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## "Contributions of Space and Interplanetary Law to Juridical Science"

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CONTRIBUTIONS OF SPACE AND INTERPLANETARY  
LAW TO JURIDICAL SCIENCE\*

BY ALDO ARMANDO COCCA†

FIFTEEN years ago in 1947, when the first seminar on aviation law was held in Argentina, we placed before the Faculty of Law and Social Sciences of Buenos Aires a different proposition, a novel request—the study of Law in the Fourth Dimension. Our position was to be based upon common and frequent observations of recent times, such as the warning of Paul Langevin—a pure and enlightened man who, in the opinion of Einstein, suffered greatly at the deficiencies and inequities of our institutions, and who firmly believed in the power of reason and of knowledge and who searched for the light of justice—that the vital feeling of progress permits us to discard the burden of antiquated learning, averring that inflexible dogmas cannot but disintegrate upon contact with contradictory events—weakening, when not completely distorting, those who experience these events. The research work involving a new phase of law such as the then new aviation law, required its own method of study. In other words it required a process of analysis, abstraction, comparison, generalization, induction and deduction, in order to attain its objective in its purest form. All of this in light of inventions and technical advances, so that the law scholar could not devote himself freely to pure academic speculation. Nothing could be worse than regressing to old juristic institutions because neither the aviation law of those days nor the space and interplanetary law of today have any real historical background worth mentioning. The philosophical content of the law was not developing sufficiently thus leading it to arbitrary reasoning. There was some justification for this at a time when aviation law—and no other previous juridical instruction—was confronting a most important factor, the factor of time, which has immense value.

Studies on that fourth legal dimension have progressed, especially since 1956, with the publication, by the VIIth International Aeronautical Congress convened in Rome, of our work, "Method for research on juridical problems posed by the conquest of interplanetary space." Mention should be made, on the merits, of some of the first theses on the subject, as, for example, one by a Philippino jurist, Restituto G. de Guzmán, "Juridical Problems of the Conquest of Space," which is one of the most extensive monographs known on this subject. In this thesis, considered on December 9, 1959, by a panel composed of Yanguas Messia, Luna Garcia, Castro Bravo and Zubizarreta Gutierrez y Azcárraga y Bustamante at the University of Madrid and classified by them as outstanding (*cum laude*), Mr. Guzmán asserts that "upon entering the era of astronautics, there is nothing else to do but to apply the theory of the Fourth Dimension to the law, as in the case of mathematics and physics, if one is completely to understand in all its extent, that is objectively, all the juridical trans-

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cendence of the diverse phenomena and to develop the coresponding norms in accordance with it." Mr. Guzmán brings out the primary importance of what he calls the "immeasurable discovery" of Argentine juridical science. The memorandum written in May of 1958 and delivered to the Institute of High International Studies of the Sorbonne by Christos Papathanassion, an Athenian lawyer, doctor of law of the University of Paris, in order to obtain his diploma at that institution, also recognized the proposed methodology. In concluding these references to the first defenders and critical expounders of the Fourth Dimensional theory of the law, we must mention the lectures being delivered in Brazil since 1958 by Professor Luiz de Gonzaga Bevilacqua.

The fact that the purpose of this article is to honor an American professor impels us to state that at the convening in Washington of the IVth Meeting of the International Institute of Space Law in October of 1961, we outlined our theory of the Fourth Political Dimension in "The Legal Status of the Cosmonaut," carrying to its final conclusion the theory of Sigmund Neumann that in the 20th Century politics has acquired three dimensions: personal, national and international. We therefore maintained, reaffirming previous concepts, that in this space age politics has acquired a Fourth Dimension since it should be regarded from the viewpoint of a policy stemming from the interests of mankind.

The results of space explorations have impressed upon the jurists the necessity of searching for a method of law study which could follow this wonderful achievement of man. The law, which must be present in all voluntary acts, had been left behind. We asked ourselves then: How should human conduct be regulated when man leaves the earth? The press of all nations at the time of this space achievement spoke of a new world vision, a felicitous statement made on the birth of a new era at the 1950 International Conference called by the Institute of High Economic Studies at Sankt Gallen (Switzerland).

The jurist's concern was reduced to the difficulty of finding a method for the study of the new law. No single jurisprudential approach has reconciled technical progress with the necessity of giving the law a valid, totally scientific method. Neither rationalistic natural law nor dogmatic rationalism, nor exegetic empiricism, nor casuistic historicism, nor eclectic sociologism, nor existentialist egological theory were able to cope with the new problems of outer space travel.

A different method was necessary to face the elaboration of the new law, or better yet, the new vision of the law. There should be a new procedure to be followed to find and explain juridical truth; a methodology that would be not only mere logic, but also dialectic in this initial stage. It would be necessary once more to find a juridical reality which was inevitably drifting from legal science because of man's inability to comprehend legal phenomena in a context other than the one provided by the notion of limited time.

A simple analysis of the situation would show the presence of a factor, one that varies substantially. This is the time factor. In only a few minutes the astronomical invention and the man travelling within it leaves the earth and penetrates space. Would this cut away the juridical ties linking them to this planet just as the physical tie would be modified or made non-existent? The law would not merit consideration as a science

were it, in the face of such an event, to abandon man and deprive him of a juridical universe, in an unknown physical world.

Scientific intention orients the constructive spirit. Confronted with the imminence of the event that threatens to discredit law as a science, the jurist is forced to formulate a proposition. He cannot agree to, nor accept, that the law, being as it is the highest achievement of man, should disintegrate, nor that it should falter in the face of a technical event. The jurist has arrived at the conclusion that a method which meets the challenge of the progress of knowledge in other fields is required in order to study the juridical problems arising from space explorations. Therefore space and interplanetary law cannot be envisaged, without the aid of a Fourth Dimension.

Thus some of Einstein's theories may be applied in the juridical field, since his relativistic conception of the universe offers a solution at this crossroad in juridical knowledge which up to the present time has been limited to the earth and which today, as in the case of astronomy, transcends the universe.

It must be kept in mind that science is the pure expression of thought and that the conceptual consequences of Einstein's theories affect all human knowledge. The lack of conformity between reality and the slow progress of juridical knowledge was obvious. With the aid of the Fourth Dimension the chaotic state of juridical thinking can be reorganized in the same fashion that Einstein organized human thought and permitted the continued existence of laws which appeared to be doomed. The greatest merit of the theories chosen as a point of departure has doubtless been the advances in the recognition of reality. If juridical reality requires a method for its perception there is nothing more appropriate than to utilize those systems which are more advantageously proximate to all the preexisting methods.

The jurist's task is a continuous labor of spiritual construction, which progress demands that it rise to the higher levels of human knowledge. Thus, juridical knowledge can be established in its scientific category, in the same fashion as in the 19th Century, mathematics, natural science and historiography definitely became scientific segments of learning.

Today's jurist must elevate his knowledge to the degree reached by progress, and to conform it to the nature of his particular specialty without forgetting that the law, besides being a science, is also conscience. He must not be guided by a method which is appropriate to another science, nor submit to the timely and efficacious enunciations of other types of scientific learning. However, he cannot deny either the reality or the knowledge of man. The spatial era implies this widening of his knowledge and gives him the sole possibility, among those that are known and foreseeable, of advancing his knowledge up to the highest category of science.

Finally, we would like to indicate precisely the sense in which we use the term science. By scientific procedure we agree with Max Bense that it is a method of obtaining an authentic and demonstrable knowledge of the world in a gnoseological, existential, and sociological sense. A world manifested as nature, technology and history. Science is only revealed by words and by statements. It unfolds statements concerning the world, but it does not modify the world itself. Therefore we distinguish between

regarding the world as converted into tools by which we can modify and change the world itself. Technology, in its tremendous progress during the last decade, seems to have taken this task upon itself, unfortunately even including the destruction of the world. All contribution tending to direct the power of technology toward other worlds will improve life in this one, not only materially but also contributing to the serenity of spirit. Such has been our proposition, happily at this time shared and expounded at a conference of the Aeronautic Circle of Buenos Aires on April 25, 1956, that is, more than fourteen months before the beginning of the International Geophysical Year.

We shall not go on to bring out some of the consequences and to suggest a few forms of procedure presented by the application of the Fourth Dimensional method in fifteen years of doctrinary preparation. In the first place when the jurist intends to perfect a doctrine on space or interplanetary law, he must contribute all his science and his most profound juridical conscience. We prefer to refer to what is known as juridical sense as juridical conscience, with the clarification that it should be the expression of collective and not only individual juridical conscience.

Imitation, disguised as adoption of rules from other juridical disciplines or its methods should be immediately discarded. Adaptation at most would result in a partial success but it would fail in its definitive objectives. Polemics is preferable to facile success. The jurist would achieve nothing if he does not accept the premise that both space law and interplanetary law have effective existence in spite of the fact that very few norms exist beyond the realm of positive law. It is fortunate that it is so, for such a highly spiritual labor demands a mature procedure and discussion which would cut off inopportunately the sanction of the positive norm. The jurist in his ivory tower can rest assured, for it cannot be denied that these new legal forms are to be found in the minds of all peoples even though they have not arrived at a true state of collective conscience. They are in everyone's mind in their human sensibilities. They resemble a most up-to-date system of natural law which, while not transcending positive norm, retains all the illusion of spiritual aspiration. Its principles are paramount to any established law.

When studying the concepts and principles afforded by juridical knowledge the jurist must analyze the essential characteristics of the known systems, taking into consideration the present state of the collective consciousness and the factors which will assist in the improvement of human relations. Only thus can he create his own system, with complete quadridimensional freedom. Granted that space law does not offer that which scientists call "historical formation," much less juridical archeology, it fortunately demands the immediate formulation of concepts that will precede its positive enforcement as a dogmatic expression arising from a condition of general consciousness. So that the concept may precede its enforcement, it must arise from profound convictions, organic in their preparation and clearly expressed. However, it must not be believed that it is only the tool that enables the construction of space and interplanetary law. Neither the scientific conception of the law nor the application of a strict methodology obstructs the productive task of creative imagination, so important in all the forms of the new law. Methodology imposes harmony and more important the scientific result, the greater the clarity,

because reality, bounded by science, is the supreme harmony. Furthermore, it contributes metaphysics in equal proportion to the elaboration of space and interplanetary law, since institutional knowledge plays just as important a role as logic.

One must realize that space law does not result from juridical technology because it comes about as a consequence of technical achievement. Technology is the tool utilized to build with the concrete material offered only by juridical science. Technology, it is true, corresponds to a science, but it must correspond solely to juridical science. Juridical technology cannot be a branch of any other but juridical science. Space law formulates concepts of universal validity, it does not adapt itself to the results of an experience developed with the assistance of a science or art alien to the law. Because of the principle of juridical security demanded by the human community, once the concept is established the formulation of the rule must follow; then we can avail ourselves of the determined juridical technology or art, furnished by the principle which precedes the norm.

If the elaboration of concepts is more important to public than to private law, it is useless to emphasize its value in space or interplanetary law whose most salient characteristic is its Fourth Dimension in the physical universe and in the social world. Far from sacrificing the dignity of the law, this dignity is rooted in the elaboration of space law for it may not abandon its high level of idealism for any reason whatsoever, even when a sporadic technological advantage of a determined potential appears to impel the crystallizing of a new norm under the pretext that with realism one attains effectiveness. Such norm would have no other existence, no other importance than the very limited one of national law, for the State parliaments lack the competence to legislate in space because with such an attitude they would fall back into a positivism which is unworthy of the spiritual science.

The jurist's labor also offers that which is advantageous to spatial and interplanetary matters. In the first place he does not have to invent anything except to disclose and express the juridical reality provided him by his scientific knowledge of physical reality. It is evident that there are many *a priori* conceptions on all interplanetary law but these will not be merely speculative if it does not revert to its experimental basis, which becomes increasingly unnecessary to scientific progress. The jurist may know the true facts without previous experience because this truth derives from the harmony of the universe. As soon as he reaches truth and certainly, not before, the jurist must undertake doctrinal elaboration, and he must not delay since he possesses the incontrovertible postulate of the juridical phenomenon.

Another advantage is that the space lawyer has a demonstrable fact in his favor: a sole, unique and inalterable human nature which neither the centuries nor political tendencies have managed to alter. It is a nature proper to peoples—which we separate into nations because these are the creations of political order—who love justice as a tangible reality and not as a metaphysical or circumstantial abstraction—they love freedom, community life, harmony and they sense the fundamental principles of natural law.

There is one third advantage: the lawyer who devotes himself to these studies will always be followed, for the formulators of the law in all peoples, according to Ihering, speak the same language whatever their