month: *Provided,* That there shall be no Leap Day in the last year of any century that is not divisible by four.

A condensed statement of the facts relating to this calendar is as follows: The year consists of New Year's Day, which is the first day of the year, and is not a part of any week or month; and thirteen months of twenty-eight days each, as follows: January, February, March, April, May, June, Sol, July, August, September, October, November and December.

In centennial years divisible by 400 and in other years divisible by 4, an extra day, called Leap Day, is inserted between the months of June and Sol. Leap Day is not a part of any week or month. The first quarter of the year ends with the first week of April, the second quarter with the second week of Sol, the third with the third week of September, and the fourth with the fourth week of December. New Year's Day and Leap Day are holidays, and are omitted in counting interest and rent.

It might be an improvement in this calendar to have the week begin with Sunday, as has always been the case. The suggestion has also been made to give the extra month the name of Midyear, though these are matters of detail.

It appears to the writer that this calendar is more desirable than the one outlined by Professor Warren in the April 19 number of SCIENCE. I hope those who are interested in the matter will communicate with Congressman Smith and encourage him to push his laudable efforts in the matter.

W. J. SPILLMAN

DRAWINGS ON LANTERN SLIDES

TO THE EDITOR OF SCIENCE: In connection with the letter from Professor Gunthorp in your issue of April 12 in regard to drawings on lantern slides, I may mention that I have obtained satisfactory results with the use of ordinary India ink such as is used by draftsmen. This takes hold quite well on ordinary clean glass surface, I suppose through the action of the gum arabic contained in the ink. The slide can be attached to a drawing board by thumb tacks whose heads project over the glass, provided bits of rubber are placed between the glass and the heads of the tacks. For drawing circles with a compass a small bit of paper was gummed to the glass at the center, to enable the foot of the compass to take hold without slipping (the paper being afterward scraped off).

J. R. BENTON

SCIENTIFIC BOOKS

Culture and Ethnology. By ROBERT H. LOWIE, Ph.D., Associate Curator of Anthropology, American Museum of Natural History. New York, Douglas C. McMurtie. 1917.

Anthropologists in America need to issue more volumes for laymen than they have so far done. Dr. Lowie's present volume, and Dr. Wissler's larger volume on The American Indian, are especially welcome studies in this sparsely cultivated field.

Dr. Lowie says in his preface that his book is an attempt at popularization. Its aim is to occupy an intermediate position between technical discourses addressed to scientists and the more popular lectures which are designed to furnish mainly entertainment. In the first four chapters Dr. Lowie seems to me admirably to have attained his purpose.

The book starts with Tylor's well-known and practically perfect definition of culture: "Culture . . . is that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society." The point is well made and forcibly driven home that since the science of psychology, even in its most modern and varied ramifications, "does not grapple with *acquired* mental traits nor with the influence of *society* on individual thought, feeling and will, there is need of a science which deals with all *acquired* capabilities and habits of man as a member of society." That science, as Dr. Lowie names it, is Ethnology.

In the discussion of "Culture and Race" the author grants that "at first blush" it appears very plausible that within the human species "differences in organization should be correlated with the observed cultural manifestations of varying degree and complexity." And he concludes that though we "assume that racial

differences *are* at the bottom of some of the observed cultural differences, this fact would not necessarily mean, then, that the *average* ability of the inferior races is less, but only that extreme variations of an advantageous character occur less frequently among them."

The field student of primitive peoples knows that not only do extreme advantageous variations occur less frequently among primitive peoples than among the more cultured groups numbering millions of men, but he knows that among primitive peoples artificial selection weeds out those superior individuals, who now and then appear and try to put over a new idea. The conclusion seems to me to be inevitable that this ruthless selection in time affects the racial hereditary abilities of such peoples—just as the Inquisition is known to have affected the Spaniards and Poles.

The author's conclusion in the chapter entitled "Culture and Environment" seems to me entirely too sweeping and to need many conditioning phrases:

"Environment can not explain culture because the identical environment is consistent with distinct cultures; because cultural traits persist from inertia in an unfavorable environment; because they do not develop where they would be of distinct advantage to a people; and because they may even disappear where one would least expect it on geographical principles." The discussion to a certain extent limits the sweeping reach of this conclusion.

In regard to "Determinants of Culture" Dr. Lowie truthfully says: "Psychology, social differences, geographical environment, have all proved inadequate for the interpretation of cultural phenomena. The inference is obvious. Culture is a thing *sui generis* which can be explained only in terms of itself." His conclusion is that culture is a closed system. Explanations of culture must remain on the cultural plane. "There are ultimate, irreducible facts, special functioning relations, and principles of wider scope that guide us through the chaotic maze of detail" in the science of human culture, as in all other sciences. Any particular cultural phenomenon is in a measure at least unique; and, in consequence, "its explanation will consist in referring it back to the particular circumstances that preceded it." One by one, then, cultural inventions must be studied primarily with reference solely to themselves; while the study of the growth of culture by diffusion from people to people, with accompanying modifications, will yield the larger volume of new data in the field of cultural research.

The last chapter, "Terms of Relationship," occupies eighty-two pages, or slightly less than one half the volume. By the time I had read the chapter two thirds through I turned to the conclusion for relief and light—and I was reassured of my powers of comprehension. This is Dr. Lowie's conclusion: "I am content with calling attention to the tremendous ethnological significance of kinship terminologies, with combating premature confidence in generalizations based on sheer ignorance, and above all with suggesting that the most rigorous logical formulation of problems is possible in this too long neglected domain of the science of culture." I was relieved to find that the often long-drawn arguments, the partial agreements with or refutations of, conclusions of other students of primitive culture, and the suggested relationships between kinship terminologies and cultural facts, were not intended to get the reader farther than Dr. Lowie's sane conclusion. I question the proper appearance of this chapter in a book intended primarily for laymen.

The book, on the whole, is a genuine asset to our anthropological literature, and will interest and enlighten the scientific student as well as the layman.

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SPECIAL ARTICLES

NEZARA VIRIDULA AND KERNEL SPOT OF PECAN

The following is intended to serve merely as a preliminary note. The work to be done on the problem far exceeds what has been accomplished but the results obtained thus far are so striking that it has seemed worth while to