speed of passage approaches the infinite. Youth looks forward and would "hasten the day"—of a party, of marriage, of economic competence. Age also looks forward, but to a constantly closer door never willingly approached. The apparent speed of time is warped in a direction opposite to that preferred. To youth it seems to move slowly, because youth would have it move rapidly. To age it seems to move rapidly because age would wish it to move slowly.

Or, to suggest another theory, we tend to measure the speed of time in terms of activity. Youth, on the average, is a period of limited interests and few internal resources. For the child, occupation must be found by some one else. He is easily and often bored. Time goes slowly with him. The adult has so much to do and think that time is never sufficient. It gallops away. Even the senile are fully occupied with issues of comfort and repose which are increasingly of concern to them. Thus time slips by with invisible swiftness.

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FURTHER NOTE ON RUSSIAN NAMES

THE scientific worker with the problem of transliterating Russian names or identifying those transliterated by others will have been gratified by the recent attempts of Drs. Hrdlička (SCIENCE, 97: 243) and Dunlap (SCIENCE, 97: 400) to secure the adoption of a uniform method of transliteration. Certain points, however, need further clarification.

Dr. Dunlap's suggestion that we should be sensible and write "Павлов" as Pavloff" conforms neither with Dr. Hrdlička's recommendations nor with the accepted practice of transliterating into English letters most nearly representing the sounds of the Russian letters. In this case the final consonant in each syllable is the Russian "B," which equals the English "v," and "Pavlov" is the only correct English rendition possible.

When the initial of a Russian name is incorrectly transliterated in a bibliography or file, the reference appears at an incorrect position in the alphabetical arrangement and may be all but lost. "Vavilov" may be found misplaced as "Wawilow," or "Yarkina" as "I͡arkina" or "Jarkina."

The other Russian letters which are most frequently transliterated with confusing results are: "E," equal to the English "ye," as in "yet," with the English "e" reserved for "э"; "Ж," transliterated "zh" and pronounced as the "s" in "measure"; "И," equal to the English "i" and not "y"; "Ц," equal to the English "ts" and not to the German "z"; "Ю," equal to the English "yu" as in "yule"; and "Я" equal to the English "ya" and not the awkward "i͡a" nor the German "j." For the Russian "Ц," the English "ch" as in "cherry" is adequate, is in customary use and retains English characters, available in all printing establishments, in contrast to the Slavic "č." (This note is restricted to Russian transliteration to avoid the dilemma of inconsistency on the one hand or, on the other, questioning of the right of so eminent an authority as Dr. Aleš Hrdlička to his preferred and long-established spelling of his own name.) There seems to be no alternative but that "Щ" be rendered as "shch," clumsy as that may seem, while the Russian "Х" is best transliterated as "kh" and aspirated as the German "ch" in "Bach." Had the Waterloo of this summer's Eastern front been properly rendered as "Oryol," we might have been spared some of the heroic but painful linguistic struggles of our radio commentators.

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THE DIET OF CHINESE SOLDIERS AND COLLEGE STUDENTS IN WARTIME

A BRIEF account of the monotonous and simple diet of Chinese soldiers, with the diet of Chinese college students for comparison, will be given in these notes. The information may be useful for those working for practical nutrition and provoke thoughts of those who are interested in the science of human nutrition.

Based upon the 1,178 rations issued in 124 messes in South China in the spring of 1940 and the food consumption data of 11,338 soldiers for a month, a basic ration has been formulated. It consists of 953 grams of rice, 274 grams of leafy vegetables, 10 grams of fat and 13 grams of salt.

The ration provides probably enough calories for an adult having physical work, enough protein, nearly all from rice, and a very small amount of fat, which furnishes less than 3 per cent. of the total calories of the diet. It supplies sufficient iron, barely enough calcium and too much phosphorus from rice, thus with a Ca : P wider than 1 : 4. In regard to vitamins, it is worthy of note that practically only from the 274 grams of leafy vegetables the soldier gets his vitamin A in the form of carotene and vitamin C; and from the rice bran left on the low-grade rice he gets his antiberiberi vitamin. The actual vitamin intake can not be estimated correctly because of lack of analytical data and loss of vitamins through cooking.

The efficacy of this ration has been reflected on the nutritional state of soldiers based upon the measurements of 3,298 of them. Their height-weight relationship is just about normal for the average southern Chinese. According to medical examinations of the soldiers, the incidences of vitamin B deficiency are higher in those groups where polished rice is used or the rice water is wasted. It has been found that new

recruits usually have a poorer nutritional state than seasoned soldiers, the explanation of which can not be based only upon diets.

Other dietary surveys made among troops at different localities of the rice-producing area and at different seasons of the year reveal that the formulated basic ration still holds true, except that leafy vegetable is not a constant item, roots being consumed when cheap leafy vegetable is not available. In that case, the vitamin A intake of the soldier probably will be cut to a very low level and the mineral intake too.

In regard to the diet of college students (man) in Kunming, a dietary record of 160 students for two months during different seasons shows that more varieties of foods are listed. An average ration consists of 423 grams of rice, 125 grams of leafy vegetables and tomato; 48 grams of tubers and roots, 68 grams of meat and eggs. It is a better diet than the soldiers' in respect to protein and fat, but still low in minerals and probably in vitamins too. The urine saturation test for vitamin C deficiency has been made. About 50 per cent. of the students tested can be grouped as sub-clinical cases of vitamin C deficiency. Among girl students, many frank cases of vitamin C deficiency have been reported by the school physicians and their bleeding and spongy gums have been promptly cured by intramuscular injection of large doses of ascorbic acid.[1] This nutritional study of the students leads to the supposition that the vitamin C nutrition of Chinese soldiers may be unsatisfactory too. One thing may be interesting to record. Almost no sugar is allowed the Chinese soldiers, and little is consumed.

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QUOTATIONS

SCIENCE AND INDUSTRY

AN urgent plea for a greater application of science to industry is made by Sir Harold Hartley in a comprehensive pamphlet entitled "Industrial Research: What it Means to Industry," which is being distributed among industrialists and may be obtained from the Federation of British Industries, 21, Tothill Street, S.W.1.

As a foreword states, it "is written in the confident belief that industrial research is going to be the vital factor in determining the future prosperity of Great Britain." This prosperity "will depend more than ever before upon the efficiency and progressiveness of our industries." The loss of foreign investments "will necessitate a considerable expansion in the value of our exports if we are to increase or even maintain our standard of living.

"This formidable task can only be achieved by using to the full our inventiveness and technical skill both to increase the efficiency of our older industries and to develop new commodities which will hold their own in the markets of the world." Compared with the nineteenth century, opportunities to-day are limited by the spread of industrialization and "because the easy inventions and obvious developments have already been made. . . . In the future the advantages Britain possesses in the skill and traditions of her craftsmen will depend more and more on the science that directs their efforts."

In this country there has not been a general appreciation of the value of science in industry, and the amounts spent on research—"the elixir of life of industry, ever renewing its youth and vigor"—have been correspondingly less than in Germany and the United States. This is in no way due to any lower standing of British science. "In both the world wars British scientists have proved that they can more than hold their own if they are given equal facilities and support. All they need is the same opportunity in peace as in war."

Industrialists will find the detailed account of the organization of research in this country of great interest and value. Making the point that business has a direct interest in seeing that research at universities and in technical colleges is adequately endowed, Sir Harold Hartley states that at any time in the university laboratories a new industry may be born which will meet some human need.

Here, too, we read that the technique of radiolocation was first devised and used for a purely scientific purpose without any thought of its practical application. The large and small industrial firm will find here full guidance on how to set about instituting research and what it will cost.

As to the dividend it will pay, the author points to results in war and peace. "It is estimated (he writes) that the gas-filled lamp developed by Langmuir represents an annual saving in the cost of domestic lighting in this country alone of £50,000,000. The improvement in the efficiency of the petrol engine due to lead ethyl saves over 2,000,000,000 gallons of petrol a year. The use of accelerators for vulcanizing rubber has saved capital outlay on moulds estimated at £16,000,000. Research on motor tires has increased their average life from 3,000 miles to over 20,000 miles.

"Naturally, these vast savings have been reflected

[1] The ascorbic acid used was a gift from Cornell University.