

Paper IAC-06-E6.5.5

Mélanie VINCENT  
University Paris XI (France)

**For a Charter on Space as a Common Good**

Apart from a handful of space experts, few are those on this planet who realize that a revolution, even more radical than that of aviation, is taking place above their heads. If we don't pay due attention to it, the "conquest of space" might end up as a colonization of space. The word "conquest" is seldom used nowadays—maybe out of political correctness (the term being too brutal) or because other words with mercantile, political or military connotations have superseded a noun which is now almost resounding with poetic overtones. Instead of "conquest," we now use terms like exploitation, domestication, privatization, marketing, militarization. (Words ending with '-tion' all come from verbs ending with '-ize' and expressing *action*, and, as we shall see, space law has indeed transformed itself and is now referred to as the law of space *activities*).

This change in vocabulary foreshadows the coming revolution. We are moving away from the founding document—the Outer Space Treaty that came into force in 1967 and which proposed a disinterested and pacifist vision of space exploration. The nineteen-sixties and nineteen-seventies were no doubt the era of space conquest and conquerors, but that era, with its scientific and military objectives, remained compatible with the humanist ideas of the founding treaty. Today, this humanist approach is jeopardized by marketing and its obsession with profit. Certain signs seem to show that the appropriation of space is not just—as one might think—a wild dream. Whereas the 1967 Treaty set rules for the *exploration* and the *use* of outer space, the "Agreement Governing the Activities of States on the Moon and Other Celestial Bodies" (1984), signed by very few states, refers to the notion of *exploitation*. A new stage was thus reached. The gold contained in asteroids, the magnesium, cobalt and uranium supposed to exist on Mars or the water and helium-3 present on the Moon have now become the new sources of wealth coveted by the great space powers of the globe. Although permitted by the freedom to explore and use outer space, this kind of greed may well tarnish the serene beginnings of man's venture into space. If emerging space powers set about challenging the supremacy of certain leading space powers, this could lead to new types of

warfare. The goal of this paper is precisely to call for vigilance in order to preserve the resources and peace of the generations to come.

My purpose here will be (point 1) to bring to mind the humanist principles of space law, before examining (point 2) the problems posed for these principles by the space activities linked to technological progress. I will then venture to suggest a few proposals that might help us deal with the said problems.

## **I. The humanist principles of space law**

The legal status of outer space is characterized by the absence of territorial sovereignty. The fact that no protest came from non-space states meant, prior to the framing of the 1967 space Treaty, that they refused to consider outer space as being part of their territories. Besides, the infinite vacuum that constitutes space did not lend itself to the exercise of prerogatives pertaining to state sovereignty. This principle of an absence of sovereignty was extended to celestial bodies by the 1967 Treaty, in spite of their quasi-territorial nature.

In order to avoid all temptation to extend the principle of state sovereignty to celestial bodies, article 2 of the 1967 Outer Space treaty stipulates that “outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.” This principle of non-appropriation by states makes it impossible to consider outer space and celestial bodies either as *res nullius*—that is, as goods belonging to no-one but that may be appropriated by means of occupation (like game in internal law or ownerless territories in international law)—or as *res communis*—that is, as goods that come under the co-sovereignty of all existing states. But, above all, this principle entails the allotment of outer space and celestial bodies to humanity as a whole. That is why outer space and celestial bodies must be regarded as areas open to exploration and use by all members of the international community. This is where the principle of the free exploration and use of outer space and celestial bodies actually comes from. States having renounced all claims to outer space sovereignty, it seemed appropriate to grant them freedom of movement for spacecrafts in that sphere of human activity—freedom being one of the most powerful driving forces of all human action.

In order to avoid the legal gap resulting from the pure and simple non-appropriation principle, paragraph 1, article 11 of the Agreement on the Moon that came into force on July 11, 1984 stipulates that “the Moon and its natural resources are the common heritage of mankind,” just as the treaty on principles governing the activities of states in the exploration

and use of outer space, including the moon and other celestial bodies adopted in 1967, recognized space activities as part of “the common interest of all mankind.” The necessity of filling the legal gap, combined with mankind’s commonality of interests and benefits, inevitably leads to the notion of a common heritage of mankind, a notion that has more to do with law than with philosophy.

The customary origin of the founding principles contained in the Outer Space Treaty—principles of freedom like the right of free access, the right of free exploration of space, or the right to use space and celestial bodies—accounts for the particular strength of that principle. The freedom of space activities does not indeed follow from the contractual obligations stipulated in the Treaty. It in fact resulted from a principle born from, and based on, the practice of existing states even before the Treaty was achieved. That principle has a *universal value*, independent of the conventional system, which only gave it external expression. It also applies to the states that were not parties to the Outer Space Treaty of 1967. When in 1975 Colombia, together with other equatorial countries, claimed a right of sovereignty over the geostationary orbit segment located above their territories, the objection that was raised against them was grounded on the value of international custom. Article 2 of the 1967 Outer Space Treaty makes no mention of the countries that were parties to the treaty, which means that this principle applies to each and every country of the world, including the equatorial states that were signatories to the Bogota Declaration of 1976 but had not been parties to the 1967 Treaty. The said principle has also a *permanent value*, in that it would continue to apply to such states as might in future terminate the Treaty. A state that would withdraw from the Treaty could neither oppose the freedom of other nations to explore and use outer space, nor make any territorial claim in that field.

Non only does that principle establish a line of conduct for states involved in space activities, but it also gives them a subjective right of a public nature basically grounded on the absence of state sovereignty in outer space and on celestial bodies. This right, which can be exercised only by states having financial and technological capabilities, applies to all states without discrimination. In order to remedy this factual inequality, states must encourage international cooperation in the field of scientific research. It is through this kind of collaboration that the principle of freedom in space activities may eventually lead us to dedicate the exploration and use of space to the common interest of all.

The competence of states gets weaker in proportion as one moves from state territories into spaces that are of common interest. What counterbalances the renunciation by states of their right of sovereignty—I mean, the principle of free exploration and use of outer space, including the moon and other celestial bodies—presents a problem because it is incompatible

with certain founding principles of space law. It is also clear that the notion of a common heritage of mankind is hardly reconcilable with the huge financial investments dedicated by certain states to the space adventure of our time: obviously more efforts and more thinking will be needed to square the circle.

## **II. The problems posed to these principles by space activities linked to technological progress**

Technological progress opens new profit-making possibilities in space, and legal brain-teasers tend to multiply. By means of a few examples, I will mention some of these problems.

The lust for appropriation may come from the private sector. In 2006, the British multimillionaire Richard Branson created—together with the American initiator of the first entirely private space flight in human history, Mojave Aerospace Ventures—a joint company called Virgin Galactic. The purpose of the founder of Virgin Music was to take “access to space out of the hands of the chosen few” and to render space tourism affordable for all, at least those who can pay 294,000 € for a two and a half hour escapade into space, including only five minutes in a state of weightlessness. His first tourist spacecraft, called *SpaceShip Two*, to be built in 2008, will be launched from a flying airplane. This makes one think of the “Sea Launch Company,” which launches satellites from the high seas, or of “Pegasus” doing the same from flying aircrafts, without being subject to any national jurisdiction or control. Under which launch state control will this first tourist flight take place? When one knows that this private company is deeply shrouded in mystery, protected by scores of family trusts registered in the Channel Islands, and that the structure of Virgin Galactic resembles an amoeba, with a network of firms that keep popping up, vanishing or changing names, one has good reason to worry, should this venture succeed, about the appropriation of the orbit or about the determination of responsibilities in case of damage.

Since September 5, 2002, a website called “Luneimmo.com” has been offering anyone interested the possibility of acquiring property on the visible face of the moon. In 1980, an American, Dennis Hope, sent letters to the United Nations, the United States government and that of the former Soviet Union, informing them that he was officially claiming ownership of all planetary and lunar surfaces (apart from the Earth) inside our solar system. His claim was based on two legal texts. First, on the 1967 treaty on principles governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies: for him, the ban on the appropriation of celestial bodies as defined by article 2 of the 1967 Treaty applied to *states*, not to *individuals*—although paragraph 3 of article 11 of the 1979

Agreement Governing the Activities of States on the Moon and Other Celestial Bodies does stipulate that “neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place, shall become property . . . of any natural person. » The second text was the Homestead Act, adopted by the American Congress in 1862 during the conquest of the Wild West, an act thanks to which settlers could after a period of five years become the rightful owners of the 160 acres of land on which they had lived. For Dennis Hope’s “Lunar Embassy,” which now sells tracts of lunar land in France, space is the Far West of the XXI century, where whoever claims a plot of land as his own automatically becomes the owner.

In year 2000, a supermarket in Brittany called “Giant” decided to give each of its employees a plot of land on the moon. “One cannot appropriate a land that is not given by a state”, explained Amel Kerrest, both law professor at the University of Western Brittany and head of the Institut de droit des espaces internationaux et des télécommunications (IDEIT). “Since, he went on to say, the moon and other celestial bodies cannot in any way be appropriated by a nation, these title deeds just mean nothing.” Outer space being ‘the common interest of all mankind’, as are the Antarctic or the ocean floor, no entity whatsoever, whether a person or a nation, may claim to be a ‘lunar’ landowner.

And what shall we make of that American industrialist who’d like to become the first man in the world to own a celestial body? Suppose he launches a satellite, tows down an asteroid and bring it back on earth. International space law declares that no one may claim property on a celestial body. But if this industrialist manages to bring back an asteroid on earth, it won’t be a celestial body any more, and therefore space law won’t apply to the case.

These examples point to an unfortunate tendency of our time, that of turning everything into merchandise. The pseudo-privatization of the moon and other celestial bodies seems to conform to the same mercantile philosophy. “Everyone is led to think, Amel Kerrest comments, that the space cake is doomed to be shared and exploited, whereas it ought to be the property of all!” A position close to that of Philippe Achilleas, head of the Institut du droit de l’espace et des télécommunications (IDEST) : « This kind of appropriation is contrary to the very spirit of the treaties governing space law. The Moon is a common heritage of mankind that must be exploited for the benefit of all states.”

The lust for appropriation may also come from states. On January 24, 2004, in a speech on the new strategic orientation of the American Space Agency, President Bush emphasized the establishment of “a permanent human presence in the solar system.” In line with this, the development of an offensive technology enabling the United States to “control and dominate space,” as is specified in a planning document entitled *United Space Command, Vision for 2020* (Washington, D.C., 2001), will give aerospace industry the means to exert a total

domination over space and its resources. Another document issued in January 2003 by the Air Force Space Command under the title *Strategic Master Plan: 2006 and Beyond*, is even more explicit: “While our ultimate goals are to try to ‘exploit’ space . . . we cannot fully ‘exploit’ that medium until we first ‘control’ it.” To this let us add the fact that the United States did not sign the Agreement governing the activities of states on the Moon—let alone the comment of former astronaut Harrison Schmitt, published in *Space News* (13-19 July 1998), according to whom “all ban on the appropriation of natural resources was a source of concern.” Our last point here concerns the fact that aerospace industry provides important fundings to associations like United Societies in Space that have undertaken to revise the clauses of space law forbidding any individual, firm or country to claim property on all or part of a planetary object.

The United States, aware of the importance of *space dominance*, in particular for intelligence purposes, and strengthened by impressive budgets, is now the dominant force in space, not only from a financial and technological point of view, but also in the field of law. Their national space laws have become a reference in many areas, and this supremacy is a danger for the respect of the founding principles of space law.

After all is said and done, whether private or public, the attempts at appropriating space should be relentlessly condemned. The antinomy between the freedom of exploration and use of outer space, the liberty of private actors, placed under the responsibility of states since the 1967 Treaty, the principle of non appropriation of space and that of a common heritage and common interest of all mankind, must be clarified parallel to the advent of technological progress and social advances. A few possible solutions might be envisaged, for instance the drafting by all the states of the world of a non-binding document that could serve as a means to call to reason the ardent supporters of space hegemonism.

### **III. A few proposals to meet these problems**

If those instances are still infrequent, if in the coming years only a few multimillionnaires can afford the luxury of an escapade in weightlessness, and if only this or that state has enough means to invest in the discovery of Mars, the fact is that technology is moving on at a rapid pace, as well as commercial activities and the desire of other countries to emerge as space powers. It is imperative for space law to follow this evolution because its highly generous principles for humanity run the risk of being more and more out of step with economic realities. On the other hand, fewer and fewer states ratify space law documents: 100 for the 1967 Treaty, 85 for the Agreement on the rescue of astronauts (the first humanitarian law in

favor of astronauts that came into force in 1968), 80 signatories for the 1972 Convention on international responsibility, 40 signatories for the 1975 Convention on registration of objects launched into outer space, and finally only 9 signatories for the 1979 Agreement governing the activities of states on the Moon and other celestial bodies. Commitment does not seem to have been the main characteristic of the late twentieth century.

Another possible initiative would be the drafting of *Codes of Conduct* by the great space agencies so as to improve the reduction of space debris and thus save launch states from being financially responsible. The Centre national d'études spatiales (CNES) is the first space agency in Europe to have signed, in October 2002, a European Code of Conduct on space debris applicable to every new project of the French space agency.

These codes, which do not come under any national laws or international legislation, could be drawn up on a worldwide scale and go beyond the mere area of space debris. The United Nations General Assembly (UNGA) could ask space agencies to draw up a common code of conduct or at least devise some coordination of national codes with a view to eliciting more respect for the founding principles of space law. This would give those codes an international legitimacy and would clarify the appropriate conduct of space actors. The world code of conduct could be used by courts to characterize guilty conducts and apply to them the Convention on responsibility or any other law relating to responsibility.

Codes of conduct are not mandatory, even for the space agency that worked them out. They are only recommendations that the agency is supposed to take into account—recommendations which have even less the force of law against national third parties like private actors, and which have no legal impact on activities led by foreign companies or agencies controlled by foreign jurisdictions.

Nevertheless the 'common code of conduct' remains one of the best adapted solutions even though it is not a binding rule. As a coordination of various codes of conduct, the European code of conduct complements the principles discussed within the framework of the United Nations and that of the Committee on the Peaceful Uses of Outer Space (COPUOS). It defines the behavior to be observed in the last phase of life of orbital satellites. Even though the clauses contained in this code are only recommendations, for the last 8 years one third of the companies which operate geostationary satellites have complied with its principles, one third have applied them in part and one third ignored them, thus increasing the possibility of collisions and the risk for launch states to be viewed as responsible.

Finally, an even more universal solution would be an *Outer Space Charter*: a charter reminding all actors of the founding principles of space and the beneficial effects of space activities, and establishing flexible rules, whether in terms of remote sensing, health,

environment or even defence. Scientists are expecting spectacular breakthroughs in the field of biotechnology as well as from research on renewable fuel and energy, or highly resistant metal alloys. Pharmaceutical companies are planning to launch into the International Space Station (ISS) very pure and precisely arranged protein crystals which might help produce new medications. Let us imagine that some Indian researcher, invited to conduct experiments in the Russian module, discovers a remedy against this or that disease. Should then the discovery be patented on a strictly commercial basis or should we provide for specific legal clauses giving free access to that discovery in order to help humanity as a whole?

In the field of intellectual property, rather than trying to apply traditional rules that are usually very protective and nationalist, it might prove more useful to take a different approach when the invention may be of help to all mankind. On this point, Maureen Williams, an expert on space law at the University of Buenos-Aires, had this remark: "Obviously countries and companies investing astronomical sums should be rewarded for their inventions. But should a formula with universal benefit . . . be licensed strictly on a commercial basis or should there be provisions to make it accessible?" Here Maureen Williams was referring to a major principle of space law embodied in the Outer Space Convention of 1967: "The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development."

In the area of remote sensing, while the United Nations have adopted a set of principles in order to ensure equal access to remote sensing data, it might be desirable to reconcile the wishes of emerging nations—that keep demanding a legally binding agreement for the "detectors," who neither have to seek any previous authorization from the "detected" countries, nor to give them preferential access to data—and those of the states or firms of industrialized countries that see no need for that, preferring customary law and voluntary codes of conduct whose only use is to preserve the status quo.

The point, in fact, is to pragmatically organize, rather than impose, international cooperation. If we expect too much, nothing will be obtained from states. Instead of binding conventions, it would be preferable to propose instruments more flexible than the codes of conduct—a Charter, for instance, with declarations or resolutions that would not only aim at minimizing abuses, but would above all recall the beneficial effects of space activities. The principles of such a cooperation and of a more equitable access to data are already part of existing conventions. It would be useful to remind decision-makers of their existence and to facilitate their application by means of statements of principle that could later on open the way to regional or bilateral agreements.



During the drafting process of the 1967 Treaty on space, the United States tried to get other participants to adopt the principle of a “pacific use of outer space” that would ban the deployment of nuclear weapons and weapons of mass destruction in space, but would tolerate the deployment of satellites for military purposes; they thus wanted to protect an instrument of major interest to them, that is the observation systems aimed at a better knowledge of their potential opponents. An arms race carried out in space would have threatened those systems and put Americans at a disadvantage. Indeed, the Soviets did not need such systems to get information about the United States, a country that was more open than their own.

Another example, as far as the limitation of space debris is concerned, might be the fact that “the United States doesn’t want anything resembling international regulations” while many other countries precisely ask for that. The author of this remark is Kai-Uwe Schrogl, a lawyer working for the German aerospace Center. Americans, he goes on to say, “would prefer to see regulations set in a non-governmental forum where they can do what they like. But they’ll eventually be forced to go to the United Nations.” Ironically, the United States is the only country having a national regulation on orbital debris, and the U.S. government is trying to reinforce these laws, whose implementation is costly. It is more expensive to build a satellite that does not drop its support rockets into space when launched than one that does so. As K.-U. Schrogl rightly predicted, “when cheaper, more polluting launchers developed by other countries begin to reduce America’s competitive edge, we will find a U.S. administration favourable to international rules.” Americans want to keep their advantage. It is in that direction that states should try to coax them into accepting new rules.

### **Conclusion:**

If we don’t want the next astronauts bound for Mars to be obliged to turn back right after landing because there is a sign saying “No entrance. Private property!”, then the moment has come to put an end to the hegemonic and mercantile folly of men. Luckily, law exists, that helps deter and punish offenders. But parallel to that legal process, which is always a dozen years late compared to technological progress, we might and should add a citizen-oriented solution based on the founding principles of space law. The 1984 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies advocates in paragraph 1 of its article 4 that “due regard shall be paid to the interests of present and future generations.” It is incumbent on us to remind the world of this fundamental duty. Yes, the moment has come to educate our children otherwise than by telling them the story of the first dog sent into space or

the first moon-landing in human history. The inclusion, in every schoolbook across the planet, of the basic principles contained in the founding space documents, together with the threat posed on these principles by the policy of space powers, would be a salutary measure and a sign of respect for the future inhabitants of planet Earth.

At a moment when a large part of mankind are beginning to enjoy the fruits of space activity, it is high time to remind them that the prerogatives of humanity must remain a common good. It is also high time we gave up those 'earthy' patterns of thought based on power, rivalry, so as to acquire a more universal and communal conception of our environment.

In his 1961 policy statement on satellite communications, President John F. Kennedy declared: "I invite all nations to participate in a communications satellite system in the interest of world peace and closer brotherhood among people of the world." It would be useful to adopt this wise invitation to continue the conquest of space in the interest of all mankind. Constraining the powerful by resorting to education and reason, instead of giving binding texts a more liberal turn, might be a new approach and a new motto.