work toward full representation and opportunity for women in scientific training and employment, affairs of the Association, and in the direction of national science policy.

The tasks of this office would be (i) to develop and undertake programs to improve the status of women scientists; (ii) to prepare a directory of women scientists; and (iii) to write and edit a page on women's equality in *Science* once a month. The AAAS women's caucus requested that the staff for this office include at least two professional-level women who are feminists and an adequate supporting staff.

A steering committee to represent members of the women's caucus was appointed and charged with making necessary arrangements for presenting a detailed proposal and budget to the board of directors of the AAAS at their next meeting.

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The continued disruption of speakers at the AAAS national meetings was a disgrace. It is a sad commentary on the whole American Association for the Advancement of Science that the heckling was allowed to continue. The entire arrangement committee should be censured for not making adequate provisions to assure decorum.

Those jackasses who consider that free speech is for them only should be taught, even at the expense of some broken heads, that other people have rights too. I, for one, will not continue to support the AAAS unless drastic changes are made for future meetings and the membership is assured that scheduled speakers will be permitted to speak.

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For two consecutive years, events have occurred at the annual meetings of the AAAS that have been widely construed as being intimidating to invited speakers. These occurrences might be all in a day's work for a politician. However, speakers at a scientific convention should not have to undergo the kind of vituperation and calumny that might have been expected by someone standing for Parliament from a rotten borough in the 18th century.

A major purpose of the AAAS is to promote a free inquiry into all natural phenomena. This objective certainly implies an audience for all kinds of views, however unpopular. But if the convention atmosphere is one of coercion, threats, and blasphemy, people will indeed refrain from speaking their minds freely. A tumultuous and violent environment exerts its own form of repugnant censorship.

Surely the carefully selected and illustrious leadership of the AAAS is ingenious and resolute enough to find a method whereby speakers of all persuasions can orate uninterrupted by castigations, especially of those whose self-righteousness and moral conceit impel them to acts that have as their purpose the prevention of rational discourse and free speech.

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Social Responsibility

The editorial of 17 December (p. 1187) that was reprinted from the *New York Times* warns the nation's anthropologists against the mixing of politics and social science. It is certainly possible to agree with Lord Macaulay that "It is of very much more importance that men should have food than that they should have pianos. Yet it by no means follows that every piano maker ought to add the business of a baker to his own; for, if he did so, we should have both much worse music and much worse bread." But this delightful quotation hardly supplies an appropriate put-down to the recent concern of anthropologists that studies of Thai tribesmen may have been conducted by some of their colleagues for military purposes.

I read Macaulay's statement as recognition of the fact that pianos and bread are only very loosely coupled, and as advocating that they should remain so (a sort of Ockham's coupling rule—*Copulae non sunt multiplicanda praeter necessitatem*). I read the better part of the anthropologists' concern in about the same way, as advocating the proposition that anthropology and military affairs should be decoupled, lest at least one of them lose its humanistic reputation. Ockham's coupling rule, as implied in Macaulay's quotation, would therefore seem to *support*, rather than confute, the concerned members of the anthropological community.

But this scholarly nit-picking obviously misses a more serious point, whether the members of any profession have a right to exhort their company to its practice for the benefit, rather than the destruction, of men. They have such a right, of course; the real question must properly concern the degree to which this exhortation may extend. Who did or did not do what in the matter of the Thai anthropological studies are matters of fact, and we may therefore hope that they will be established by investigation.

The appropriate mode of conduct for the professional anthropologist, on the other hand, can only be decided by discussion within the anthropological community, and we must hope it will continue to be discussed there as we must hope it will be discussed in all the professions, or the lesson so painfully learned by the atomic scientists will be lost. The scientist is human and has social responsibilities; he must recognize them and deal with them. He cannot escape them by piously defining them out of his code of professional conduct.

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To employ the separation of church and state as an analog to the science and society issue is patently misleading if not dangerous. While the First Amendment makes clear the nature of the church-state relationship, there is fortunately no such similar guidance for the knowledge-society interaction. One reason for this may have been Sir Francis Bacon's famous dictum, "Knowledge is power" (*1*).

To endorse an individual's efforts and accomplishments as the only criteria for judging his professional competence is to unequivocally accept positivistic doctrine. Such an endorsement denies the true definition of professional, which places upon an individual the responsibility for assessing as best he can the consequences of his actions.

As long as the products of scholarship may be exploited by powerful individuals and institutions for selfish purposes, researchers will have an obligation to encourage and publicize the open discussion of possible attendant societal consequences. Hopefully this may lead to a better informed society and a reduced probability that subsequent actions will yield undesirable impacts. Although the practice of partisan

politics through such discussion does a disservice to scholarly exchange, the absence of responsible political behavior may well signify the end of knowledge as a force for human progress.

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Reference

1. F. Bacon, in *The Collected Works of Francis Bacon*, J. Spedding, R. L. Ellis, D. B. Heath, Eds. (Hurd and Houghton, New York, 1869), p. 95.

Shape and Structure

The very human phenomenon (misinterpretation of flat images) discussed by Hans Elias in the article "Three-dimensional structure identified from single sections" (3 Dec. 1971, p. 993) is not unique to biology, geology, or stereology if the concept is generalized. It also appears in physics, chemistry, engineering, and statistics. I think G. Santayana (*1*) very aptly described it when he said, "The empiricist . . . thinks he believes only what he sees, but he is much better at believing than at seeing."

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Reference

1. G. Santayana, *Skepticism and Animal Faith* (Dover, New York, 1955).

Dyslexia: A Personal View

The letters (16 July 1971, p. 190) about learning in dyslexic children and the report that inspired them (26 Mar. 1971, p. 1264) were interesting to me. I comment on dyslexia from a personal standpoint. I believe that I was a dyslexic child, my 14-year-old son was diagnosed as having primary dyslexia, and my 80-year-old father also suffered from this problem.

Each of us has learned to read, but not by conventional methods. We all have the physical characteristics that are usually associated with dyslexia, that is, no strong left or right dominance, a tendency to "fall apart" under pressure to perform in reading and writing, and extremely poor handwriting.

I learned to read at age 11 by using verbal recall. I memorized whole stories and then attempted to match the known words with the written images. I was aided by the fact that I attended a small Catholic school, where the method of teaching involved a great deal of formal reading and reciting. I usually heard an entire lesson read aloud by another student, which gave me a chance to commit it to memory and then to compare the written text with what I had memorized. As my reading improved, whenever possible, I asked another student to describe what I was going to read, so I would have some idea of what was being said in the text. That is still my method—I skim for the main points before I attempt to read.

Our son was quite different. In addition to dyslexia, he also had an extreme amount of dysgraphia. We found a good tutor, a professional third-grade teacher, who began by teaching our son verbally every rule about word attack and phonics. She used a reward system to accomplish this. He then started to learn two-letter words, such as *it, an, at,* and *on.* His progress was slow, but the method worked. We used a flash-card system, timing him and rewarding him for knowing an increasing number of words in a set time. We always used a phonetic approach.

We also attacked the problem from the angle of motivation. Our son loved reptiles, and this provided us with a tool. We bought him several snakes and books about snakes. We encouraged him to catch snakes and lizards and to feed and care for them. Soon he was trying to read about snakes.

Another area of concern was our son's schooling. We received little cooperation from either principals or teachers. One principal felt that our son did not belong in public schools. We live in a city with few special classes. If our son had been dropped from the public schools, he might have been grouped in a class with retarded or emotionally disturbed children; he was neither of these. We felt that such grouping would be detrimental to him and refused to permit it. We always insisted that he finish assignments no matter how long that took, even if the teacher had already given him an F. What he didn't learn during the school year he made up during the summer.

We attempted to see that our son's whole body was developed as completely as possible. Most dyslexic children tend to be clumsy and usually drop out rather than compete. We encouraged him in sports (wrestling, swimming, and trampoline) that would not magnify his problem, but would give him the maximum development. We convinced him that competition was worthwhile, even if he had to practice twice as long as other children. He has competed successfully in both wrestling and swimming.

At age 14, in the ninth grade, our son is emotionally sound. He reads both fast and well, but fails to finish assignments, long essays, and essay or timed tests. His handwriting will never be really legible. He usually receives C's or B's in everything except English. He is still tutored by a high-school student, who helps him organize his assignments and corrects his math.

We have found that dyslexia does not end with just learning to read; it results in a way of life that compensates for a defect which seems lifelong.

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Erroneous Reference

Sandra Scarr-Salapatek, in her thoughtful review of the writings of A. R. Jensen, H. J. Eysenck, and R. Herrnstein on intelligence (Book Reviews, 17 Dec., p. 1223), refers twice (her reference 14) to two papers of mine (*1*, *2*). Her first reference correctly refers to my survey of certain gene frequency data in Africa and the United States, but the second reference incorrectly attributes to me views on intelligence which are completely absent from any of my papers. These two papers (*1*, *2*), like most or all of the other 11 studies of the last 20 years [references in (*2*)], as well as a recent paper of mine (*3*), are concerned only with gene frequencies in Caucasian American, African, and hybrid populations. There is no mention of intelligence, eugenics, or euthenics in any of my three papers on population mixture.

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References

1. T. E. Reed, *Amer. J. Hum. Genet.* **21**, 71 (1969).
2. ———, *Science* **165**, 762 (1969).
3. ———, *Proc. Nat. Acad. Sci. U.S.* **68**, 3168 (1971).

The intended reference was to E. W. Reed and S. C. Reed (reference 15). The correction applies also to the other authors cited in reference 14.

—EDITOR