

## American Association for the Advancement of Science

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Instructions for contributors appears on page xi of the 27 June 1986 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.

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## Beauty, Balance, and Mathematics

Now that female beauty has been reduced to a formula (eye width, three-tenths of the width of the face; chin length, one-fifth of the height of the face; area of the nose, less than 5 percent of the area of the face\*), we await the arrival of a formula for the ideal journal. The reader might wonder how decisions can be made in the absence of such mathematical precision. There are indeed historical, philosophical, and economic considerations that guide the policy of a journal.

*Science* is designed for the sophisticated scientist. Why sophisticated? Because, of course, like beauty, interest in a journal is in the eye of the beholder. *Science* is a relatively thin magazine compared to most specialty journals, yet it covers the entire range of scientific disciplines. Thus it is inevitable that only a small fraction of the articles can be in an individual scientist's subdiscipline. The more curious the reader is about the entire range of science, the more likely he or she is to find something of interest in our pages.

A frequent comment is that *Science* is biased toward the biological sciences. That is historically true, and Newton's laws of motion apply to magazines as they do to bodies falling through space: to change trajectories requires enormous force. It is the goal of this magazine, of this editor, and of the American Association for the Advancement of Science, which represents all of science, to increase participation of scientists in nonbiological disciplines. To do this at the expense of biological science at a time when biology is flourishing in what appears to be its golden age would be folly. Therefore, the AAAS has wisely decided to add pages to the magazine in order to increase the participation of the physical and social sciences without diminishing the contributions of biological sciences.

Balance does not mean that each part of the magazine in each issue will have the same proportion of space for the various fields. Our news department emphasizes the physical sciences, as space science and weaponry occupy an unusually large portion of the news. Reports emphasize biology. Solicited articles, Research News, and Book Reviews reflect our attempts to increase coverage of social and physical sciences. We interpret balance in terms of the entire magazine, and our goal is to ensure that each issue contains items of interest to every type of scientist.

Balance is not achieved by giving every subspecialty equal weight. Fields that flourished in the past may not be as productive in the present and "the past" can be a mere few years ago. We do not wish to forget the past, but we want to emphasize the present and the future.

In the selection process, the economics of publication must play a role. For a wide circulation magazine such as *Science* (subscriptions 155,000) compared to specialty journals (circulations in the 3,000 to 10,000 range), the cost of printing and mailing is enormous. If we want to keep the magazine portable, economical, and comprehensive, topics of the widest impact must be given priority. Seminal articles in any area are welcome, even if they may be difficult reading for many. Intense joy to a small minority of our readership can be as important as mild pleasure to the majority of our audience. An author's anguish when we reject an excellent paper with the statement that it is more appropriate for a specialized journal is matched by our own. This painful selection process is not driven by economics alone; it is also a service to our readers to present a distillation of the best and most general.

Magazines, like species, must adapt to optimize their survival in an ever-changing world. Mutations can occur from within or by suggestions from readers, and this editor particularly welcomes ideas for new features, new emphases, and new concepts. Those who think that their particular specialty is being neglected are encouraged to send specific suggestions to us. We would hope that a mathematical formula would arise to select the good mutations, but in the interim the editor's receptors will have to respond in a serendipitous manner to the most attractive intellectual pheromones provided by our writers and scientists.—DANIEL E. KOSHLAND, JR.

\*M. Cunningham, *J. Pers. Soc. Psychol.* 50, 925 (1986).