cember, a score of social scientists spoke of similar difficulties. I suspect that the same experience will occur with respect to the President's war-on-poverty program. Millions will be spent for action, but very little either to plot the course of poverty over time or to evaluate the action programs undertaken. There is no dearth of social scientists willing and eager to work on the massive social changes which are under way in our time, but there is little matching enthusiasm on the part of those institutions that should be supporting basic or fundamental work on these problems.

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One week after publishing the latest in the unsatisfactory series of exchanges on the race issue between Garrett and George and the AAAS Committee on Science in the Promotion of Human Welfare (28 Feb., p. 913), *Science* asks, "Why do social scientists not take better advantage of major and foreseeable social changes to study the processes and effects . . .?" *Science* has part of the answer to its question in its own pages. The kind of "thinking" and name-calling and intimidation and appeal to faith that accompany studies in race relations explain why many social scientists stay aloof from such practical research. For what if the "good guys" (most of our colleagues) were proved wrong? We are timid men and, as they say in our jungle-cities, "Who needs an enemy?"

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. . . Here in Los Alamos there is a beautiful opportunity for studying major social changes as they occur. Here is a community, built from nothing, so to speak, which has evolved in a decade from a secret army post, to an expanding, totally government-owned town, to the present community-in-transition, in which the citizens are being asked to buy their homes, utilities, and so on. . . . In a mountain setting and 20 miles from the nearest village, it is completely isolated geographically. . . . Its social and cultural development, in a vacuum, as it were, is fascinating, and someone should do a thorough study now, while the original patterns are still evident. . . .

The attitudes of primitive peoples toward orbiting satellites, the new fears, new folklore, or new curiosity resulting from "new stars moving in the sky," should merit some study by social scientists. . . .

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Coauthorship: Too Much Laissez Faire

Page's editorial, "Some perils of authorship" (10 Apr., p. 139), should move all scientists to re-examine their practices as authors and editors. Authorship is probably still the primary form of social "currency" in the research community despite continuing competition from such old rivals as officership, professorship, lectureship, and committee membership, and the appearance of many new challengers —granteeship, contractorship, consultantship, study-section membership, paper givership, inviteeship, and international commutership. Like monetary currency, the coins of authorship come in different sizes (books, articles, and technical reports) and vary in value with the standing of the issuing agency (publisher). The wise or suspicious sometimes will not accept the coin until they have tested its metal themselves. But the analogy soon breaks down. Authorship coinage is regulated by vague, unwritten conventions assumed to be universally observed and to be passed on unchanged from generation to generation in the same manner as legends. Page has pointed out that this assumption is unjustified since, in reality, practices vary widely with regard to whose names appear on a paper as authors and how these names are ordered. This lack of common practices leads to dissension among collaborators and to debasement of authorship as the currency of science.

Though perhaps not as serious, additional types of damage follow actions and decisions based on the false premise that the first author named on a paper is always equivalent to the "senior" author and that the order of authors' names has, at present, any universal significance. Page touched upon some of these consequences, and others can be found. For example, the value of author indexes is reduced when, on the assumption that the first few names on a paper are the most important, all authors after some arbitrary cut-off point are omitted. As mechanization and automation of the production of bibliographic tools increases, the economies to be realized by truncating the full list of authors will become more tempting.

Page's suggestions provide an excellent basis for developing the standardization required to correct the damage resulting from our present *laissez faire* with regard to authorship. He rightly indicates that achievement of common practices ultimately depends on authors. But editors can speed this development greatly *if they can agree* on explicit, operational guidelines for authors; individualistic editorial policies will only aggravate the problem. The American Standards Association is working toward national and international consensus on other conventions in scientific publication. It represents an existing mechanism that could be used to develop practical, generally accepted guidelines in cooperation with scientific societies, publishers, and organizations specifically concerned with scientific publication—Section T of the AAAS, the American Medical Writers' Association, the Conference of Biological Editors, the Society for Technical Writers and Publishers, and so forth. The importance of the problem justifies the effort.

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We can turn to the wisdom of the ancients for advice on the problem of multiple authorship discussed by Page.

In the *Ars Poetica* Horace says, "And in one scene no more than three should speak."

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Polonium-210 and Bladder Cancer

Radford and Hunt report (*Science*, 17 Jan., p. 247) that the Po^{210} contained in cigarette smoke may act as a cocarcinogen in lung cancer. This observation seems even more interesting in the light of the finding that the urine of heavy smokers contains nearly