

THE ROLE OF THE CIVIL COURTS IN RESOLVING RISK AND UNCERTAINTY IN ENVIRONMENTAL LAW

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Risk and uncertainty are elements in predicting environmental impacts as well as in proving causation in environmental litigation. The author examines the way courts treat these elements in judicial review proceedings and in tort litigation. Problems are identified and suggestions made as to how these problems may be solved.

Le risque et le doute sont des éléments dans la prévision des impacts environnementaux tout comme pour prouver la causalité dans le litige environnemental. L'auteur jette un regard sur la façon dont les tribunaux examinent ces éléments dans les causes de réexamen judiciaire et dans les litiges délictuels. Les problèmes sont identifiés et des suggestions sont faites sur la façon dont ces problèmes peuvent être résolus.

INTRODUCTION

The technologies developed since the Second World War have enabled society to modify the natural environment, both deliberately and accidentally, on an unprecedented scale. We can create dams and water diversion projects that can flood millions of hectares of land and dry up an equal amount of ground water and surface water in other areas, expand cities over large areas of farmland, and spray herbicides on huge acreages of forest from the air.

Thousands of new synthetic chemicals have been created that have the potential alone or in combination with other chemicals to interfere with the reproductive capacity of plants and animals and to cause cancer and other serious diseases in human beings.

Our ability to create new technologies and build mega-projects and our ability to detect and measure minute quantities of pollutants in air, water, soil and in living tissues has greatly outstripped our ability to predict their impacts on the environment, including human health.

In light of the high level of uncertainty associated with such risks, the civil courts have played a central role in protecting the environment, and they will continue to play a crucial role in the future. Their role has been twofold: both in the judicial review of administrative action and in dealing with torts. In judicial review, the courts play an important role in ensuring that government agencies make decisions about risk and uncertainty that will have tremendous effects on the community in an open, fair, sensitive and scientifically sound manner. In dealing with torts such as nuisance, riparian rights, negligence and the doctrine in *Rylands v. Fletcher*,¹ the courts must often balance the rights of people to make productive use of their property and to carry on business activities against the rights of others to be free from interference with their physical and emotional well-being and their use and enjoyment of their own property. In doing this, the courts must allocate risks between the parties, often in the absence of certainty about the level of risk, its causes and the practicality of methods proposed for reducing the risk. How these courts deal with issues such as standing, interim and interlocutory injunctions, burdens of proof, causation and costs plays a central role in determining the risks to which the public will be subjected by their neighbours and by government agencies.

Initially, the decision whether to allow the introduction of a new technology, the production or distribution of a toxic chemical, the establishment of a waste disposal site, the construction of a nuclear power plant, or the logging or mining of a tract of land will be a "political" decision, made either by politicians on the advice of civil servants and other advisors or by a specialized tribunal.

Ideally, these decisions will be made with adequate communication between the decision-makers and the public and taking into account all relevant social, economic and environmental concerns. To the extent that a fair process is employed, the courts usually have, and perhaps should have, little involvement. To a large extent, the utilitarian calculus is the mandate of the politicians.

However, if the political process is patently unfair, or established rights are infringed, the courts should not shrink from preventing that unfairness or redressing wrongs.

In fact, the refusal of the courts to compromise rights in the interest of what might be perceived to be the broader public interest has sometimes been one of the most effective instruments of social progress.

For example, in 1955 two owners of lands downstream from municipal sewage treatment plants sued the municipalities for violation of riparian rights. The sewage treatment plants were discharging effluent that polluted the streams flowing through the downstream owners' property. In the case of *Stephens v. The Village of Richmond Hill*,ⁱⁱ Justice Stewart of the Supreme Court of Ontario found that before the municipality constructed its sewage disposal plant, the stream flowing through Mr. Stephens' property had been "ever-flowing and sparkling [and] abounded in fish and watercress". The stream was used by children for swimming and was used as a source of drinking water and for watering livestock. Its bottom was of gravel and the stream was always clear. The court found that the disappearance of the fish and watercress in the stream resulted from the sewage treatment plant effluent.

The court granted an injunction, but stayed the injunction for several months to give the municipality an opportunity to rectify the problem. A similar result was reached in the case of *Burgess v. The City of Woodstock*.ⁱⁱⁱ

In *Stephens*, the court recognized that granting the claim would deprive the people of Richmond Hill of the only readily and economically available method of disposing of the sewage. The court also recognized that 95 per cent of all municipalities had similar sewage disposal systems. Justice Stewart stated:

It is quite natural and proper that Dr. Barry, Dr. King, Mr. Redfern and Mr. Caverley (a member of the council of Richmond Hill) should insist upon the importance of the welfare of the people at large, but I conceive that it is not for the judiciary to permit the doctrine of utilitarianism to be used as a make-weight in the scales of justice.^{iv}

While it may seem surprising today that a court would ignore the balancing of social interests and uphold individual rights even where they interfere with the "welfare of the people at large," this courageous stand resulted in major improvements to environmental quality in Ontario. Although the legislature dissolved the injunctions and passed amendments to the *Public Health Act*^v giving municipal sewage works the defence of statutory authority, the politicians also responded by passing the *Ontario Water Resources Act*^{vi}, establishing the Ontario Water Resources Commission.

The Commission was a water management agency, with the power to provide water and sewage service to municipalities, and to approve the construction of sewage treatment works, and to issue orders to municipalities and industries to regulate and control pollution. Its work resulted in the establishment of one of the most modern and extensive sewage and water infrastructures in the world.^{vii}

A second example of a court upholding minority rights in the face of major government interests, resulting in wiser decision-making and better environmental protection in the long run is the decision of Mr. Justice Malouf of the Quebec Superior Court halting work on the James Bay Project in November 1973.^{viii} In 1973, although the Inuit and Indians of Northern Quebec were engaged in negotiations with the Quebec Government about the extent to which their interests would be protected and compensation would be granted as a result of the construction of the James Bay dams, extensive work was being undertaken with severe and potentially irreversible damage to the environment.

The James Bay hydroelectric project was to be the largest in North America, producing three times the power of Churchill Falls in Labrador. The complex would involve the construction of 4 power houses, 4 main dams, 18 spillways and 80 miles of dikes. The project would affect 62,000 square miles, of which over 4,000 square miles would be flooded.

To gain access to the project, the proponents were constructing a 450-mile road, three airports and a dock for unloading ships. In granting an interlocutory injunction, Justice Malouf took into account the inconvenience that would be caused to the Quebec Government and the James Bay Development Corporation if these works were halted. However, he stated:

I find it difficult to compare such monetary loss to the damages which such a large group of people will suffer. The right of petitioners to pursue their way of life in the lands subject to dispute far outweighs any consideration that can be given to such monetary damages.^{ix}

Even though the Quebec Court of Appeal lifted the interlocutory injunction, the success of the Inuit and Indians before the Quebec Superior Court gave them a much stronger bargaining position in the negotiations, which eventually led to an extensive agreement that gave a substantial degree of protection to the native way of life and to environmental protection.

This is not to suggest that all courts show the same sensitivity to environmental concerns. In one civil suit for nuisance in small claims court, an apartment dweller was suing her landlord for nuisance. Beneath the windows of her apartment, the landlord was carrying out construction of another building throughout the night, resulting in noise and dust interfering with her enjoyment of her apartment for several months. The small claims court judge dismissed her claim in a four-line ruling, consisting of a statement that the plaintiff, being a very intelligent woman, should have moved.^x

More recently, a Provincial Judge hearing a private prosecution against a Toronto lead

smelter for allegedly emitting lead into the air in concentrations greater than those allowed by the *Environmental Protection Act, 1971*,^{xi} after referring to the potential length of the proceeding before him, said that he “personally would rather be back with my burglars and murderers.”^{xii}

I. THE ROLE OF THE CIVIL COURTS IN JUDICIAL REVIEW

In a judicial review, the court decides whether a government agency is acting within its powers and is conducting its deliberations in accordance with natural justice or fairness.

On an application for judicial review, the court can grant orders :

- to compel a public official or tribunal to perform a duty which he, she or it is required by law to perform;
- to prohibit an official or tribunal from carrying out a function or making a decision without the authority to do so, and unless all procedures specified by law are followed;
- to quash a decision or order already made by an official or tribunal if the decision was not arrived at properly; or
- the court may also declare the conduct of the government or its officials to be contrary to law.

Ideally, the executive branch of government should treat the public with respect, so that judicial review of its actions is unnecessary. However, in the field of environmental protection, governments throughout Canada have frequently taken the attitude that the only accountability that government has to the public is at the polls during election.

A cynic once summed up the difference between Canada and the United States by saying that, “In the United States, the people hate the government. In Canada, the government hates the people.”^{xiii}

There is more than a grain of truth to this, making judicial review an important tool to protect the public from what one author called “bureaucratic aggression.”^{xiv}

A good example of the importance of judicial review in protecting people’s environmental rights is the litigation against *Ontario’s Royal Commission of Inquiry Into Waste Management Inc.* by the *Preserve Our Water Resources Group* of the town of Stouffville.^{xv}

In May 1977 the *Globe and Mail* disclosed that a contribution of \$35,000 had been made to the Progressive Conservative Party of Ontario by Disposal Services Limited. This company was seeking government approval for two of the largest waste disposal sites in Canada at the time the donations were made. The interesting thing about this donation was that an internal company memorandum, obtained by the *Globe and Mail*, stated that the donation had been given for the

purpose of ensuring approval of its application to develop one of these waste disposal sites, the one at Maple. To clear the air, the Premier of Ontario appointed a Royal Commission. The commissioner was Mr. Justice Samuel Hughes of the Supreme Court of Ontario.

When residents of Stouffville, who had conducted a lengthy and unsuccessful fight against approval of the second site, heard about this donation, they successfully petitioned the Premier to expand the terms of reference of the commission to look into the approval of that site as well as the Maple site.

However, when the hearing commenced, an event occurred which the commissioner described in his final report as “a serious obstacle to the orderly progress of the [commission’s] investigation” which “caused further and unforeseen delay.”^{xvi}

This “obstacle” was the fact that ratepayers groups in both Maple and Stouffville requested standing to participate fully in the inquiry, and when Justice Hughes refused them standing, the Stouffville residents made an application to the Supreme Court of Ontario to require the commission to allow them to participate.^{xvii} Justice Hughes’ position was that the mandate of his commission was to inquire into corruption, and the concerns of the ratepayers related to environmental protection. Because the concern of the ratepayers was that the use of garbage as landfill in the vicinity of human habitation may damage the water supply and generally affect the amenities of habitations, Justice Hughes felt this was outside the commission’s mandate. The commissioner ruled that commission counsel could adequately represent the interests of these ratepayer groups, and therefore they had no need to have counsel present at the hearings.

The Stouffville citizens challenged the jurisdiction of Justice Hughes to deny them standing.

The Divisional Court ruled that the citizens group had a direct and substantial interest in the subject matter of the inquiry and granted them full standing.

The involvement of the ratepayers required this commission to expand its investigation to include the citizens’ allegations of systematic non-enforcement of the *Environmental Protection Act*.^{xviii}

During two weeks of hearings, the commission repeatedly heard evidence of numerous violations of environmental legislation at the Stouffville waste disposal site, and the consistent refusal of the Ontario Ministry of the Environment to lay any charges. Successive Ministers of the Environment and ministry officials testified that it was the policy of the ministry to prosecute only as a last resort, and that the law would not be enforced through prosecutions as long as there was any evidence of cooperation and progress by polluting companies. In the end, although he found that there was no evidence that any benefit had been given by the government to the waste disposal company in return for its donation, Justice Hughes accepted the submissions of counsel for the Stouffville ratepayers that such a policy of non-enforcement was inappropriate. Justice Hughes recommended that “the law should be uniformly enforced against violators of any provision of a

statute of Ontario in any case where the evidence requires or justifies a prosecution.^{xxix}

Although this did not lead to an immediate change in government policy, the Hughes Commission recommendation was an important milestone. Today, Justice Hughes' position has become the policy of the Ontario government, and prosecutions of polluters are the rule, rather than the exception.^{xx} Had the court not required the commission to give the ratepayers standing, it is unlikely that most of the evidence upon which this recommendation was based would have been brought before the commission, or that any such recommendation could have been made.

More recently, the courts have breathed life into the federal government's environmental impact assessment process. Although the federal environmental assessment and review process has never been enshrined in legislation, and the order establishing this review process purports, according to its title, to be merely a set of guidelines, a recent series of judicial decisions have held that this order is not a mere description of a policy or program, but requires an environmental impact assessment under certain circumstances. The order, therefore, creates rights that may be enforceable by mandamus. Based on this interpretation, the Federal Court and the Supreme Court of Canada have overruled decisions to approve major dams without an environmental impact assessment.^{xxi}

II. THE ROLE OF THE CIVIL COURTS IN DEALING WITH TORTS

For the past two centuries, the civil courts have played a prominent role in providing citizens with remedies for environmental harm through several causes of action, including nuisance, riparian rights, trespass, negligence and the rule in *Rylands v. Fletcher*.^{xxii} More recently, the tort of deceit has become a useful cause of action for purchasers of land contaminated with hazardous waste. Although the usual rule is caveat emptor, in several cases, the courts have been prepared to give relief where vendors were negligent or were aware of the use of radioactive soil as fill or other such "latent defects," and did not disclose them to the purchaser.^{xxiii}

Although there has been a dramatic increase in statute law, there are still significant gaps in the statutory protection provided to the public. These gaps require that the public continue to use the rights and remedies provided by common law torts to redress many wrongs.

The tort system has a number of theoretical advantages over other methods of obtaining relief. The injured person can initiate action on his own, without the need to rely on any government agency to protect his interest. He controls the choice of lawyers, medical and other scientific experts to assist him. The parties themselves or their legal advisors maintain control over the timing and choice of strategies through every stage of the negotiations. Except in the case of infants and certain persons deemed by law to be incapable of making informed judgments without assistance, the decision of the plaintiff whether to accept a settlement offer need not be approved by any bureaucracy. Moreover, if the matter goes to trial, it is decided by an independent judiciary designed, at least in theory, to be above political or partisan pressures, and whose decisions are subject to appeal to higher courts.

It has been said many times that the courts are one of the few places where the “little guy” can meet big corporations or government on an equal footing.

However, in practice the advantages of the court system are often illusory. The problems include the difficulty in ascertaining the appropriate cause of action, the lack of recognition of certain kinds of injury, restrictions in the scope of damages available, limitation periods that do not take into account latent effects of exposure to contaminants, the lack of any meaningful procedure for class actions in most Canadian jurisdictions, and the fact that the tortfeasor may have insufficient assets, income or insurance to pay a judgment awarded against him or her. The possibility of a hollow judgment is compounded by the ease with which businessmen and women in most Canadian jurisdictions can create “shell” corporations and make themselves judgment-proof through a variety of corporation “shell games.”

III. KEY AREAS OF RISK AND UNCERTAINTY IN ENVIRONMENTAL CASES

Two of the most significant problems faced by plaintiffs are cost and the difficulty of proving causation. The areas of risk and uncertainty of most significance to people trying to use the civil process to vindicate environmental rights are the substantial risk of losing their case, which results from the scientific uncertainty inherent in environmental cases, and the risk of losing their shirts if they lose their case.

A. Cost

In our system of party-and-party costs, the plaintiff not only faces the daunting prospect of paying the fees and disbursements of his own lawyer and experts, but also the prospect of paying an unpredictable amount as costs to the defendant, should he lose the case.

This problem has long been recognized, but for everyone except the very poor, who may obtain legal aid, and the very rich, who can afford to take the gamble, the problem has not been solved.

The Ontario Government’s Task Force on Legal Aid, headed by Mr. Justice Osler of the Supreme Court of Ontario, reported on the problems in that province in 1974.

While noting that the question of costs was outside its jurisdiction, the task force recommended that it be dealt with. Justice Osler stated :

We are emboldened to suggest at this point that it is no longer self-evident that costs should follow the event. So much of today’s litigating involves contests between private individuals and either the state or some public authority or large corporation that the threat of having costs awarded against a losing party operated unequally as a deterrent. The threat of costs

undoubtedly works heavily against groups who seek to take public or litigious initiatives in the enforcement of statutory or common law rights when members of the group have no particular or individual private interest at stake. We would therefore propose an amendment to the Legal Aid Act casting upon a successful respondent in any such proceedings the burden of satisfying the Court or Tribunal before costs are awarded in his favour that no public issue of substance was involved in the litigation or that the proceedings were frivolous or vexatious.

The deterrent threat of being mulcted in costs is often more than enough to inhibit a group of genuinely concerned citizens from proceeding against a public authority or a large corporation though vital public issues may be at stake.

We have more than once expressed the view that to grant nominal rights is worse than useless unless the means of enforcing them are also provided. Reasonable immunity from the penalty of costs should properly follow the assertion of such rights by a legally aided group; in equity this same immunity should be extended to non-legally aided groups on the same conditions.^{xxiv}

The problem is compounded by the consequences of failure to accept an offer to settle. In Ontario, as probably in other provinces, there is a rule that if a party refuses an offer to settle, and obtains a lower award of damages at trial, costs may still be awarded against him, even though the issue of liability has been resolved in his favour.^{xxv} While there are sound reasons for such a rule, it can be disastrous to a litigant who feels strongly that the settlement offer is unreasonable. In some cases, a plaintiff may realize a net loss after years of litigation, even though liability has been found in his favour and costs have been awarded to him. This happened to Mr. Clark Muirhead, a Toronto businessman. Mr. Muirhead bought a country home to escape the tumult and pollution of a large metropolis, only to discover that a nearby gravel pit continued to expand until its operations were encroaching on his property. As his fences dropped into the hole his land was subsiding into, and the noise and dust day and night made life unbearable in his country retreat, Mr. Muirhead sued. He sued in the Supreme Court of Ontario, but was awarded costs only on the lower County Court scale. The offer to settle exceeded his recovery, and he ended up with a net loss as a result of his success.^{xxvi}

Similarly, the undertaking to pay damages that must be given to obtain an interlocutory injunction also prevents plaintiffs from obtaining this remedy. The refusal of Mr. Justice Malouf to require such an undertaking when giving the Inuit and Indians this relief made it possible for them to continue their efforts. In some jurisdictions, such as Michigan, the maximum security a court may order to ensure payment of costs has been restricted to a nominal amount, such as \$500.^{xxvii}

Shortly after the *Osler Task Force* report, the Ontario government appointed a civil procedure revision committee to review the *Rules of Civil Procedure* and the *Judicature Act* (now the *Courts of Justice Act*).^{xxviii} In a brief to that committee, the Canadian Environmental Law Research Foundation recommended that the courts recognize the concept of a “public interest case,”

and relax the costs rule in such cases.^{xxix}

The foundation recommended that in cases where the plaintiff has no personal or financial property interest to protect, where the potential financial loss that plaintiff may incur by litigating is greater than the potential financial gain, or where the plaintiff in private litigation seeks to vindicate a significant public policy and to create a widespread benefit, the courts should not award costs against a plaintiff even if he or she loses the case.

The committee did not choose to make any significant change in the basic rule that costs follow the event.

In 1989 the Ontario Law Reform Commission released a long-awaited report on the law of standing. The commission recommended that current barriers to standing in public nuisance and administrative law cases be removed, and a new *Access to Courts Act* be passed to increase access to the courts by granting standing to individuals who have no personal, pecuniary or proprietary interest that has been specially or uniquely affected. The commission also addressed the issue of costs, concluding that reform of the law of standing will be ineffective without “fundamental change” to the present law of costs. The commission recommended that plaintiffs should not have to pay costs to defendants in the following circumstances: where the person has no personal, proprietary or pecuniary interest in the outcome of the proceeding, or, if he or she has such an interest, it clearly does not justify the proceeding economically; where the issues have not been previously determined by a court in a proceeding against the same defendant; and where the defendant has a clearly superior capacity to bear the costs of the proceeding.^{xxx}

These costs rules have been created by the courts themselves, and it would be appropriate for the courts to enunciate guidelines for the awarding of costs that recognize such situations and reduce the risk of undue hardship to people trying to vindicate environmental rights.

B. Causation

Our ability to detect and measure minute quantities of pollutants has now greatly outstripped our ability to determine how they got to the place where they were detected or what their effects might be on human health or the environment. The problem of proving that a particular action will cause or has already caused the specific injury the plaintiff fears or has suffered is widely acknowledged to be the paramount barrier to establishing liability for environmental damage. Very little is known about the toxicity of many chemicals in common use, their dispersion through air and water, their persistence or stability, their affinity for living organisms, their synergesis, the movement of air and water currents and underground water, and the etiology of diseases.

There are usually many available explanations for any harm done to health or the environment. In areas of widespread pollution, there may be many potential sources of a single pollutant. There may also be other pollutants that can cause the same disease or damage. There are

often a variety of natural causes for the same disease or injury as well. Often, the experts can do no more than establish a range of probabilities.

In a typical toxic torts negligence suit, there are three major areas of uncertainty facing the plaintiff who must prove that the defendant's activities were the cause of the harm he or she has suffered: finding the cause, ascertaining the effect and determining the appropriate standard of care.

1. Finding the Cause

A simple example of this problem might be a leak from a truck transporting industrial chemicals. A truck leaves Texas, bound for the Niagara Peninsula with a load of drums of toxic chemicals. At the Canadian border, a customs official notices liquid leaking from the truck. The tailgate is opened and a damaged drum is found. What caused the leak? Was the drum not designed to contain this liquid under these circumstances? Was the drum properly designed but not properly constructed? Was the drum damaged during loading? Was the drum not adequately secured? Although this is a relatively simple fact situation, the answer may not be apparent without expensive testing of the drum for defects and stresses. Under the circumstances, it is difficult to prove which of several possible defendants was at fault.

2. Ascertaining Effects

At a chemical manufacturing company in Ontario a few years ago, a shaft of a machine overheated, causing chemicals in a drum to catch fire. To reduce exposure to fumes which might be toxic, the surrounding area was evacuated. Residents wanted to know what they had been exposed to, and whether this exposure might affect their health. One would think that the solution is to read the Material Safety Data Sheet, describing the toxicity of this chemical. However, the public was not exposed to this chemical, but to the by-products of thermal decomposition of the chemical. Experiments determined that if the chemical ignited as a result of receiving a certain degree of heat, there would be 50 to 70 different chemicals in the smoke leaving the plant. But if the chemical burned at other temperatures, the by-products and the dosages would be substantially different. Under the circumstances, the composition of the smoke that residents were exposed to may never be fully known.

3. Ascertaining the Appropriate Standard of Care

One of the difficulties in proving negligence is that for many hazardous activities there is no obvious customary standard of conduct. Many environmental problems are so new that there is no literature and no uniform safe practice. Governments and industry associations, which are in the best position to articulate the standard of care for many hazardous activities, have often failed to do so.

In those cases the court is, in effect, legislating each time it establishes the standard of care. If the court “recognizes” a high standard of care, this will encourage more cautious practices throughout the affected industry. Conversely, if the standard of care is low, the industry will be encouraged to continue imposing risks on the public.

IV. THE ABILITY OF THE CIVIL COURTS TO RESOLVE UNCERTAINTY

The court does not have the capacity to carry out its own scientific studies. It must rely on the existing evidence. Where the degree of risk from a particular activity is uncertain, the concept of causation applied by the court, the level of proof required, and who has the onus of proving a fact are crucial to the determination of who succeeds in the face of this uncertainty.^{xxxii}

One of the criticisms often levelled at the judiciary is that judges who have no scientific training cannot properly understand scientific evidence and make a correct determination. As a result, some have suggested establishing a special Science Court.^{xxxiii} This would be a special body that would adjudicate only scientifically complex issues after someone has separated the facts from social policy. The court would be run by disinterested scientist.

There are many difficulties with this proposal.^{xxxiii} One of the them is the assumption that the certainty is there, but judges are incapable of understanding scientific evidence. However, most complex technological issues break down into fairly simple, straightforward components. When counsel properly presents a case, courts are quite capable of understanding scientific issues and determining the degree of certainty.

Another criticism is that the adversarial process used by the courts obscures, rather than elucidates, scientific “truth”. This criticism ignores the striking similarities between the methodology and goals of scientists and those of the courts. Both start with a hypothesis; both test the hypothesis rigorously; both have methods of recognizing and taking into account the possibility of “false positives” and “false negatives,” and both clearly articulate the level of certainty required to verify the hypothesis. When a scientist offers a conclusion, there is no better method of exposing the areas of uncertainty and the degree of that uncertainty in his or her findings than a well-prepared cross-examination of an expert witness.

The problem, then, is not the inability of judges to determine the degree of certainty, but the question of what degree of certainty should be sufficient for success. This is the policy issue with which courts and legislatures must grapple.

As the former chairman of the Science Council of Canada has said:

Some scientists decry the pressure on Courts to make decisions in the absence of sufficient evidence. Since our political and legal systems both are based on the need

for decisions on the “best available evidence” and cannot come to a standstill while awaiting certainty, this criticism must be regarded as true but irrelevant.^{xxxiv}

Given this situation, then, the kind and amount of evidence required by the courts are crucial to determine success in the face of uncertainty. Generally, a plaintiff will not be given relief unless there is evidence that the defendant’s activity has caused or will cause some harm to the plaintiff. What is meant by “cause”, therefore, is crucial. Although philosophers write entire books on the subject of causation, the courts have given remarkably little attention to the fact that there are many different concepts of causation. The traditional rule has been that the plaintiff must prove that some act or omission by the defendant was or will be the direct and proximate (that is immediate) cause of his injury. If a series of events or actions contributes to a situation that results in pollution damage, only the most significant cause would result in liability. Any intervening causes often render the initial activity free from liability.

When the court has a number of possible causes to choose from and cannot be certain which of the causes was the primary one, it may find that the defendant has not proven causation, or it may hold that the injuries were “too remote.”

Similarly, if it is clear that the defendant’s conduct was a cause of the plaintiff’s damage, but that a number of other intervening factors aggravated the damage or caused it to occur in an unexpected or unusual way, the court, instead of using the language of causation, may rule that the damage was “unforeseeable.”

In recent years, however, a different concept of causation has commended itself to some courts. The British House of Lords has ruled that a “substantial contribution” is sufficient causation to provide a basis for liability.^{xxxv} This decision has been applied in a few Canadian cases,^{xxxvi} and appears to have been accepted by the Supreme Court of Canada, although that court rejected the reversal of the onus of proving causation espoused by Lord Wilberforce in the *Mc Gee* case.^{xxxvii} This relaxation of causation requirements has been applauded by some scholars.^{xxxviii}

In environmental cases, where the level of inherent uncertainty is very high, I would suggest that the adoption of new theories of causation may be the only way to avoid imposing substantial risks on the public.^{xxxix}

A second evidentiary issue affecting the outcome of tort cases is the onus of proof. In the light of scientific uncertainty, some commentators have suggested shifting the burden of proof that a substance is safe from the person alleging it is harmful to the person who stands to profit from it.^{xl} The shift in onus that is frequently suggested, and is incorporated into some American statutes, is that once the plaintiff has shown that a substance has been discharged and that the known effects of this substance are consistent with the harm or loss he has suffered, the onus of proving that the substance did not cause the harm shifts to the person who discharged it. Before the *Canadian Charter of Rights and Freedoms*, such reverse onus provisions were common in criminal and quasi-criminal statutes dealing with public health and welfare. Even before the *Charter*, such provisions were subject to the criticism that they eroded the principle that a person is innocent until proven

guilty.^{xli}

In the civil context, it is equally certain that many will feel that such a reversal of onus offends the principle that the burden of proof is on the person alleging a wrong. Although it is unlikely that the language of s. 11 of the *Charter* can be stretched to cover reverse onuses in civil cases, an argument will certainly be made that they offend s. 7 of the *Charter*.

The purposes of the criminal justice system and the tort system, however, are quite different. The fundamental principle of criminal law is that people are to be punished only when they are at fault. The tort system recognizes the need to allocate risks in an equitable fashion, often regardless of fault. Without some shifts in the onus, it is likely that this purpose will not be achieved in many environmental cases.^{xlii}

V CONCLUSION

The rules and procedures that the courts develop will determine to a great extent the level of risk of environmental harm that ordinary people will be exposed to. Many of the barriers to environmental litigation are court-created and can be court-destroyed. By creating more liberal standing requirements, broadening the kinds of damages that are awarded, liberally construing limitations periods, and changing the costs rules, the courts can reduce the risks to plaintiffs from litigating, and encourage people to pursue their rights. By developing doctrines that will give a greater likelihood of success in the light of scientific uncertainty, such as changes in the judicial concept of causation, recognition of reverse onuses, and creation of high standards of care, the courts can give relief to individual plaintiffs, while also safeguarding others from serious risks.

One case epitomizes the role the courts can take in protecting the public in the light of great uncertainty and potentially remote risks.^{xliii}

In 1972, a British Columbia subdivision approving officer refused to allow a developer to register a subdivision plan for residences in an area of the Rocky Mountains potentially subject to rock slides. The developer appealed this decision to the Supreme Court of British Columbia. The evidence before Justice Thomas Berger was that a rock slide could occur sometime in the next ten thousand years. A representative of the Sierra Club of British Columbia, who was given standing by Justice Berger to oppose the developer, argued that this was a substantial enough risk to prevent the development. The developer argued that in human affairs, a generation is a long enough time, and no one should be expected to order his affairs on a geological time scale. The development company offered to undertake to advise all future purchasers of the risk of a slide if the court approved the subdivision. Justice Berger said:

On a human time scale, there is a risk here. It is a risk that can be understood. It is a substantial risk. It may not be an immediate risk, yet it is there. Who is to say that the life of the subdivision would be merely one generation? [...] The evidence shows that there is a

risk—a risk that reasonable men cannot exclude—that a disaster will occur within the life of a community. The Approving Officer adopted a policy of safety first. I think he was right to do so.^{xliv}

Justice Berger upheld the decision of the approving officer. The rock slide occurred one year later.

ENDNOTES

- i. *Rylands v. Fletcher* (1866), L.R. 1 Exch. 265, affirmed (1868) L.R. 3 H.L. 330.
- ii. *The Village of Richmond Hill* [1955] O.R. 806, at 808, [1955] 4 D.L.R. 572, affirmed with variation as to damages [1956] O.R. 88, (1956) 1 D.L.R. (2d) 569 (C.A.).
- iii. [1955] O.R. 814, [1955] 4 D.L.R. 615.
- iv. *Supra* note 2 at 812 (O.R.).
- v. S.O. 1956, c. 71, s. 6.
- vi. *Ontario Water Resources Commission Act*, S.O. 1956, c. 10, repealed and substituted by the *Ontario Water Resources Commission Act*, S.O. 1957, c. 88.
- vii. For more detailed discussion of water pollution control in Ontario from the 1950's to the early 1970's, see P. Anisman, "Water Pollution Control in Ontario" (1972) 5 Ottawa L. Rev. 342, and A. W. Bryant, "An Analysis of the Ontario Water Resources Act", in P.S. Elder ed., *Environmental Management and Public Participation* Toronto: Canadian Environmental Law Research Foundation, Toronto, (1975).
- viii. *Kanatewat v. James Bay Dev. Corp.*, Que. S.C., Malouf J., 15th November 1973. Excerpts from the 171-page judgment of Mr. Justice Malouf, together with a commentary on the significance of this decision, are found in Canadian Environmental Law News, vol. III, No. 1, February 1974 at 3, *et seq.*
- ix. *Ibid.* at 18.
- x. *Levinsohn v. Greenwin Const. Co.*, small claims court, Toronto, 7th May 1976, per Chown J. Ms. Levinsohn appealed the decision and the defendant company settled the appeal by paying her full claim, and costs.
- xi. *Environmental Protection Act, 1971* (Ont.) c. 86.
- xii. The comments were made by Provincial Judge Dneiper, in the case of *R. ex rel. Perkins v. Toronto Refiners & Smelters Ltd.* In the author's experience, comments by judges, at least in Ontario, indicating a reluctance to sit on environmental cases are not uncommon. Perhaps this reflects their unfamiliarity with environmental statutes and issues, and their trepidation about treading on unfamiliar ground, rather than any lack of environmental concern.
- xiii. From a letter to the editor, New York Times, reprinted in Goodwin's Magazine, Fall 1983.
- xiv. A. Jay, *The Householder's Guide to Community Defence Against Bureaucratic Aggression* (1972).
- xv. *Re Royal Comm. on Conduct of Waste Mgmt. Inc.* (1977), 17 O.R. (2d) 207, 4 C.P.C. 166, 80 D.L.R. (3d) 76 (Div. Ct.).
- xvi. Report of the Royal Commission appointed to inquire into Waste Management Inc., etc., the Hon. S.H.S. Hughes, 30th March 1978 at 3.
- xvii. The Maple Group did not join in the judicial review application. Even though their own counsels were acting pro bono, they were afraid of the prospect of costs being awarded against them should they lose this application. The municipal counsel of the town of Stouffville, on the other hand, had promised to indemnify the Stouffville ratepayers against an award of costs. See text, *infra*, regarding the dampening effect of the fear of the party-

- and-party costs awards on public interest litigation.
- xviii. *Supra* note 11.
- xix. *Supra* note 16 at 101.
- xx. A special investigations unit of trained investigators was established within the Ontario Ministry of the Environment in 1981. In 1985 this unit was expanded into a branch of 63 people, which has now grown to over 100 investigators and support staff. A Uniform Enforcement Policy was promulgated in 1986, indicating the increased importance of strict enforcement, and prosecution in particular.
- xxi. *Canadian Wildlife Federation Inc. v. Canada (Ministry of Environment)*, [1989] 3 F.C. 309, [1989] 4 W.W.R. 526, 3 C.E.L.R. (N.S.) 287, 37 Admin. L.R. 39, 26 F.T.R. 245, affirmed [1990] 2 W.W.R. 69, 4 C.E.L.R. (N.S.) 1, 38 Admin. L.R. 138, 99 N.R. 72 (C.A.). See *Friends of the Oldman River Soc. v. Alberta (Ministry of Environment)* (1987), 2 C.E.L.R. (N.S.) 234, 56 Alta. L.R. (2d) 368, 85 A.R. 321 (Q.B.), [1992] 2 W.W.R. 192, 7 C.E.L.R. (N.S.) 1 (S.C.C.). For caselaw involving the province of Saskatchewan regarding Rafferty-Alameda project see *Assn. of Stop Const. of Rafferty Alameda Project Inc. v. Saskatchewan (Ministry of Environment & Public Safety)* (1988), 3 C.E.L.R. (N.S.) 236, 68 Sask. R. 52 (Q.B.).
- xxii. *Supra* note 1.
- xxiii. *Sevidal v. Chopra* (1987), 64 O.R. (2d) 169, 45 R.P.R. 79, 41 C.C.L.T. 179, 2 C.E.L.R. (N.S.) 173 (H.C.); *CRF Hldg. Ltd. v. Fundy Chem. Int. Ltd.*, [1982] 2 W.W.R. 385, leave to appeal to S.C.C. refused 33 B.C.L.R. 200, 19 C.C.L.T. 263, 42 N.R. 358 (sub nom. *Smerchanski v. C.R.F. Hldg. Ltd.*); *Heighington v. Ont.*, (1987), 60 O.R.(2d) 641, 41 C.C.L.T. 230, 2 C.E.L.R. (N.S.) 93, 41 D.L.R. (4th) 208 (H.C.).
- xxiv. Report of the Task Force on Legal Aid, Pt. I, November 1974, Ontario Ministry of the Attorney General at 99-100.
- xxv. Rules of Civil Procedure, O. Reg. 560-84, R. 49 (am. O. Reg. 221/86).
- xxvi. Personal communication, David Estrin, counsel for Mr. Muirhead. The decision is reported as *Muirhead v. Timber Bros. Sand & Gravel Ltd.* (1977), 3 C.C.L.T. 1 (Ont. H.C.).
- xxvii.. *Michigan Environmental Protection Act*, s. 2a. If the court has reasonable ground to doubt the solvency of the plaintiff or the plaintiff's ability to pay any costs or judgment which might be rendered against him in an action brought under the *Act*, the court may order the plaintiff to post a surety bond or cash not to exceed \$500.
- xxviii. S.O. 1984, c. 11.
- xxix. Swaigen, *Costs, Undertakings and Public Interest Cases* (1978), *Brief to the Civil Procedure Revision Committee* prepared on behalf of the Canadian Environmental Law Research Foundation.
- xxx. Ontario Law Reform Commission, *Report on the Law of Standing*, Toronto, 1989.
- xxxi. Some courts do have the power to appoint experts to assist, but this power is rarely used. Where the parties have skilled counsel, and present qualified experts who disagree, it is questionable whether an additional expert of the court's choosing can resolve the differences.
- xxxii. A. Kantrowitz, *Congressional Record* 113 (1967) at 15, 256.

- xxxiii. *The Science Court Experiment: An Interim Report*, Science 193 (1976) at 653.
- xxxiv. S. Smith, "Science in the Courtroom - The Value of an Adversary System" (1988), *Alternatives*, vol. 15, No. 2 at 18, 20.
- xxxv. *McGhee v. National Coal Board*, [1973] 1 W.L.R. 1, [1972] 3 All E.R. 1008 (H.L.); *Willsher v. Essex Area Health Authority*, [1988] 2 W.L.R. 557 (H.L.).
- xxxvi. See, for example, *Nowasco Well Service Ltd. v. Canadian Propane Gas & Oil Ltd.* (1981), 16 C.C.L.T. 23, 122 D.L.R. (3d) 228, 7 Sask. R. 291 (C.A.); *Powell v. Guttman*, [1978] 5 W.W.R. 228, 6 C.C.L.T. 183, 2 L. Med. Q. 279, 89 D.L.R. (3d) 180 (Man. C.A.); *Gallant v. Fialkov* (1989), 69 O.R. (2d) 297, 50 C.C.L.T. 159 (H.C.).
- xxxvii. *Snell v. Farrell* (1990), 110 N.R. 200 (S.C.C.).
- xxxviii. According to Linden, "This new principle seems to be gaining support in this country. It certainly has much to commend it": A.M. Linden, *Canadian Tort Law*, 3rd ed., (Toronto: Butterworths, 1982).
- xxxix. For further discussion, see J.G. Fleming, "Probabilistic Causation in Tort Law" (1989) 68 *Can. Bar Rev.* 663.
- xl. Krier, "Environmental Litigation and the Burden of Proof," in M. Baldwin and J. Page eds., *Law and the Environment* (1970) at 105. See also Henkes and Henkes, "An Environmental Bill of Rights: The Citizens Suit and the National Environmental Policy Act of 1969" 24 *Rutgers L. Rev.* 265-68; J. Sax, *Defending the Environment* (1971) at 136-57.
- xli. See, for example, MacKenna, "The Compellability of the Accused and Reverse Onus Statutes," in W. S. Tarnopolsky ed., *Some Civil Liberties Issues of the seventies* Toronto: Osgoode Hall Law School, 1975; Levy, "Reverse onus clauses in Canadian Criminal Law - An Overview" (1970) 35 *Sask. L. Rev.* 40.
- xlii. See, for example, *Nowasco*, *supra* note 33. In that case, the defendant, a propane supply company, sent one of its supply trucks, complete with a 3,500-gallon tank, to the plaintiff's garage for repairs to its exhaust system. After the truck arrived, an explosion demolished much of the garage. The plaintiffs sued, alleging negligence because the truck had not been properly drained of liquid propane and liquid gas, and its gas tank had not complied with a regulation under the *Boiler and Pressure Vessels Act, R.S.O., C. B. 10*. The plaintiffs contended that the propane gas must have escaped from the tanks and must have been ignited by the overhead heating system in the building. Although the court could find no direct evidence of this, the Saskatchewan Court of Appeal shifted the onus to prove a lack of negligence to the defendant. The court held that in cases where a breach of a duty of care has been found against a defendant, such as the violation of statutory regulations, if that breach has materially increased the risk to the plaintiff, and the plaintiff has fallen foul of something consistent with that risk, the onus of proving non-negligence should be shifted to the defendant. Such a shift should only be effected, however, when the increased risk is of a kind that is "more likely than not" to threaten harm.
- xliii. *Re Cleveland Holdings Ltd.*, B.C.S.C., Berger J., 23rd August 1973, *Canadian Environmental Law News*, vol. II, No. 5, October 1973 at 114.
- xliv. *Ibid.* at 116.