mostly well-known, often elementary, facts, largely known even outside the circle of specialists. The authors build on these data long reviews, with wide speculation and generalization in many directions. Such articles would never be accepted by a Western periodical, but the editors of the *Zhurnal,* after printing such an article by Diadichev in three issues ("Contributions to the study of the epidemic process"), ask for more works of this kind (No. 3, page 317). In none of these three articles does Diadichev give a single note of bibliography. The translation of such writing is distasteful to the translator, and many mistakes originate in such translations.

Westerners should bear in mind that the official philosophy to which every Russian scientist is supposed to adhere is that of dialectical materialism—that is, Marxism. With this official doctrine is connected, in Russia, worship of the physiologist Pavlov. This is chiefly because of his works and teachings about the function of the brain and nervous system. Long articles and discussions on these subjects are popular in the Russian periodicals. Such sections of Russian works will seem rather tedious and unreliable to the Western reader. Let us take as an example the article of Gordienko (No. 1, page 138). His "few words" are as long as five pages of small print and start with the quotation: "There must be a painstaking accumulation of facts and its correct understanding on the basis of theory of dialectical thinking." Translation of these articles is difficult because of lack of adequate expressions in English. For 40 years the Russians have hammered on this philosophy and produced a language unknown in the West.

The inclination of Russians to overestimate the achievements in science of their men who have done some experimentation or writing has been even more accentuated in the English translation. The Russians give a relatively poor 3½-by-2½-inch picture of Grigoriev; the picture of him in the English version is 5½ by 4 inches—large and very expressive. The Russian *Zhurnal* is printed on cheap, grayish paper; the English edition is on heavy, glossy paper.

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The Limits of Mankind. R. A. Piddington. Wright, Bristol, England, 1956. vi + 153 pp. $2.60.

"The overshadowing menace of our time is not the Hydrogen Bomb or War or Communism, but the fact that makes all those three spectres loom so large—namely, the increase of mankind by at least thirty millions annually, and chiefly where the standard of living is so low that all the technical skill of the West, if devoted to the task, could not catch up with the enormous additional demands which that increase brings every year." So writes the author of this little book with big impact.

For too long, in discussions of human population, food has been given first attention. It is time, says the author, to look further. This he proceeds to do in an impressive exposition which deserves to be read by every thoughful citizen. I would question, however, whether the food problem for the masses of living human beings around the world has, in fact, been solved. Even now the cost of food steadily rises in productive, rich America, and so recent an author as Cole [*Sci. American* **198**, 92 (1952)] writes that, as one who would like to live on a meat diet, he cannot see very much to be optimistic about for the future.

Nevertheless, for the sake of Piddington's thesis, and in order to assure some much-needed attention to other problems, let us consider some of the author's further points.

For one thing, a minimum of habitable space, as implied also by Sears [*Science* **127**, 9 (1958)], is essential to satisfactory living. Will the purpose of the human race be better served by 5000 million human beings than by 2500 million?

If man persists in destroying the balance of nature, thinks the author, he will contrive his own doom "as surely as if he let loose unlimited radio-activity in both hemispheres." There does seem to be much truth in the statement that "under the dominion of *Homo sapiens,* the world has steadily become denuded of bulky slow-breeding species and overrun by hordes of fantastically prolific vermin and insects."

Close-set, crowded populations facilitate infection. Also, as the epidemic diseases are brought under control, chronic ills seem to be increasing.

The expansion of intellectual civilization that has occurred in the past two centuries bids fair to be less useful than it should be, simply through being overlarge. The British Museum library, with 6 million books, now occupies some 73 of its 75 miles of shelving, and space remains for only 18 months of intake!

"Travel is a universal passion that grips like a drug" asserts our author, and "many unique treasures are being spoiled or destroyed at an accelerated tempo by the hands and feet of the ever-increasing pilgrimage that surges round or through them." We in the United States can see the deterioration proceeding before our very eyes in our own national parks.

"At present, each voter in Britain, in an electorate of 20,000,000, has a one-twenty-millionth share in the government of others . . . but only a twenty-millionth share in the government of himself . . . ," so he is a good deal more conscious of being governed than of governing! Since, in the United States, our population is greater, we are in even worse case; and what shall we say of India and China?

Seemingly, planetary colonization offers little hope for relief. Thirty million persons would have to be exported every year to keep the present population from increasing, and in a few more years the figure would be 60 million.

The author appropriately pays his respects to those who believe that those who feed well do not breed well, that all we have to do to solve our population problems is to build up our industries.

The author's treatment of this difficult subject of population regulation affords a novel approach to some of the things we will face as population continues to increase. It must be conceded that in the absence of effective thought and action, the living conditions of our children will leave much to be desired.

The book has an excellent index. A bibliography would have been helpful.

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Atlas of the Sky. Vincent de Callataÿ. Translated by Harold Spencer Jones. St. Martin's Press, New York; Macmillan, London, 1958. 157 pp. Illus. $12.50.

Planned for "amateurs who do not have a telescope," the central offering of this atlas is a series of 36 charts with white stars on black background. The charts are designed to appear as much like the real sky as possible. No names or numbers appear on them, but white lines join the brighter stars of a given constellation to help identify its configuration. The first nine charts cover major areas of the celestial sphere; each of the rest pictures a few constellations in detail, including all stars brighter than magnitude 5.5. Each detailed chart is accompanied by one or more maps giving constellation boundaries and designations of the stars and by a listing of objects of interest to the naked-eye observer. With each chart is a short summary of knowledge about a specific topic of stellar astronomy; for example, globular clusters are described along with the chart of Hercules and diffuse nebulae with Orion. At the end is a series of 12 Mount Wilson and Palomar photographs.

The natural charts, although handsome in concept, suffer in two respects.