

of thought without serious fear of failure to get back to logical ones. Preoccupation with things and ideas rather than with people is obviously characteristic of natural scientists, and even of some social scientists. This characteristic is not directly related to creativity, I think, but rather to the content of it.

I need not add that such statements

as these are generalizations and that any individual case may be an exception. We may go farther, however, and generalize differences among men who follow different branches of science. That a man chooses to become a scientist and succeeds means that he has the temperament and personality as well as the ability and opportunity to do so. The branch of science he

chooses, even the specific problems he chooses and the way he works on them, are intimately related to what he is and to his deepest needs. The more deeply engaged he is, the more profoundly is this true. To understand what he does, one must try to know what his work means to him. The chances are that he does not know or care to know. Indeed, he does not need to know. We do.

Science and the News

The School Bill: As Usual It Is in Trouble; Notes on Disarmament, Satellites and Radio Astronomy

It was generally reported last week, for the fourth time during the congressional session, that the school bill was dead, and the outlook for supporters of the bill was indeed even dimmer than usual. The remarkable event that triggered the latest batch of dismal reports was the decision of Senators Morse and Hill, chairmen respectively of the Senate subcommittee on education and of the full Senate Committee on Labor and Public Welfare, to sponsor a separate bill for the extension of school aid to the impacted areas.

(The impacted areas program provides grants in lieu of taxes to school districts containing substantial tax-free government property. Three out of four Congressmen and all Senators have impacted areas within their constituencies. The program expired in June, and one of the few things that can be said with absolute certainty about Congress is that it is not going to go home and face the voters without renewing aid for impacted areas.)

The principal hope for the immensely controversial general school bill was to tie it to the immensely popular extension of the impacted areas program; and the fact that two of the leading Democratic supporters of school aid were sponsoring a separate impacted areas bill suggested that the Democrats were throwing in the towel.

For all this, the latest reports of the

demise of Kennedy's program, like the earlier ones, have been, at the least, premature. Welfare Secretary Ribicoff insists that the Administration is not giving up on the bill "until the last gavel falls," as he put it, and the last gavel, announcing the end of the congressional session, is not expected to fall for another month, during which time the Administration has considerable room for maneuvering.

What was, and remains, necessary for general school aid to be forced through the reluctant House was aggressive lobbying from the White House. This required a delay of a show-down on education until after the foreign aid bill had cleared Congress for the President's signature. The two Houses were expected to have passed their respective versions of the foreign aid bill this week, and a compromise version, worked out by a House-Senate conference, may be ready for a final vote next week. The way will then be clear for the President to move on education, although the White House has as yet made no public commitments on what, if anything, the President will do to break the log jam in the House of Representatives, where the whole Administration education program — school aid, National Defense Education Act extension, and aid to colleges — has been blocked in the Rules Committee.

The Morse-Hill move in the Senate last week was intended mainly to assure that, if the school bill failed this year, the aid to impacted areas would

receive only a 1-year, rather than its usual 3-year, extension, thus making it possible next year to make another attempt at forcing through general aid to schools by tying it to extension of impacted areas aid. The Senate action had the incidental effect of warning the quite large bloc of fence-sitters in the House, who would prefer not to have to vote either way on the delicate issue of general aid, that if the House failed to face the issue this year, it would probably have to face it next year, an election year.

Meanwhile, responsible Administration aides have been hinting that the President might veto even a 1-year extension of impacted areas aid if that is all that gets through Congress. This, together with the accompanying message explaining why the bill was vetoed, would be the most dramatic possible way of focusing the nation's attention on the education program, and particularly on the failure of the House even to face the issue and vote the program up or down.

But this would be a politically drastic as well as a dramatic step, for the pressure to renew impacted areas aid is great enough to assure eventual passage, if necessary over the President's veto. If a veto, and the accompanying furor, forces the House to act on the broader education program, it will be a great victory for the Administration, but if it fails to force broader House action, and impacted areas aid only is pushed through, despite the veto, the Administration's defeat will only look so much worse.

What suggests that, barring a change of mood in the House, the President might take such a risk is that after calling school aid probably the most important piece of domestic legislation, and after the brave talk of his aides about fighting "until the last gavel falls," he is going to look a little silly if he simply takes a complete defeat lying down.

Disarmament

On a broader matter, the principal American and British negotiators were scheduled to return to Geneva next week for another try at reaching a test ban agreement, but there was no real expectation that anything would come of the new try. The Russians have repeatedly restated their position, including their insistence on the "troika" principle, with East, West, and neutrals each given a veto over the administration of the treaty. The Russians insist that they are not going to give up the troika idea, because their experience in the Congo, where, they say, the neutral administrator actually favored the West, has convinced them that there is no such thing as a neutral man, and that if everyone's interest is going to be safeguarded it must be by giving everyone a veto over all administrative decisions. The Russians say this will not make the inspection system meaningless, since if a disturbance meets the criteria for an inspectable event, an inspection cannot be vetoed.

The West is unconvinced by such an argument; for who decides whether the disturbance meets the criteria? The troika. Thus the Russians could not veto the inspection of a certified suspicious event, they could only veto the administrative decision that a given disturbance is a suspicious event. Beyond the specific problem in this case, the West is fully against accepting the troika principle in any case, for its adoption would set a precedent for Russian insistence on similar arrangements for all international organizations. The Russian argument, after all, is not that some special circumstances here require the adoption of the troika, but that as a general principle all international agencies should be controlled by the troika.

Kennedy said that if Ambassador Dean finds no change in the Russian position next week, he will be brought home again, and the President will then make "the appropriate decisions." But there is small likelihood that these "appropriate decisions" will include a decision for a prompt resumption of weapons testing. As noted here two weeks ago, the general world situation makes such a decision unlikely in the immediate future. If, as is expected, Dean gets nowhere with the Russians next week, the next major episode will probably come at the United Nations General Assembly meeting, beginning in late September, where the United

States and Britain have asked for a full debate on the test-ban question.

At that General Assembly meeting the United States and Britain will also present a Western plan for general disarmament, intended to counteract the unfavorable impression left in recent sessions by the American reluctance to discuss large-scale disarmament. The American plan, now being circulated among our allies, apparently will not only contain the traditional stress on adequate controls but, more strongly than has been done in the past, will build a case for the need for effective means of settling international disputes peacefully as a prerequisite for any realistic hope of general disarmament. The effort will apparently be to show, with the frustrating course of the test-ban negotiation as an example, how the Russians talk enthusiastically in general terms of disarmament but, when it comes to specific arrangements, are extremely reluctant to accept any proposal that would limit their freedom of action, even though the acceptance of such limitations is a necessary condition of getting anything done on disarmament. It is apparently in this context, of preparing for the U.N. debate, rather than in a context of preparing for a prompt resumption of testing, that Dean is being sent back to Geneva next week.

In line with this preparation for the U.N. debate, the Administration has apparently decided to press Congress for approval of Kennedy's proposal for an expanded United States Disarmament Agency, rather than let the proposal lie over until the next session when it can be given more leisurely consideration. The Senate Foreign Relations Committee held hearings on the bill this week, and the House Foreign Affairs Committee is expected to follow suit. Except for the Goldwater wing in Congress, which numbers perhaps 10 members in the Senate and perhaps 60 members in the House, there is no real opposition to Kennedy's proposal. Members who are likely to oppose the bill are far outnumbered in both Houses, and if the President insists, as he apparently is doing, that it is important to pass the bill promptly, there seems to be no important obstacle to getting it through. John McCloy, the president's chief adviser on disarmament, met with the Senate Republican policy committee last week; afterwards the Republican leader, Senator Dirksen, announced that he thought most Republicans were "ready to go along with the general

outlines" of the Administration bill and that there was no disagreement among Republicans with the stand that something had to be done to get disarmament on its feet. Representative Halleck, the House leader, has as yet made no public statement, but there is no likelihood that he would oppose the bill.

Needles

On a far simpler matter, the federal Space Council, part of the Executive Office of the President, has issued a report assuring astronomers that the Air Force project to put in orbit a band of fine copper wires will have no significant effect on astronomical observations, and that no larger-scale project will be authorized until the results of the first test can be evaluated, or without consulting with American and foreign astronomers. A mild furor had developed over the project, from the concern of astronomers that the globe-circling belt of wires would interfere with radio and optical astronomical observations.

The project was originally called Project Needles, an apparently too evocative description of the 35 million bits of fine wire that would be put in orbit. Their total weight would be about 75 pounds. The project is now called "West Ford," after the location of the largely Air Force financed M.I.T. Lincoln Laboratory (Westford, Mass.), where the experiment was conceived.

The purpose of the experiment is to seek confirmation of theoretical predictions that such a belt of fine wires, each about 0.7 of an inch long, the proper length to reflect radio frequencies in the 8000-megacycle range, could be used as an artificial ionosphere to make possible long-range communication at such frequencies. Without the belt, long-range communication at ultrahigh frequencies is impossible beyond the horizon, since signals of such short wavelength simply pass through the ionosphere, instead of being reflected back to earth. The two practical advantages that are seen from such a system are that (i) it would broaden the range of frequencies that could be used for long-range communication and so relieve the crowded traffic in the conventional frequencies used for international communication, and (ii) the artificial reflecting band could be a more reliable means of long-range communication than the actual ionosphere, which makes radio communication susceptible to sharp variation and occasionally to

blackouts due to sunspot activity affecting the ionosphere.

The astronomers were concerned that, in addition to reflecting radio waves back to earth, the wire band would reflect radio waves from the stars away from the earth, and so interfere with radio astronomy. To a lesser extent the astronomers were concerned that the band should interfere with optical astronomy. The Space Science Board of the National Academy of Sciences was informed of the project by the Lincoln Laboratory in the fall of 1959 and concluded, after a study completed in June 1960, that the exploratory test would have no harmful effects on any branch of science, since the effect on radio waves from space reaching the earth would be a matter of a very few parts per million, and would be barely detectable, and then only because the astronomers would know just where to look for it. But the Space Science Board also concluded that there was justifiable cause for concern over the effects that might be produced if the much larger band needed for an operational system were put up after a successful pilot experiment.

The NAS Space Science Board generally allayed the astronomers' concern over the pilot test, but left them with their greater concern over the possible harmful effects of a fully operational system. The significance of the Space Council policy statement, which is an official statement of U.S. policy, was that it gave the astronomers the assurance the National Academy could not give, that the government would not authorize the larger follow-up project, or satellite projects generally, without full consideration of the possible side effects of a project on other scientific fields, or without giving interested scientists a chance to make their views felt.—H.M.

A new type of fatty substance—a **phosphate-free plasmalogen**—has been discovered by a group of Harvard chemists. The new substance combines properties of the two main types of lipid substances known—fats and phosphatides. A variant of a phosphatide, in which a fatty acid is replaced by a vinyl alcohol, is known as a plasmalogen. The new substance does not contain phosphorus, and in this it resembles the fats; like the plasmalogens, it contains vinyl alcohol.

The newly discovered lipid occurs in minute amounts and thus has been missed up to now. Beef brain, guinea-pig heart, and beef bone marrow con-

tain, respectively, 3, 15, and 50 parts of the lipid per 10,000 parts of total fatty substance. The Harvard chemists are now trying to determine the possible importance of the lipid in the healthy and diseased organism.

The country's **population center**—defined by the Census Bureau as that point upon which the United States would balance, if it were a rigid plain, without weight, and if the population were evenly distributed and all individuals were of equal weight—has been officially relocated in a field 6½ miles northwest of Centralia, Illinois. The U.S. Coast and Geodetic Survey relocated the center on the basis of last year's national census. Since the first census in 1790, the center of population has moved westward 701 miles from its original point, 23 miles east of Baltimore, Md.

A **"research city"** is scheduled to be built near Munich, Germany, by 1965. The complex of buildings will house the Munich Institute for Plasma Physics, the Max Planck Society's working group for extraterrestrial research, and a number of other research institutes. Laboratories, offices, private study rooms for individual scientists, a large auditorium, a library, workshops, storehouses, and a power station will be erected in three phases of construction. The West German Ministry for Nuclear Energy estimates the cost of the project at \$20 million. Of this amount the West German government will provide \$17 million; the remaining \$3 million will be contributed by the European Atomic Energy Commission.

The U.S. Post Office has discontinued experiments with high-speed **electronic transmission of mail**, after spending over \$4 million on a test program. In the pilot operation, "facsimile mail" was transmitted by coaxial cable or microwave radio. According to the Post Office, several private firms are conducting similar experiments and the government abandoned the program rather than be in direct competition with them. The test program demonstrated, it was announced last fall, that mail could be moved between Chicago and Washington in 15 seconds.

Students of engineering and of teaching, according to Peiping Radio, constituted more than two-thirds of the 160,000 graduates who were recently awarded diplomas in Red China.

Announcements

The following have been appointed judges for the 1961 **AAAS-Westinghouse Science Writing Awards** [*Science* **133**, 1909 (1961)]:

Walter G. Barlow, president of Opinion Research Corporation, Princeton, N.J.

Norman Cousins, editor of the *Saturday Review*.

Geoffrey Edsall, superintendent of the Institute of Laboratories, Massachusetts Department of Public Health.

Earl English, dean of the University of Missouri's school of journalism.

Ralph E. McGill, editor of the *Atlanta Constitution*.

Morris Meister, president of the Bronx Community College.

Deadline for entries: *10 October 1961*. (Graham DuShane, AAAS, 1515 Massachusetts Ave., NW, Washington 5, D.C.)

Russian-speaking physicians, researchers, technicians, and administrators are being sought as participants in the U.S. Information Agency's **medical exhibition in the U.S.S.R.**, scheduled to tour three major cities of the Soviet Union in 1962. (John Dixon, ICS Exhibits Division, U.S. Information Agency, Washington 25)

The Philippines, Malaya, and Thailand have formed the **Association of Southeast Asia (ASA)** "to establish effective machinery for . . . consultation and mutual assistance in economic, social, cultural, scientific, and administrative fields." ASA's goals include exchange of educational and research facilities and information; collaboration in the utilization of natural resources and the improvement of transport and communications; and cooperation in the study of international commodity trade problems.

Scientists traveling to the Soviet Union are invited to use the Information Center for American Travelers to the Soviet Union, 333 East 46 St., New York City. Individuals or groups may contact the center to arrange for a briefing. The center is sponsored by the Government Affairs Institute. The service is free. Information of a more specialized nature is available from the Office of International Relations of the National Academy of Sciences, 2101 Constitution Ave., Washington, D.C. Among other services, the NAS office