

# Development and imperialism in space

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**This article analyses established models of imperialism and seeks to apply them to possible space development scenarios. Inherent in such an analysis is a critique of the predominant rationales for advanced Solar System development (permanent planetary bases, settlements and colonies). The argument that emerges suggests that no single rationale is sufficiently strong to propel humans towards Solar System expansion as yet. However, in the instance that an extraterrestrial material becomes economically valuable, Solar System development will probably proceed. Under this scenario the present politico-legal regimes which govern prospective space development (and, moreover, the philosophical inclinations of many of those involved in formulating such regimes) dictate that Solar System development will be of an imperialistic nature.**

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<sup>1</sup>Examples of officials and entrepreneurial-minded writers, from throughout the Space Age, advocating extraterrestrial resource development include; Arthur C Clarke *Profiles of the Future: An Inquiry into the Limits of the Possible* Harper & Row, New York, 1963; Wernher von Braun *Space Frontier* (rev edn) Holt, Rinehart and Winston, New York, 1967; Michael Michaud 'Spaceflight, colonization and in-

*continued on page 42*

Will human expansionist development beyond Earth Orbit ever occur? What will be the nature of such development if it does occur? This paper seeks to apply models of development, as theorized by writers on imperialism, to the extraterrestrial realm. Economic, strategic, military, nationalist, populist sociobiological and sociopsychological models of Solar System development are examined. Such an approach enables an exposition of the motivations and rationales that exist for Solar System development, and also allows an assessment as to whether these motivations and rationales are of an imperialistic nature.

In the light of the arguments put forth in this paper, it is suggested that space policy-makers and space advocates might have to rethink many of their ideas with regards to the likelihood of current visionary space plans ever coming about, and also with regard to the desirability of such space plans being implemented.

While the analysis in this paper is focused on the American Space program, the critique that emerges might appropriately apply to other national space programs.

## **Economic models of development in space**

### **Development in space as imperialism**

If development does occur in space it will be of an imperialistic nature. It will be undertaken by a few technologically elite space-capable nations who will appropriate the commonly-owned resources of the Solar System for themselves, without any committed provision for the sharing of the benefits to other, non-space capable, nations.

Unfortunately such imperialistic tendencies are not just a prospect for the future, they are evident in current space activities. Not throughout the Solar System maybe, but certainly within the confines of the near space of Earth orbit. Imperialistic tendencies in this realm have provoked a growing sense of resentment amongst those nations being subjected to it. For instance, with the continued development of the geostationary orbit, concern is being expressed that the space a satellite occupies in this type of orbit is becoming a scarce resource, and one which is becoming increasingly unavailable to non-space nations. Some of these nations have banded together under the 1986 Bogota Declaration to express their right to benefits accumulating to users of geostationary orbits above their territories. Included in this group of nations are the Third World states of Brazil, Colombia, Ecuador, Kenya, Uganda, Zaire and Indonesia. None of these states receives rent for the occupation of their geostationary space, just as no satellite launching nation or company pays rent to the rest of the global community for occupying a common space that belongs to all the world. Those nations and firms that launch and operate satellites generally feel that the benefits accrued from satellite activities are offered throughout the world through the normal market procedures. However, unlike the free-riding satellite operators, user nations have to pay to receive satellite services. Additional to this is the ability of the space-capable nations to obtain information about resources in the territories of non-space-capable nations, which is either made unavailable to the latter or is sold to them at a profit.

The highly technological nature of satellite launching and operations not only means that poorer nations have less access to the benefits of satellite technology, but also that they are unlikely to initiate their own independent satellite operations. Even when they do, they come up against the rules and practices of space operations as governed by the world's dominant nations, which are often inimical to Third World space development.

Another significant issue of relevance here is the Missile Technology Control Regime (MTCR) implemented by the Bush Administration and

<sup>17</sup>R Robinson 'The eccentric idea of imperialism' in Mommsen and Osterhammel (eds) *Imperialism and After* GHI, London, 1986, pp 267–289.

and continued by Clinton. This regime is supposed to prevent Third World states from developing ICBMs or IRBMs, but in practice it is also stopping them from developing their own launch vehicles for satellites. Brazil and India are two nations particularly stifled by the MTCR. US launch vehicle manufacturers are the primary winners of the MTCR, as they would have much to lose if every nation was able to launch its own satellites and openly compete for payload customers.

Returning to extra-orbital space development, many are bound to enquire: 'what is wrong with imperialism in outer space if there are no indigenous peoples there?' Apart from the anthropocentrism inherent in this question,<sup>18</sup> what is problematic about extraterrestrial imperialism is that it will increase economic inequalities between the Earth's nations by giving inequitable access to, what may eventually be, significant amounts of resources. What also has to be noted is that imperialism involves dominion over territory and not just people. The outcome of this dominion being that others who have legitimate claim on the resources within those (extraterrestrial) territories are effectively excluded from using them.

The politico-legal mechanism for the control of space development in the solar system is the international treaty. Herein lies another problem, since the attitude of the space-capable nations to the various space treaties reflects their imperialist tendencies. The main international treaty dealing with the development and exploitation of extra-orbital space at the present time is the 1967 Outer Space Treaty. While this treaty places a prohibition on national or private appropriation of areas on extraterrestrial bodies, it can still be regarded as a regime that facilitates imperialism since it allows an interpretation if its premises that indicate that when materials of extraterrestrial bodies are removed they become the property of the remover. In essence, the Outer Space Treaty makes provision for usufructory rights, in the same vein as much modern day minerals prospecting.

There is a regime in place aimed at ensuring imperialism is not sanctioned in space. The 1979 Moon Treaty has as a central premise the notion that no single nation or private entity has the right to appropriate commonly-owned resources (whether they remain intact with their parent body or are removed from it). The 'Common Heritage of Mankind' (CHM) principle is the basis of this notion and it suggests that non-space-capable nations should have access to, and receive the benefits of, resources extracted from extraterrestrial bodies. Alas, the USA has not signed up to the Moon Treaty. Nor Russia, nor Japan, nor any ESA nation bar France, leaving the Moon Treaty largely devoid of support in those nations proposing expansionist space policies.

The normative prescription of the Moon Treaty for extraterrestrial equity is not given its due respect by policy-makers in the USA, because they adhere to the belief that those nations or companies that expend effort to prospect planetary bodies should be allowed to use any resources they discover. Debates in the USA surfaced when the Moon Treaty was officially drafted in 1979, as to whether the Treaty imposed a moratorium on extraterrestrial resource utilization until the setting up of some regime or authority to administrate and manage the exploitation. The US government's position with regards to this issue is that an implied moratorium on the exploitation of space resources, until the instigation of an international regulatory regime, is unacceptable.<sup>19</sup> As the Outer Space Treaty imposed no such moratorium the USA felt able

<sup>18</sup>The anthropocentrism in this question presupposes that imperialism can only be said to occur if humans suffer the consequence of it. The possible existence of non-human life on other planets of the solar system may be small but it is real, and the chances of these lifeforms being detrimentally affected by human activities is great. Such ethical/environmental considerations in the face of human space expansion are considered in E C Hargrove (ed) *Beyond Spaceship Earth* Sierra Books, 1986; A Marshall 'Ethics and the extraterrestrial environment' *Journal of Applied Philosophy* Vol 10, No 2, 1993, pp 227-236, C P McKay 'Does Mars have rights: an approach to the environmental ethics of planetary engineering' in D MacNiven (ed) *Moral Expertise: Studies in Practical and Professional Ethics* 1990, pp 161-183; and N Tabachnaya 'Economics and ecology of space commercial activities' Paper presented to the 43rd Congress of the IAF, Washington DC, 1992 (paper No: ST-92-0003).

<sup>19</sup>See S Gorove 'The future of space law: a legal regime for space colonies' in *Proceedings of the 19th Colloquium on the Law of Outer Space* 1977, pp 47-51.

to become a signatory to it. But the implication for a moratorium in the Moon Treaty is a notable barrier to its acceptance in the USA.

The USA's official position in space is one involving the desire to have an open door policy. According to Mitchell and Tinker<sup>20</sup> this would give US companies a clear advantage in the extraterrestrial resource stakes. Under the Moon Treaty, US companies might have to rent the site of extraction from the rest of the global community, the price of the rent being set at a level corresponding to the predicted level of profit. Such a policy would provoke yelps of horror from space capitalists whose ideological tradition would make them reply that those who take the risk and invest the capital should reap the rewards.

In essence, there are two approaches to formulating or interpreting outer space law. One is to ensure that the legal framework to encourage private commercial enterprise in the solar system is in place. The other is to ensure that any resources that are extracted from space are distributed to every nation, given that every nation owns them. In the profession and practice of space law, the most common ideological preference is for the former. This is not surprising, since most space lawyers and space policy analysts are American.

Within the USA human space expansion is considered eminently compatible with the operation of market forces, and a virtual impossibility under a regime with a penchant for distributive justice. The Moon Treaty is therefore regarded as a deleterious regime since few companies are likely to embark upon commercial space endeavours if there is the possibility that they will have to forfeit their profits.

Evidently, the arguments about what kind of regime to install in order to direct space development along a particular path are imbued with deep political and philosophical foundations so that the debate resorts to being conducted along old Earth-based ideological lines. With the prospect of extraterrestrial development and imperialism these debates have found fresh material for development. One of the most important considerations of these debates is the definition of, and the role to be played by the concept of the 'Common Heritage of Mankind'.

The meaning of the CHM concept as encapsulated in the Moon Treaty is ominously vague. But its very inclusion promotes the Moon Treaty above the Outer Space Treaty as the supreme formalised anti-imperialist regime. Hence the Moon Treaty has received both United Nations and Third World support. The CHM concept is often regarded as a descendent of the *Res communis* concept. The *Res communis* concept, itself, is often regarded as an outmoded and pre-modern philosophical attitude to law rather than actual enforceable legal principle. Its general focus is upon communal land or resource ownership by all members of a community. It is a matter of opinion as to whether the various solar system bodies should be regarded as *Res communis* or *Res nullius*. The latter indicating an unclaimed territory with no owner, until someone gets there and claims it for themselves. The Outer Space Treaty with its tendencies toward the allowance of the appropriation of extracted resources, is unclear as to whether it leans towards *Res communis* or *Res nullius*. But the Moon Treaty is distinctly clear on this point, through its incorporation of the CHM concept.

These niceties are crucial when discussing the development of space, since a strong *Res communis* attitude amongst the world's space nations may render imperialism in space impossible. Whereas a fixation with the normative principles of *Res nullius* very much promotes it. The frontier-

<sup>20</sup>B Mitchell and J Tinker *Antarctica and Its Resources* Earthscan, London, 1980.

ist attitude to space development is normatively allied to the *Res nullius* approach since it sanctions a physical appropriation of extraterrestrial materials that amounts to annexation.

To delve into the CHM concept, is obviously to take a leap into the ethical realm. Interpretations of CHM, whether they are legal, political or economic interpretations, must also take normative stances. While CHM is not a well-defined concept, my own predilections suggest to me that CHM encompasses the following features:

- 1) non-appropriation (this is adequately encapsulated in the Moon Treaty, but is deficient in the Outer Space Treaty),
- 2) universality of applicability (to all states and to all parts of space, including space itself; this would thus make nations and private firms liable for rent payment with regard to orbital occupation),
- 3) universality of formulation (so that all states participate in the drawing up of space law),
- 4) equitable distribution of space resources (the meaning of equitable being decided by all states),
- 5) the use of space for peaceful purposes (the intention of this is to disengage the military from space endeavours, rather than legitimize the role of the military in space to maintain peace and order).

The adoption of these features into a regulatory regime would work to significantly repel imperialistic tendencies in the Solar System. The mildness of the above prescriptions is demonstrable by the fact that many, maybe most, space enthusiasts would agree with them. Those that do not, I submit, are either more interested in the personal profit that they can squeeze from space endeavours or so obsessed by the notion of extraterrestrial space expansion that they are willing to sacrifice the rights and concerns of many of the world's people.

## **Conclusion**

Will human expansionist development beyond Earth orbit ever occur? The models of space development examined in this paper indicates that advanced Solar System development (permanent planetary bases, settlements and colonies) will not take place. At least there is no single model of development which suggests expansion beyond Earth orbit is likely. Even acting in a synergistic manner, the rationales for Solar System development seem incapable of propelling humans towards permanent occupancy of the Moon or the planets.

However, *if* there are economically valuable resources beyond Earth orbit, and this is an 'if' of celestial proportions, then space expansionism may be unstoppable.

What will be the nature of such development? Given that space expansion is only ever likely to proceed due to economic forces, space development must thereby operate by economic principles, which themselves are regulated by political regimes. Currently the political regimes in place (notably the Outer Space Treaty) dictate that solar system development will be undertaken in an imperialistic manner. Space advocates are not necessarily malevolently predisposed towards the welfare of the world's poor, but to hold to the view that extraterrestrial resource utilization is capable of positively contributing the global community with the Outer Space Treaty intact is to bask in a vat of optimism so large as to be unsupportable.