

# Unknown Causes, Unknown Risks

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Canadians are living longer than ever. Increased longevity has been attributed to declines in mortality rates for most leading causes of death, such as cancer and heart disease (Statistics Canada 1999b). Not only are deaths from diseases declining but fewer people are dying from plane accidents, car crashes, or even by their own hand. Most likely because of these cheery statistics, Canadians believe that a risk-free lifestyle is attainable (Health Canada 1993). At the same time, however, Canadians are bombarded with news stories that link pesticides, nuclear power, and even electro-magnetic impulses to cancer. These headlines and stories make any death, any cancer diagnosis, appear an aberration and starkly contrast the desire for a risk-free life to a life that is desperately trying to avoid unknown, dangerous risks from everyday events.

A sampling of some headlines from across the country, in print, on television and on the web, illustrate the media's focus on risks outside our control. On July 29, 1999, the *Globe and Mail* reported, PESTICIDES AT ROOT OF CANCER, VICTIM SAYS. On June 20, 1999, columnist Michele Landsberg's headline in the *Toronto Star* encouraged LET'S ACT NOW TO CURTAIL CANCER EPIDEMIC. A few months earlier on May 22, 1999, the same paper printed this sensational headline: STUDY SUGGESTS LINK BETWEEN CELLULAR PHONE USE, CANCER. And, a year earlier

on September 21, 1998, the *Toronto Star* reported: FEAR OF CANCEROUS CELL PHONES AND MURDEROUS MICROWAVES IS FUELING A WORLDWIDE EPIDEMIC OF LAWSUITS. Similarly, on March 23, 1993, the *Winnipeg Free Press* gave this headline: DIALING FOR DISASTER? Alison MacGregor's article on cell-phones in March, 1999 was printed in several Southam newspapers across the country with the headline: GROUP WANTS FEDS TO USE CELLULAR-PHONE WARNINGS: SOME EVIDENCE SAYS FREQUENT USERS MAY HAVE INCREASED HEALTH RISKS. The *National Post* on January 16, 1999, warned, HOTLINE TO AN EARLY GRAVE: GET OFF YOUR CELL-PHONES! EVIDENCE SUGGESTS THEY ARE A DANGER TO YOUR HEALTH. The most provocative headlines came from the Canadian Broadcasting Corporation's web site, funded by taxpayers: BREAST CANCER EXPERTS TARGET POLLUTION, STUDY CONFIRMS LINK BETWEEN PCBS AND BREAST CANCER, RESEARCHERS FIND RISE IN RADIATION IN CHILDREN'S TEETH.

Just as people are living longer, the environment is getting cleaner (see, for example, Hayward and Jones 1999). However, it would be difficult for people to know this if they relied on the media for their main diet of information. But, that is exactly where the majority of Canadians receive their information about health issues and risk. About half of the 1500 respondents in a survey by Health Canada said they receive "a lot" of information on risk from the media and about 35 percent said they receive a "fair" amount. Physicians, the next most popular source, give only about a quarter of respondents "a lot" of information (Health Canada 1993). Media reports are extremely influential. One study found that "media coverage of a toxic exposure may lead people to report symptoms, even though their actual exposure was very slight" (Lees-Haley and Brown 1992).

The National Media Archive (NMA) conducted several media studies on risk, which show how the media portray risk to the public. In all cases, the NMA found that the media overemphasize minute risks about which little can be done and ignore those that their readers can do something about. Much of this phenomena can be explained by examining the way in which journalists come to think about a story as newsworthy. For a story to make the news, it should have one or more of the following components: simplification, dramatization, personalization, themes and continuity, consonance, and the unexpected (Ericson, Baranek and Chan 1987: 140-49).

Most stories on risk fill many, if not all, of these criteria. Take, for example, this headline from *CBC Online*: RESEARCHERS FIND RISE IN RADIATION IN CHILDREN'S TEETH. The headline itself meets four of the six criteria for newsworthiness. What could be more simplistic than the link between children's teeth and radiation? There is considerable drama in the statement. Whenever children are evoked in a news story, it

becomes a personal story. Clearly the public did not expect to find radiation in children's teeth, fulfilling the unexpected component.

While stories on risk make good headlines for journalists, those who promote these stories manipulate journalists into committing several errors of omission or commission. The criteria for newsworthiness tends to blind journalists to the bigger picture and consequently they misinform their audiences and perpetuate myths and misunderstanding. There are generally five errors that journalists fall into when they pursue this type of reporting.

- (1) *Mistaken emphasis on unavoidable risk* Here the media overemphasize things that we have no control over or they report on the bizarre story while ignoring common place occurrences.
- (2) *Unanimity alleged* When there is a suspected causal agent that is dramatic or adheres to a conspiratorial conclusion, journalists fail to represent the information as such. Dissension from the original premise or any mention of disagreement among experts is downplayed.
- (3) *Use of dubious sources* In order to achieve unanimity in these stories requires two things: avoiding reputable scientific sources and elevating interest groups.
- (4) *Calls for increased government involvement* Having declared a crisis using extremist sources and reporting unanimity, the agenda moves towards calls for increased government involvement to solve the problem.
- (5) *Contrary evidence is ignored or downplayed* Considering the way in which journalists give little room for alternative explanations, it is not surprising that when evidence comes in to refute the original assumptions that new evidence is either ignored completely or downplayed in subsequent reports.

The remainder of this chapter gives examples and instances of these errors in the media's coverage of risk.

### **Mistaken emphasis on unavoidable risk**

News tends to emphasize bizarre or unusual occurrences over the mundane. Journalists often defend their reporting practices by saying that the news consists of the unusual; otherwise, it would not be news. However, it is this quest for the unusual that distorts the public's sense of real risk. One example of how the news media emphasize unavoidable though small or negligible risk at the expense of mundane but real risk is found in its coverage of cancer.

Cancer is the term for a process of abnormal cell division that spreads throughout the body, invading and destroying normal tissue. While scientists do not understand why this process occurs, decades of research have determined the principal causes of cancer. Dr. Robert Scheuplein, head of the United States Food and Drug Administration's Office of Toxicology, states: "There are essentially three causes of cancer—to the extent that they can be separated . . . tobacco or cigarettes would account for one-third of all cancers; diet would be one-third; and everything else would be the other third" (Scheuplein 1991: 30–33).

This too, is a simplification of the factors that have been linked to cancer but is useful for analytical purposes. In our analysis of television's coverage of cancer in 1993, the NMA found that the risks associated with diet and smoking were practically ignored by the national television networks. Instead, the Canadian Broadcasting Corporation (CBC) and CTV Television (CTV) focused on the environmental causes of cancer. In 1993, two-thirds of coverage by CBC and over one-half of coverage by CTV of cancer focused on environmental factors (Morrison 1993: 2).

The environmental factors being blamed for cancer were pesticides, man-made chemicals, man-made radiation, asbestos, general pollution, ozone depletion as a result of CFCs and magnetic fields—all by-products of the modern industrial world. In contrast, in a widely-cited paper, Oxford researchers R. Doll and R. Peto found that the best estimate for pollution and industrial products as a cause of cancer deaths was less than 3 percent (Doll and Peto 1981).

The Alberta Cancer Board agreed with this analysis. In its book on the subject, in a chapter entitled *Can Cancer Deaths Be Avoided?* the Board stated: "There is no current evidence to suggest that environmental factors play a major role in cancer causation" (Birdsell et al. 1990: 48). Yet, with the greatest portion of television coverage focusing on the environment as a cause of cancer, the public is being led to believe that these factors pose a serious health risk. More important, these reports on risk of environmental causes of cancer occurred at the same time pollution levels and uses of pesticides were on the decline (Hayward and Jones 1999).

Television reports consistently ignored the causes of cancer that were within the control of the individual. Diet, alcohol, tobacco, and sun tanning were given only 15 percent of total attention to the causes of cancer by CBC and only 25 percent, by CTV (Morrison 1993: 3). It is estimated that these factors cause almost three-quarters of cancer deaths.

Bruce Ames, a professor of biochemistry and molecular biology at the University of California, is concerned that there is "a public mis-

conception that pollution is a significant contributor to cancer and that cancer rates are soaring” He points out: “Cancer is fundamentally a degenerative disease of old age, although external factors can increase cancer rates (cigarette smoking) or decrease them (fruits and vegetables)” (Ames 1993b: 38).

The fact that Canadians believe that the causes of cancer are beyond the control of the individual supports Dr. Ames’ belief. Instead of focusing on decisions about one’s lifestyle that can significantly reduce one’s risk of getting cancer, Canadian television networks focused on the environmental causes of cancer, which pose a relatively small risk but are not within the control of the individual. This attention to the causes of cancer may have been a factor in the finding that Canadians think that cancer is “a powerful disease with a mysterious course of its own, controlled by fate and not by its victim” (Morrison 1993: 3).

Ozone depletion was the cause of cancer most often cited by the national television networks. Twenty-five percent of the CBC’s attention to the environmental causes of cancer, and over 40 percent of CTV’s attention, focused on ozone depletion (Morrison 1993: 4). A similar trend is shown by the attention given on television to the type of cancer. Forty-seven percent of the CBC’s attention to the various cancer sites, and 44 percent of CTV’s attention, focused on skin cancer (Morrison 1993: 6).

The risks posed by excessive exposure to sunlight and ozone depletion are, in fact, relatively small. While sun-tanning is the cause of approximately one-quarter of cancer incidence, the vast majority of these cases are curable. Only one form of skin cancer, melanoma, is considered deadly and, as melanoma is relatively rare, skin cancer accounts for only 1 percent of cancer deaths (Roach 1992: 42). This fact was not mentioned, however, by either CBC or CTV. For example, on the March 30, 1992, CTV News reporter Michael O’Byrne stated: “Melanoma is the deadliest form of skin cancer and Dr. Abarca predicts he’ll treat a massive outbreak in the next few years.” Following this statement, Dr. Bedric Magas who studies ozone predicted a 20 percent to 40 percent increase in the incidence over the next ten years.

Similar alarmist reports were given on CBC. On the July 21, 1992, *Journal* by Dr. Robin Marks said:

There’s no doubt in my mind that in order to get a sun tan, is enough sunlight to lead to the epidemic of skin cancer that we’re seeing in Australia, you’re seeing in Canada, they’re seeing in the United States, Britain, Europe, South America, throughout the western world. Melanoma is rising at a rate that no other cancer is rising. It’s becoming the cancer of the late twentieth century.

On the April 4, 1991, on *The National*, CBC reporter Eve Savory reported that there had been a “1,250 percent increase in the most lethal skin cancer, melanoma” over the past 55 years. Following this statement, environmentalist Robert Hornung stated: “Every one percent decline in the ozone layer leads to a three-to-four percent increase in the rate of skin cancer. And in Canada we’re already near an epidemic level of skin cancers.” However, according to Mary Roach, an editor of *Health* magazine, “there’s more to the story than ozone. This is especially true of melanoma. Melanoma risk is a complicated conspiracy of genes and moles and childhood sunburns. The hole in the sky plays a role but not the lead” (Roach 1992: 42).

Just as the ozone layer was linked to the increase in skin cancer, television linked pesticides to cancer. The CBC focused over 20 percent of its attention to the environmental causes of cancer upon pesticides. In contrast, on CTV, pesticides accounted for only 7 percent of the coverage (Morrison 1993: 8). Yet Doll and Peto estimate that pesticides in pollution causes only 2 percent of all cancer deaths Doll and Peto 1981).

One difference between the networks is the manner in which these studies were reported. Of the coverage devoted to pesticides, more than 60 percent of CBC’s statements presented these substances as a definite cause of cancer. In contrast, on CTV less than 10 percent of the statements linked pesticides with cancer in a definitive manner. Instead, the vast majority of CTV’s coverage stated that pesticides were a suspected cause of cancer (Morrison 1993: 8)

The significance of these findings is even more apparent when one considers how substances are determined to be carcinogenic. Most product testing is conducted on laboratory rats. Using a process called maximum tolerated dose (MTD) researchers determine the level of a chemical that will kill the animal and then give it a little less than that every day. According to Dr. Ames: “Animal cancer tests are being misinterpreted to mean that low doses of synthetic chemicals and industrial pollutants are relevant to human cancers . . . testing at the MTD frequently can cause chronic cell killing and consequent cell replacement, a risk factor for cancer that can be limited to high doses” (Ames 1993a).

One of the reasons that pesticides received more attention on CBC than on CTV is that an entire edition of *The Journal* was dedicated to the issue (Morrison 1993: 8). On May 2, 1989 Barbara Frum asked a panel of experts whether consumers should be concerned about the fresh produce being sold in Canada. While the other two panelists agreed that Canadians had no cause to be worried, environmentalist Julia Langer, Executive Director of Friends of the Earth replied:

Well, frankly, Barbara, I don't think we know enough about the kinds of chemicals that are on the food, what the effects are on ourselves and on the environment to really be able to say with confidence that the food is safe . . . There are carcinogenic substances in the food—and no safe level of those is conceivable—so I think it's a bit presumptuous to be taking the approach that it's all safe.

According to Dr. Ames, however: "Approximately half of all chemicals—whether natural or synthetic—that have been tested in standard animal cancer tests have turned out to be carcinogenic" (Ames 1993a). Further, Ronald Hart of the National Center for Toxicological Research has pointed out that the cancerous tumors found in rodents are likely unrelated to the carcinogen that is being tested.

We feed rodents "all-you-can-eat" buffets every day, yet we know that calorie intake is the single greatest contributing cause of cancer. In fact, we found that you can modify the cancer-causing impact of one of the most potent carcinogens from 90 percent down to less than 3 percent, just by cutting calorie intake 20 percent. (Brookes 1990: 161–70)

In the same edition of the *Journal*, Ms. Langer called for complete withdrawal of pesticide use. She stated: "These are chemicals which are put deliberately into the environment, which have health effects, environmental effects, effects on wildlife, and—if we can grow fruits and vegetables, and we can, without pesticides—then we should, for public health and for environmental health."

In contrast, Dr. Ames believes "all this business of organic food is nonsense basically. We should be eating more fruits and vegetables, so the main way to do that is to make them cheaper. Anything that may make fruits and vegetables more expensive may increase cancer." However, this view was never presented in national television reports.

The media's overemphasis on environmental cancer is not an isolated reporting practice. In a study by the NMA on transportation, we found that high-risk but rare accidents dominated headlines while mundane but relatively frequent car accidents were underplayed (Torrance 1998). Accidents account for a significant proportion of media coverage—around 4 percent to 5 percent of the national news on CTV and CBC, more than coverage of health and disease (Miljan 1998). Yet health and disease far out-pace accidents as a cause of death. Of all deaths reported in Canada in 1996, only 6 percent were external causes (Torrance 1998). This includes all accidental deaths, as well as suicides, murders and unknown causes.

Most transport accidents involve motor vehicles. Of the 3,488 people who died in transport-related accidents in Canada in 1996, 89 percent were killed in automobile collisions. Water-transport accidents accounted for 4 percent of transport-related deaths; air accidents, 2 percent; and railway accidents, one percent (Statistics Canada 1999a).

The world according to national television news is rather different. On CBC and CTV in 1997, motor-vehicle accidents accounted for less than half of collision reports (49 percent). Air accidents were greatly over-represented as they were the subject of 35 percent of accident stories. Railway and water-transport accidents were also overemphasized, accounting for 11 percent and 5 percent of accident reports respectively (Torrance 1998). Motor vehicle accidents only received as much coverage as they did because of stories involving celebrities; the death of HRH Diana, Princess of Wales, in a car accident was one of the most reported events of the year (Miljan 1998: 8).

### **Unanimity alleged**

Just as the media emphasize the unusual or dramatic they too misrepresent the degree of scientific acceptance. In our study of environmental causes of cancer (Morrison 1993), not only did television news overstate the link between ozone depletion and melanoma but it consistently blamed chlorofluorocarbons (CFCs) for the reduction in the ozone layer without acknowledging that scientists are still debating the issue. For example, on the April 5, 1992 edition of *The Journal* Barbara Frum stated: "The depletion of the ozone layer is something scientists have been wrestling with for years. They know chemicals like CFCs . . . eat away at the layer once they're released into the atmosphere."

However, neither CBC nor CTV reported that ozone readings have always experienced great fluctuations. James Hogan, a writer for *Omni* magazine points out:

The ominous term "ozone hole" was coined by a media machine well rehearsed in environmental politics and anything the scientific community had to say has been drowned out. Missing from the press and TV accounts, for instance, is that an unexpectedly low value in the Antarctic winter-spring ozone level was reported by the British scientist Gordon Dobson in 1956—when CFCs were barely in use. (Hogan 1993: 34)

Some scientists go so far as to say that there is no relationship between the depletion of the ozone layer and the increased incidence of skin cancer. According to Martin Weinstock of the Rhode Island Moles and Melanoma Unit, "What's been happening with melanoma rates is in no



way related to ozone . . . It's the emphasis on having a tan." John Hastings of the American Cancer Society points out: "Skin cancer rates have been climbing ever since French designer Coco Chanel came back from a cruise sporting a tan in the 1920s and sent everyone scrambling for a place in the sun" (Roach 1992: 42).

While sunlight is the primary cause of skin cancer, the television reports have downplayed this cause. On CBC, statements linking ozone depletion with cancer were twice as frequent as statements that simply focused on sunlight. On CTV, ozone depletion received four times more coverage than sunlight (Morrison 1993). Although both networks focused on the increased incidence of melanoma, neither CBC nor CTV reported the good news that the odds of being alive five years after being diagnosed with melanoma had increased significantly. In the early 1970s, the five year survival rate for melanoma was 65 percent for men and 85 percent for women. By the early 1980s, this probability had increased to 82 percent for men, and 88 percent for women. One's risk of either developing or dying from melanoma is relatively small (Morrison 1993).

### **Use of dubious sources**

One reason why the media has failed to provide simple, factual information regarding risk is that, in setting their news agenda, they have acquiesced to the environmental lobby. Journalists have elevated to an honoured status activists who have taken up breast cancer as their cause. Journalists applaud their rejection of the medical community and traditional care. A report posted on *CBC Online* on July 31, 1999 told of the lengths to which the activists went to get their message across. "These women are also trying to shake up what they refer to as the 'cancer establishment'—governments, drug companies and the research bodies that decide where cancer money will be spent. To do that, they challenge the status quo and they provoke controversy. They've certainly done that during this conference." Later in the story it was revealed that the headlines had some effect on the direction of the Canadian Cancer Society; the effect was "certainly not revolutionary change, but those comments are enough to make conference organizers feel they've done their job. They've said over and over that they just want to put the concerns of women on the agenda. It seems they have—at least for this week. But what about next week and beyond?"

On July 29, 1999, Sasa Petricic, in a CBC television story about the conference on *The National*, contrasted the conventional medical opinion with fear from a cancer victims: "For years Canadian women have been told how to avoid the ravages of breast cancer, what to do—like having regular X-rays—what not to do—like smoking—and what to

watch for—like a family history of the disease. And yet for more than half of Canadian women with breast cancer like Carol Dunn none of these factors apply.” Carol Dunn, a cancer victim then presented her views on cancer, “It must still be something in the air, in the atmosphere, something that I can’t control, and that’s what I think scares most people with cancer.” Petricic then introduced a study presented at the conference that he said, “seems to back up some of Dunn’s unease of widespread chemical use.” The study found that there was a higher risk of breast cancer when there were higher concentrations of PCBs. However, the study could not link pesticides to breast cancer. Petricic, referred to other studies that examined pesticides as well as PCBs, which found PDBs in the food chain but no evidence of pesticides. However, following researcher Kristan Aronson stating “We found increased risk of breast cancer associated with three specific PCBs,” the Sierra Club’s Elizabeth May was presented on camera to denounce all use of pesticides: “Pesticides should not be considered innocent until proven guilty. We should be sure that they don’t pose a risk to public health before they are in use.” The resulting picture of breast cancer and pesticides was confusing, contradictory, and scary but had nothing to do with the new study introduced at the cancer conference. In this instance, the journalist used scientific opinion to provide some of the information about breast cancer concerns but went to an environmentalist to provide the solution. All of this was buttressed by the image of a cancer victim fearful of the air and atmosphere around her. Nowhere in the story was age, diet, or other common factors associated with breast cancer discussed.

A similar trend occurred in the reports suggesting a connection between brain cancer and the use of cellular telephones. Stories were initiated by the news of a Florida man who wanted to sue the cellular-telephone industry for the wrongful death of his wife. He claimed that his wife developed brain cancer as a result of excessive use of her cellular telephone. To back up the claims, journalists used medical sources that said that there might be a chance of the antenna of a cellular telephone heating up brain cells, which, in turn, might cause cancer. Dr. Stephen Cleary conducted experiments on rats using wattage that far exceeded the amounts used in cell phones. His conclusion was that cancer cells were accelerated and he argued that more study was needed. In an article of March 23, 1993 in the *Winnipeg Free Press* he was quoted as saying “I don’t think cellular phones cause cancer but, if the results at cellular phone frequencies and wattages are consistent, there is a possibility they could promote brain cancer.”

Thirty-eight percent of the comments on cell phones and brain cancer sided with the claimants that there was a link. Added to that

were the pointed demands that because cell-phone companies could not prove their product was safe that it must be treated with caution.

In the case of the scare over a link between cellular telephones and cancer, opinions coming from the anti-cell-phone groups, victims' families, and technology writers were given considerable credibility. These groups and individuals spoke in conspiratorial terms saying that the cellular telephone companies were waging a public-relations campaign similar to that of the tobacco industry. David Reynard, who launched the lawsuit against the cellular-telephone industry, remarked: "Are they carrying the how-to tobacco handbook in their back pocket? Yeah. It's almost directly in line with the tobacco industry and all the things that they did to try to keep information from the public, to try to suppress science, to try to only allow us to have the information that they want us to have" (Malarek 1999). Any statements by representatives of cellular telephone companies that studies could not show a link between brain tumours and the use of cellular telephones were treated with suspicion. In this story, aired on February 9, 1999 on the CBC's *Fifth Estate*, Victor Malarek remarked,

Were the concerns raised by the Reynard lawsuit a real danger or a false alarm? The truth was no one knew for sure. The industry had been telling the public that cell phones were proven to be safe, but then had to admit that the science was at best incomplete. The cell phone industry needed to find a way to reassure their customers everything was fine, so they came up with a strategy that would be a textbook case for crisis management.

### **Calls for increased government involvement**

Lacking evidence of the true nature of the risk or even the conventional scientific evidence of the cause of the problem, the news media quickly prescribes quick-fix solutions, such as government regulation. What is ironic about these prescriptions is that the news media often blames the problem on faulty government regulation or the government's not enforcing existing codes. In the case of environmental causes of cancer, either government was blamed for inadequate regulations or industry was blamed as the principal pollutant. Similarly a 1988 study on the environment identified ineffective governments who did not enforce existing legislation and big corporations only concerned with big profits as the cause of environmental damage (see Miljan 1989: 5). CBC blamed governments in 35 percent, and corporations in 36 percent, of the coverage of the causes.

The government was criticized for a number of reasons, one of which was not adequately enforcing existing legislation. For example,

the government was held responsible for the entry into Canada of toxic chemicals hidden in gas and oil. Their inability to stop the practice was outlined by Paul Griffin in a report on May 10, 1989 on the *Journal*: “Government officials say they’ve known about the scam for several months but their spot checks seem fruitless. There’s simply too much tanker traffic crossing the border for inspectors to handle.”

Consistent with blaming government and corporations for environmental problems, 61 percent of the solutions to environmental problems offered by CBC, and 60 percent of those offered by CTV, called for increased government control via legislation and clean-up. At the same time, stories on companies cleaning up without government interference were reported but were accompanied by criticisms of past performance and dubious of efforts to improve. One comment from Linda Sims’ report on July 24, 1988 on CBC’s *Venture* is illustrative: “Once waste becomes a business issue, business solutions emerge . . . Many companies may not want to shoulder more of the burden of garbage but they may not have a choice very much longer.”

Another story on CBC’s *The National* seemed to have difficulty showing a business as the antagonist and as a result provided a negative spin to the story. Peter Mansbridge introduced a story on February 27, 1989 on the greenhouse effect with: “The greenhouse effect—the gradual warming of the earth’s atmosphere—is an international cause for concern and one US company thought it should make a contribution to help . . . It’s all because a company with the potential to be part of the problem wanted to be part of the solution.”

Sheryl Sturges, a company spokesperson, identified why, on their own initiative, the corporation decided to spend thousands of dollars to negate their contribution to global warming: “We decided that the most effective way for AES to deal with our particular part of the problem was to plant trees.” In assessing this effort, Eve Savory concluded the story by saying: “Trees are not the answer to global warming but they could buy time until the political and scientific problem of cutting emissions and developing alternative energy sources can be solved.”

Corporate solutions were also met with distrust. Claude Adams, in a story published on February 19, 1989 reported that Britain’s privatization efforts would have a negative effect on the environment: “Critics say private companies would have to make a profit and, for something as important as water, that could be dangerous.” He then provided a clip from Andrew Lewis, a spokesperson for Friends of the Earth: “There’s no profit in pollution prevention. There’s little profit, little prospect of profit in environmental protection but there’s every incentive to cut corners, to dodge the regulations.”

The calls for increased regulation on the basis of small or indeterminate risk are not unique to environmental issues. In our study on transportation accidents (Torrance 1998), we found that both CTV and CBC reported the Ontario government's introduction of legislation to deal with flying truck wheels. Commercial truck drivers or fleet owners would pay from \$2,000 to \$50,000 if their trucks lost a wheel, regardless of the reason. "Flying truck wheels have been a horrifying and all-too-familiar sight lately on Canada's roads and highways," Lloyd Robertson began his report of February 21, 1997 on *CTV News*. The network noted that four people had been killed due to flying truck wheels in Ontario since 1995. Reporter George Wolff began with an account of an accident two months before, in which two people died after a flying tire hit their car. He then detailed the Ontario bill, the "toughest law in Canada," and provided comments from politicians calling for a federal truck-safety program.

The report was favourable to the new regulation, with interviews from politicians and a friend and relative of the accident victims. The only voice presented in opposition was that of the federal transport minister, who said the problem was a provincial responsibility and the provinces should ensure trucks meet existing standards. No one from the industry was quoted. The reporter concluded: "It's a danger that only tough laws can control and already tonight the Ontario Trucking Association was warning that [Minister Al] Palladini's new law could run head on into a constitutional challenge."

CBC, in its report the same day on *The National* saw the problem in a similar way: "an all-too-common sight on the highways around Toronto." The network granted more time to opposition voices than did CTV, however. A spokesman for the Ontario Trucking Association argued: "It's often not the truckers' fault themselves—maybe a third-party tire service company or whoever's doing work on the wheel is just as much at fault." An anonymous trucker voiced concern that the fines would put companies out of business. "Don't tell that to the family of Angela Worona," reporter Jeffrey Kofman responded. He recounted a fatal accident caused by a flying wheel two year before, which was used to dismiss the industry's concerns. The victim's sister called for the government to take away licenses. The story concluded with the Ontario government's suggestion of national standards and, in contrast to CTV, CBC reported that a spokesman for the federal transport minister agreed and called for continent-wide regulations.

National news networks apparently believe that flying truck wheels are a major problem that only government can fix. This, after CTV itself observed that only 4 people had died in Ontario in such accidents in two

years. In 1995, trucks 5 tons or over accounted for 162 fatal accidents in all of Canada (Statistics Canada 1999a), not all of which, of course, involved flying wheels, that “all-too-familiar” sight.

Rarely does the media shy away from promoting regulation, even in the midst of freak accidents. On July 12, 1997, two small Quebec children were killed when a personal watercraft (more commonly known as a “jetski”) collided with their inflatable boat. CTV’s first report on the accident (*CTV News*, July 13, 1997), the next day, focused on safety concerns, quoting two sources. A marina operator said that almost anyone can rent a jetski and an owner defended himself against the charge of noise, claiming boats are just as noisy. Reporter Scott Laurie then concluded, “the accident might intensify demands for stricter regulations and licensing of jetski riders to control something that’s made for fun but has caused so much grief.” There was no mention of what caused the accident or how regulation could have prevented it and no sources other than the reporter made any arguments for regulation.

CTV network ran another report on *CTV News* on July 19, 1997 after the children’s funeral. Reporter Cindy Sherwin translated a mourner’s brief comments and a policeman was quoted discussing how to determine the speed of the crafts. No mention of regulation was made by any source but the reporter ended the story by saying: “[police] findings will likely lead to a municipal law controlling the speed of *Jetskis*. However, many here hope the federal government will pass broader legislation regulating the age and experience of the drivers as well.”

The CBC also promoted regulation in a July 14 report on the accident on *The National*. Reporter Mark Kelley interviewed a boater who said simply that accidents should be prevented. As to how that should be done, the head of the federal Boating Law Task Force declared that “the sentiment of opinion was there should be mandatory training for everyone who operates a recreational boat in Canada.” A spokesman for Bombardier, which makes *Sea-Doos*, (a brand of jetski), pointed out that his company gives a training video to its customers. “But critics say the federal government, not the boating industry, should be setting the rules and regulations,” the reporter stated, quoting the Quebec transport minister. The story ended with the suggestion that the accident would result in the end of the jetski craze: “Even the [rental shop] owner says he doesn’t think they’re so much fun any more.”

There were only 12 fatalities related to personal watercraft in 1997. In 1995, there were only four. Still, the government responded to media calls for regulation. In 1998 the federal government ruled that those under the age of 16 could not operate personal watercraft and, after April 1, 2002, craft operators must meet mandatory training requirements (Torrance 1998).

It seems that whenever there is an aircraft disaster, the stock response from journalists is to call for greater regulation. For example, *CTV News* examined safety concerns after Air Canada flight 646 crashed in Fredericton, New Brunswick on December 16, 1997 causing injuries but no fatalities. Though the cause of the crash was still unknown, Lloyd Robertson stated: "Critics say Liberal government cutbacks are putting the travelling public at risk—cuts like the ones that left Fredericton airport without an air traffic controller." No mention was made of how the crash related to an unmanned control tower. Still, the crash is evidence, insisted Harry Gow, a spokesman for the lobby group Transport 2000, that "the air traffic safety system in Canada is coming apart at the seams" and a spokesman for the Aircraft Operators Group agreed. The network did report opposing voices from the federal transport minister and a spokesman from NAVCAN, the private company that took control of the air navigation system in 1996. The insinuation, however, was that the unmanned control tower was responsible for the accident: reporter Craig Oliver observed that the company was still planning to remove controllers in other airports, "despite the Fredericton experience."

CBC's *The National* (December 17, 1997) also looked at cutbacks to air traffic control services "and whether they may have contributed to the accident." Again, there was no explanation of how cutbacks might have led to the accident, the cause of which was still unknown. A spokesman for the Transportation Safety Board admitted that having no control tower in Fredericton probably caused delays in helping the injured. Quoted next was Transport 2000's Harry Gow, who again argued that cutbacks were causing safety problems and warned "if they don't watch it, they'll have a 747 coming down in a Montreal suburb next." David Collenette, the federal Transport Minister, pointed out that the accident rate for aircraft has dropped steadily over the last decade. Reporter Sasa Petricic ended the story, however, by recounting three recent accidents and questioning whether cutbacks "have resulted in either savings or safety." A federal auditor's report concluded, said the reporter, that "the government didn't include measures to ensure that Transport Canada could continue to monitor safety" after privatization of air traffic control services.

CTV devoted a report on the edition of *CTV News* for Christmas Eve, 1997, to the safety concerns of fire chiefs arising from the crash of flight 646. "Now, no one died in last week's crash but the fire chiefs say that is no thanks to Ottawa," anchor Dana Lewis said. The fire-fighters complained that they are required to hose down a plane but not to rescue survivors. A Canadian Association of Fire Chiefs spokesman noted that he has been lobbying for tougher standards. He argued that there would not have been enough emergency workers at the Fredericton

airport to handle a fire had one broken out after the accident, a situation that could have led to fatalities. The chief was the only person quoted in the story and his opinion went unquestioned. The report ended with the information that the government “now promises to clean up a planned review in the new year.”

CTV’s account of the fire-fighters’ safety concerns gives the impression that the chiefs’ opinions are irrefutable—no opposition was provided. A report commissioned by Transport Canada and reported in the *Vancouver Province* for June 16, 1998, however, provides another point of view. The report concluded that media reporting on the Fredericton crash caused a “distorted public perception” of emergency response measures. “No reasonable argument, moral or economic,” supports full-time rescue and fire-fighting systems at all airports, the report found. “Using the Fredericton accident as a cause célèbre, fire-fighters have unnecessarily alarmed the Canadian public” (Canadian Press, *Vancouver Sun* 1998: A19). This may not be the entire story either but this perspective was not even considered by CTV.

The federal government responded to the media pressure in February, making fire-fighting services available for every flight in the country’s busiest 28 airports. The Fredericton accident “renewed pressure on the government to review its rescue and fire-fighting standards at airports,” the *Halifax Daily News* reported (Canadian Press 1998). Air travel, however, is already extremely safe: there were only 96 air-related fatalities in Canada in 1995. In 1996, that number dropped to 56 and only 14 deaths were attributed to accidents involving commercial aircraft (Statistics Canada 1996a: 252).

Other studies have also found cases in which the media, first, misrepresented risks and, then, called for government regulation. In Canada in 1996, the federal government wanted to ban cheese made from unpasteurized milk. Worldwide since 1971, there had been 4,228 illnesses and 57 deaths attributed to raw-milk cheese (D’Aoust 1996). The National Media Archive examined reports on the proposed regulation by CBC and CTV and in the *Globe and Mail* (Morrison 1996).

The CBC strongly supported the government’s plan. Over 70 percent of the network’s assessment agreed that government intervention was needed to protect the public from the risk. Coverage by CTV and the *Globe and Mail* was more balanced: 56 percent of CTV’s coverage and 39 percent of coverage by the *Globe and Mail* argued that regulation was unnecessary. CBC also lagged behind the other outlets in presenting public reaction, including that of consumers, industry representatives, and the Quebec government—6 percent of their coverage gave public reaction compared to 25 percent in the *Globe and Mail* and 41 percent on CTV.



## **Contrary evidence is ignored or downplayed**

One might be able to excuse the media for emphasizing the unusual and therefore providing a distorted picture of reality. What is inexcusable, however, is their failure to set the record straight when new evidence is provided that refutes the original claims. What this does is perpetuate the misinformation and make it appear more common and natural. Almost 25 percent of the CBC's attention to the environmental causes of cancer, and 30 percent of the CTV's attention, focused upon man-made chemicals—primarily dioxins, furans and polychlorinated biphenyls (PCBs). However, the Doll and Peto found that industrial products caused less than 1 percent of cancer deaths (Doll and Peto 1981).

For example, when well-water was banned in the town of Newcastle, New Brunswick, due to excessive levels of polyaromatic hydrocarbons (PAH), CBC and CTV both followed the story. However, the "facts" were presented differently.

On CBC's *The National* for April 19, 1989 reporter Bob Merzerol stated that Newcastle's main well had been shut down "when it tested positive for cancer-causing polyaromatic hydrocarbons." While the well contained three and one-half times the acceptable level, this report gave the false impression that any trace of the chemical will cause cancer. In contrast, on CTV *News* for April 23, 1989 Jonathan Gravener reported that the well had "excessive levels." Gravener also reported that these same chemicals are part of everyday life: "It's a chemical that's been linked to cancer . . . PAH is a residue of combustion. Levels can be found in barbecued meats and cigarettes." By including this additional information, the CTV report gave the viewer perspective on the relative danger of PAH.

This incident prompted the New Brunswick government to conduct a study to determine whether or not the people of that region had a higher risk of getting cancer than people elsewhere in the province. The study, based on 500 families and conducted over two years, found that the people of Newcastle were in no greater danger than people elsewhere in the country. The report found that cancer rates were higher in New Brunswick than elsewhere in Canada due to diets too high in salt, fat, and alcohol and due to too much smoking.

CBC reported the findings of this study on the *The National* for July 23, 1990. Instead of using the findings of the study to highlight the dangers of consuming excessive fat, salt, alcohol, and tobacco, however, CBC questioned the validity of the government study. Reporter Susan Bonner began the story with the statement: "Marg Gorbert is one of hundreds of people in Newcastle who live in fear of cancer. Within six years she lost her mother, her sister, and her husband to the disease.

She thinks pollution, probably in the water, causes it. She calls the latest study a 'government cover-up'." This statement was made before the viewer was even told the results of the study. In the entire report, 11 statements were made that questioned the findings while only 4 statements reported the results of the study. Bonner concluded the story: "Marg Gorbert says she has lost too much. It will take more than one new government study to change her mind."

While the study found that it was the lifestyle of the inhabitants of Newcastle that had resulted in the higher cancer rates, CBC's report placed the blame on the government and, indirectly, on local industry. Bonner stated: "Newcastle is an industry town in New Brunswick's Miramichi area. There's a pulp mill here and a chemical plant. Two years ago cancer-causing chemicals were discovered in the town's water."

In fact, few studies have proven a link between industrial waste products and increased cancer rates. The British Columbia Cancer Agency analyzed cancer rates for 15 regions throughout British Columbia that have had pulp mills since 1970. While the initial analysis showed higher rates of lung cancer, when the data was adjusted for a greater incidence of cigarette smoking the findings "ceased to be significantly high" (Wigod 1992: A1, A3).

## **Conclusion**

The media's misrepresentation of certain risks and the ensuing calls for government regulation have serious implications. Canadians get most of their information on risk from the media; the government, in turn, responds. In 1993/1994, the burden of federal, provincial, and local regulations was \$85.7 billion, 12 percent of GDP. This translates into a hidden tax of about \$12,000 annually per family of four (Mihlar 1997).

Attempts to eliminate or reduce risk often do not accomplish their goals. One example is government-mandated automobile safety and pollution standards. The estimated cost of an airbag is between \$1,300 and \$2,200. If airbags are mandatory, some people will be unable to afford a new car. They may keep their old cars or buy used cars that may be less safe than new cars without air bags (Mihlar 1996).

Pollution standards may produce similar results. Money may be spent on making cars that pollute less, with diminishing returns. But again, people may continue to use older cars that pollute more than newer cars, made before the new standards. Regulations can also carry unintended consequences. In the 1970s, for example, child-resistant caps on some medicines were made mandatory but the numbers of child poisonings actually increased. Parents, it seems, felt safer with the new caps and thus were not as attentive to their children's safety as they had been before the caps were introduced (Lott 1997).

Reports of risk is often taken out of context. If the media provided more information on the relative risks of activities on which they report, Canadians could judge meaningfully the various risks they face. Our resources are not unlimited. If risks are not assessed comparatively, resources will be wasted on attempting to decrease or eliminate minute risks that, paradoxically, could put more lives in danger. Many people object to the idea of putting a dollar value on life but with limited resources, money should be allocated where it can do the most good. Air travel, for example, has become extremely safe and there are diminishing returns to spending any more money on airline safety.

The Harvard Center for Risk Analysis examined 185 life-saving interventions. It found the regulations cost \$21.4 billion and saved 56,700 lives annually. Tammy O. Tengs and John D. Graham estimated that those resources could be reallocated to save a total of 117,000 lives. As an example, they compared money spent on regulating fire retardant clothing with the cost of smoke detectors: "We regulate the flammability of children's clothing, spending \$1.5 million per year of life saved, while some 30 percent of those children live in homes without smoke alarms, an investment that costs about \$200,000 per year of life saved" (Tengs and Graham 1996).

Still, after many tragedies that have received media attention, the government, with media approval, is quick to introduce new regulations, regardless of their cost or potential effectiveness. Governments rarely seem to consider options outside of regulation. More often, it appears they respond to media-charged safety concerns, whether resources are best deployed there or not.

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