

Taking Science Public?

The further civilization progresses, the greater the media's influence becomes. This also holds true for the media's impact on science. For the purposes of this article I will set aside scientific journals and technical publications, and use the term "media" to refer to radio, TV, newspapers and the Internet, the popular sources that most of society receives information about research achievements from.

Generally speaking, the mass media inform the wider public about the results of research conducted in laboratories, libraries or under natural conditions, and also offer knowledge that enables people of varying educational levels to grasp complex phenomena in the surrounding world. Making sophisticated research achievements comprehensible to a wide audience takes extraordinary skill, something researchers themselves are rarely endowed with. Science journalists and editors are specialized in this field.

The knack of conveying research achievements or scientific information in a way that reaches the layman generally involves changing the language of communication from hermetic, specialist jargon to everyday, freely accessible speech. Various analogies, metaphors, images are the most frequently employed means of explaining discoveries and research achievements. The point is: the more "mass" the media, the humbler the information provided. This seems understandable, considering the fact that the daily press is sometimes addressed to millions of individuals. Furthermore, in order to encourage readers, listeners or viewers to take an interest in information about research, journalists emphasize aspects that are exciting, surprising or shocking. As a result, however, they risk sending a message that runs counter to what scientists themselves intended, and sometimes the information presented may even be simply untrue. Let me illustrate this with an example from my own research field, reported in the Polish daily press several years ago. In 1995, Robert Plomin and his collaborators from the University of London published a professional paper in which they compared selected genes among groups characterized by three different levels of intelligence (IQ = 82, 105 and 130). They concluded that their results could account for less than two percent of the inter-group differences in IQ. But regardless of the subtle and complex nature of their findings, several daily newspapers touted the news with a brief and bold headline: "Intelligence Gene Discovered!" Nothing of the sort had actually occurred. Another example

can be found in reports about the lethal properties of prions, which, although real, have been announced in such a way that they caused the public to fear for their lives. Meanwhile, the probability of being afflicted with this disease is even a million times smaller than the risk of dying in a car crash. Nevertheless, in spite of this question of whether popularization might bring about a false image of science, there are

obvious benefits of "taking science public." Publications in professional journals ensure that a new discovery becomes a component of science in the global scale. However, it is the popular media that "merchandize" science to the general public and decision makers. It is good if they sell it well. Such discoveries, passed on in a form that implies potential benefits for industry or other branches of the national economy, helps find sponsors that are in favor of promoting scientific research. Research achievements popularized in the media sometimes encourage members of parliament to favor the financing of science, something that finds reflection in preferences for those disciplines that produce spectacular discoveries and spur the economic, social and cultural progress of society.

And last but not least, the educational role of the media is hard to overestimate. To give an example, it is thanks to the media that most educated people are nowadays aware of what genetic engineering is. Moreover, the media do influence the educational preferences of young people. It is not uncommon for a single discovery presented in an eye-catching way to evoke a passion and determine a young man or woman's choice of further education.

To conclude: the development of science would be difficult without the engagement of the media, and the benefits of this involvement are certainly manifold. But scientists must be aware that the press is a very powerful tool, and that it is their duty to use it wisely. Researchers who inspire the media to disseminate fresh, very attractive but unverified results are not practicing good manners in science. Representatives of the scientific community must also bear in mind that the media do tend to simplify or distort research results, which may lead to the depreciation of science. The above-mentioned announcement that an "intelligence gene" had been discovered illustrates this premise.



The popular media "merchandize" science to the general public and decision makers. It is good if they sell it well, but scientists have a duty to use this tool with caution

JAN STRELAU

Vice-President of the Polish Academy of Sciences

e-mail: Jan.Strelau@pan.pl