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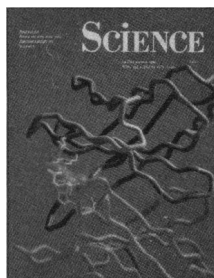
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COVER Combining site (heavy chain in red, light chain in blue) of antibodies which bind ligands containing tetrahedral phosphate (here phosphorylcholine shown as blue surface with phosphate bonds colored cyan) can stabilize a hydrolytic transition state and thus function as a highly specific enzyme. See page 1570. [Coordinates of the McPC603 antibody-antigen complex from D. Davies, National Institutes of Health. Computer graphic modeling and photograph by Arthur J. Olson, Research Institute of Scripps Clinic, La Jolla, CA, using software by A. J. Olson and Michael L. Connolly]

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New Year's Resolutions and the Black Bear

As we go about making New Year's resolutions, I will once again vow to follow my role model, the female black bear.

The black bear hibernates for 5 months, during which time she neither eats, drinks, urinates, or defecates but delivers several cubs. This paradigm of fuel efficiency, absence of toxic wastes, budget balancing, and productivity is one from which individuals, governments, and businesses have much to learn. The black bear achieves this fabulous efficiency by converting fat cleanly and completely to CO₂ and H₂O, recycling the H₂O as well as all of its nitrogen. The black bear eats in summer for its big winter sleep, yet there is no record of the spouse of a black bear criticizing her for a bulge in the midriff section. Black bears resist cosmetic arguments for jogging and find ambling totally satisfactory for getting from place to place. They are not belligerent but can use claws effectively to preserve freedom or defend loved ones.

Black bears deserve commendation because they have adjusted their goals to be in agreeable harmony with their internal machinery. They recognize that they cannot degrade proteins at both ends without devising a cycle that gives them a favorable balance of nitrogen trade. They cannot have trim waistlines and hibernate. The needed internal enzymes to avoid external pollution have been selected by an exacting evolutionary process.

Today nations and individuals are operating with systems that lack the disciplined logic of the black bear's metabolism. Sophistries such as "service industry can replace manufacturing industry," "we can have commitment without marriage and marriage without commitment," "we can maintain standards without flunking anyone," "world opinion will enforce good behavior," and "you can help the poor without inconveniencing the rich" are mistaken for analysis in which assets and liabilities are evaluated in a realistic way.

The modern world has Herculean challenges and it is a lot easier to invent a slogan than develop a logical disciplined policy. It is easy for intellectuals to say, "protectionism is bad," but the blue collar worker in Detroit is not convinced he will be welcomed in Silicon Valley. The plea for "no nuclear weapons" is highly humane and laudable, but unless we are first able to erase human conflict from the globe, it opens up the prospect of the return to an era of "conventional" warfare. "No sports without a C average" emphasizes the basics, but it may alienate those who most need to be enticed into more learning.

It is time that society recognizes that in order for a policy to be a real policy, it must be thought through to an internally consistent system.

There may be several such systems, and we can choose among them on the basis of our value judgments. For example, protectionism could be a consistent policy for our country, but it would have consequences such as high costs of goods, subsidized inefficiency, and retaliation by other countries. Completely free trade is also a potentially beneficial policy, but it requires an understanding that much manufacturing will move to low wage countries and displaced workers will need assistance to allow transition to new jobs. A carefully developed compromise might be devised that could provide protection for selected key industries and let others struggle for survival. However, a system in which protection ebbs and flows with political clamor is destined for failure.

Any self-consistent policy will have both assets and liabilities and, therefore, will always be vulnerable politically to those who pick out the liabilities and emphasize them. We will never have a society that can cope with terrorism, overpopulation, famine, and war if we do not demand from those who criticize whether they have an internally consistent policy that is better. My New Year's vow is to respect those who have a well-thought-out policy, even if parts of it are against my own deeply felt, sincerely believed, but highly emotional personal policy.

I shall also resolve to develop my own well-designed policy for *Science* to achieve harmonious science policy, faster publication schedules, and more exciting articles. I have taken the first step. There is a slight bulge where my waistline used to be.

—DANIEL E. KOSHLAND, JR.