ture, to which it belongs. It is the world in which Mr. Macmillan said—or might, taking a tip from Snow, have varied his phrase by saying—'You never had so much jam'; and in which, if you are enlightened, you see that the sum of wisdom lies in expediting the processes which will ensure the Congolese, the Indonesians, the Bushmen (no, not the Bushmen—there aren't enough of them), the Chinese, the Indians, *their* increasing supplies of jam. It is the world in which the vital inspiration, the creative drive, is 'Jam tomorrow' (if you haven't any today) or (if you have it today) '*More* jam tomorrow.' It is the world in which, even at the level of the intellectual weeklies, 'standard of living' is an ultimate criterion, its raising an ultimate aim, a matter of wages and salaries and what you can buy with them, reduced hours of work, and the technological resources that make your increasing leisure worth having; so that productivity—the supremely important thing—must be kept on the rise, at whatever cost to protecting conservative habit.

"Don't mistake me. I am not preaching that we should defy, or try to reverse, the accelerating movement of external civilization (the phrase sufficiently explains itself, I hope) that is determined by advancing technology. . . . What I am saying is that such a concern is not enough—disastrously not enough. Snow himself is proof of that, product as he is of the initial cultural consequences of the kind of rapid change he wants to see accelerated to the utmost and assimilating all the world, bringing (he is convinced), provided we are foresighted enough to perceive that no one will long consent to be without abundant jam, salvation, and lasting felicity to mankind."

What does Leavis want us to pursue that conflicts with jam? Or conflicts with Snow's urgent call for technical help to the developing countries? Leavis is unclear, although he says it will involve "creative responses to the new challenges" of the scientific revolution: "something that is alien to either of Snow's cultures." It apparently has something to do with intuitive responses apparently as opposed the cut-and-dried categorizing Leavis seems to see in both of Snow's cultures. There is a good deal of talk about D. H. Lawrence (for Leavis, the great genius of English fiction) and the importance of *living*. It becomes hard to follow: "for the sake of our humanity—our humanness, for the sake of a human future—we must do, with intelligent resolution and with faith, all we can to maintain the full life in the present—and life is growth—of our transmitted culture."

Leavis says he wants the university to serve neither the literary nor scientific culture but, at heart, to blend all in "a vital English school." ("A center of consciousness and conscience for our civilization.") For details we have to wait: "I mustn't say more now about what I mean by that. I will only say that the academic is the enemy and that the academic *can* be beaten, as we who ran *Scrutiny* [a literary review] for twenty years proved. We were, and we knew we were, Cambridge—the essential Cambridge in spite of Cambridge: that gives you the spirit of what I had in mind. Snow gets on with what he calls the 'traditional culture' better than I do. To impress us with his antiacademic astringency, he tells us of the old Master of Jesus who said about the trains running into Cambridge on Sunday: 'It is equally displeasing to God and myself.' More to the point is that *that*, I remember, was very much the attitude of the academic powers when thirty years ago, I wrote a pioneering book on modern poetry that made Eliot a key figure and proposed a new chart, and again when I backed Lawrence as a writer."

Counterattack

The effect of the whole production is a little confusing. Snow has greeted the attack with silence, but the *Spectator* received a prompt flood of comment from third parties, most of it anti-Leavis, although not always pro-Snow. The line of reasoning that emerges most clearly from Leavis's production is (i) Snow is worthless, (ii) that he has, nevertheless, been made a great figure, thus demonstrating that something is wrong with the society that has made him a great figure, and (iii) (suggested, perhaps unintentionally by Leavis, in the last excerpt quoted here) that if the society were what it should be the Leavises rather than the Snows would be the great figures.

This produced the principal line of criticism, that Leavis seems motivated by jealousy: in the formulation of one correspondent (Lord Boothby), Leavis is "spewing out the reptilian venom of those who have created nothing, and are concerned only to wreak vengeance upon those who have, and thus assuage their own sense of frustration. . . . The sort of criticism exemplified by Dr. Leavis . . . leaves one with a sense of desolation. I can tell him what D. H. Lawrence, the only one who gets a good word, would have said about it: . . . 'To hear these people talk really fills me with black fury: they talk endlessly, but endlessly—and never, never a good thing said. They are cased each in a hard little shell of his own and out of this they talk words. There is never for one second any outgoing feeling and no reverence, not a crumb or grain of reverence. I cannot stand it. I will not have people like this—I had rather be alone. They make me dream of a beetle that bites like a scorpion. But I killed it—a very large beetle. . . . It is this horror of little swarming selves I can't stand.' "—H. MARGOLIS.

On this side of the Atlantic, the Supreme Court decision on reapportionment will have an indirect, but very substantial, long-term effect on the extent and pattern of United States support for schools, conservation, and nearly the entire range of problems related to or affected by the scientific revolution; much more of an effect, certainly, than anything else that is likely to happen for a long time. A review of the dilemma that the courts faced in dealing with this issue appeared here on 24 November. Some report on the nature of the decision and its likely repercussions will appear next week.

Space Cooperation: U.S., Soviets Agree To Do Up There What They Have Not Done Down Here

United Nations, New York. While the United States and the Soviet Union made no headway last week in Geneva on such earthly problems as disarmament and Berlin, both were emphatically agreeing at the United Nations that it is time to team up on outer space.

This sudden amity has led some cynics to inquire whether Khrushchev has proposed to Kennedy that "you go first." Behind the humor is a natural curiosity over just what has led the Soviets to sudden enthusiasm for space cooperation. They showed no such response when Kennedy lyrically proposed in his inaugural address: "Together let us explore the stars. . . ." And their expressions of a desire for

cooperation follow a 2-year period in which they flatly refused even to attend meetings of the U.N.'s Committee on the Peaceful Uses of Outer Space. Once having agreed to attend, however, they have shown considerable gusto for joint efforts.

The spark for Soviet expression of interest appears to have been provided by Glenn's orbital flight, which drew a congratulatory message from Khrushchev, accompanied by the observation that "if our countries pooled their efforts" numerous benefits would accrue to mankind. Kennedy promptly took up the proposal and suggested five specific areas of cooperation: weather forecasting, magnetic field studies, space medicine, communications, and exchange of radio tracking stations; the President also proposed discussions of joint efforts in manned and unmanned exploration of the moon and other celestical bodies.

Cost a Clue

Khrushchev, in a reply last week, declared that he fully agreed with the President and provided some clue to his motivations by noting that space exploration is "quite costly." He then tossed in three other possible areas of cooperation: an agreement for assistance in the search for and rescue of disabled spacecraft, a study of the legal problems of space, and, finally, an agreement to restrict experiments that might interfere with peaceful space exploration.

An uncharitable view of the Premier's response might interpret the last point as a reference to this country's Project West Ford, which is intended to orbit a band of copper filaments for experiments in jam-proof communications. West Ford, a subject of considerable interest to America's widely dispersed military forces, has been assailed by the Soviets as a sort of pollution of outer space for nefarious purposes.

Nevertheless, Khrushchev's response to Kennedy was remarkably free of Cold War jargon, and while in the past the Premier has made all manner of things contingent upon "complete and general disarmament," he merely pointed out, in restrained fashion, that "it seems obvious to me that the scope of our cooperation in the peaceful exploration of space, just as the choice of the directions themselves, along which such cooperation will be possible, depends to some extent on the settlement of the disarmament problem."

The Soviet Premier has given the West every reason to be conditioned to sudden and unexpected changes in the international weather, but his reasonable words, and the amiable attitude of the people who represent him on the Space Committee, have led American space officials and diplomats to a feeling of optimism. This is accompanied by the hope that if a fairly significant Soviet-American space program can be developed, it might absorb some of the energies devoted to the Cold War, as well as give the two countries experience in a large-scale cooperative effort.

(The only public note of disharmony so far was provided by Senator Capehart, Republican of Indiana, who took a look at the evidence of a budding space romance and warned (i) it's a Russian trick and (ii) the American taxpayers will never stand for it.)

Outside of the cost of space exploration, the reasons for the sudden Soviet willingness to talk have not been disclosed by the Soviets, and therefore whatever is to be offered must be clearly labeled as speculation. For the uncertain art of Kremlinology, therefore, the Soviets' sudden affability presents a rich vein. The U.N. Space Committee, originally formed in 1958 as an 18-nation body, was immobilized by the Soviets through their insistence on a "troika" division—East, West, and neutral—with all decisions to be made on the basis of "agreement" rather than by majority vote. The troika was needed, the Russians argued, to avoid American domination of the committee. The United States, however, refused to go along with this proposal and insisted on adherence to the U.N.'s majority vote procedure. The Russians then refused to have anything to do with the committee, and maintained this insistence through the following two years, despite an effort to win their support by enlarging the committee to 24 nations and thus broadening its political base. With the Soviets—representing 50 percent of the world's space powers—refusing to attend, the committee realistically spared itself even the labor of calling meetings.

NASA Reaps Good Will

Meanwhile, a considerable amount of international space cooperation was being carried on by the United States, in sharp contrast to the rigid security which the Soviets maintained around their space establishment. The National Aeronautics and Space Administration, in cooperation with the U.S. Weather Bureau, put the Tiros weather satellite system into operation and made its benefits available to the world. At the same time, NASA offered to launch into orbit scientific payloads prepared by other nations (the first, a United Kingdom satellite, will be launched within the next few weeks); and NASA established 100 fellowships for foreign students to study space science and engineering in this country. In one way or another, some 40 countries bear some working relationship to this nation's space program, including many whose citizens help man NASA's string of tracking stations around the world. NASA also adhered to the policy of wide-open press and television coverage of American launchings, a procedure that assures disaster for U.S. prestige when things go wrong, as they did with the first Vanguard orbital attempt, but one that pays off in enormous good will and admiration when things go right, as they most spectacularly have on America's three manned flights.

While the Soviet political stance barred cooperative efforts with this country, American space specialists noted a keen interest in international cooperation among their Soviet counterparts. Western contacts with Soviet space specialists produced the conclusion that the Soviet politicians, convinced that their country's superiority in space weight-lifting had put Russia far ahead of the West, paid little heed to their scientists' argument that the West was superior in other phases of space technology: instrumentation, control, and miniaturization among them.

Soviet Conflict

The strongest suggestion of a conflict between the scientists and the politicians occurred in mid-November—about 2 weeks before the Soviets suddenly switched their stand and agreed to end their boycott of the U.N. space committee. The November occurrence involved a meeting in Washington on satellite weather forecasting to which NASA and the Weather Bureau invited all interested nations. The purpose of the meeting was to provide other nations with procedures for utilizing the information from the still-rudimentary weather satellite system and to develop methods for broad use of the Tiros data when the system comes into full operational use during the next few years. In response to the invitation, the chief of the Soviet Hydro-Meteorological Service cabled that he would send two rep-

resentatives. The day after the meeting opened, a cable was received stating that the Soviet delegates would be unable to attend. No explanation was made in the cable, nor was any provided later, but the incident supported the theory that Soviet space scientists had at last prevailed upon their political chiefs to enter into some sort of space cooperation with the West, only to be reversed at the last minute. Thus, while the Soviet absence from cooperative space efforts had left their space establishment unviewed by non-Soviet eyes, the United States was reaping a vast amount of international good will and was in no way impaired by the Soviet intransigence.

At the U.N., meanwhile, the Soviets found themselves burdened by the fact that space has taken a remarkable hold on the imaginations, and fears, of scores of nations.

"It is a very curious business," a member of the American delegation observed, "but for many of the smaller nations, especially the newer and poorer ones, there is almost a hypnotic fascination with space. They are proud, tickled pink, to be associated with the American space effort, even if we had to give them their first telescope to make it possible. And they have been making the Russians miserable by badgering them about their unwillingness to cooperate, all the time pointing out that the United States is running a wide-open space program."

Pressure at the U.N.

The pressure on the Soviets came to a head on 11 December when the General Assembly's 103-member Political Committee unanimously called upon the Space Committee to meet by 31 March to work out a program for international cooperation in space. The membership was raised to 28 nations, to reflect the growth of the U.N. since the Committee was last enlarged. The issue of "agreement" versus majority vote was untouched, but to some extent, the Soviets triumphed here. When the committee held its first meeting last week, the chairman, Franz Matsch, of Austria, announced that "through informal consultations it has been agreed among the members of the Committee that it will be the *aim* of all members of the Committee and its subcommittees to conduct the Committee's work in such a way that the Committee will be able to reach agreement in its work *without voting.*"

Members of the U.S. delegation point out that the method cited by Matsch is only an *aim,* and the U.S. still reserves the right to insist on a vote if it feels its interests are threatened. Whatever the method may be, however, any progress depends on Soviet-American accord, and when either nation feels its interests are not being accorded proper treatment, the will of the remaining nations is not likely to make much difference.

The United States, for example, disclosed earlier this week that it would not provide the U.N. space register with data on Glenn's flight, a decision which in itself is of little importance since whatever would go into the register is already public knowledge. But the decision demonstrates that this country is clearly reserving to itself the right to make its own interpretation of any cooperative agreement. The register, which was originally proposed by the United States, was established by resolution of the 103-member Political Committee as a painless exercise in space cooperation. Its founding resolution simply requests nations "launching objects into orbit or beyond" to "furnish information" to the Space Committee.

On 5 March the U.S. submitted data on 72 objects in space as of 15 February—5 days before Glenn's flight—providing data on the purpose of each launching, date of flight, angle of inclination to the equator, and the lowest and highest points reached. The United States later said it would periodically keep its report up to date and would also provide data on Glenn's flight. The Soviets made a similar report on Monday, in which they listed 16 flights, including the orbital flights of Gagarin and Titov.

The U.S. has sought to justify its decision on the Glenn flight by an interpretation that the register is for objects currently in orbit or in space—that the purpose of the register is to assist in tracking operations. NASA officials have privately expressed their unhappiness with this interpretation, but the State Department insists that the U.S. is fully complying with the rules of the register.

The decision, of course, may be changed, simply because it smacks of pointless hairsplitting and apparently serves no purpose other than to assert U.S. freedom of action. But in viewing the apparent space accord, as well as other Soviet-American relations, the decision on the Glenn data should perhaps serve as a reminder that when close-up observers find Washington behaving inscrutably, they should approach humbly the task of calling the shots in Moscow.

Military Potential

Underlying the budding East-West space relationship is a clear recognition, on the part of the Americans, the Soviets, and the U.N. marriage brokers, that neither principal is at this stage ready to forego the vast military potential of the outer regions. In his address to the U.N. last September, Kennedy proposed "prohibiting weapons of mass destruction in space or on celestial bodies." The proposal, without any apparent lament from East or West, has quietly been set aside, with the Russians presumably concurring in the decision because the proposal obviously carries with it the necessity for inspecting, at the very least, Soviet space payloads; the American concurrence, according to members of our U.N. delegation, was based upon a desire to avoid a sticky issue that could destroy any possibility of a space accord. From the American viewpoint, the quiet burial of Kennedy's proposal forestalled any impediments to the continued development of a variety of military space programs, including the Samos reconnaissance system, which Soviet spokesmen periodically, and quite accurately, denounce as an intended successor to the U-2.

The areas specified by Kennedy and Khrushchev for cooperative efforts thus reflect an extremely realistic appraisal of each nation's sensitivities, and, therefore, provide support for the general feeling of optimism. After an exchange of affable statements at the U.N. by representatives of each nation, it was announced that technical talks, aimed at getting some cooperative efforts under way as soon as possible, would take place this week between Hugh Dryden, deputy administrator of the National Aeronautics and Space Administration and V. Dobronravov, a member of the Soviet Academy of Sciences.

The impasse at Geneva serves as a warning that the chasm between East and West remains perilously wide, and hopes for space cooperation should therefore be restrained from going into orbit. Nevertheless, whatever the motivations for working together in space may be, the apparent accord is a development of enormous potential—scientifically as well as politically.—D. S. GREENBERG.