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Lee, Kai N. COMPASS AND GYROSCOPE : INTEGRATING SCIENCE AND POLITICS FOR THE ENVIRONMENT. Washington, D.C.: Island Press, 1993. 243 pp. US\$16.95 paper ISBN: 1-55963-198-8. Recycled, acid-free paper.

COMPASS AND GYROSCOPE presents a theoretical and practical guide to achieving sustainable development amid the conflicting forces of development pressures and environmental preservation. Kai N. Lee acknowledges the needs of resource developers. Also recognizing the need to protect ecosystems, he attempts to describe how both inclinations can be satisfied. His conciliatory approach is likely to interest resource managers who are seeking a path to sustainable development. However, environmentalists might be dismayed at what they perceive as a lack of fervor. Industrialists, harking back to the good old days of no restraints, might see the book as much ado about nothing.

Much of Lee's thesis is based upon his experience as Washington State representative to the Northwest Power Planning Council. That Council was charged with seeking cost-effective solutions to the collapse of the salmon fisheries on the Columbia River, a collapse that had been caused by the relatively unrestrained construction of hydroelectric dams. A crisis ensued when Native Americans sued for and won treaty-guaranteed fishing rights. This threatened to further deplete the already reduced fish stocks available to industry. The strategies that the Council developed to satisfy the contending parties led Lee to conceptualize what he calls adaptive management and bounded conflict, the "compass" and "gyroscope" of his book's title.

According to Lee, science is crucial. It is the compass that points toward sustainable development. He envisions a group of civic scientists whom he hopes will carry out "experimental science with reformist zeal." They will provide data for and also promote scientifically justified policies. Lee urges policy-makers to support this endeavor. Moreover, because science continually moves forward, policy-makers must be willing to adapt to changing scientific knowledge. In other words, they must be "adaptive managers."

Lee recognizes that political and economic forces will seek to maintain a status quo. This is the gyroscope of the title. Disparate goals lead inevitably to conflict, which Lee sees as necessary for social learning. Social learning in turn is necessary for finding an appropriate path to sustainable development. Toward this end, the policy-maker should seek to make conflict "bounded." That is, he or she should strive to use any of several techniques which Lee describes that will make the conflict manageable. Achieving such an end will make progress attainable.

Environmentalists may be uncomfortable with Lee's tacit acceptance of sustainable development. Perhaps treatment of this concept goes beyond the book's scope. However, it is an important and contentious issue that is far from being resolved. Many scientists believe that population and development pressures have already carried the Earth past the point of sustainable development. If true, Lee's promotion of more development undermines his position as an environmental scholar. One case study that he cites is particularly illustrative. In 1987, the wet tropical forest of northern Queensland, Australia was declared a

World Heritage Sight. It was placed off limits to the massive logging that had threatened its ecological integrity. An obvious victory for environmentalists, Lee describes it as unfortunate because the world was now deprived of a test bed for sustainable development. In his view, it was a failure of bounded conflict.

Lee seems to assume that all parties in resource disputes will have honest intentions. Industrialist seek profits. Environmentalists press for conservation. It is a traditional conflict that has been played out in courts and legislatures for years. Any semblance of this being a fair fight however, has changed (at least in the United States) with the rise of powerful anti-environment forces. Such forces are typified by the industry-sponsored and funded Wise Use movement and the 104th Congress. These are manifestations of a multi-level campaign which attacks at least two of the fundamental elements of Lee's theory.

The Wise Use movement has been described by its spokesmen as an organized attempt to obliterate the environmental movement. Success in that goal would remove a source of conflict that Lee holds as necessary for achieving sustainable development.

On another level, the 104th Congress has attacked the scientific foundation that is key to Lee's thesis. The dramatic funding cuts for endangered species, clean water, clean air, national parks, and scientific investigations of long-term global change, are thinly-veiled attempts to stop the kinds of activities that may produce data unfavorable to corporate goals. The anti-regulatory rhetoric of legislators seeks to unfetter exploitative industries while simultaneously paralyzing regulatory agencies with new rules and procedures.

Given the enduring public support for preserving the environment, one could hardly fault Lee for failing to anticipate this turn of events. However, his book must be read with the new anti-environmentalism in mind. In truth, it needs one or two more chapters to bring it up to date.

The Compass and Gyroscope may have been a good metaphor up until November 1994. Unfortunately, powerful forces are now unscrewing the base of the compass. And they are simultaneously trying to relocate the poles upon which it relies.

In any event, this book needs to be studied; a casual reading will not benefit the reader and may even be an impediment to bringing Lee's goals of adaptive management and bounded conflict to practical reality. It may require too much discipline and vigilance to survive today's chaotic world of politics and resource management. In truth, the future of Lee's vision may greatly depend on the extent to which it becomes a part of academic programs across the nation.