

curred December 14, 1894. A short time previous to his death he gave a series of papers on the Milky Way and the nebulae, in *Knowledge*, of which magazine he was editor. In speaking of the dark lane south and east of Theta Ophiuchi on a Lick photograph of mine which he reproduced, he says: "The dark vacant areas or channels running north and south of the bright star (Theta Ophiuchi) at the center. . . . seem to me to be undoubtedly dark structure, or obscuring masses in space, which cut out the light from the nebulous or stellar region behind them."

There is a list of starless fields given in Appendix I of Webb's *Celestial Objects*, taken from the Cape observations of Sir John Herschel. These, however, are quite different from the ones I have been dealing with and are in most cases perhaps only real vacancies among the stars.

For some time I have hoped to make a catalogue of the dark markings shown on my photographs of the sky. The exact location of these objects is desirable so that their study with powerful photographic telescopes may be possible. There seems to be no question that some of them are real objects which are either entirely devoid of light or so feebly luminous when seen against the Milky Way as to appear black. As mere curiosities of the sky alone their cataloguing would be desirable, but as real opaque objects between us and the more distant stars their exact location would seem to be important. Their study with the present means of research will be of the highest interest. With this idea in view I have collected a number of these objects shown on my negatives to form the following catalogue. . . .

Science News Letter, February 4, 1933

PSYCHOLOGY

Women Quicker but Men Better at Prolonged Thought

WOMEN are superior to men in those mental tasks which require attention to details and a quick adaptation to a rapidly changing situation. But men are superior where quick responses are not so important as a grasp of the problem as a whole—where it is necessary to hold the attention for a prolonged period in order to carry a thing through to its logical conclusion.

These sex differences were observed in the psychological laboratories of Indiana University, Bloomington, by Dr. Hanna M. Book, who reported her findings in the *Journal of Social Psychology*.

In a test such as that of comparing two parallel columns of figures, where each item is quickly finished and one must go on to the next, women were found to excel. Men were better on maze tracing where the whole pattern must be kept in mind until a solution is found.

After a nerve fiber has been excited by any stimulus such as those constantly occurring during mental work, there follows a brief period during which the nerve fiber is inactive and cannot respond to further excitement. This refractory or inexcitable or non-irritable period is extremely short, measured in mere thousandths of a second, and is very difficult to determine. So far sex

differences, if any, have not been noted. But Dr. Book explains the sex differences in mental activity she has observed as being possibly a result of such sex differences in the refractory period.

Women, she said, probably have shorter refractory periods. Therefore, their nerves transmit a greater number of impulses per unit of time, which, being physiologically a more intense stimulus, would account for their ability to respond quickly to more details and to rapid changes in environment. Men have longer refractory periods and therefore fewer impulses per unit of time, which would account for a slow, massive, deliberative sort of thinking in men.

"In general, if the task is fractional, that is divided up into parts, the women are better; if, however, the task is continuous, the men are superior," Dr. Book said.

Science News Letter, January 28, 1933

New knowledge of the Bacchic mysteries is gained by study of a statue base of the second century A.D., which once supported a statue of a priestess of the Dionysian cult and which bears the names of about 400 initiates who dedicated the monument to her.

GENERAL SCIENCE

Foundations Alter Support of Researches

AMERICAN foundations continued their support of research during 1931 despite economic conditions, it appears from a report issued by the Twentieth Century Fund.

Although the total of grants for research was cut more than two million dollars from 1930 to 1931, this reduction represented less than 19 per cent. of nearly thirteen millions which were given out in 1930. The type of research aided changed considerably, however, reflecting a change of interests during the year. Researchers in general education, international relations and aesthetics were reduced 78 per cent., 64 per cent., and 73 per cent. respectively; while research in social welfare was increased 205 per cent., research in government increased 263 per cent., and research in agriculture and forestry increased 264 per cent.

Other less extreme instances in which funds were diverted to channels aiding the present situation more directly are shown by the following increases and decreases in grants for research: Physical sciences decreased 48 per cent., engineering reduced 12 per cent., social sciences increased 21 per cent., and humanities decreased 28 per cent. Research in economics was increased 49 per cent.

Medical research received more aid from foundations in 1931 than in 1930, gaining 40 per cent., although medical education suffered a loss of more than thirteen million dollars.

Over \$54,000,000 Given

The total of the grants covered in the report of the Twentieth Century Fund amounted to fifty-four and a half millions of dollars, of which by far the greatest proportion went for aid in education. The wide variety of activities to which money has been donated, the report said, range all the way from cave dwellers' art and the causes of pessimism in the Middle Ages to the preserving of game birds, maintenance of undertaking parlors and research into ventilation, comfort stations and interstellar complications of modern times. The decrease in the total below the amount granted in 1930 was about 24 per cent.

Science News Letter, February 4, 1933