Book Reviews

Talent and Society. New perspectives in the identification of talent. David C. McClelland, Alfred L. Baldwin, Urie Bronfenbrenner, Fred L. Strodtbeck. Van Nostrand, Princeton, 1958. vii + 275 pp. $3.75.

The committee of social scientists which wrote this volume on utilization of talent turned away from traditional concerns with ability tests and thinking processes, exploring instead the values and styles of behavior that distinguish high achievers from low achievers. For example, high-achieving groups are much less fatalistic, and much more ready to break family ties in pursuing other goals.

This finding comes from the most interesting of the empirical chapters, Strodtbeck's study of family influences in transmitting "the American achievement ethic." Since Jews are high achievers by many criteria, and Italians low achievers, Strodtbeck examines differences in their family relations by several methods, including an ingenious technique for observing "how decisions are won" in family arguments. His striking intermixture of theory and evidence indicates that power relationships among parents and child determine the child's outlook on achievement. Power structures, in turn, depend on subcultural tradition, social class, and the out-of-home success of the male parent.

An intricate paper by Bronfenbrenner and others redefines the problem of measuring social sensitivity or insight. Their small-scale experiment cries out for replication; if the findings are confirmed, it will have outstanding implications for social psychology.

McClelland's summary of the four topical chapters shows that selecting the most promising young people is an inadequate solution to the problem of talent. He stresses the desirability of encouraging the individual to go into situations for which his values and styles of work are most adaptive. This replaces the concept of all-round potential with a concept of potential for specific roles. It is also suggested that we can modify the child's experiences so as to develop attitudes conducive to achievement in this culture, and that school and work situations can be modified to use value patterns that do not now lead to success. A typical question is: If school success is a prerequisite to responsibility and if school demands certain personal characteristics, may we not be eliminating individuals who lack these traits but whose other characteristics would make them highly successful in science, art, or public affairs? Questions may be raised about some of the positions advanced. Some inconsistency is apparent. Though matching persons to tasks on the basis of personality characteristics, for example, is a plausible aim, the evidence that different types of achievement require different values and styles is missing. Likewise, when McClelland assumes that a person's values, motives, and sensitivities are so stable that they "lead him to behave in certain ways whatever the situation," he appears to pay too little respect to the adaptations most people make readily in going from one role to another.

This yeasty contribution to thinking and research merits the attention of psychologists and sociologists. The first and last chapters have much to say to all others concerned with improving education. The committee members offer no definitive answer, but this is a token of their wisdom; the problem of talent is broad, and our ignorance of basic facts is great.

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Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii. vol. 28, No. 1–3. *Min. zdravookhranenia.* Moscow, S.S.S.R. English translation. D. J. Bauer, scientific translation Ed. Published on the initiative and with the financial support of the National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare. Pergamon Press, London and New York, 1957.

Everybody who knows Russian scientific writing will be worried about the attempt to give a complete, word-by-word English translation of a Russian *Zhurnal.* It is not enough to know the two languages. It is necessary to have a thorough knowledge of the different fields of science, the special terminology of both languages, and, furthermore, the Russian scientific slang.

The scientific value of the translation will be determined by the exactness of the translation. Comparison of the original Russian text with the English translation will show how accurate the latter is in this most important respect.

The articles of the *Zhurnal* vary greatly in their difficulty for the translator. Easiest to translate are the short technical papers; most difficult are the long "general" articles and those saturated with Marxist philosophy.

Many of the technical papers are surprisingly well translated; among these are the articles by Nabokov (No. 1, page 19), Varfolomeeva (No. 1, page 38), Markova (No. 2, page 185), Miasnikov (No. 2, page 270), Zherikova (No. 3, page 329), and many others. Unfortunately not all the translators had the knowledge necessary to produce perfect translations. The translations contain many errors, some of them grave, which completely distort the original text. Table 1 shows some of these errors.

As Table 1 shows, errors are caused by lack of knowledge in the special field of science under discussion or by misunderstanding of the Russian text and terminology. Some improvement can be noted: the third issue contains fewer errors than the first. There are practically no printing errors.

The technical papers reveal, to the unprepared Westerner, the incredibly unsanitary and poor living conditions in rural Soviet Russia. Epidemics of a type for generations unknown in the West ravage the people of Soviet *kolkhozes.* The cadavers of dead animals are thrown into gardens and the dogs tear them apart (No. 2, page 247). To prevent their freezing, young animals are kept in the living quarters (No. 2, page 248), or at least this was the case until an anthrax epidemic swept through the population. Some *kolkhoz* workers stay for long hours with bare feet in mud contaminated with urine and feces of swine (No. 2, page 241). These farms have very little water, and what water there is, is stored in barrels embedded in earth. From these barrels water is used both for pigs and for people. On the farms discussed in these papers, the small pig pond was extensively used by the inhabitants for bathing (No. 2, page 242). Such conditions caused the development of a great deal of swine leptospirosis among the population of these *kolkhozes.* The reader is told that during these calamities the population receives scientific help from government agencies. The epidemics, the course of diagnosis, and the preventive measures taken are well described in the translations and provide the most rewarding reading in the volume; these are not pages from a text-

book of bacteriology but are from the book of life itself.

The use of slang in Russian scientific papers caused the translators a great deal of difficulty. The slang words are mostly those used to shorten an expression, or they are technical terms lacking in Russian and taken from some foreign language and then used in Russianized form. These expressions, abundant in the era after the Russian revolution, have appeared less often in more recent years. Let us mention only a few of them: *massovost* (No. 2, page 205), for "the absolute number"; *passirovanie* (No. 2, page 171) for "passage cultures"; *puzyrchatka* (No. 1, page 34) for cystitis. It is doubtful that a translator can find the right expression in English for these words.

Among the articles published in the *Zhurnal* it is necessary to point out some which, in content and treatment of subject, are of a type unknown in the West. We are familiar with the reviews in our periodicals giving a summary of achievements in one or another field of science, giving also more or less complete bibliographies. Quite different are the Russian "general" articles. They restate

Table 1. Examples of errors in translation which distort the meaning of the Russian text.

Russian version	Published translation	Correct translation	References: Issue No. and page of the *Zhurnal* (page No. of English text in parentheses)
pri kotorykh otmechaetsia tak nazyvaemoe zdorovoe zarazonositelstvo	with the exception of those few infections distinguished by the title subclinical	which are known as so-called healthy disease carriers	No. 1, p. 8 (5)
smena patogennym parazitom svoego biologicheskogo hoziaina vo vremeni i prostranstve protekaet pri razlichnykh infekciakh razlichno	the changes effected by the pathogenic parasite in its biological host vary according to the infection	in different infections the pathogenic parasite changes his biologic host in time and space in different ways	No. 1, p. 8 (5)
iz semeistva iksodovykh	Ixodisdae	[New terminology?] Ixodinae, Ixodidae	No. 1, p. 10 (7)
Shotmiuller	Schott-Müller	Schottmüller	No. 1, p. 11 (9)
pribavlenie polnogo antigena	addition of the pure antigen	addition of the complete antigen	No. 1, p. 13 (11)
vsasyvanie sostavnykh chastei pischevykh veschestv v verknikh otdelakh (tolstogo kishechnika)	absorption of the products of food substances digested higher up	absorption of food components in the upper part (of the large intestine)	No. 1, p. 13 (11)
sluchai disenteriinykh poliartritov	dysenteric polyarteritis	dysenteric polyarthritis	No. 1, p. 14 (12)
prosteishie i gelminty	commoner helminths	protozoa and helminths	No. 1, p. 14 (12)
posle perenesennoi dizenterii	after being a carrier of the disease	after recovery from dysentery	No. 1, p. 15 (12)
samymi raznoobraznymi toksinami	by the same types of toxin	by the most different toxins	No. 1, p. 15 (13)
v podkozhnoi kletchatke	superficial fascia	subcutaneous tissue	No. 1, p. 127 (129)
bez gigantskikh kletok	without macrocytes	without giant cells	No. 1, p. 127 (129)
posev nuzhno proizvodit ne ochen gusto	plating must not be carried out too quickly	plating should be carried out not too densely	No. 2, p. 21 (182)
iz probirochnykh metodov titrovania skarlatinoznogo toksina	one animal test method of titrating scarlatinal toxin	one in vitro method of titrating scarlet fever toxin	No. 2, p. 26 (187)
toksinov-po 1 ml v prostykh probirkakh	toxins—1 ml unmixed in a series of tubes	toxins—1 ml in the ordinary test tubes	No. 2, p. 29 (189)
vnutrikletochnoe parazitirovanie	intracellular infection	intracellular parasitism	No. 2, p. 47 (207)
Gall (1948) schitaet chto vvedenie syvorotki ranee privitym posle ranenia podavliaet vyrabotku organizmom antitoksina	Gall (1948) considered that the giving of antiserum to those previously inoculated potentiates the elaboration of toxoid	Gall (1948) thinks that giving of serum to the injured who have been previously inoculated depresses the production of antitoxin by the organism	No. 2, p. 50 (210)
u oboikh krolikov uvelichenie titra imelo mesto tolko na 5-e sutki	the rise in titre in both rabbits lasted only to the fifth day	the rise in titre in both rabbits occurred only on the fifth day	No. 2, p. 52 (211)
v predelakh pervogo desiatka edenitc v 1 ml	concentrations of less than one tenth of a unit per ml	within the limits of the first ten units per ml	No. 2, p. 72 (229)
epidemii raka	influenza epidemics	epidemics of cancer	No. 3, p. 5 (315)
ishodia iz rasshiritelnogo tolkovania simbioza	basing his ideas on our increased knowledge of symbiosis	on the basis of a broader concept of symbiosis	No. 3, p. 6 (316)
v prosvete pischevaritelnoi trubki	in the lumen of the oesophagus	in the lumen of the gastrointestinal tract	No. 3, p. 9 (319)
rezko otlichaiutsia odna ot drugoi po svoei epizootologii	are rarely distinguished from one another in their epizootology	differ sharply from one another in their epizootology	No. 3, p. 13 (323)

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.