Inevitably, one must ask Herrnstein what the consequences would be if somehow it were scientifically proven that American blacks had lower average intelligence than American whites. "It doesn't sound very good," says Herrnstein, but whatever the truth, knowing is preferable to not knowing. Nazi Germany, he points out, chose not to know—in order to foster the illusion of uniform Aryan superiority, IQ tests were banned in German schools. Even if the worst were true, it would not necessarily mean a change in social policies, because plenty of blacks would still be smarter than the average white.

Herrnstein does not believe that the truth about race and intelligence would either foster or eradicate racism, since racism is not based on reason, but on visible physical characteristics. He personally thinks that the only cure for racism is intermarriage. Only when people are evenly distributed along the color continuum will they stop being uptight about racial differences. He adds that, even if whites are brighter, intermarriage would have no "dysgenic" effect.

Where do we go from here? Herrnstein is not sure. "Psychology is the science that should find ways to compensate for genetic defects," but "the intellectual muscle in this field is not in psychology." A place to start might be some basic research on compensatory education, which would mean discovering just how the learning process works in people, and then developing a technology to take advantage of the findings.

As he says in his book, "The biological stratification of society looms whether we have tests to gauge it or not, but with them a more humane and tolerant grasp of human differences is possible." He hopes the clouds that prevent the development of such tests are lifting, but he's not terribly optimistic.—CONSTANCE HOLDEN

Nixon-Brezhnev Summit: A New Clutch of Compacts

If science did not exist, it would be necessary for arrangers of summit conferences to invent it. Together with accords on strategic arms, pacts on matters scientific have formed the bulk of the agreements concluded between President Nixon and General Secretary Brezhnev at their meetings in May 1972 and during last month's summit. The vagueness of the agreements concluded in the past few days leaves uncertain what value they will have in addition to their symbolic role as the icing on the cake of Soviet-American amity.

Of the ten agreements signed by Nixon and Brezhnev or their deputies, four and a half concerned scientific cooperation, and two related to efforts to avoid nuclear war. Scientific accords on oceanography, transportation research, agriculture, and atomic energy formalized extensions of the general science and technology agreement concluded in Moscow last May. Preparatory work on the accords was initiated at a high level some 2 months ago, and the final documents were more or less ready for signing by the time of Brezhnev's visit.

There is certainly an element of the cosmetic art in the agreements. Just how large this element may be, at least in the case of the oceanography agreement, emerged at a press conference held in the State Department just prior to the signing ceremony:

Q: Would you have bothered signing this agreement if there was no summit conference?

Herman Pollock (deputy administrator of the National Oceanic and Atmospheric Administration): I suppose so, because it facilitates the work we have to do. However . . . it is not anything really new for us. But I think the answer is yes—the summit certainly does provide the kind of atmosphere which will give us a more open feeling of joint effort, of cooperation.

Q: In other words, the answer is no—that you wouldn't have really signed it if you didn't have a summit conference.

Pollock did not deny the statement.

The agreements contain the following essential features:

Oceanography, signed 19 June. Cooperation will focus on ocean-atmosphere interaction; ocean currents; geochemistry and marine chemistry; geology and geophysics of the ocean, including deep-sea drilling; biological productivity of the sea; and standardization of instruments and methods. The agreement will be implemented by joint planning, exchange of scientists and information, convening of joint conferences, and so on. A Joint Committee on Cooperation in World Ocean Studies will be established and will meet once a year.

Agriculture, signed 19 June. The agreement defines ten areas of cooperation, including exchange of forward estimates of crop production; forecasting methods; plant science; livestock and poultry science; soil science; mechanization; fertilizers; processing and storage; land reclamation; and use of computers in agriculture. The agreement is to be implemented by the exchange of scientists, information, and plant germ plasm. The two countries will set up a Joint Committee on Agricultural Cooperation, within which there will be two working groups devoted to economic and to agricultural research. From the American side, the agreement will furnish economic intelligence about the state of major Soviet crops, a factor that is said to have been somewhat lacking in last year's wheat deal with the U.S.S.R.

Transportation, signed 19 June. Five areas of cooperation have been selected: construction of bridges and tunnels; railway transport; civil aviation, including problems of efficiency and safety; marine transport, including cargo handling; and automobile transport, with particular reference to traffic safety. The agreement says that scientists and information will be exchanged to this end. A joint committee will be formed to implement the agreement.

Cultural Exchange, signed 19 June. The agreement provides for exchanges in science, technology, education, and culture, through 1979, and stipulates specific numbers for 1974 to 1976. At least 40 graduate and postgraduate students in the sciences or humanities will work in the other country for up to one academic year. At least ten professors will be exchanged, in order to conduct research, for periods up to

Scientists Probe Russian Viruses

Last November, American and Russian scientists met in Moscow to trade cancer viruses. Among other things, the Russians gave their American guests a gift of six different lines of human cells which, they said, produce particles that look like known tumor viruses. The Americans brought their hosts a collection of viruses that clearly cause cancer in animals, as well as a few viruses that are merely suspected of being carcinogenic.

Although the virology that is being done in this joint program is of interest, many persons close to the situation believe that the cordial ties that are developing between scientists of the two countries will be far more significant in the long run than any single research endeavor.

This exchange of viruses initiated a cooperative program among scientists from the two nations for the study of "leukemia and tumor viruses of animals and man." (Although the majority of the American viruses had already been given to the Russians throughout the years on an informal basis, the formal exchange may mean that Russian virologists, who are said to be "hungry" for viruses with which to work, will have easier access to these agents than they had before.) The opening for this cooperative effort had been made earlier, in the spring, when Richard Nixon and Leonid Brezhnev concluded a round of summit talks with agreements designed to improve relations.

In addition to exchanging viruses and other scientific materials, the American and Russian cancer researchers agreed to exchange individual investigators in virology, and related immunology and molecular biology, for periods as long as 1 year. This part of the agreement, known officially as a "memorandum of understanding," has yet to be put into effect, but, according to John B. Moloney, a National Cancer Institute (NCI) scientist and administrator who headed the American delegation, efforts are being made now to bring a few Russian researchers to the NCI. Moloney is particularly hopeful that young Russian scientists will be permitted to come to this country, and certain researchers have been singled out already. One of them is a woman who has been described as a "highly talented, bright virologist" named G. I. Deichman. Ms. Deichman is a Jewess. American scientists are reportedly anxious that she come here to work for a few months, but it is not clear whether her government will allow her to leave.

While efforts to deal with this side of the American-Russian venture are being pursued, work in the laboratory is moving forward, although it has not gone without a hitch. For one thing, the cell cultures contained organisms other than the viruses and there have been problems growing enough virus material to work with.

In this country, researchers associated with the NCI's Special Virus Cancer Program (SVCP), working in high-containment facilities, have been studying the Russian viruses with what they believe to be the most sophisticated techniques available anywhere. (As far as is known, Russian scientists are not yet in a position to use immunological techniques, for example, for the identification of viruses.)

Thus far, preliminary characterizations have been made, and scientists from both countries are preparing a manuscript for joint publication, according to their agreement. Although all the data are not yet in, preliminary indications are that the Russian viruses are neither classic B- nor C-type particles, but that they may be part of some other class of viruses. According to one of the researchers who has been working with them, each of the Russian viruses appears to be similar to the others. Whether any of these viruses originated in the human cell line that is producing it remains unresolved. It is, of course, possible that the virus entered the human cell culture as a contaminant.

The viruses given to the Russians included the Mason-Pfizer monkey virus, which may induce tumors in primates, and a virus called RD-114B, which, some persons thought at the time, might cause cancer in human beings. (It has since been shown to be a cat virus.)—BARBARA J. CULLITON

6 months, but the total volume of professorial exchanges is "not to exceed 50 man-months for each side." An unspecified number of professors may lecture in the other country for up to 1 year.

Atomic Energy, signed 21 June. The agreement provides for cooperation in the fields of controlled nuclear fusion, including design and construction studies, at all stages up to industrial-scale operations; fast breeder reactors; and research on the fundamental properties of matter. In the last item, the possibility of a U.S.-U.S.S.R. accelerator is raised by language which says that cooperation "may be undertaken on the design, planning, and construction of joint facilities." A Joint Committee on Cooperation on the Peaceful Uses of Atomic Energy will be established.

Strategic Arms, signed 21 June. The agreement is not a treaty, but a joint directive to the SALT negotiating teams to come up with a new limitation on strategic arms by 1974. A feature of the directive is that it calls for limitations on the qualitative aspects of strategic arms as well as on their mere numbers, raising hopes of reducing the technological contribution to the arms race. Another clause, however, builds into this aspiration the loophole that "modernization and replacement" of strategic arms would be permitted under conditions yet to be agreed upon. The directive also bids the negotiating teams to work toward a reduction in offensive weapons, not just a limitation. Proponents of arms control find little that is new or significant in the document. "There is even less there than meets the eye, and there is not much that meets the eye," says Thomas A. Halsted, director of the Arms Control Association.

Apart from the agreement on cultural exchanges, the various pacts signed during the summit week are notably bereft of precise numbers or figures, which means they guarantee nothing more than good intent. As such, they may be jeopardized by such frictions as the Soviet treatment of their own scientists (see box, page 38). That is not to say that the agreements will necessarily be a useless exercise. Last year's exchange of cancer viruses, for example, seems to have assisted friendly relations between scientists in the field, even if the viruses themselves have not been the basis of any spectacular advances (see box, this page). —NICHOLAS WADE