Sci. 280, 281 (1955).

\textsuperscript{198} Schurr, supra note 194, at 107.

\textsuperscript{199} Schurr, supra note 194 at 109. At the World Power Conference in Vienna this past summer, John V. Dunworth, head of the Reactor Physics Division of the British Atomic Energy Authority, announced that atomic power is competitive with coal. United States delegates commented that the statement must be considered with regard to the fact that British coal supplies are growing scarce and expensive to mine. N.Y. Times, June 22, 1956. p. 30, col. 6.

\textsuperscript{200} Schurr, supra note 194, at 110.

\textsuperscript{201} The phrase is that of United States physicist Henry DeWolf Smyth, N.Y. Times, Sept. 30, 1956, p. 28, col. 4.


At the same time, however, it would be misleading to ignore the position of AEC Chairman Lewis L. Strauss, who holds that technology should precede construction, and that since the nation is not faced directly with a power crisis, we should not invest exorbitant sums for power plants that are certain to be not only uneconomical competitively, but technologically obsolete even before they are completed. However, even Mr. Strauss favors a program of reactor development by the government in cooperation with private industry, providing the latter with necessary expertise when full-scale operation becomes feasible.\textsuperscript{204}

Turning again to the President, we may summarize the social utility, or at least, with reasonable optimism, the future social utility, of the atomic reactor: "The atom stands ready to become man's obedient, tireless servant, if man will only allow it."\textsuperscript{205}

Finally, is the promised social utility of the atomic reactor of sufficient weight to preclude an injunction directed against the inherent hazards?\textsuperscript{206}

As for the prima facie tort, the case seems clear. The foreseeable risk\textsuperscript{207} is certainly more than fanciful, nor would a complaint be made only by one with fastidious sensibilities or on the basis of irrational fears. Consider, for example, the reluctance of the hardheaded men of affairs in the insurance industry to make an all-out gamble on an atomic reactor catastrophe.\textsuperscript{208} In fact, a court might well take judicial notice of the "generally recognized" magnitude of the hazards to health and safety created by the use of atomic energy.\textsuperscript{209}

A high degree of social utility has also been made out. Does it automatically follow that the atomic reactor will be immune to injunction, although subject to damages, either on grounds of strict liability or in accordance with the analysis of ultrahazardous activities suggested above? I think not, for as we have seen, the total social context must be examined in each particular case.

\footnotesize{\textsuperscript{204} N.Y. Times, Sept. 23, 1956, p. 8E, col. 3.}
\footnotesize{\textsuperscript{206} Note again that the question of federal preemption is being postponed.}
\footnotesize{\textsuperscript{207} Forseeable risk, without actual harm, is of course enough. "Actual irreparable damage, actual depreciation of property, of course, does not exist. It is the prevention of these consequences which is the objection of the process." Weir's Appeal, 74 Pa. 230, 243 (1873).}
\footnotesize{\textsuperscript{208} Cf. Murphy et al., Preliminary Report on Financial Protection Against Atomic Hazards, N.Y. Times, May 20, 1956, p. 10, col. 2.}
First of all, we are most interested here in anticipation of the nuisance, i.e., of preventing construction of a reactor in a particular place. The first question, therefore, is, how important is location to the efficiency of the nuclear power reactor.

Apparently it is of great importance. Ideally, from the point of view of safety alone, the reactor should be located in a remote, unpopulated area. This, however, would be "clearly ... impractical for a nuclear power industry." An alternative would be to locate the reactor on such a large site that damage to the community would be minimized. This too raises difficulties: "Since land costs are so high in industrialized and populated areas, the increase in fixed charges on the plant could easily price it out of competition."

To enjoin location of a reactor on grounds of nearby heavy population, therefore, could in some industrial areas amount to total prohibition. How disposed might a court be to bring about such a result? What weight would be given to the fact that the reactor has been licensed, with careful consideration given to location, by the AEC and perhaps the state public utilities commission as well?

According to the weight of authority, an activity authorized by statute or by administrative order cannot be a public nuisance. However, as we mentioned earlier, statutory authority does not extend so far as to privilege the maintenance of a private nuisance. In such a case damages, and even in some instances an injunction, will be granted.

Two Supreme Court cases are illustrative of the general rule. In one, Richards v. Washington Terminal Co., the defendant operated a railroad near plaintiff's property. The plaintiff's complaint alleged injury from dense smoke, dust, dirt, cinders, and vibrations. Part of this injury was occasioned by the fact that plaintiff's land lay opposite a tunnel ventilator that served to keep the tunnel free of smoke and gases. In its answer the company defended on the grounds that

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213. Although the discussion will be in terms of court decisions, it should be remembered that legislatures and public utility commissions will have similar problems. Cf. The Pennsylvania Public Utilities Commission Act, June 24, 1939, P.L. 872 § 656; PA. STAT. ANN. tit. 66 § 1183, providing for initial jurisdiction in the Commission to determine and make necessary orders regarding unsafe public utilities.
216. 233 U.S. 546 (1913).
the construction had been authorized by an act of Congress, permits had been issued by the Commissioners of the District of Columbia, and the railroad right of way had been condemned by Congress.

The Court nevertheless held that "... while the legislature may legalize what otherwise would be a public nuisance, it may not confer immunity from action for a private nuisance of such a character as to amount in effect to a taking of private property for public use." 217 Since the railroad had no practical alternative to the location of the tunnel and the blower, an injunction would have been contrary to the public interest. 218 Even so, the burden placed on the plaintiff by that part of the injury caused by the blower was "so direct and peculiar and substantial" 219 that the legislative authority was held to be no defense to an action for damages. However, no recovery was allowed for that part of the injury which constituted only "sharing in the common burden of incidental damages arising from the legalized nuisance." 220

In the other case, Baltimore & Potomac R.R. v. Fifth Baptist Church, 221 the Supreme Court went even further and allowed an injunction against the maintenance of a railroad engine house and machine shop adjacent to a church. 222 Here too congressional authorization of the route was set up as a defense. However, the Court found that this authority did not extend to locating an engine house and machine shop wherever the railroad might see fit, "without reference to the property rights of others." 223

By way of argument ad absurdum the Court added, "As well might it have been contended that the act permitted it to place them ... in the most densely populated locality." 224 The Court

217. Id., at 553.
218. Cf. 233 U. S. at 557.
219. Id. at 559.
220. 233 U. S. at 554.
221. 108 U. S. 317 (1882).
224. Id., at 331. Note that by statutory construction the court would have avoided having to find statutory authorization of so clear a public nuisance. Cf. Yoffe v. Pennsylvania Power & Light Co., 385 Pa. 520, 535 (1956): "The defendant stresses the fact that it had obtained license on consent of governmental authorities to span the river with its wire, but the license did not immunize the company from responsibility for negligence or for creating a hazard to the public." Similarly, Seaboard Airline R. R. v. The Pan Maryland, 105 F. Supp. 958, 964 (S.D. Ga. 1932). "It is inconceivable that there could be any basis in law or in fact for Seaboard's contention that once its bridge was approved by the Secretary of War, it could not constitute a hazard, that, in the absence of a specific directive from the Secretary of War to alter the bridge, the Railroad was powerless to initiate any steps toward correcting the extremely hazardous and unsafe conditions existing at the bridge insofar as navigation was concerned."
held that regardless of the extent of the authority conferred a qualification prohibiting the establishment of a private nuisance must be inferred. 225 "Grants of privilege or powers to corporate bodies, like those in question, confer no license to use them in disregard of the private rights of others. . . ." 226 Apparently of considerable importance to the allowance of the injunction, however, is the fact that there were "many [other] places in the city . . . sufficiently near the station of the company to answer its purposes." 227

The Richards and Baptist Church cases are significant for our purposes for three reasons: first, because they both concede that explicit legislative authorization precludes a finding of public nuisance; second, because they are consistent in following the rule that no private party, except insofar as he can show special injury, can prevent the maintenance of a public nuisance; and third, because the point on which the grant or denial of injunction turned is the availability of an alternative location that would equally have served the public purpose.

There can be little doubt that an atomic reactor, assuming that it is a nuisance, is a public one. There is probably no industrial risk that creates a hazard shared so generally by so many. Its preclusion from a community, therefore, unless a private individual is able to make out a case of special damage, can only be accomplished by legislative action or by suit initiated by the appropriate executive official.

In such a case, if there is conflict between municipal and state officials, the state decision is almost certain to prevail. For example, in Jewish Consumptives Relief Society v. Town of Woodbury, 228 a state certificate of approval for a tuberculosis sanatorium in Woodbury was given, subject to any "valid town ordinance." The town promptly zoned all sanatoria out of town. The court, in holding the ordinance ineffective, emphasizes at one point that the ordinance provided not for segregation of such uses but for "unqualified prohibition." 229 Yet later in its opinion the court states that because of the specific grant of power to a state commission to certify approval, which included consideration of location, the city could not even exclude the sanatorium from its residential zone. 230

Similarly, in the recent Duquesne Light Co. v. Upper St. Clair Township, 231 the utility was held not subject to a town zoning ordi-

225. 108 U.S. at 331.
226. Ibid.
227. 108 U.S. at 334. If there had been no other possible location, at least damages would have been awarded.
228. 243 N.Y.S. 686 (1930)
229. Id. at 693.
230. Id. at 696.
nance that might have required rerouting of proposed towers and power transmission lines. A contrary holding, said the Court, would be inconsistent with the power of the state public utilities commission to regulate the utility.

State courts also, as a matter of discretion and without consideration of constitutional compulsion to do so, have taken the national interest into account. The typical case is that of offensive use for purposes of war production. The national emergency has consistently been a controlling factor in such cases. However, in the absence of federal preemption of the field, federal licensing of an activity would not preclude intrastate exercise of state police power. A state legislature or court could declare an activity to be a public nuisance in a given locality, regardless of federal licensing.

More interesting would be a case in which one state sued to enjoin the construction of an atomic reactor close to its own border but in a sister state. Apart from the question of whether there is a nuisance, to which we will return shortly, there is authority in support of standing on the part of a state to represent its citizens in this fashion. In Georgia v. Tennessee Copper Co., for example, gas from the defendant's plant was ruining forests, orchards and crops in five Georgia counties. Justice Holmes wrote the opinion for the Court, allowing Georgia to enjoin the Tennessee industry. "Whether by insisting upon this claim [Georgia] is doing more harm than good to her own citizens is for her to determine."

It is not unlikely in any of these cases, however, that private parties will be able to show special injuries. Property values in the immediate neighborhood of a reactor, especially if there should be even a minor fallout accident, might well go down sharply when plans to build the reactor get underway. If so, as we have seen, an injunction might be granted at the suit of a private citizen.

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234. 206 U.S. 230 (1906).

235. Before suit, Georgia officials tried without success to obtain help from the state of Tennessee in abating the nuisance.

236. 206 U.S. at 239. Justice Holmes also stated that in suing as a "quasi-sovereign" Georgia was "... somewhat more certainly entitled to specific relief than a private party might be." Id., at 237. There seems to be no justification for this dictum, and Justice Harlan, who concurred in result, disented on this one point. Id., at 239.

237. Of course, things could get so bad that they would be good, from the point of view of the defense counsel. If property depreciation were widespread enough, it would not constitute grounds for a private nuisance suit.
The fact that there might be no alternative site could certainly provide a stumbling block for the plaintiff. However, the alternative-location holdings all involve a major premise that may not always hold in the atomic reactor case—that is, the high social value of the public utility in question.

Another obvious factor is the irreparable nature of radiation injury. A court might be less disposed to allow the defendant to proceed "at his own risk" in a reactor case than in one in which the alleged interference would amount to annoying noise or unpleasant odors. However, an equitable doctrine that might be available to a defendant in an appropriate case is laches. If the plaintiff has for an undue length of time permitted construction of the reactor to proceed without objection, he could be found to have forfeited his right to relief.\textsuperscript{238}

To return, then, to our original question, might a court enjoin an atomic reactor? I think it well might, depending upon the local conditions. As suggested earlier, the utility of a reactor cannot be evaluated in the abstract. The hazards, of course, are substantial. Cheerful forecasts of cheaper fuel costs cannot in every case overbalance such a risk.

Certainly in parts of New England the possibility of inexpensive power is an extremely weighty factor, especially with so much industrial migration to the South. The Massachusetts legislature, for example, has passed a "Resolve Providing for an Investigation and Study by a Special Committee Relative to Procuring a Steel Mill and Atomic Plants within the Commonwealth."\textsuperscript{239} In such a social context, the utility might well be considered high enough to justify maintenance of the risk—a typical ultrahazardous activities case.

However, there are other areas of the country where a contrary result would be indicated by a different economic and social context. The National Coal Association and various miners' unions have expressed disapproval of government subsidized competition from nuclear fuel, and it has been reported that Congressmen from relatively fuel-rich Pennsylvania have questioned the location of the Shippingport reactor in that state.\textsuperscript{240}

It would, it is submitted, be entirely proper for a judge in such an area to weigh the social utility of the atomic reactor in the context of

\textsuperscript{238} See note 30 supra.

\textsuperscript{239} Mass. Acts and Resolves 1955, c. 88. Other high-cost power areas, such as Nevada, are reported receptive to local atomic reactor development. Thomas,\textit{Democratic Control of Atomic Power Development}, 21 LAW & CONTEMP. PROB. 38, 53 (1956). In a recent convention in St. Petersburg, Florida, of 200 technical, industrial and educational leaders, as well as representatives of southern state governments and the AEC, recommendations were adopted "to create a bold and comprehensive regional action program for nuclear energy in the South," N.Y. Times, Aug. 5, 1956, p. 59, col. 1.

\textsuperscript{240} Thomas, supra note 239 at 53.
established and healthy industrial and social patterns. Indeed, it would be bad nuisance law if he did not. In such an area, in view of the high risk of nuclear power production, the minimal local gain, and the availability of sites in other areas of the country, an injunction against erection of an atomic reactor would be entirely appropriate.

IV. Federal Preemption of Reactor Regulation

We turn now from the question of the application of the law of nuisance, to the question of the power of a state court, in view of the federal legislation, regulation, and interest in the field, to enjoin the erection of a reactor. We are not here concerned, however, with whether Congress has the power to legislate in the area. This has been adequately covered elsewhere,241 and will here be assumed. Our concern will be with whether the courts should infer an intention on the part of Congress to preclude state regulation of this nature.

At the threshold of this issue is the recent decision of the Supreme Court in Commonwealth of Pennsylvania v. Nelson.242 The Court there held that the Pennsylvania Sedition Act 243 was rendered invalid by force of federal preemption implicit in the Smith Act.244

In reaching this decision the Court applied three criteria of federal preemption: (1) Whether the federal regulation is "so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it"; 245 (2) Whether the field is of such a peculiarly national concern, that it can be considered "in no sense a local enforcement problem"; 246 (3) Whether the state regulation "presents a serious danger of conflict with the administration of the federal program." 247

Although these tests overlap to a considerable degree, it is convenient to lay out some of the material bearing on Federal preemption in the pattern of the Nelson analysis. However, the significance of other language in that case may be far greater than is the analytical structure of the opinion. We will therefore return to the Nelson case at a later point.

244. 18 U.S.C. §2384 (1953).
246. Id. at 482.
247. Ibid.
First, then, to what extent has Congress indicated an intention to occupy the field?

As one authority\(^{248}\) has pointed out, in the 1946 Atomic Energy Act Congress clearly exercised exclusive control in the atomic energy area. Not only has there been no modifying language in the 1954 Act, but there are extensive instructions given to the AEC in this regard with no explicit recognition of any complementary independent role for the states.\(^{249}\)

Under sections 103(d) and 104(d), for example, “no license may be issued . . . if, in the opinion of the Commission, the issuance of a license . . . would be inimical to the health and safety of the public.” Sections 161(b) and (f) are even broader. Subsection (b) authorizes the AEC to “establish by rule, regulation, or order, such standards and instructions . . . as the Commission may deem necessary or desirable . . . to protect health or to minimize danger to life or property.” Subsection (f) authorizes the AEC to “utilize or employ the services or personnel of any Government agency or any state or local government, or voluntary or uncompensated personnel, to perform such functions on its behalf as may appear desirable.”

The implication seems to be that radiation hazards are the province of the Commission, and that State and local government activities, along with those of “voluntary or uncompensated personnel,” are to be limited to assistance to the AEC in the latter’s discretion.

The diligence exercised by the AEC in its licensing and inspection activities is impressive. It includes careful evaluation of proposed uses as well as “visitation” of users of radioactive materials, for purposes of judging the adequacy of facilities and equipment, assisting the user with regard to safety problems, and determining whether a user is complying with the terms and conditions of his license and with AEC health and safety standards.\(^{250}\)

The influence of the AEC, moreover, “has blanketed the whole realm of atomic energy.”\(^{251}\) The Commission, with direct responsibility for development and control of atomic energy, has been the “overwhelmingly dominant locus of power” in the field, along with the


Joint Committee on Atomic Energy.\textsuperscript{252} In spite of a "trend away from this unique domination by the federal government," a recent article devoted to analysis of this trend makes no reference to any contemplated shift of power to the states, but only to the increasing responsibility of private industry.\textsuperscript{253} Similarly, the McKinney Report states that "Federal, State, and local authorities must continue to cooperate closely" in the interest of "uniform radiation health standards," but adds:

There must be a balance between the conceivable and the actual hazards, however, and for some years to come the Federal Government will certainly have the responsibility of estimating this balance. This is not the sole responsibility of the Commission, but a joint responsibility of all Federal agencies involved or affected.\textsuperscript{254}

However, the McKinney Report can be cited as well for limited rather than complete federal occupation. For example, at another point the Report states:

It would seem unnecessarily cumbersome and expensive to have a separate Federal agency—the Commission—invade all . . . affected industries and regulate, inspect, and enforce. The Commission has already indicated an intention of letting other Federal, State and local authorities take on the detailed regulation and enforcement, in those areas and activities which are their normal province. For example, conferences of State officials have been held on health and safety and other regulatory problems.

The Federal Government is in a more informed and better position to establish minimum standards. The responsibility for adapting these standards to local conditions and enforcing them could be kept within the purview of the State and local authorities.\textsuperscript{255}

At one of the conferences referred to in the McKinney Report, representatives of the AEC who spoke and answered questions from the floor were most careful to leave the issue of federal occupation open. An example is the following question, and the response made by Dr. C. Rogers McCullough, Chairman of the Advisory Committee on Reactor Safeguards:

\textsuperscript{252} Ibid.
\textsuperscript{253} Ibid.
\textsuperscript{255} Id. at 133.
Question: Will the AEC license require that a licensee comply with all applicable State and local regulations?

Answer: The present drafts of the proposed regulations do not relieve the licensee from compliance with State and local regulations, but they do not expressly require compliance.  

At the same conference Mrs. Clara Beyer, Associate Director of the Bureau of Labor Standards, stated that "state agencies should . . . step up their safety and health programs and acquire the necessary experience for dealing with radiation hazards." The states, she said, have a "much broader responsibility" for safety and health than does the AEC, whose regulations "govern only a part of the problem."  

Our second test is whether the atomic energy field is of such a peculiar national concern that it can be considered in no sense a local problem. Clearly the international aspects of atomic energy development is a federal rather than a local concern. As one authority has written, the Commission must stimulate industrial participation not only for its own sake, but as a means of achieving competitive power most swiftly, as required by the need to keep in the forefront of world atomic development. In this joint operation, coordination and harmonization are necessary. This must be the task of the AEC.  

A further consideration is that radiation hazards are not local, but multistate. This fact, too, points to the national, rather than state, nature of the problem. Similarly, uniformity of safety and health standards is desirable. A lack of uniformity could, for example, make impracticable the development of a multistate market for manufactured goods in the atomic field.  

On the other hand, there are some aspects of the atomic energy program that are so related to local conditions and local problems as to indicate at least an overlap of local interest with federal. This is recognized in the above quotation from the McKinney Report that

256. Conference of State Representatives on the AEC Licensing Program 7 (1955).
257. Id., at 21.
260. Ibid.
refers to "those areas and activities that are [the] normal province" of the states, and that takes specific note of the problem of adapting minimum federal safety standards to local conditions. Similar suggestions can be found at several points in the Conference of State Representatives on the AEC Licensing Program. For example, Harold L. Price, Director of the AEC's Division of Civilian Application was asked the following:

Question: Have areas of regulation been defined as between those which would be exclusively Federal, exclusively State, or concurrent as to both Federal and State?

Answer: No. AEC's responsibility is to see that licensees comply with the applicable provisions of the Atomic Energy Act and the terms and conditions of the license. It is recognized, however, that the States have an interest also.

Third is the question as to whether state regulation presents a serious conflict with administration of the federal program. Here again AEC representatives and other authorities in the area suggest both an affirmative and a negative answer.

With regard to possible stricter safety standards in the states, the McKinney Panel has stated that "overcautious safety standards applied without adequate knowledge could be so costly as to deter development and application." However, even if state and federal regulations are separate but identical, conflicts in administration and administrative discretion would be inevitable; the process of licensing atomic facilities is, of course, a slow and difficult one. In addition, lack of expertise on the local level would be conducive to conflict.

At the same time, Mr. Price has expressed the hope that the states will be able to participate in the area of atomic energy regulation without conflict with federal activities. The McKinney Report at one point has gone even further, suggesting that "State and local bodies have the right to impose regulations more stringent than those

262. See note 255 supra.

263. The very fact that such a conference was held is, as the McKinney Report points out, a significant recognition of state interest in the local aspects of the problem. See note 255 supra.

264. See note 266 infra.


266. Address, Conference of State Representatives on the AEC Licensing Program 4 (1955).
required by the Federal Government.” 267 Although this statement is perhaps extreme, as well as contradictory of other parts of the Report, 268 it is at least indicative of the fact that the states have not been excluded on grounds of potential conflict.

The question that must ultimately be answered here is whether application of nuisance law to bar the erection of a reactor is within that area that is (1) outside an exclusive federal field, (2) of primarily state concern, and (3) not in conflict with federal policy. First, however, let us return briefly to the Nelson case.

As was suggested above, the importance of the Nelson opinion may lie not in the structure of the analysis but in the facts of the case and the limitation of the holding to those facts. It should be noted first that Nelson involved activities designed to overthrow lawful government by force. One can imagine few subjects that come more clearly within the traditional concept of “police power,” i.e., of powers reserved to the states by the tenth amendment. Secondly, it is of significance that in the Nelson case the state activity was not antithetical to the federal policy, but directed toward the same end.

Viewed in this light the decision does seem to go “considerably beyond existing Supreme Court precedent.” 269 However, Chief Justice Warren is careful to point out that the decision does not prevent the state from protecting itself against “sabotage or attempted violence of all kinds,” nor from prosecuting “where the same act constitutes both a federal and a state offense under the police power.” 270

The Court's distinction of the Gilbert case 271 in this context is significant. In Gilbert the Supreme Court had held valid as “simply a local police measure,” the defendant's conviction under a state statute prescribing interference with the enlistment of men in the military or naval service of the United States—clearly a national concern. The Gilbert case is distinguished, however, on the ground that there the Court had found an immediate “prompting to violence.” 272

268. See note 265 supra.
270. Commonwealth v. Nelson, 350 U.S. 497 (1956). Cf. the recent opinion of Tennessee Attorney General George F. McCanless, N.Y. Times, Sept. 30, 1956, p. 52, col. 3. (One John Kasper has been indicted under the state anti-sedition statute for inciting race riots in his campaign against racial integration in public schools. Mr. McCanless expressed confidence that the state law is valid insofar as it is applied to seditious acts against the state alone and to inciting to riots.) If the state court should limit the statute to such cases of threat of immediate breach of the peace, the Nelson decision could be readily distinguished.
Similarly, Pennsylvania is left now with plenary power over any "actual or threatened internal civil disturbances."\(^{273}\) The validity of the Smith Act is, of course, premised upon threatened internal civil disturbances.\(^{274}\) In spite of the analysis in terms of federal occupation and interest, and possibility of state conflict, therefore, a very substantial overlap of state and federal jurisdiction remains. The state is precluded only from dealing with sedition \textit{qua} sedition.

Turning then to our question of whether a state court can apply nuisance law to atomic reactors, we can suggest several conclusions on the basis of the analysis thus far: (1) Although the federal government has occupied a significant part of the field of atomic development, there is still a substantial area of health and safety regulation reserved to the states; (2) Although the national interest as to many aspects of atomic energy development is clear, considerable state interest in related local problems of health and safety is also evident; (3) Although state conflict with the federal policy of speedy atomic reactor development is probably contrary to congressional intent, the states will be permitted to regulate local health and safety as such, in spite of some degree of conflict with the overlapping federal area of atomic energy development.\(^{275}\)

This conclusion is supported by the McKinney Report reference to the policy of the AEC favoring "detailed regulation and enforcement" by the state and local government "in those areas and activities which are their normal province."\(^{276}\) Certainly the protection of members of the public from industrial nuisances generally, is within this category.

It can be argued, however, that the propriety of the location of a reactor is just one of those things that the AEC has most clearly preempted through authorized issuance of regulations. The AEC, with the assistance of the Advisory Committee on Reactor Safeguards, obtains and examines complete data on a proposed site, including meteorology, earthquake history, geology, hydrology, etc.\(^{277}\) As part

\(^{273}\) Id., at 500, n. 8, quoting with approval from the opinion of the Pennsylvania Supreme Court, 377 Pa. 58, 70, 104 A.2d 133, 139 (1954).

\(^{274}\) Dennis v. United States, 341 U.S. 494 (1951).

\(^{275}\) No implication is intended that the line will be easy to draw in all cases between what is local health and safety and what is federal atomic reactor regulation. The establishment of radiation tolerance figures for reactor personnel would probably be exclusively a federal function. Waste disposal into public sewers is more difficult to decide. Cf. Atomic Energy Commission, Notice of Proposed Rule-Making, Standards for Protection Against Radiation, 20 Fed. Reg. 5101 (1955); Mass. Acts and Resolves c. 335 (1955).


\(^{277}\) II Id. at 597.
of this effort, the AEC requires each applicant for a license to file complete information describing the proposed site, with a map indicating the surrounding land use.\(^{278}\)

In spite of this fact, however, a court should hesitate to infer that Congress intended to remove from the jurisdiction of the states all questions of local, state, or even of regional planning. True, a state cannot overrule the AEC on reactor safety standards as such. But neither can the AEC, without clear and explicit authorization from Congress, usurp all related state power over health and safety.

This is not meant to suggest that a state could use its police power to exclude atomic reactors from non-populous areas. However, we must distinguish this abuse of power from the state’s right to segregate this industrial use to the same extent that it would segregate other similar hazardous industrial uses. In a particular state, New Jersey or Rhode Island, for example, this could reasonably amount to total exclusion. In most other states, it would not. A New York court, for example, should certainly be upheld if it barred a nuclear power plant from downtown Manhattan,\(^{279}\) whereas it might well be found to conflict unreasonably with the federal policy if it sought to exclude the same reactor from less densely populated areas of the state.

Of interest in this regard is the decision of the Belgian government to refuse permission, on grounds of public health, for the construction of a small demonstrator reactor at the 1958 International Exposition in that country. A New York Times correspondent reported that “the Belgians seem to be no more concerned about atomic radiation than most people,” but the operation of even a pilot model within or bordering the city limits seemed “a needless, even a foolhardy” risk to many residents.\(^{280}\) At the same time, however, Belgium is moving ahead quickly on her own atomic development program. A reactor location has been established in the sand and pinewood area of Northern Belgium in Antwerp Province.\(^{281}\)

One final point raised by the Nelson case bears mention. Both the United States Supreme Court and the Pennsylvania Supreme Court stress as a “peculiar danger of interference with the federal program”

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\(^{279}\) Compare the ordinance of Pleasant Hills Borough, Pennsylvania, which so soberly prohibits the testing of atomic bombs within the town limits, in complete disregard of possible conflict with the national interest. Pa. Ord. No. 36, 2 ZONING Ord. bk. 456, art. IX, § 901. Compare the equally sober pronouncement in a recent law review note, that “undoubtedly, this can be done for the safety of its residents.” Note, 16 U. of Pitt. L. Rev. 168, 179 (1955).

\(^{280}\) N.Y. Times, July 19, 1956, p. 8, col. 1.

\(^{281}\) Ibid.
the fact that a private party can initiate court proceedings.\textsuperscript{282} The same is true, of course, in the case of a private nuisance. The difference is, however, that in the latter case, the plaintiff is entitled to sue only because he is personally damaged to a greater degree than any other member of the community. In such a case, there is more than rational justification for allowing the suit. As both the *Richards*\textsuperscript{283} and *Baptist Church*\textsuperscript{284} cases make clear, the fifth amendment of the Constitution requires that relief be allowed, at least to the extent of just compensation.

V. Conclusion

Our conclusion is, then, that under the common law of nuisance and the related doctrine of "abnormal uses" or "ultrahazardous activities," a state court could, in some instances properly enjoin the construction of an atomic reactor. This can be done, however, only after balancing the nature of the hazards involved against the social utility of a reactor in the particular location.

Although the state court in such a case should weigh the fact that a license has been given by the AEC, the license in itself would not be conclusive on the question of public nuisance. On the other hand, state legislative or administrative authorization clearly approving the location would be determinative. The courts, however, might be reluctant to construe such authorization broadly enough to cover a clear case of public nuisance, inferring an absence of legislative intent to bring about such a result. Neither state nor federal license would be conclusive as to private nuisance.

Federal interest, legislation, and regulation in the field of atomic energy development would not preclude a state court finding of nuisance. A state would undoubtedly be restricted from entering directly into the field of atomic reactor regulation. However, as long as state regulation affects the federal atomic program in a non-discriminatory fashion, and only through the exercise of traditional local planning powers as such, the state regulation should be upheld.

\textsuperscript{282} 350 U.S. 497 (1956); 377 Pa. 58, 74, 104 A.2d 133, 141 (1954).