apatite free of all carbonate content. Thus the presence of carbonate is not needed for the synthesis of hydroxyapatite.

The study of the exact nature of mineral tissue is fascinating work. There is room in this field for many viewpoints and dissenting theories. I think it is important to state clearly what is known and what is not known about these systems and I have attempted to do this in my chapter (*1*). I urge all workers in this field not to be satisfied with the half-answers in our possession now. We need more experiments, more facts, to define the atomic structure of hard tissue.

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Grants and Applicants

The game of measuring past scientists against present grant-reviewing policies [*Science* **133**, 1040 (1961)] can be played without end. Freud was never psychoanalyzed, Mendel lacked training in genetics, Boas's degrees were not in anthropology, and Faraday's formal qualifications were belittled in his own time.

But these pioneers are not the applicants for today's research dollars. The request for a $20,000 analyzer rarely comes from an amateur in science, and the retired school teacher does not seek $50,000 (plus overhead) for studies on carcinogens. Current applicants make a point of their education, degrees, training, publications (and imagination) and expect to be judged accordingly.

It is true that a polished research plan does not automatically guarantee results. But no one has suggested that totally unplanned excursions are more productive. There are discovery-prone investigators and discovery-proof workers, and it is reasonable to bet on the former.

Years ago, in the Neolithic, an anonymous Sumerian discovered wine. Admittedly he lacked formal training in microbiology and carbohydrate chemistry. But in all probability he was versed in juice technology and combined intuition with persistence and the experimental approach. These same qualities, in modern dress, involve training, knowledge of the literature, a facility at posing problems, and demonstrated ability to see them through—qualities that may be present in one man, or shared by a team.

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Federal Aid to Education

In the editorial "Equal but separate," on federal aid to education [*Science* **133**, 1043 (7 Apr. 1961)], there are several debatable points—for example, that of the legality under the constitution of federal aid to education and of whether the necessity for this is real (the increase in school construction since World War II has been much more rapid than the large increase in the number of students).

The point that really concerns me, however, is the argument that federal aid is needed because the communities and the property tax can no longer support schools. Does the author of the editorial feel that there are other sources, aside from all the local communities, of federal income, and does he feel that the money the federal government acquires in a community multiplies on its trip to Washington? If this type of fuzzy thinking is representative of the scientific community which *Science* represents, the situation is indeed deplorable.

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The editorial entitled "Equal but separate" contains errors in logic and fails to use facts to justify a position. It is, therefore, little more than a regurgitation of some widely publicized views. Such a spurious effort is especially inappropriate for a scholarly publication.

For instance, it is a flagrant *non sequitur* to claim "the deficiencies in education in the United States are serious in the extreme" follows from