

# THE CONQUEST OF SPACE AND NATIONAL SOVEREIGNTY

The changes in technology applied by industry, whose rhythm has been ever accelerating in the course of the last decades, have destabilized institutions in western societies: they change the meaning of these institutions, and modify their efficacy, without our collective awareness, and without our jettisoning the ballast of inertia and social anachronism. The techniques of industrialization which incomparably endow the great nations and national empires, and which the infant nations desire with a sure instinct, give rise to profound contradictions in the traditional doctrine and practice of national sovereignty.

The lines of national frontiers derive from chance and accidents of history; they have distributed natural resources and men without the slightest economic or global rationality. In addition, the evolution of technology has changed the relative weight of nations, according to the resources situated within their

Translated by Therese Jaeger.

## *The Conquest of Space and National Sovereignty*

territory or below their ground. According to whether or not they possess great industrial centers, the nations possess riches and exercise power—or do not. When they do, they exercise influence well beyond their own frontiers: reciprocally, the nations that do not have at least comparatively powerful industrial centers receive these influences on their territory. The actual measure of sovereignties, all equal under the law, depends on the resources contained within the frontiers, by means of which heavy industry has been developed. The national states exercise a sort of collective quasi-ownership and quasi-monopoly over their resources and industries. They protect the exploitation of industry for the preferential benefit of their own nationals. And as for its economic and political efficacy, the nation is a market which derives its strength, a political society which derives its power, from the great industries. Because these branch outwards, they encroach on the frontiers of others.

In order to correct these intolerable and dangerous inequalities, the most powerful nations “give aid” to the weaker ones. But the doctrine of the nation and of national sovereignty still forms a screen behind which the debate continues between the effective nations and the fictitious ones. In referring to a specific aspect of technology (nuclear or outer space) we must differentiate between nations exercising full power and secondary power. Great Britain, France and Israel all have a rocket industry;—the first two (at least) will put satellites in orbit; but at the moment there are only two powers in space: Soviet Russia and the United States.

The nation is, in a sense, outmoded, but we do not yet know what institution will replace it; the economy of the twentieth century requires an organization of economic functions on a worldwide scale, organized according to world regions; but the interests threatened are too powerful, and habits too ingrained, for true international and global institutions to offer men the social spheres of activity which they would need in order to take full advantage of modern and contemporary technology.

On the other hand, the nations are becoming industrial societies; they have a growing need for science and technology. The new idea, the invention and the innovation have taken over from the capacity to save and invest. In their present stage

of development, the great capitalist nations can put the useful innovation into effect more and more rapidly with their already installed apparatus of production. They are obliged to do so by the vigorous competition of oligopolies and by collective competitors of a political nature.

Now, the useful innovation is not only not stimulated to the maximum, and best applied, by the quasi-mechanisms of the market, but a market founded on this onerous exchange risks slowing down the appearance of the innovation, and applying it wrongly. A new idea has notable characteristics: it cannot be exhausted; it is not lost by him who gives it away; it is not a service or goods comparable to others.<sup>1</sup> But still he who produces it must live. In a capitalist society based on the market, his efforts and investment must be remunerated. And so patent legislation organizes a monopoly for the inventor, and firms attempt to maintain a quasi-monopoly over the practical procedures which envelop the application for patent.<sup>2</sup> For this reason, our western societies innovate less and less efficiently than they might; they live, according to a correct and striking formula of Wassily Leontief, "in a chronic state of under-employment of technological knowledge." To the degree that, in a recent publication of the United Nations, we read that "patenting practices may become a real brake" on economic and industrial development, and that it is in the public interest—both national and international—to spread the methods, the new procedures, the *savoir faire* so that all those who could usefully employ them indeed have access to them.

But what are the proposed reforms of the patent laws, compared with those which would be needed to destroy the collective monopoly which the nations exercise when they pronounce conquests of science and technology to be military secrets? The greatest nations—far removed from the average and small nations—deprive each other of the most decisive scientific and technical information. Laboratories engage concurrently in the

<sup>1</sup> On this point cf. François Perroux, *Economie et Société: Contrainte, Echange, Don*, Paris, Presses Universitaires, 1960.

<sup>2</sup> "Les Brevets d'invention dans l'économie," *Cahiers de l'Institut de science économique appliquée*, Paris, No. 116.

## *The Conquest of Space and National Sovereignty*

same research in order to triumph in performances which are of interest to all mankind, which could have been accomplished earlier and at less expense with the help of organized cooperation. National sovereignty, conceived in order to defend men and improve their lot, has turned against them. It is effective only for the nations that have the greatest scientific means—and means of application. And among the great nations, on the other hand, it prohibits a cooperation which would serve them themselves, as well as the rest of the world.

Industry, technology and science tend to take on universal significance in the twentieth century. Materially, they can produce advantageous results for a growing number of men—and at the outside limit, for all men. But national sovereignties and the traditional institution that is the nation resist this universalization; they magnify and perpetuate the collective quasi-ownership and quasi-monopolies of riches, power and knowledge for the nations, and very specifically, for the Big Two.

Space technology carries this contradiction, which antedates it, to an unequalled degree of acuity. In order to understand this, and to foresee the result, we must explain precisely why the space age is incompatible with the traditional nation and the classic national sovereignty. We must also show why and how the world cooperation which reason would impose is, for the moment, held back; how and why it is degraded in inappropriate and perhaps dangerous cooperations—the cooperations under the leadership of a sole great power—which may be fruitful, but are powerless to resolve the essential question, which is cooperation among the nations of Europe and functional and scientific cooperation in a divided world.

The space age is the age of crises of national sovereignty and of the failure of world cooperation.

If we do not reverse the trend, it will bring with it consequences as painful as massive bombardments in the air age and as the bombing of Hiroshima in the atom age.

It is an effort toward understanding without complacency, toward imagination and realism without timidity, which may make the space age a “new renaissance,” in which an original form of political society is constructed that goes beyond the greedy and murderous nation.

## THE SPACE AGE AND CRISES OF NATIONAL SOVEREIGNTY

Let there be, on the surface of the earth, a territory A-B. Within the frontiers of this territory, each point P and each individual is subjected to the sovereignty of a national state (*Cf.* p. 16).

The state gives orders to each individual on this territory, subjects each to public order and mobilizes each for war. In return, it protects him against attack from the outside. As for the goods, they are the property of individuals or firms, or fractions of public domain; all goods, whatever they may be, are subject to a collective organization and political economy whose rule is: "The citizens of the nation come first."

For the national defense and the realization of the national advantage, the state applies unconditional public force (Max Weber); it exercises it on a territory against another unconditional public force.

As we know, military, naval and air techniques, have changed the extent and notion of "territory" and the practical means of protecting and exploiting it.

With astonishing rapidity and efficiency, the space age is changing "territory" in the direction of a third dimension: towards the heavens and towards hell, as the Romans said, in the direction of the center of the earth and in the direction of a stellar referential, as we say today.

Until now, we have known the internal constitution of our geoid indirectly, by studying seismic reactions, and directly, by not very deep digging, so-called utilitarian digging and the clearing of tunnels. The Russians and the Americans are, simultaneously, digging scientifically to great depths which greatly surpass the few kilometers attained before. As generally happens, these vast scientific enterprises will have useful applications in the exploitation of the materials discovered, and in the utilization of the earth's heat. In addition, all the information obtained about earthquakes, the composition of the deepest layers, the nature and properties of their rocks, is of interest to all nations and men; this information cannot safely be withheld by those who do the digging; it cannot be transmitted quickly to all without the cooperation of all. These deep diggings are, by their very nature and *de rigueur*, enterprises of world interest.

## *The Conquest of Space and National Sovereignty*

As much must be said of the "thrusts" in the direction of the planets and stars. A precise and operative knowledge of the atmosphere, troposphere, ionosphere and exosphere, and the determination of the heterogeneity of these regions as regards their characteristics of mass, density, electric conductiveness and rays, have the greatest importance for the fate of all inhabitants of this planet. In order to utilize its resources, they must have controlled, classified observations, rapidly transmitted and applicable by competent personnel. The conservation and improvement of natural surroundings is, by its nature, of worldwide concern. The pollution of the lower and upper atmosphere, and protection against cyclones, are enterprises of worldwide interest. Now—to remain with a single example—no nation stretches far enough in latitude and longitude to track the earth's artificial satellites correctly.

We must say, therefore: "Humanity is presently organized in nations which are no longer units of security, nor units of maximum return for technical and economic efforts." They do not protect for sure against the warlike enterprises of others. They do not shelter from damages which might be avoided if one did away with the dispersion and simultaneity of efforts against natural hazards.

In order to achieve enterprises of worldwide interest, national organization and national sovereignty are inadequate. Henri Laugier<sup>3</sup> is one of the very rare representatives of military science who teaches this without paraphrasing. "Constructing autonomous nations and concurrent nationalisms for his peripheral, temporary needs, man is made helpless by the progress of science in the sphere of communications between men, of the limitless perspectives of space and space travel, of the discoveries to be brought about by the knowledge and conquest of the resources of the terrestrial mass." And again: "The truth is that the riches of our earth belong to mankind, that they should be exploited for the benefit of all men and all nations of all continents by international institutions, agreed upon by all."

The national or imperial monopolies, or quasi-monopolies,

<sup>3</sup> "Penser International," *Revue de la Société d'études et d'expansion*, August, September, October 1962, No. 197.

of riches, power and knowledge contradict the positive and observable consequences of modern technicians, and especially of the most recent and promising, those of the space age. It is therefore not surprising: (a) that the schemas of sovereignty applied to outer space, and those of collective quasi ownership applied to celestial bodies, give absolutely no results, and (b) that the struggle of the two super-powers (the United States and Russia) combines rather mediocly the call for universal collaboration with the diplomacy of the preparation for a super-war.

From the first hope of space travel, juridical thought has occupied itself with the problem of sovereignty and law in relationship to the conquest of space. In 1953, the Prince of Hanover submitted a thesis on this subject to the University of Goettingen. Regular studies of it have been carried on by national and international scholarly societies. Specialized conferences have been held.<sup>4</sup> A symposium of 1300 well-filled pages was prepared under aegis of the United States Senate.<sup>5</sup> The basic notions have been presented to the general public.<sup>6</sup> A library has come into existence composed of works on a very high level, written by such specialists as John Gobb Cooper and Andrew Haley (United States), A. Kislov and S. Krylov, A. Galina, Y. Korovin, G. Zhukov (Russia) and Modesto Seara Vazquez (Mexico). From this treasury, which is enriched with every passing day, we can retain only that which is essential for our purposes.

The juridico-political disorientation which the conquest of space brings with it cannot be made more striking than by a border reference to the Kelsen cone. This great jurist has suggested that sovereignty over territory is delineated by straight lines passing through the center of the earth, cutting its surface at the borders, and extending into infinity. Unfortunately, the earth turns and so the celestial bodies are displaced, so that according to this view the states are successively sovereign over

<sup>4</sup> *First Colloquium on the Law of Outer Space*, Vienna, Springer Verlag, 1959; *Second Colloquium on the Law of Outer Space*, same publisher, 1960.

<sup>5</sup> *Legal Problems of Space Exploration*. A Symposium, 22 March 1961.

<sup>6</sup> Ch. Chaumont, *Le Droit de l'espace*, Que Sais-je, No. 883.

## *The Conquest of Space and National Sovereignty*

objects which they may or may not reach, since the lines are prolonged to infinity. This prolongation nullifies the definition of outer space which has occupied and occupies the intellectual energies of an entire population of jurists.

*Outer space*: literally, outside space. Outside what?

Outside the space of air sovereignty defined by the treaty of Paris of 1919 and the Chicago Convention of 1944, one might think to reply. Each state has complete and exclusive sovereignty throughout the altitude where an airplane can be supported by air. But the altitude attained depends on the plane, and rocket-gliders such as the Dyna-Scar were not foreseen by this definition. Must we reply that outer space begins beyond the atmosphere? The limit is uncertain, given the heterogeneity of the atmosphere as regards density and gaseous composition. Moreover, it is variable: the work of the International Geophysical Year has proved that the density of the air in the upper atmosphere changes by ten points according to geographical location, the season and the time of day.

Shall we consider the minimum altitude of satellization? This is only a trivial notion. A satellite moves on an ellipse, having a perigee and an apogee; for a given distance of the perigee from the earth, should the same apparatus be subject to two completely different regimes as regards sovereignty? And further, the fact that the satellite is in an orbit superior to the minimum distance of satellization does not by any means mean that its activities are not of interest to territorial sovereignty.

All these seem to be dead ends. The persistent influence of the Roman adage: "Cujus est solum, ejus est usque ad coelum" has perhaps made research sterile, and led it astray in an epoch in which the nation is no longer a fencible field,<sup>7</sup> and in which the Termes would look with anger and perturbation towards new heavens. The analogies drawn from maritime and air law do not, on the whole, seem to have been more fruitful, since the conquest of space and nuclear science are without precedent.

Fortunately, people have begun to ask *why* there should be a delineation of sovereignty in space. In the first approximation,

<sup>7</sup> On this point, see François Perroux, *L'Europe sans rivages*, Paris, Presses Universitaires, 1954.



one can admit that it serves the defense and military security of the nation. But here the jurist submits it to another test. If sovereignty is valid in space for as far as a space attack can actually be stopped, the delimitation would depend on the power of anti-satellite and anti-missile protection (very unevenly distributed); it would even vanish, since today, as we know from the study of the equilibrium of thermonuclear threats, no great power can be sure of preventing a surprise attack of great scope. The *Karman Line* which was proposed to delineate national sovereignty in the third dimension, is bypassed at about 100 kilometers from the surface of the earth, given the power of engines and the characteristics of trajectories.

The means of improving the security and "defense" of populations does not lie in tracing limits of national sovereignty, but in limiting national sovereignty itself, that is to say, in submitting it to agreed and respected treaties which acclaim, to some degree, a common and customary law of humanity.

These last tentatives admit of two methods, which are not mutually contradictory.

The one is the demilitarization of outer space, defined—in a purely conventional fashion, recognized as such—as beginning at a distance greater than 50 kilometers. Practically, that means renouncing putting nuclear bombs in orbit, and invites peaceful cooperation in exploring space. A rather distant parallel to this proceeding offers itself to the jurist who is fond of precedent in the Treaty on the Antarctic, signed at Washington on 1 December 1959, in which the parties engaged to abstain from military operations in this zone and, without renouncing their ulterior motives, opened it freely to all for individual and collective explorations destined to serve humanity.

The other method is the patient and determined attempt, in spite of the failures that have accumulated in the field of control, to inspect and eliminate nuclear and space machines intended for military use. This is an aspect of disarmament policy, either in a general or in a limited and progressive form.

Will the systems of national sovereignty which exist on the surface of the earth carry over onto the moon and other celestial bodies? The Soviet rocket aimed at the moon contained objects marked with the sickle and hammer, and a Soviet flag. Mr. Tops-

## *The Conquest of Space and National Sovereignty*

chief, on being asked, declared that Russia did not have territorial pretensions. The surface of the moon photographed by *Lunik III* gave rise to the publication of a map (*Pravda*, 4 October 1959) marked solely with Russian names, contrary to the custom of the International Astronomical Union. Washington, faced with these facts, declared that planting a flag on a land did not give the rights of sovereignty. The rights of the first occupying force, of effective occupation accompanied by validation, have already been invoked. Also, fortunately, the idea has already been suggested that the conquest of the moon, and eventually of other celestial bodies, should be made "in the name of" and "for the benefit of" all humanity. A living and new idea, which stumbles when it is tripped up by the Latin togas of *res communis* or of *res extra commercium*.

The conquest of space and nuclear achievement have presented a barrier to national sovereignty for a central reason whose essence we now understand. Sovereignty is territorial, that is, localized. The technology of the nineteenth century began vigorously, and the ruling technology of the twentieth century realized with a spectacular burst, the delocalization of the major enterprises with which human groups have concerned themselves. Industry has created super-powers: they are world wide, whether they wish it or not. The conquest of space and nuclear achievement belong to the two super-powers which they reinforce and oppose: their peaceful and warlike consequences are global, whether the powers wish it or not.

For the moment, the two super-powers are resisting this globalization (which is also a universalization, because it is of interest to humanity and to the entire being of each man). Just the same, they cannot ignore it; they use its language and invoke its ideal model at the same time that they brandish the doctrine of sovereignty in order to defend their (threatened) monopolies of research, power, and scientific and technical knowledge.

On both sides, the rules of law are not strangers to the combat: one or the other is insisted upon, depending on the needs of the moment.

On many occasions, the United States has legitimized the Samos system of reconnaissance, and shown that sovereignty

must be extended as far as national security demands. But it has not protested against the flights of Russian satellites over its territory. With continuity and perseverance, it has proposed atomic disarmament and the demilitarization of space (Cabot Lodge project before the United Nations, January 1957; proposition before the Committee on Disarmament at London, August 1957, and before the General Assembly of the United Nations, 1957; Eisenhower declaration, 1958; declaration of the Parliamentary Committee for Science and Astronautics, May 1959; first Kennedy message, 30 January 1961, proposing cooperation in space activity to all; Kennedy declaration following Glenn's orbital flight, February 1962).

On the Russian side, a history of politico-judicial variations on space could be written, but this should not make us forget the appeals for space cooperation, which have become more accentuated as successes accumulated, and the proposition for general disarmament which is the foundation of Soviet politics and diplomacy. In December 1926 Mr. Zarzar, who was to become the chief of Russian Astronautics, declared that the Soviets were opposed to the creation of an international organization controlling space because it would be dominated by the west. In 1934, Mr. Korovin declared all restriction of space sovereignty without disarmament to be utopian. From 1950 to 1956, sovereignty prolonged to infinity seems to have been in favor, because the high-altitude planes and even the research balloons of the United States were suspect. With *Sputnik I*, the situation changed a little: the theory of freedom in outer space stands out. Mr. Khrushchev, in his speech of 6 November 1957 for the fortieth anniversary of the October Revolution, evoked the "community of satellites." "This community, this competition would be highly preferable to a competition in armaments, the manufacture of armaments which sow death." In September 1958, Mr. Galina maintained that no state could be authorized to extend its sovereignty over any part of interstellar space and, on the other hand, that rockets could be launched into space without the permission of any foreign government; on 13 September 1959, *Lunik II* reached the moon. In December 1959, in the Moscow review *International Affairs*, Mr. E. Korovin pointed out very forcefully that Mr. Khrushchev's proposition

## *The Conquest of Space and National Sovereignty*

before the General Assembly of the United Nations (18 September 1959) included disarmament in outer space, but that this could not be separated from disarmament on earth which, as we remember, according to the Russian theses, includes the suppression of American bases.

This mixture of diplomatic and juridical manoeuvres and determined battles leaves us far removed from that humanity which is the subject of law, a moral person, conscious carrier of a project, communicable to all, which was the theme of the greatest thoughts of all times, and which imposed rationally the major technology of the present time. The lag of institutions, of collective notions, of objective knowledge of man and of his groups, gives a literal significance to Einstein's statement that it is more difficult to split a prejudice than an atom. For in the concrete attitude of the super-powers there is a prejudice in the most outright and etymological sense. Each considers his own social system preferable to that of the other without having tested the economic virtues of both. Each judges his style of living, his way of life, the concrete expressions of his civilization before having analyzed objectively the content both of his own and of his antagonist. Each accepts applied science; but he rejects the science that destroys all prejudice and makes constant comparisons and inquiries *whose result cannot be foreseen*.

Will the spirit of science—radically revolutionary, always and everywhere—succeed, by a series of great accidents or by imperceptible infiltration, in transforming today's abortive collaborations into true cooperations?

### THE SPACE AGE AND THE FAILURE OF WORLD COOPERATION

The United Nations, where the formation of the first world-wide powers is sketched and whose action, in spite of its lacks and faults, bears witness to the reality of globality and favors its recognition, has played the role of a forum where views are exchanged and the opposition of interests is evaluated in the field of space conquest.

The history of the two Committees for the peaceful use of space is a wearying and laughable one of quarrels of procedure

and precedence, and of systematic elimination of fundamental points by the "priority" method.

The first Committee, created by the Assembly in December 1958 as proposed by the United States, was born a year after the success of *Sputnik I*. The Soviets, having demanded in vain more extensive powers in the Secretariat and in the Committee, left the latter, followed by Czechoslovakia, Poland, India and the United Arab Republic. A gesture could have been made—as Lincoln P. Bloomfield said—in favor of the Soviet, honoring their performance; it would have preserved the unity of the Committee. After this bad start, it limited itself to establishing priorities: (1) liberty in outer space for exploration and peaceful use; (2) the responsibility for damage caused by space vehicles;—the notion of outer space (notably) was not judged ripe enough for definition.

The Committee also declared that it was not opportune to create an intergovernmental organization for international co-operation in outer space.

The General Assembly, in its meeting at the end of 1959, took no official notice of this information from a committee that was indeed handicapped. It limited itself to the briefest possible declaration on the exploration and use of outer space "for the benefit of all nations, whatever their degree of economic and scientific development." It named a new committee, in which the quarrels of the first regarding precedence and equality became even more violent.

The results, as we see, are laughable. It has been suggested that the scientists and military men, far from ignoring these failures, should protest vigorously and violently against them, taking part in these great debates that concern all men and urging their governments to demonstrate that they have understood the symbolic meaning and present duties of the only organism whose call is to deal with world problems. This is not asking much; but space collaboration is pursued by adulterated and insufficient formulas, about which we ought to form a clear opinion.

Towards the end of 1960, Senator Alexander Wiley evolved<sup>8</sup>

<sup>8</sup> Before the National Capital Section of the American Rocket Society.

## *The Conquest of Space and National Sovereignty*

a program which he planned to present to Congress. This program was a binomial: national policy; cooperation. The United States, including space research and space conquest among its national goals, should collaborate with the Western nations, in order to realize its own program and in order to help its friends by giving them little rockets, other machines, and technical information. This was the formalization of a long-established practice. Since 1938, the *NASA Act* has authorized the United States to cooperate with nations and with groups of nations for the peaceful applications of space conquest. Funds have been allotted to the United Kingdom, to West Germany and to Japan for tracking stations. It should be noted that in December 1959 NASA offered the services of the United States world tracking net to help the USSR in the launching of any manned machine.

Since strategic and military interests cannot be held strictly distinct from peaceful purposes, this cooperation under the leadership of the United States, fruitful in itself, does not go to the bottom of the problem. As in nuclear matters, it is good that the super-power of the West is submitted to constantly watchful criticism, and to a rigorous discussion, on the part of the scientific and moral elite and of other governments. Intellectual courage is as important as material forces, because nations whose space and nuclear technology are negligible are strategically placed and exercise political influence.

It is as a means of limiting the deviations of American leadership and, just as important, of hastening scientific and technical progress, that we must approve the European cooperation for space research that has just been instituted. The European Center of Nuclear Research is a very encouraging precedent. For a long time yet, it will not be a question of creating a supernational power disposing of a common atomic force, and of common spatial means of a strategic order. For reasons gone into at length elsewhere, we do not attribute to a European state the strength to preserve peace. But European space cooperation, beyond intensifying scientific information and research, and putting common funds into very costly work, can, by making use of the appropriate intermediaries, exercise two important lateral functions concerning public opinion. One point

is, indeed, to prevent the two super-powers from behaving as if they were alone in this world. The other point is, while avoiding polemics, to make the collective nature of successes in space properly understood. Indeed, these successes do not belong to single nation. They are the fruit of extended research over a long period, in which scientists working in very different parts of the world took part. The pioneers in the field of rocketry are American, French, Russian and German. Progress in thrusting power, teleguidance and telemetry is due to innumerable studies which can be all the less localized since they go back to systems of concepts and of symbolization, all the way back to the generating ideas. The spirit of scientific appropriation, jealous, vicious or protective, is one of the poisons of national policy. Public opinion, in whatever locality, must call for a methodical and energetic detoxication treatment.

This is not superfluous, even in the organizations for scientific, technical and functional cooperation which are already dedicated to space research and space conquest.

These are the international Associations of interested disciplines, such as the International Astronautical Federation, which in 1960 founded an International Institute of Space Law; the International Communication Union, which caused agreements to be signed in 1959 for the regulation of radio operations; and the World Meteorological Organization, which improves the methods of spreading information coming from meteorological satellites. Admirable work—but a stranger to the fundamental political options.

This work takes on a manifest exemplary meaning when it develops into such great world undertakings as the International Geophysical Year (July 1957-December 1958). Following the example set by the Polar Years (1882-1932), which aided cooperation for the exploration of the Arctic, fifty nations spent one hundred million dollars to organize a prolonged meeting during which they could pool their geophysical research. Aside from its intellectual rewards, an effort of this sort shows the universal and world-wide character of science and its results. Is this perhaps a prefiguration...?

When, if we manage to avoid war, around 1970-1975 numerous peaceful satellites are revolving around our planet, launched by

## *The Conquest of Space and National Sovereignty*

a growing number of nations; when the human spirit *in person* has visited a nearby planet; when new planetoids of the sun have been created from an earth rich in human beings: at that time, will the sharpest and clearest eyes, having seen a world partly recreated, look at their neighbor with the fresh vision by which we discover the Other, recreating him and recreating ourselves with him?

For the man of science, who forbids himself to overstep his role, this is only one hypothesis among many. It is the happy hypothesis among the many sinister ones.

What we know now is more modest. We know with sufficient precision and control that the technology of this time contradicts the nation and its sovereignty, that it destroys all social dogmatism and gives birth to new societies, either for or against us.

We know also that the spirit of social innovation is set in motion by great adventures. It is significant—in itself—that two Americans, Mr. Jessup and Mr. Taubenfeld, have proposed the creation of a Cosmic Development Corporation (CODEC), to be directed by the United Nations, which would be given the international ownership and trusteeship of the celestial bodies reached by man. It is equally significant that another American, Lincoln Bloomfield, should have suggested that complete collections of photographs of the United States and the Soviet Union, as seen from space, should be compiled and given in their entirety to the United Nations.

These “unrealistic,” bold suggestions are closer to the real needs of humanity than the ruses of the man of war and the silences of the diplomat.

