

Anonymous Publication by 1984?

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What if all scientists were to publish anonymously?

I was asked to consider this question in a recent letter from Dr. Lester Goldstein, a molecular biologist at the University of Colorado. He asked, "Do you think that the scientific literature would be far less cluttered with almost worthless or carelessly produced articles were the authors to receive no public credit for their contributions? We might, in fact, be able to achieve that great nirvana in which science was practiced for its own sake, rather than for fame and fortune."

I have often thought about the consequences of universal anonymous scientific publication. The idea, no matter how impractical, is an appealing escapist fantasy since I have been all too aware of the problems involved in the collection, processing, publishing, and retrieval of names. Eliminating names would save a lot of effort. Or would it? So let's consider the possibility that we would all publish anonymously.

As Goldstein suggests, the literature might be less cluttered with

'junk' than at present. The elimination of names might result in shorter articles. We would no longer have to acknowledge by name the earlier contributions of colleagues who had also published anonymously. We would have little difficulty devising means for indexing and retrieving anonymous literature. Indeed, our own patent citation indexes illustrate how one can index serially numbered documents. But the total elimination of eponymic terms in science would often result in longer descriptions.

The 'publish or perish' problem would be solved, since it would be impossible to tell who had published what. Scientists would have to cite previously published papers by code numbers. Unless the FBI or CIA somehow rediscovered their authors, there could be no meaningful citation analyses of individuals, research groups, departments, or institutions. In our brave new world, directors of laboratories would no longer need to add their own names to the published reports of their subordinates. But we would still identify

the most cited paper of the year and award its author a 'Nonny.'

But there are some penalties for the 'ideal' world of anonymity. Communication between researchers might be more difficult. Having read an interesting article, how would one identify or contact its author? Perhaps it could be done by use of mail codes provided by journals. Or the paper could be discussed by computerized conferencing techniques now in development.

Would scientists continue to do research if they were deprived of recognition? Would their love of truth be sufficient motivation? On the other hand, how would scientists obtain research positions or obtain grants? Without publications to cite they might really perish!

Some people believe that the pressure to continually 'prove' oneself by publication, creates a bad atmosphere for research. Without personal publications could scientists carry on their research in a more relaxed atmosphere? Would scientists cease worrying about priority of discovery? Without public accountability wouldn't they also stop worrying about embarrassing mistakes in their data? How would their reputations be established? How indeed would scientists establish a pecking order? Would we not eventually find the emergence of the cult of personality?

Wouldn't the more aggressive *oral* verbalizers begin to dominate the halls of science? But they would have to learn to speak in the third person, lest they reveal in conversation the personal role they played in the anonymous journal literature.

The more you think about it the more pessimistic are the prospects for anonymous publication. Imagine having a scientific conversation without eponymic terms such as Avogadro's Law, the Doppler effect, Hammett's equation, or even Garfield's constant. We would have to create so many new terms or symbols that science would indeed become an arcane language.

"The highest form of vanity is love of fame," wrote George Santayana.¹ But is fame the worst reason for practicing science? I think not. "None but a blockhead ever wrote except for money," said Dr. Samuel Johnson. We scientists might paraphrase him, "None but a blockhead ever published a scientific article except for recognition."

What lies at the heart of the notion proposed by Goldstein is the absurd idea that individual and community interests are necessarily separate entities. My dear friend Chauncey Leake taught me long ago that the interests of society are served best when individual and community interests are mutual. Does Goldstein

seriously believe that the best interests of society would be served by depersonalizing science? Would he suggest that artists not sign their paintings?

I have often asserted that secrecy in science is deplorable. Anonymous publication is a form of secrecy that would depersonalize the scientific-artistic experience. Anonymous science would eventually come to a halt. Even within a totally militaristic society recognition of individual performance is necessary. Scientists may during a period of crisis, as in World War II, sacrifice public recognition. In time, however, most of the important breakthroughs were credited to their discoverers.

Undoubtedly the pressures created by the information explosion will cause us to seek alternative means for communicating scientific information. I have expressed myself on the future of scientific communication before.² The growth of the scientific population of the world should cause us to raise, not lower, the standards and ethics of publications. I believe that these efforts have had significant effects throughout the world.

There may be a place for anonymous publication of controversial

opinions. This may lessen the emotional impact of such statements. But anonymous publications, like anonymous refereeing, makes for easier irresponsible attacks on individuals, and institutions. If some professor feels that his opinions may be holding back his or her career, then I suggest the use of a pseudonym. Many years ago I did this in order to get an opinion published in a journal that consistently refused to give such views any space. The pseudonym I adopted was in fact one used by a nineteenth century revolutionary. It was amusing that no one seemed to recognize it as such.

I would be in favor of adopting code names like Bourbaki as a means of eliminating the absurd listing of dozens of authors for a single paper on some new particle in physics or some new manipulation of DNA. That may be the price one pays for big science. But in spite of the increase in coauthorship, the majority of papers are still published by one author--an individual doing 'little science.'

When scientific or other forms of authorship have become completely anonymous, then 1984--not nirvana--will have been realized.

1. Santayana G. *The life of reason; or, the phases of human progress*. One volume ed. rev. by the author in collaboration with D. Cory. New York: Scribner, 1954, 504 pp.
2. Garfield E. Is there a future for the scientific journal? *Sci-Tech News* 29(2):42-44, 1975. Reprinted in *Current Contents*[®] No. 31, 4 August 1975, p. 5-9.