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**Information for contributors** appears on page XI of the 22 December 1989 issue. Editorial correspondence, including requests for permission to reprint and reprint orders, should be sent to 1333 H Street, NW, Washington, DC 20005. Telephone: 202-326-6500. **Advertising correspondence** should be sent to Tenth Floor, 1515 Broadway, New York, NY 10036 Telephone 212-730-1050 or WU Telex 968082 SCHERAGO, or FAX 212-382-3725.

## Two Plus Two Equals Five

Science. Dr. Noitall, you are the world's greatest authority on public relations, the man who could get Brezhnev elected in Orange County, the man who could sell crepes suzette as the breakfast of champions.

Dr. Noitall. A vast understatement of my true worth.

Science. We have come to ask you why scientists seem to have such a poor image.

Dr. Noitall. How can you possibly ask such a simple-minded question? You are the people who have brought us nuclear war, global warming, and acid rain. You enjoy dissecting frogs, and you keep mice and rats in little cages instead of killing them with warfarin, as any decent soft-hearted farmer does.

Science. But we're not in favor of nuclear war.

Dr. Noitall. You discovered the atom. You had your chance to stick with phlogiston, and you didn't do it.

Science. We are not in favor of global warming. In fact, we're the ones who alerted the public to this danger.

Dr. Noitall. That shows the naïveté of scientists. The Bible records the execution of messengers who brought bad news. We no longer execute such people, but we certainly don't have to like them. You tell me I have to give up my air-conditioned gas guzzler for an itsy-bitsy, crowded, four-cylinder, nondescript vehicle, and expect me to like you.

Science. But it is our job to tell people when 2 + 2 = 4.

Dr. Noitall. That's exactly where your views are wrong. A recent poll shows that 50% of the people think 2 + 2 = 5, and almost every network agrees with them. Those people have rights, they believe sincerely that 2 + 2 = 5, and you take no account of their wishes and desires. Simply imposing 2 + 2 = 4 on them is not democracy.

Science. But there is really no serious scientific disagreement on the question.

Dr. Noitall. That is exactly where the problem comes in. The Establishment is lined up monolithically on the side of 2 + 2 = 4. A dissident scientist representing the 2 + 2 = 5school cannot get his articles published in Establishment journals. Peer review is utterly unwilling to look with favor on such viewpoints. Granting agencies do not encourage people who believe 2 + 2 = 5 to serve on their boards.

Science. We can't take seriously people who make emotional rather than scientific arguments.

Dr. Noitall. That reflects a condescending attitude toward those who did not have the privilege of having an advanced education. Prominent political groups have already supported enactment of legislation, even if it is scientifically inaccurate, as long as the public wants it.

Science. Then how can we go about changing public opinion?

Dr. Noitall. In the first place, you could stop having funny-looking people in glasses and lab coats appearing on television and before legislative committee. Pick real successes, such as actors, actresses, and rock singers, and let them present your side of the story. Making large amounts of money and being handsome is evidence of success in modern society. Such people are much more likely to understand big subjects than professional types. And stop defending unpopular causes. It is now understood that atoms, asbestos, CO<sub>2</sub>, and cholesterol are bad. Attempts to say that they're all right in small doses is only going to get you an image as an apologist for bad guys.

Science. But even if we pick attractive spokespersons, how can we convince them of the

Dr. Noitall. That is another misconception that you are going to have to get rid of. There are two truths in this world: one of the laboratory, and the other of the media. What people perceive as the truth is truer in a democracy than some grubby little experiment in a laboratory notebook. A stubborn insistence on the facts instead of the people's perception of the facts makes you look heartless and disdainful. You are going to have to come out as more reasonable and accommodating, as more benevolent, kindly, and pliable, willing to give and take, empathizing with the public's fears and frustrations.

Science. So how do we handle the 2 + 2 = 4 problem?

Dr. Noitall. I'd suggest you start by conceding that  $2 + 2 = 4\frac{1}{2}$ .

—Daniel E. Koshland, Jr.

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