a university contribution to the total research cost of a project, the amount varying from perhaps 5 to 50 percent. There is also the consideration that, at the termination of the contract or grant, the title to capital equipment rests either with the government or with the university. Thus, it would seem that we have to look beyond the percentage figure in order to obtain a realistic evaluation of overhead allowances.

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I have read with considerable interest the editorial entitled "Costly cash." For your information, during 1960–61, Western Reserve University, while spending $5.018 million in federal and private funds for project research, incurred an obligation for unreimbursed indirect costs of $665,000. I should like to point out that while grants, particularly those from the U.S. Public Health Service, do not provide for anything like sufficient overhead, many nonfederal sources are even less generous. Thus it seems to me that we must not level such charges against the federal government alone.

On the basis of a formula worked out by the government audit agency we have determined that 26.2 percent of the total costs is an allowable charge for indirect costs on research projects. While we have not, to date, turned down any grant because of inadequate allowance for overhead, there is little doubt in my mind that this possibility will become increasingly less remote in the years ahead.

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The Rise of Sap

In the article "Cohesive lift of sap in the rattan vine" [*Science* **134**, 1835 (1961)], Scholander, Hemmingsen, and Garvey state that the rise of sap in tall trees has been puzzling "for more than a century" and that the cohesion theory of Dixon and Joly (1894) and Askenasy (1895) is generally accepted.

This very problem was considered by the reverend Stephen Hales (1677–1761) in the early years of the 18th century. Hales, known as the first man to have measured arterial blood pressure [*Haemostatics* (1733)], was inter-

ested in the quantitative approach to various problems of animal and plant physiology. As far as I know, he associated the rise of sap in tall trees with the pulling force generated by evaporation from the leaves. Does not Hales's principle underlie Dixon and Joly's as well as Askenasy's theory?

Almost a quarter of a millennium has passed since Hales attacked the problem which, as Scholander says, still challenges "the experimental ingenuity of future workers." It is worth while to remember that, according to Hales, our thoughts should carry us "a little farther than the plain evidence of experiments will warrant . . . otherwise we should make but very slow advances in future discoveries." Is it experimental ingenuity or ingenuity in conceptualization which now is needed most?

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Objectivity and Responsibility

I enjoyed and appreciated the editorial "The other fellows' ball park" [*Science* **134**, 1163 (20 Oct. 1961)]. This touches one facet of a broader problem. I observe regretfully that certain elements of the scientific community are so absorbed in presenting the unprejudiced, objective viewpoint that they often do great damage to the democratic cause, usually by careless implication and omission. This is usually attributable to their being far better informed about the weaknesses of our own system than they are about the weaknesses of the competitive system.

Of late, *Science* has been particularly negligent about accepting responsibility for presenting a complete picture. For instance, in "Soviet defections: Conclusions of broad discontent unwarranted" ("Science and the news," 20 Oct.), the last paragraph is expressed exactly as I would expect it to be stated in a Russian newspaper, and no doubt Russian newspapers will quote this material verbatim.

Science and scientists cannot divest themselves of their national responsibility to consider the net effect of their expressions, particularly at this time when our own citizens and people the world over are keenly aware of the role of science in the present and future.

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Meetings

Microbiology in Latin America

The second Latin-American and the first Costa Rican national congresses of microbiology were jointly held from 10 to 17 December 1961, in San José, Costa Rica. The meeting was attended by about 300 participants from 16 nations, including 50 from England, Canada, and the United States.

Listed in the scientific program were more than 150 titles, encompassing the following fields: general, medical, and veterinary bacteriology; immunology; helminthology; mycology; protozoology; virology; phytopathology; and agricultural and industrial microbiology. The greatest interest was expressed in medical microbiology. Abstracts of papers were published in a "General program and résumé"; many of the individual papers will appear in scientific journals.

Special symposia or panel sessions focused on leishmaniasis, intestinal parasitosis, microbial physiology and