

*I need no warrant for being,
and no word of sanction upon
my being. I am the warrant
and the sanction.*
— Ayn Rand, *Anthem*



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Better Never?

by [Sam Kazman](#)

(The following article is a revised version of a lecture given at The Objectivist Center's 2003 summer seminar.)

I would like to start by asking you all to secure yourselves in your seats. If you have any pointy objects, make sure they are facing away from you but also be sure that you do not turn them into a threat to your neighbor. And if you must use paper, be very careful to avoid those nasty paper cuts.

You might think that I am exaggerating, given that my topic is the Precautionary Principle, and you'd be right—I *am* exaggerating things, but not by much. Also, in a sense I'm being a bit deceptive, because what I was just doing was giving you all advice about some minimally risky items. If I were really applying the Precautionary Principle, I would take those objects away from you.

The principle is not a proverb like "better safe than sorry." Proverbs like that make sense, and they are also counterbalanced by other sayings such as "he who hesitates is lost" or "make hay while the sun shines." What is more important, the main characteristic of proverbs is that they are advice—they are addressed to the individual mind. The Precautionary Principle is not advice. It is not a guide for living. It is a rule for regulating. Worse yet, it is becoming a rule for regulating at the international level.

Essentially, the Precautionary Principle is the idea that society should permit no new technologies to be developed without the certainty that they will cause no environmental harm. The principle has two basic forms. The "weak" formulation states: "When there are threats of serious or irreversible environmental damage, lack of scientific certainty should not be used as a reason for postponing efforts to prevent that damage."

A stronger version states: "When there are risks to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."

In practice, there is very little difference between these two versions. Under both of them, it is the proponent of the technology who has the burden of proof. (This shift in the burden of proof is sometimes called "reverse onus." It sounds like a board game, but it is one that we lose.)

Risk and Common Law

Compare the procedures mandated by the Precautionary Principle with the ways in which common law deals with risky activities, especially new types of technologies whose full consequences may not be known for some time. After all, risky things have been going on for centuries, and common-law rules did develop to deal with them. Those rules generally imposed more liability on risky activities than on other actions. In tort law, if you engage in an everyday activity such as walking down the street, you are liable for injuries that you cause through your negligence—for failing to take the reasonable care expected of a pedestrian. If you walk negligently, if you skip with your eyes closed and smack into someone, then you are liable for that harm. But if you were walking with full care and you just happened to crash into someone through no fault of your own—for example, if you just happened to have a seizure even though you had been perfectly healthy beforehand—then you probably would not be held responsible.

The same is true for walking your dog. If the dog has never before been violent and it suddenly lashes out at someone, then under common law there is no liability. But if the dog has previously been violent and it now bites someone, then you would be liable. From this we get the saying that "every dog is entitled to one bite." After the first bite, you are responsible.

On the other hand, if you are engaged in what are regarded as ultra-hazardous activities, things change. You become "strictly liable"—that is, no matter how much care you take, you are still responsible if your actions lead to harm. For example, if you use a poisonous gas to get rid of cockroaches, and the gas leaks and wipes out your neighbors, you will be liable no matter how careful you have been in using the gas. Or if you walk down the street with a lion, even one on a leash, and it lunges out at a passerby, you are liable. Dogs get one bite; lions get none. (Note that common law has been replaced or supplemented, in many

areas, by legal codes. Many municipal codes today make dog owners responsible for even the first bite, and flatly prohibit owning a lion, let alone strolling with one.)

How should these situations be dealt with under an individual-rights approach? That they often involve the gray area of public property might muddle the analysis, but overall the result would probably be pretty much the same. You might have some disagreement over strict liability versus negligence, but those disputes would not make much difference in the long run. The basic principle is that you are liable for injuries that you cause.

But the Precautionary Principle has nothing to do with liability at all. It does not say that people engaged in risky activities are liable; it says that those activities will not be allowed in the first place. It seems to act like a preliminary injunction—you do not wait for injury to occur; instead, you go into court in advance and prevent the activity before it takes place.

But to get an injunction, you need to meet a high burden of proof. If it later turns out, after a full trial, that you are wrong, then *you* are responsible for any damage that the injunction itself might have caused. Getting an injunction from a court is both difficult and risky for the person seeking it. This makes sense—you have the possibility of preventing injuries (especially when such injuries cannot be remedied by compensation), but you also bear the risk if your case turns out to be meritless. In short, you had better have a very good reason for seeking that injunction.

Under the Precautionary Principle, however, there is no court involved. The state or some international agency itself imposes the injunction, while the technological innovator has the burden of arguing against it.

A Radiological Detour

This raises an interesting side question, almost epistemological in nature: How should we handle totally new activities, things that have never been done before? It is possible that if you do something totally new you might unleash some new set of energies that wrecks havoc on outsiders. What should we do about this possibility?

History can be useful here. In the late 1800s, as the electromagnetic spectrum and the phenomenon of radiation began to be investigated, some bad things happened. In 1895, X-rays were discovered, followed by uranium salts and radiation. Marie and Pierre Curie discovered radium and polonium; they worked with pitchblende, a common ore, refining it and ending up with something that glowed in the dark. They invited friends over to see it and gave away samples in vials. It was a sensation.

Decades later Marie Curie died of leukemia, very possibly due to her work. It is likely that some of her friends suffered as well.

Under the Precautionary Principle, all this work would have been stopped at the outset until we had full knowledge of radiation's effects. This means that it would probably *still* be halted, because even today we do not know everything about it. And yet X-rays have proven to be incredibly beneficial, in uses ranging from medicine to metallurgy. Similarly, we had huge debates a decade ago over whether power lines cause cancer in children. Utilities spent huge sums to allay fears before it finally became clear that there was no hazard. A strict application of the principle would have shut down most electrical transmission lines.

To stop technologies in their infancy may well mean stopping them dead. Given that so much of human survival and flourishing depends on new technologies, stopping technology means curtailing civilization.

Under common law, there is a very high burden to obtain an injunction; under the Precautionary Principle, there is none—the burden is on those who want to act. Moreover, the principle is not a judicial rule. In courts there are procedures and evidentiary rules. The Precautionary Principle is a political rule; more precisely, if you are at all cynical about government, it is an international cover for more expansive regulation.

A Brief Chronology

The Precautionary Principle first appeared in the late 1970s in Germany as part of an environmental protection campaign. It was called "*vorsorgeprinzip*," foresight planning. In 1985, it was utilized by the European Commission to ban the use of growth-promoting hormones in agriculture. The principle made its first appearance in international law two years later, as part of an international agreement to protect the North Sea from toxic discharges.

In 1992, the United Nations Conference on Environment and Development (the "Earth Summit") produced the Rio Declaration on Environment and Development, which set forth the "weak" version of the principle. On its face, that version does not mandate the prevention of environmental degradation; it only states that such prevention should not be postponed due to lack of full certainty regarding cause-and-effect. Nonetheless, some environmentalists have interpreted it as dispensing with even a "suggestive demonstration" of harm. The principle is also incorporated into the Treaty on the European Union and underlies the Cartagena Protocol on Biosafety and the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

Closer to home, last June San Francisco became the first American city formally to adopt the principle. In the words of the *San Francisco Chronicle*: "Rather than asking 'How much harm is allowable?' it forces us to consider, 'How little harm is possible?'" (June 19, 2003).

The Politics of Precaution

By stymieing innovation, the Precautionary Principle essentially protects the status quo. But the status quo is already incredibly well protected. Think of it from a business perspective: if you are developing a new product or technology, you face a huge uphill battle. The entities that you will be going up against—existing manufacturers, their employees, their distributors and retail outlets—all have a strong interest in keeping you out of the market, and they probably have huge political clout as well. What do you have? Yourself, your idea, your backers, and that's it. The consumers you will be serving in the future don't even know about your plans, let alone enjoy your products; they are not about to take to the streets, or their phones, to support you. Such incredibly popular technologies as VCRs and the Internet could easily have been killed in their infancy by various legislative proposals, and the consumers who now embrace them would have been totally ignorant of what they might have lost.

In his 1845 "The Petition of the Candlemakers," Frédéric Bastiat presented a fable about an appeal to the French legislature by candlestick producers, lantern makers, and kerosene bottlers, all protesting the unfair competition they faced from an incredibly cheap source of light—the sun. The sun was unfairly dumping its product, and these honest citizens simply had no way to compete; their only hope was that the government would force heavy drapes on the people. Their petition failed.

Under the Precautionary Principle, however, that petition might have had a pretty good chance of success, especially if the sun had not yet started to shine and people did not know what they were about to be deprived of.

This is how the politics of the status quo is so greatly skewed by special-interest groups. But there is something else at work here as well—the Precautionary Principle causes a skewing of outlook. When you are concerned with future technological risks, you tend to ignore existing natural risks. When you are focused on what might happen, you are distracted from what actually is occurring.

It is for this reason that controversies over the risks of new medicines often overshadow the risks of the diseases that they're intended to treat. Technological advancement may well pose risks, but so does technological stagnation. In that sense, the Precautionary Principle itself is an incredibly risky proposition.

The Principle at Work

The Precautionary Principle is hardly a household term (except perhaps in Brussels and Washington, D.C.). Nonetheless, it is already being invoked in many major regulatory battles.

Biotech Foods: No one has ever been injured by a genetically modified (GM) food. GM crops require less land and fewer insecticides; they can be grown more intensively and more cheaply. This past May the Royal Society of Britain declared that GM foods pose no new risk—a conclusion shared by the French Academy of Sciences. Nonetheless, the European Union bans them. The alleged purpose of the ban is concern for public safety, but in fact there are huge European agricultural interests at work here as well, propelled by a belief that biotechnology would make American agriculture an even more formidable competitor.

(By the way, you do not have to trust GM foods to oppose a ban on them; you do not even need laws mandating their labeling. Markets are clearly capable of providing certain information about food to people who desire it. Millions of people buy only kosher food, and they are able to do so despite the absence of laws compelling the labeling of un-kosher foods. Kosher food companies have developed to meet this market demand, and they function despite the absence of government standards on this issue, although they are obviously subject to laws regarding fraudulent advertising. In the same way, companies specializing in non-GM foods could satisfy consumers who wish to avoid GM items.)

Global Warming: The popular view of the global-warming issue is that the science is clear—we face a climatic crisis due to man-made increases in CO2 levels. In fact, there is growing dispute over this, as the computer models underlying the doomsday predictions prove increasingly off-track. This past winter three of the Great Lakes froze entirely for the first time in recorded history. This does not disprove the global-warming threat, but you probably did not read about it in the national press. On the other hand, if three frozen Great Lakes had suddenly thawed, you can imagine the headlines.

Limiting CO2 emissions to supposedly avert global warming would require severe restrictions on energy use. Such restrictions, however, would carry massive costs, as documented in such books as Bjørn Lomborg's *The Skeptical Environmentalist*. (Lomborg does not question global-warming science but nonetheless concludes that the proposed restrictions are incredibly wasteful.) While the Precautionary Principle is commonly invoked to support such energy restrictions, it is rarely applied to force consideration of the harm that those restrictions would cause.

Synthetic Chemicals: Man-made chemicals have long been under attack, but in recent years the focus of those attacks has shifted to their total removal from society. One current campaign has "zero discharge" as its goal; rather than bother with analyzing the risks of specific chemical discharges, let's simply phase those discharges out altogether. The "Clean Production" campaign goes even further, arguing that "we must address all phases of the life-cycle of a product or process to minimize risk"—an approach that would inject government into just about every conceivable stage of product development, from design to production to marketing to refuse collection. In Massachusetts there is a "Toxic Use Reduction Act," under which companies commit to reduce their use of toxic chemicals by 50 percent.

From an individual-rights perspective, the issue is not discharge or use; it is who bears the harm that a chemical might cause. The key issue is where the stuff stays. Imagine that I have a filthy production process, but that I manage to contain and store all the dangerous residues that I create. I don't harm any outsiders and I don't violate anyone else's rights, yet under the "Clean

Production" approach I am penalized as severely as someone pumping those residues into public water or air.

A baby emits noxious substances all the time, but the key issues are whether it is diapered and whose lap it is sitting on—a proud parent or an unwilling stranger. The proper way to deal with pollution is not through production mandates but through the principle that the polluter pays for any damage inflicted.

Lastly, the Precautionary Principle's skewing of outlook that I mentioned previously takes on a particularly insidious form here. As Bruce Ames, a leading biochemist at the University of California, Berkeley, has pointed out, the vast majority of the chemicals to which we are exposed are natural chemicals, and yet it is synthetic chemicals that receive almost all the attention.

This discrepancy has no basis in science. Every substance is poisonous at some level. The real issue is not whether something is natural or synthetic, but whether humans are exposed to it in dangerous amounts. Coffee, according to Ames, contains over one thousand known chemicals, of which only twenty-two have been tested for carcinogenicity in lab animals. Of those twenty-two, seventeen proved positive. But epidemiological data show no association between coffee consumption and cancer.

Baptists and Bootleggers

Clemson University economist Bruce Yandle has developed a useful framework for looking at how moneyed interests can team up with public-interest groups to advance a political agenda. After Prohibition ended, bootleggers wanted alcohol to remain illegal since legalization would have ended their lucrative occupation. But the bootleggers' arguments did not carry much policy weight. Anti-alcohol Baptists, on the other hand, had some very weighty arguments. When Baptists and bootleggers joined forces (with the latter sometimes funding the former), they did very well.

In the global-warming controversy the environmentalists are the Baptists, while the countries and companies that stand to profit from restrictions on carbon-based fuels are the bootleggers. Enron, for example, owned natural-gas pipelines, which would flourish under coal and oil restrictions; it also established a major brokerage to buy and sell CO₂-emissions permits. Certain corn growers stand to similarly benefit because, unlike fossil fuels, agriculturally produced ethanol would be exempt from the Kyoto Protocol's restrictions. (These corn growers already receive massive federal subsidies in the name of environmentalism, but don't think of this as a family-farmer program—about half of those subsidies go to the Archer Daniels Midland company.)

Putting the Principle to the Test

If the Precautionary Principle were truly a tool for averting risks, we would see its advocates applying it to government agencies as well as private parties, and with no regard for political correctness. In practice, however, the Precautionary Principle is used largely, if not exclusively, to promote a statist, anti-technology agenda. Consider the risks created by government regulation that seem to have entirely escaped the attention of the principle's advocates:

Space Shuttle Disasters: The 1986 *Challenger* explosion was largely blamed on an O-ring failure due to a low-temperature launch. But there is some evidence that this failure was related to a change in the type of putty used to seal the O-ring joints—a change that can be traced to the federal ban on asbestos in consumer products. In the recent *Columbia* disaster, there are claims that the incidence of foam breaking off at launch from the shuttle's fuel tanks greatly increased after NASA switched to a more "environmentally friendly" type of foam. Neither of these issues, however, has received the attention it merits.

Malaria and the DDT Ban: There are currently about 300 million cases of malaria annually, and more than 1 million deaths. The disease could be drastically reduced through inexpensive, minimal applications of the banned chemical DDT. When South Africa began to use DDT in this manner in 1990, over worldwide environmentalist protests, it succeeded in reducing malaria cases by 90 percent in certain areas. Despite its human toll, however, the DDT ban remains largely sacrosanct.

Federal Fuel-Economy Standards: In 2001, a National Academy of Sciences study found that government fuel-economy standards, while saving energy, were increasing traffic fatalities. The standards were discouraging the production of larger, heavier vehicles. This reduced vehicle-mass led to reduced crashworthiness, according to the study, and the downsizing contributed to about 2,000 deaths per year—a huge toll, given that these regulations have been in effect for over two decades. The academy's findings, however, were largely ignored in the press, and environmentalists continue to push for even more stringent (and therefore more lethal) standards. If these standards were a privately produced product rather than a government regulation, they would have been banned overnight.

Precaution and Prometheus

The late sociologist Aaron Wildavsky observed that we are the wealthiest, healthiest society in human history, and yet we have become scared to death of practically everything—our air, our food, our water.

The Precautionary Principle epitomizes this fear. It's hard to conceive of any technology that would pass muster under it. But rather than bemoan the principle's existence, maybe we should celebrate the fact that it did not appear earlier in human history.

Or did it? As the Competitive Enterprise Institute's Fred Smith points out, the Greek legend of Prometheus can be viewed as illustrating the Precautionary Principle. After stealing fire from the gods and giving it to man, Prometheus was punished by being chained to a cliff, where eagles pecked at his liver for eternity. After all, despite its usefulness, fire is an incredibly dangerous

technology, and the person who rashly unleashed it on the world should pay. In the modern version of the legend, perhaps, Prometheus would be attacked not by the eagles of Zeus but by Nader's Raiders.

This view, however, misses an essential point about the legend. We regard Prometheus as a hero and fire as a blessing. Once we lose that vision, once we allow Prometheus to be replaced by precaution, we lose an essential force of human progress.

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