seem, in this field the mahogany roll-top desk is not the greatest thing in the world.

Says Professor Fite in the *Nation:*

> Wherever two or three are gathered together, and even where they are not gathered together, some one is on his way to organize them. In the madness for organization we have long since lost sight of the end in the means; we have forgotten that neither the fruition nor the advancement of human life can take place in the absence of individual freedom and creativeness, and we have come to believe that the sole meaning of life and of culture is—to be organized.

INDIVIDUAL

SCIENCE AS CONTRABAND

TO THE EDITOR OF SCIENCE: Through the kind offices of Professor James Ward the British authorities have consented to release the books sent from Germany to the *Psychological Review.* The Psychological Review Company desires to express its thanks to Professor Ward.

For the benefit of other scientists who may be similarly involved it should be stated that the action taken was a pure act of courtesy to Professor Ward. The taint of contraband still infects scientific literature in the opinion of the procurator general; but he is willing to defer to expert judgment.

HOWARD C. WARREN

PSYCHOLOGICAL REVIEW CO.,
PRINCETON, N. J.,
February 20, 1917

TRIMMED MAGAZINES AND EFFICIENCY EXPERTS

TO THE EDITOR OF SCIENCE: Your correspondent "H. P." waxes somewhat warm in your issue of January 12 on the above subject and evidently prefers his untrimmed. To me it seems "all nonsense" to say that "I have always found that I got more out of an unopened magazine than an opened one." The contents are of course the same in either case, the difference is in one's mental attitude. I find my weekly copy of SCIENCE so interesting that I almost invariably read it clear through, and I do not want to be delayed in getting at its contents by having to cut its pages. I find it very irritating to have to cut the pages of an interesting book when I had much rather be reading it. Such work is to me a waste of time and energy. SCIENCE is read weekly by some 12,000 to 15,000 busy men and women whose time is valuable in the literal as well as in the figurative sense, hence the "general opinion that the copies should be trimmed." This suits the present writer, but it is to be regretted that "H. P." can no longer get his untrimmed.

E. W. GUDGER

STATE NORMAL COLLEGE,
GREENSBORO, N. C.,
February 1, 1917

QUOTATIONS

INTELLECT AND THE WAR

HAD not experience amply shown that no subject is so remote as to make it exempt from contact with the workings of the great war, one might expect such immunity in the case of a paper on "The Relations of Mathematics to the Natural Sciences." As it is, one is not in the least surprised to find that the bearing of the present state of the world on the future of mathematical research is the theme of the closing remarks in the presidential address with that title delivered at the recent meeting of the American Mathematical Society by Professor E. W. Brown, the distinguished mathematical astronomer of Yale. While the stupendous events of the past two years have caused the need for scientific research to be emphasized more strongly than ever before, he says, yet it is to be remembered that in this the practical end alone is contemplated, and the purely intellectual side is little regarded. "The future of research in pure science is in danger as never before," he warns.

For this fear there is only too much ground, though in our judgment it would be a deplorable error to accept as inevitable that which is only threatened. No man can say what reaction there may be after the war from that state of mind which the appalling demands of such a conflict as is now convulsing the world inevitably produce. Everything depends on the nature of the peace which is to follow. If it is to be such as will compel a

state of gigantic preparedness for a renewal of the stupendous struggle, the constant expenditure and strain directly involved will be no more certain than such consequences in the domain of the intellect as Professor Brown foreshadows, and as other men concerned for the future of intellectual aspiration have undoubtedly been apprehending. If, on the other hand, the world shall be blest with such an outlook at the close of the war as will make the recurrence of such a calamity seem practically out of the question, it is by no means impossible that release from the fearful strain of the war will carry with it a spontaneous rush of lofty minds into regions as remote as possible from that into which the life of man had been so inexorably forced during the years of terror. To trust to any analogy of the past, when the present is in some vital respects so utterly without precedent, would be most unsafe; yet it is not without significance that in this very domain of pure mathematics two periods of the highest fecundity have occurred precisely when it might have been supposed that the minds of men were completely absorbed in the tremendous actualities of war. During and for some years after the wars of the First Republic and of Napoleon, there was in France such a flowering of mathematical genius and such splendor of mathematical achievement as have hardly been matched in the history of the world; and it was immediately after the war of 1870 that, after a long period of comparative quiescence, that same spirit flashed out in the brilliant group of mathematicians of whom Henri Poincaré was but one, though the most illustrious, exemplar.

However this may be, there can be no doubt that the gospel of relentless "efficiency" to which the war has given so great an impetus carries, deeply embedded in it, the seeds of hostility to all activities and interests which find their spring in intellectual aspiration or enthusiasm. At best, from the standpoint of the efficiency cult, such endeavors have to be justified by the plea that, divorced as they may seem to be from practical objects, they do conduce to the advancement of the common ends of the nation or of mankind, though the connection may be remote or subtle. The plea can be made good over a very broad area, and in the case of mathematics the constant interplay between the advancement of pure theory and the pursuit of its physical applications makes the task easier than in many other cases. But the argument is a thorny one; and that is not the worst of it. The mere necessity of resorting to such a defensive plea, the mere surrender of the proud conviction that the pursuit of truth is in itself a noble end which requires no secondary justification, must immeasurably depress the tone of scientific enthusiasm and impair the energy with which its objects are pursued.

And it has to be confessed that, long before the war began, long before any shadow of its approach had been cast upon the world, another factor was working powerfully toward the production of the same effect. For years, and most of all in this country, the idea that "service" is the only justifiable motive of intellectual endeavor had been steadily gaining ground. It is true that occasion has shown, again and again, that the intellectual world had not been swept from its moorings; that, as usual, the latest mode had been taken up by persons whose vocal facility produced a false impression both of their numbers and their weight. Nevertheless, the trend was marked enough to be important; and, unless checked by staunch self-assertion on the part of those whose convictions were deeper, as well as more informed, it threatened grave injury to one of the highest interests of civilized mankind. With the reinforcement which the developments of the war have from so different a quarter brought to this tendency, it is more than ever necessary for those to assert themselves who know how precious to the life of us all is that element which is supplied by the devotion of the lives of some to the pursuit of truth for its own sake, or even for the sake of the fame which is the natural reward of signal success. John Milton had perhaps as high an ideal of service as the youngest of our present-day reformers; yet it was not with contempt that he spoke of those who "scorn delights and live laborious days" in the pur-

suit of intellectual fame; nor did Newton do less for the greatness of his country, from whatever standpoint you choose to view it, by uncovering the secret of the universe than he would have done by sticking closer to earth in the strivings of his unrivalled intellect.—New York *Evening Post.*

SCIENTIFIC BOOKS

An Introduction to Historical Geology with Special Reference to North America. By William J. Miller. New York: D. Van Nostrand Company. With 238 illustrations. Pp. xvi + 399. $2.00 net.

The meaning of the word geology was greatly modified and vastly expanded in the early part of last century through the works of Wm. Smith, Cuvier, Brongniart and their followers. In the place of philosophical mineralogy the meat and marrow of the subject became earth history. To this phase of the subject Conybeare and Phillips devoted the greater portion of space in their well-known treatise of 1822. Lyell's tastes being largely along the line of the modern physical geographers, judiciously termed his great work not Geology, but the "Principles of Geology, or the modern Changes of the Earth and Its Inhabitants Considered as Illustrative of Geology." Yet he included in the earlier five editions of this work a large amount of stratigraphical matter gleaned during his various trips into the Tertiary fields of south Europe. In 1838, however, he excerpted the stratigraphical or historical matter from his "Principles," recast and enlarged upon the same and brought out a separate volume called "Elements of Geology." This ran through some half-dozen editions down into the "seventies" and was referred to by him as Elements of Geology, Students' Elements of Geology, Geology Proper or simply Geology. Some time before, however, De la Beche had foreseen the divisibility of the subject along similar lines, for he remarks in the preface to his treatise of 1833:

> It is not difficult to foresee that this science, essentially one of observation, instead of being, as formerly, loaded with ingenious speculations, will be divided into different branches each investigated by those whose particular acquirements may render them most competent to do so; the various combinations of inorganic matter being examined by the Natural Philosopher, while the Natural Historian will find ample occupation in the remains of the various animals and vegetables which have lived at the different periods on the surface of the earth.

A recent text-book of geology, by Pirsson and Schuchert follows practically the lines of subdivision suggested by De la Beche: Part I. is designated Physical Geology; Part II., Historical Geology. These parts may be purchased in separate binding. Another recent text-book by Cleland, is styled "Geology, Physical and Historical."

In Miller's work before us we have an independent volume styled "An Introduction to Historical Geology." This the author hopes "may find a place as a class-book dealing with the historical portion of a one-year course in general geology," adding, however, "An elementary knowledge of what is generally comprised under dynamical and structural geology is presupposed."

Except in this independent character of the work, Professor Miller's production does not differ radically from what has usually been found in the historical portion of the better text-books on geology. That is, the various periods are taken up in chronologic order. The origin of the name of the period, its subdivisions, distribution of rocks, physical history, foreign equivalents, climate, economic products, and life are the usual subdivisional topics. Under life, Plants, Protozoa, Porifera, Cœlenterata, Echinoderms, Molluscoids, Mollusca, Arthropods and Vertebrates, with subdivisions are systematically discussed. The author quotes freely from modern text-books, manuals and general geological literature, seemingly content to let well-enough alone. Likewise "appropriate illustrations more or less familiar because of their appearance in other text-books or manuals of geology, have not been abandoned merely for the sake of something new or different."

As regards the matter of allotment of space and attention to the several eras, we believe good judgment has been shown. 145 pages are