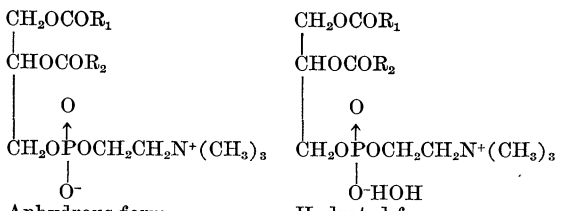
Communications

Depiction of the Lecithin Molecule

As a modification of the excellent suggestion made by David R. Howton [*Science* **119**, 420 (1954)], it would be well, in view of our present knowledge of acids and bases, to avoid depicting a hydrogen ion (proton) as existing, as such, in the presence of such a strong base as a hydroxyl ion. If the water of hydration is so important, it would be better if it were pictured in the manner indicated here. Note also the coordinate bond between the phosphorus and an oxygen atom.



Anhydrous form | Hydrated form

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A Comment on Scientific Writing

In *Science* for 23 April 1954 there were articles on the frequent wordy emptiness and awkward style in scientific writings. Most of the examples quoted and discussed, although poorly written, were nevertheless in correct English. However, the matter is more serious than that: in the mathematical field, at least, outright errors in grammar are not uncommon.

Recently the editors of a journal of a mathematical organization sent me for review a book that furnishes a rather bad example. The volume in question contains a fair proportion of really valuable new work. It was written by a group of distinguished scientists. The native language of the majority was German. The result is a chain of slang and stodgy teutonisms, scattered helter skelter among the commas. To qualify this statement I must add that one of the authors born abroad wrote in clear, precise, and correct English, whereas one of the young native Americans wrote miserably. Young scientists are trained by example, and I fear his case is typical. This aspect of the problem, nothing so refined as mere infelicity of expression, was not mentioned in the articles in *Science,* and for this reason the following paragraphs from my unpublished review may be of interest.

> Now to say no more than this about the style might allow misunderstanding. This particular kettle is only somewhat blacker than the pots in its environment. Not to the tolerance of Americans but to their carelessness must be attributed their willingness to read such maculation of their mother tongue. No German or French editor would dare to publish a comparable haggis of blunders and anglicisms. To the triumph of the jargon of comic strips and advertisements has been added the influx of foreign scientists, especially Germans. The splendid additions brought by these foreign scientists to our scientific life make it easy to see how some young Americans, already ill footed in their mother tongue and mistaking in their masters the certainty of knowledge for correct expression of it, have fallen into a ragged bastardy of language. At the same time there has been a very unfortunate pressure on foreign-born scientists to write in English. That their English is better than our German or French does not make their English correct or clear. That their English is only a little worse than their students' and colleagues', while reflecting little credit to these latter, does not license it. Every editor knows that most manuscripts received contain outright errors which must be corrected silently, while the problem of style is more or less hopeless. I mention all this here because this volume is the worst I have seen: each manuscript, apparently, is printed in its original purity, making the whole a defining example of *die schönste Lengevitch.*
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> Moreover, since most of this volume is written by persons whose native languages will not tolerate the mangling to which its free (but nevertheless not inexistent) grammar makes English liable, in this case there was a simple remedy. Had the editors encouraged some of the authors to write in German, some of the articles in this volume would have been expressed in a style commensurate with the value of their contents and the result would have come nearer to that clarity without which expository works fail of their purpose.

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"Big Business Takes Over Research"

In the issue of 9 July, page 74, J. B. Sumner pays tribute to the governmental and private institutions that "possess the financial backing, the equipment, the highly trained scientists and the technicians to follow up any new lead in science and to carry this lead rapidly to a successful conclusion." The remainder of the letter is a complaint that the university teacher cannot compete successfully with this setup and that this situation is "altogether undesirable."

The university teacher who carries on research as a side line to his teaching and utilizes untrained or partly trained fellows has as his most important function the training of his assistants in the methods of research. He is pointed not at the production of new *facts* so much as at the production of new *researchers.* The university professor must recognize that his first function is education, and no one should underrate that function—certainly not the professor himself. Without competent men, no amount of financial backing or equipment would produce anything.