

flux mentioned in the editorial, about 400 liters per square meter day (2). Various U.C.L.A. reports and journal publications followed, describing the technique in detail (3), and two patents were granted in 1964 (U.S. 3,133,132 and 3,133,137). All of this work was sponsored only by the California State Legislature. The flux obtained is sufficiently high that the technique is being given serious consideration both by contractors of the Office of Saline Water and by several private organizations.

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#### References

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3. ———, "Sea water demineralization by means of an osmotic membrane," in *Proc. Am. Chem. Soc. Symp.*, 1962, p. 117-132 (*Advan. Chem. Ser.* 38); "Sea water demineralization by means of a semipermeable membrane," *U.C.L.A. Dept. Eng. Progr. Rept.* 60-60, 61-42, 62-26, 62-41, 62-52, 63-22, 63-32, 63-37.

### No Quarter for Humanities

Scientists who write in support of the cause of the humanities lend new empirical substantiation to the hypothesis that the road to Hell is paved with good intentions. Wolfe's editorials (20 March and 31 July 1964) favor formation of a National Humanities Foundation; and an article by Seaborg (5 June 1964, p. 1199) is entitled "Science and the humanities: a new level of symbiosis."

Well, I certainly question that science should encourage support of the humanities. Seaborg's article is very badly misnamed; his fascinating illustrations reflect not a new level of symbiosis, but the gradual replacement of "humanistic scholarship" by scientific techniques. It may be true that, since Thomas Huxley's time, science in general has, in public prestige, surpassed the humanities. At any rate, contemporary scientists are persuaded that science, as a good winner, ought to help the humanities to their feet. They assume that the humanities, once upright again, will not deliver to science a stinging blow. They must believe that the two can grow together. In my opinion, it would be more correct to view science and the humanities as cut-throat competitors.

I do not expect my argument to convince many natural scientists; they long

since have won their major battles with the humanists. They can afford a permissive attitude.

The situation with respect to certain social sciences, however, is very different. Still the underdog, social science is in a fierce competition with the humanities—and only the fitter will survive.

In view of this circumstance, Wolfe's editorials, by implying it false that much of what the humanities claim as theirs is the rightful territory of the social sciences, represent not merely an implicit (and doubtless inadvertent) insult to these social sciences; these editorials also, by aiding a competitor, damage the prospects of the social sciences. Many social scientists will disagree with my position. The entire January 1964 *Journal of Social Issues* is dedicated to patching up the quarrel between social scientists and humanists. The editor of the issue, Warren G. Bennis, finds this antagonism "bizarre because the social sciences and the humanities seem to have so much in common" (p. 4). A domineering husband and a domineering wife may also have much in common. Does that mean their marriage will prove a happy one?

Come the day of reckoning, history will be devoured by sociology, and *applied science* will occupy that territory which today is called the arts'. Conclusion: Help stamp out art!

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### Supply of Telescopes

The recent report of the National Academy of Sciences entitled *Ground Based Astronomy, A Ten-Year Program* (see *Science*, 18 Oct. 1964, p. 899; 25 Dec. 1964, p. 1641) is excellent in its coverage, attitude, and the moderation with which it approaches the problems. However, I should like to add a few comments on a problem that I think it does not properly cover.

There are in the United States a fairly large number of astronomers who are members of the faculties of universities and colleges of medium or small size. In many instances there is only one astronomer at the institution. Usually these men and women have large numbers of students but are able to devote their summers to research. Until the last dozen years they were

able on occasion to visit large observatories in the summer to obtain observational material. But because of the serious shortage of observing time, which the report so ably points out, they are no longer able to do so and to continue to make their modest but important contributions to astronomy. Very few of these astronomers are associated with institutions which have even the most elementary research facilities in the way of telescopic equipment. A good many are at the point of being forced to retire from even a modest research program.

Any telescope with an aperture smaller than 36 inches seems to be regarded in the report as a teaching telescope and not a research instrument. I cannot believe that the committee's attitude is as rigid as this (see page 49 of the report). I am sure that many astronomers would agree with me that a 24-inch telescope devoted to photometric programs can obtain highly significant data on a wide variety of problems.

There are within reach of a 24-inch telescope several hundred eclipsing binaries for which there are no good light curves. In addition there are large numbers of intrinsic variables which deserve study. This work may not be on the very frontier of astronomy, but the results that could be obtained would be basic to the whole field. Telescopes of this size could also serve as training instruments for undergraduates and perhaps first-year graduate students who might well go on to other institutions for more advanced work. In many areas such instruments would serve to attract astronomers to the many schools which now do not have any on their faculties.

The cost of such an installation is not high. A good telescope of aperture of 24 inches plus photometer and associated electronic equipment and including the dome and a suitable building would cost little more than \$100,000—a rather modest sum. Twenty of these installations at suitable colleges and universities in the United States could easily produce results of value far out of proportion to the relatively modest investment. These installations would serve to take some of the heavy pressure off of the large, established graduate schools of astronomy and would serve to keep astronomy alive in areas where it is now in danger of dying.

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