Fact or Fiction?



Jack W. Dini 1537 Desoto Way Livermore, CA 94550 E-mail: jdini@attbi.com

The Precautionary Principle

- Better safe than sorry.
- Just in case.
- Above all, do no harm.
- Do nothing new until it can be absolutely proven to be completely safe.

All of the above statements have been used to describe the precautionary principle (hereinafter referred to as PP). Few policies for risk management have created as much controversy as PP, which emerged in Europe in the 1970s and is now in environmental statutes and policies-including the margin of safety requirement for setting ambient air quality standards under the Clean Air Act, the Rio Declaration from the 1992 Earth Summit, and industrial practices involved in product testing and environmental management.¹ Yet, despite its seemingly widespread political support, PP has engendered endless controversy, in part because of the confusion surrounding its interpretation.

One legal analysis identified 14 different formulations of the principle in treaties and nontreaty declarations.² The "strongest" formulation of the principle can be interpreted as calling for absolute proof of safety before allowing new technologies to be adopted. The World Charter for Nature (1982) states that "where potential adverse effects are not fully understood, the activities should not proceed." Foster et al.,2 points out that if this is interpreted literally, no new technology could meet this requirement. Some PP formulations open the door to cost-benefit analysis and discretionary judgment, while still others call for decisions in the absence of any scientific evidence at all.

If the stronger PP criteria were followed, something as common as salt or pepper or sugar or Vitamin D could never be added to prepared foods. Any of these might be carcinogens to which everyone is unavoidably exposed—the last three have, in fact, been shown to cause cancer in at least one animal test.³ Application of PP decades ago to innovations (such as polio vaccines and antibiotics) might have prevented occasionally serious, and sometimes fatal, side effects by delaying or denying approval of those products. That precaution would have come at the expense of millions of lives lost to infectious diseases, however.⁴

PP is about risk, and life is risk. If you want to be a strong advocate of PP in your daily living, perhaps you should not even get out of bed in the morning, because as soon as you do this, you take a risk. Even if you decide to stay in bed, you take a risk. About 20 Britons die every year as a result of falling out of bed, while 30 die in their bathtubs. Around 600 die on their own stairs.⁵

How difficult is it to get dressed? For some people, the answer must be "very." In 1997, some 50,000 close calls were seen by emergency room doctors. A pair of socks can spell disaster. Emergency rooms treat hundreds of sock-wearing accident victims who have slipped and taken bad spills.⁶ You can choke to death on a lump of health food.⁵ Risking and living are inseparable (hospitals make people sick; exercise can hurt you; herb tea is laden with carcinogens, etc.). Even breathing, according to a prominent theory in which cancer is caused by oxygen radicals created through the burning of fat, can kill.³

One could go on and on with these types of statistics, and if you want to really capture the spirit of our fearful times, read: *I m Afraid, You re Afraid; 448 Things to Fear and Why*, by Melinda Muse.⁶ This volume is an A-to-Z compilation that will provide you with enough information to show you there is nowhere to run, nowhere to hide it s no longer survival of the fittest, but of the wariest. The book is a textbook of life s hazards—from abstinence to zippers, martinis to yard sales, it s all here. Things you must not touch, places to flee, creatures and people to avoid. A must-read if you re a worry wart.

Getting back to PP and its advocates, in recent years, those advocating the stronger definitions of PP have sought to narrow both the information and the choices available for society to make important decisions, ranging from public policy issues, to consumer products and the application of science. This use of a narrowly focused PP has resulted in some devastating adverse consequences. In 1991, Peru suffered a massive outbreak of cholera, which killed 7,000 people and afflicted more than 800,000 others. This was caused by Peru s decision to ban the chlorination of drinking water, based on American studies that had shown there might be a slight chance of developing cancer due to chlorine. But the chances of cancer death from chlorinated water turned out to be far less than the risk of death due to a contaminated drinking supply.⁷

Another potential negative impact is the expenditure of large amounts of dollars to correct a problem of limited or negligible impact, thereby leaving less funding for other measures that could be more important. Clean-ups are accomplished only by diverting resources from other worthy missions, including the avoidance of other health risks. For example, putting the \$6 billion per year being spent on Superfund toward cancer research would quadruple cancer research spending.⁸ Estimates put the cost of avoiding one case of cancer through Superfund clean-up at a whopping \$11.7 billion.⁹

Another example is lead. Vast amounts of resources have been devoted to cleaning up lead at hazardous waste sites, while more significant sources of lead exposure, such as apartment paint and soil in urban areas, have received less attention.²

PP as a guide to decision-making under conditions of uncertainty suffers from another drawback. If the future is really all that uncertain, how can one be confident that action taken today will not make things worse, rather than better? For example, if effective action had been taken in the late 1960s and early 1970s to combat the fear, widespread among certain climatologists, that the world was entering a new Ice Age, the consequences now would have been most unfortunate.¹⁰ These are the same folks who now promote global warming. Stayed tuned. Who knows what our weather folks will be telling us 20 years from now.

Summary

PP is fundamentally a statement of values related to beliefs about how organizations and society ought to operate. When combined with other desirable societal characteristics—such as sustainable development, investment in science and technology, science-based decision making and expanded consumer choices—PP can add an important dimension to the choices of civil society.¹

However, reformers must understand and effectively communicate five simple truths about risk regulation to convince the public that regulatory reform will result in more protection, not less:⁷

- 1. Not every risk is avoidable.
- 2. All risks are relative.
- 3. Wealthier is healthier.

- 4. Regulations can have adverse side effects, thereby creating more risk and less protection.
- 5. More lives would be saved if risks were prioritized.

Application of PP makes sense—*if* it s done with the above in mind. Policymakers who rely on the strong definitions of PP, however, turn a blind eye toward the risk created by over-regulation. This is a costly mistake. For much of the world, the greatest environmental threats are derived from poverty and a lack of innovation, not newfangled technologies. By focusing on only those risks posed by the uncertainties of new technologies, PP turns a blind eye to the harms that occur, or are made worse, by the lack of technological development.¹¹

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