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Communicative Accuracy

The events of the past few months have emphasized something we have known all along—that it is important for scientists to describe their activities to the public in such a way that they will be generally understandable and properly informative. This runs into the practical difficulty that some scientists, when they attempt a "popular" description of their labors and of their ideas, insist on achieving almost the same precision and completeness of statement which they would, quite properly, use in talking to their scientific colleagues. "You must not expect me to say that genes are distributed along a chromosome like different sizes and colors of beads along a string, for I have no satisfactory evidence that genes are as discrete as separate beads, and also I don't know about their sizes and shapes." Such scientists feel the urge to attach to each general statement of a popular exposition all the cautionary qualifications, all the modifying details, and all the scholarly footnotes that they would use in a technical report.

It may be helpful to suggest to such scientists that they consider the concept of "communicative accuracy." This concept rests upon the fact, not always recognized, that the effective accuracy of a written statement depends primarily upon the interpretation given to it by the reader. A statement may be said to have communicative accuracy, relative to a given audience of readers or hearers, if it fulfills two conditions. First, taking into account what the audience does and does not already know, it must take the audience closer to a correct understanding. The better an example of communicative accuracy it is, the more gain in understanding it will achieve—but the basic point is simply that it must gain ground in the right direction. Second, its inaccuracies (as judged at a more sophisticated level) must not mislead, must not be of a sort which will block subsequent and further progress toward the truth. Both of these criteria, moreover, are to be applied from the point of view of the audience, not from the more informed and properly more critical point of view of an expert.

Communicative accuracy is important to all of us all of the time. Consider the illuminating example, recently offered by a newspaper reporter, of the two men coming home from work and greeting their wives. One says, "My dear, when I look into your face, time stands still." The other remarks, "My dear, your face would stop a clock."

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