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Approaching Science

SCIENCE COMMUNICATION IS A HOT TOPIC THESE DAYS. I KNOW OF TWO COMMITTEES exploring how science journalists and scientists can find new ways of working more effectively with one another. Programs such as the Aldo Leopold Leadership fellowships are educating young scientists about how to make their work more understandable to the public and to the mainstream media. These are common-sense responses to two important changes. First, the scientific disciplines are drilling deeper into the fine details of everything from atmospheric physics to the molecular basis of cell signaling. Acronyms and other shorthand indicia are used more often than ever, and even the titles of research papers are sometimes challenging. Second, science and technology are increasingly relevant to public policy, and unless those who speak for science can be understood, the policy decisions are likely to be wrong.

So how are we doing at *Science*? From readers' surveys, discussions with our Board of Reviewing Editors, and my mail, we get the same story. The language used in Reports and Research Articles is sufficiently technical and arcane that they are hard to understand, even for those in related disciplines. In conversations about this problem, I have heard the following: "It doesn't have to be like this; editors push hard to make authors compress their language too much." (Point taken; but allowing extra space for clarity in paper A makes less room available for the new findings in paper B, and pages also cost.) Or: "Can't you do a better job of teaching some of the scientists to write in a more accessible or understandable way?" (Another good point; but editors who do that sometimes find they edit for more clarity while authors insist that they are sacrificing precision and accuracy!)

It's clear that accessibility is a problem, because we're all laypeople these days: Each specialty has focused in to a point at which even the occupants of neighboring fields have trouble understanding each others' papers. We have already undertaken some measures that we think are helpful. Well before each issue, we gather News and Editorial staffs to consider which forthcoming papers should be accompanied by News or a Perspective, the latter of which provides a context for, or possible extensions of, new findings published in the same issue. We hope that this extra coverage improves comprehension.

But it's clear that to solve the underlying problem we need to do something more ambitious. Accordingly, we are initiating a new experiment, beginning on p. 766 in this issue. Each Research Article published this week and in the next five issues will be preceded by a one-page "Authors' Summary": an account, with one figure, of what the paper reports and what its conclusions are. Each author will have agreed to supply such an account and to let us improve its accessibility and clarity where needed. Our plan is for summaries of papers in physical science fields to be reviewed by our life-sciences editors and vice versa.

This experiment will affect both the print version of *Science* and *Science Online*. It is important for our readers to understand the purposes of the different ways in which we present research papers to improve understanding. The one-page summary is intended to make clear what the investigators did, how it was done, what the result was, and its significance. A Perspective, as always, will be complementary, putting the new result in context, exploring its impact, drawing in related information from other studies, and assessing how it changes the field.

Obviously, we want to evaluate the outcome of this experiment, so we invite readers to look with special care at the first of these, in this issue, and at those that will follow for the next several weeks. Give us your opinion, either by returning a survey card, which will be in every issue that has summaries, or by going online to www.sciencemag.org/sciext/easurvey to fill out a short questionnaire. We look forward to hearing from you!



Mail or online survey:
www.sciencemag.org/sciext/easurvey

– Donald Kennedy

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