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THE PROTECTION OF A DARK AND QUIET SKY THROUGH HUMANKIND'S LEGAL LENS

Abstract

As championed by Antônio Augusto Cançado Trindade, serving judge of the International Court of Justice, "States are no longer the sole subjects of international law; they nowadays coexist, in that condition, with international organizations and individuals and groups of individuals; and, moreover, humankind as such has also emerged as a subject of international law." This contentious position has particular relevance within the law of outer space given that "[hu]mankind" is referred to eight separate times within the corpus of its five core multilateral treaties. Such de lege ferenda recognition of humankind's personality has a vast range of possible consequences for both outer space and international law, among these the effect that this legal recognition presents for optical and radio astronomy. This paper tackles this question in light of the growing challenge posed by satellite mega-constellations to humanity's shared right to a 'dark and quiet sky' for astronomical observation. For mega-constellations pose a serious environmental threat to ground-based astronomy due to the reflectivity factor of the thousands of individual satellites that they comprise. Furthermore, in addition to the exponential risk of collisions due to the vast increase of space objects entering low earth orbit, there are the deleterious environmental effects of the ongoing de-orbiting and replacement of thousands of individual satellites with relatively short operational lifespans.

These pressing issues while currently engaging both the astronomical and space law communities, to date have not been analyzed through the lens of humankind's own emerging legal personality. For if a legal subject, with potentially a unique claim to the observable sky – a shared resource for over two hundred millennia and one with intrinsic cultural significance to innumerable indigenous peoples – the protective role of humankind in addressing this 21st century challenge stands worthy of examination. Such analysis from the perspective of humankind as a legal subject presents an opportunity to invert the current legal and moral paradigm whereby mega-constellation operators and their governing States are no longer merely requested by international civil society to voluntarily address this issue. Rather implementing an adequate and effective response to this developing environmental and scientific threat presented by mega-constellations being instead a responsibility imposed upon both corporations and States as a mandate arising from humankind's own emerging legal authority within international law.