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# THE APPLICABILITY OF THE NORMS OF EMERGENCY RESCUE OF ASTRONAUTS TO SPACE TOURISTS

*Tanvi Mani\**

*The rescue of Space Tourists is a significant issue that has been effectively excluded from the domain of Outer Space Law and policy. The absence of any deliberation or discourse on the subject can be attributed to the general perception of the impossibility of such a situation, requiring the rescue of private individuals in Outer Space, arising in the near future. The Virgin Galactic Space flight, the world's first commercial space venture, is scheduled for take-off shortly. The question of the possible need for the regulation of commercial recreational activities in Outer Space therefore arises. More pertinent however is the concern of how and by whom the rescue of such Space Tourists would be effectuated. This paper questions whether the existing norms of emergency rescue of astronauts can be made applicable to Space Tourists, and if not, seeks to propose the formulation of an alternate instrument that would regulate the nature, extent and scope of obligations that rests upon the Nation engaged in such a rescue operation.*

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## 1. THE HISTORICAL CONTEXT OF THE RESCUE AGREEMENT, 1968

The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of objects launched into Outer Space was the second treaty drafted by the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)<sup>1</sup>. The agreement was formally adopted via The United Nations General Assembly Resolution 2345(XXII) which, despite not being formally binding upon countries, was recognized as an act of collaborative espousal of the common goal of peaceful Outer Space study and exploration. Subsequent to this resolution, The Agreement was entered into force on 3rd December 1968.<sup>2</sup> The history of this Agreement can be traced back to a 1959 report of the Committee on the Peaceful Uses of Outer Space which for the first time brought to the fore the impending need for the establishment of a system to effectuate the rescue of astronauts and provide them with necessary assistance in times of distress. The rationale provided within this report, for the institution of such a system, formed the crux of the Rescue Agreement, which has currently been ratified by 92 countries and has 24 signatories.<sup>3</sup> Paragraph 21 of the 1959 Report brought to attention the possibility of accidents

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<sup>1</sup> Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, US-Gr Brit-USSR, Apr 22, 1968, 19 UST 7570 [hereinafter Rescue Agreement]

<sup>2</sup> United Nations Treaties & Principles on Outer Space & other related General Assembly Resolutions at v, UN Doc ST/SPACE/11/Rev I UN Sales No 05 1 90 (2005)

<sup>3</sup> K Hodgins, 'Procedures For Return Of Space Objects Under The Agreement On The Rescue Of Astronauts, The Return Of Astronauts & The Return Of Objects Launched Into Outer Space', in *Proceedings of United Nations International Institute of Air and Space Law Workshop on Capacity Building in space law* (United Nations, New York 2003) 59

occurring during the re entry and landing of both manned and unmanned space vehicles into the earth's atmosphere. This drew the focus towards the imminent requirement for a multilateral Agreement that sought to define uniformly applicable norms of recourse or redress in case of an unintended landing within the territory of another State or on the high seas. Included within the substantive provisions of such an Agreement was the return of the vehicle to the launching state, and in the case of a manned vehicle, the speedy return of personnel.<sup>4</sup>

In addition to this, paragraph 74 of the report highlighted the need for appropriate arrangements to be made to restore the equipment and instruments recovered by the country within whose territory this accidental landing may have occurred to the launching State<sup>5</sup>. The Super Powers at the forefront of the Space Race agreed on the need for a comprehensive set of binding norms that would govern the rescue of space objects as well as astronauts in times of distress. They subsequently realized that it was in their best interest to take the initiative for the formulation of such a legally binding instrument. The exchange of letters between the U.S.S.R and the United States marked the beginning of the legal regime in Outer Space and lay the foundations for the construction of a comprehensive agreement between nations.<sup>6</sup> The 1963 Extraordinary Administrative Radio Conference, held in Geneva, adopted Resolution 2A which described in great detail the handling of radio communication in emergency situations caused by distress to space vehicles.<sup>7</sup> The awareness created through this resolution provided the necessary impetus for the multilateral negotiations that soon followed, which eventually culminated in the inclusion of a particularly relevant provision in the 1963 Declaration of Principles.<sup>8</sup> Principle 9 of the Declaration provided that all States shall recognize the role of astronauts as the envoys of mankind in Outer Space and render unto them all possible assistance in the event of distress or emergency situations.<sup>9</sup> The Declaration of Principles eventually became a part of customary international law and was acceded to by all nations.

The three major elements that contributed to the formulation of an international agreement on the Rescue of Astronauts were defined within the 1962 exchange of letters between the United States and the U.S.S.R. These principles proclaimed that Astronauts in distress on earth should be assisted to the fullest possible extent; that Astronauts in Outer Space should be afforded an equal extent of assistance; and lastly, that there exists a universal obligation on all nations to furnish the necessary information that would aid in the effectuation of such assistance.<sup>10</sup> The idea of providing assistance to the fullest possible extent, without a specific reference to "events of distress, emergency or accident" reflected a wider ambit of the obligation beyond the parameters laid out within Article V of the Outer Space Treaty.<sup>11</sup>

The Outer Space Treaty was entered into force within a politically charged atmosphere, with both the U.S and the U.S.S.R actively seeking to gain footing in the race for Outer Space. Immediately after it came into force the United States, the U.S.S.R as well as other member nations of the COPUOS recognized the need for a subsequent treaty which would define the specific obligations of nations to provide assistance to astronauts and ensure the safe return of space objects that landed within their

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<sup>4</sup> Manfred Lachs, Tanja L Masson-Zwaan and Stephan Hobe, *The Law Of Outer Space* (Martinus Nijhoff Publishers 2010) 87, 88

<sup>5</sup> *ibid*

<sup>6</sup> Gyula Gál, *Space Law* (AW Sijthoff 1969) 211, 213

<sup>7</sup> Lachs et al (n 5)

<sup>8</sup> Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, GA Res 1962 (XVIII), para 2, UN Doc. A/AC.105/5721 Rev 1 at 37 (Dec 13, 1963) [hereinafter Declaration of Principles]

<sup>9</sup> Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, G.A. Res. 1962 (XVIII), para 9, UN Doc. A/AC.105/5721 Rev 1 at 37 (Dec 13, 1963) [hereinafter Declaration of Principles]

<sup>10</sup> Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of all States, Taking into Particular Account the Needs of Developing Countries, GA Res 51/1122, ~ 2, UN Doc NRES/51/1122 (Feb 4, 1997)

<sup>11</sup> Article V, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan 27, 1967, 18 U.S.T. 2410, TIAS No 6347, 610 UNTS 205

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territory due to an unintended mishap. Consequently an elaborate and refined set of principles were formulated and bound together in a comprehensive Agreement that came into effect in the year 1968.<sup>12</sup>

### ***A. THE RESCUE OF ASTRONAUTS DUE TO THEIR STATURE AS ENVOYS OF MANKIND***

Astronauts are perceived as apostles of the internationally endorsed mandate of the peaceful exploration and use of Outer Space. The 1963 Declaration of Principles specifically deemed astronauts to the "envoys of mankind" in Outer Space and imposed upon all nations an obligation to assist them in the event of any accident, distress or unintended landing either on foreign territory or on the high seas.<sup>13</sup> This Declaration of Principles, delineating the contours of cooperation within the International Community in facilitating the rescue of astronauts, was the first articulation of the now universally accepted obligation incumbent upon Nations to extend their assistance to the envoys of mankind, when in distress.<sup>14</sup> This principle has been crystallized within Article V of the Outer Space Treaty, the binding character of which remains undisputed.<sup>15</sup> Immediately after the establishment of the Outer Space Treaty The United States, the Soviet Union as well as other member of the COPOUS recognized their interest in protecting astronauts from any mishaps that might occur and took definitive steps to formulate a comprehensive and largely collaborative Rescue Agreement.<sup>16</sup>

The "envoys of mankind" principle derives its veracity from the fact that astronauts are engaged in "working fundamentally for a greater public common good".<sup>17</sup> Although the rewards of this exploration are reaped by a single nation, the benefits of the scientific knowledge accrued from such study are equally accessible to all Nations, their governments and their citizens. This acquisition of benefits, despite not having invested in the research, is effectively balanced by the universal undertaking by all nations to assist astronauts during emergency situations and engage in rescue operations in the event of any mishap that might endanger their lives.<sup>18</sup> The phrase "envoys of mankind" in Article V of the Outer Space Treaty rests upon notions of diplomacy and "the contribution to scientific research for the public good".<sup>19</sup> It is this access to a public good that justifies the imposition of an obligation, even on those nations that are not engaged in a space program, to use their resources for the emergency rescue and assistance of astronauts.<sup>20</sup>

However, with the advent of space tourism, the objective and intent of the Rescue Agreement rests on shaky ground. The application of the norms of rescue of Space Tourists is challenged because of the lack of a universal obligation to assist private individuals in Outer Space, who may not fall under the category of envoys of mankind. The representative role embodied by astronauts is akin to that of State actors and they are therefore entitled to assistance in times of distress

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<sup>12</sup> Carl Quimby Christol, *The Modern International Law Of Outer Space* 178-80 (Pergamon Press 1982)

<sup>13</sup> Declaration of Principles (n 9)

<sup>14</sup> See, Stephen Hobe, "Current and Future Development of International Space Law" in *Disseminating and Developing International and National Space Law: The Latin America and Caribbean Perspective*, Office for Outer Space Affairs United Nations Office at Vienna, 10 ST/SPACE/28 (United Nations, New York 2005)

*("The general principle of rescuing astronauts in distress, as contained in the Outer Space Treaty (cf. Article V OST), is further implemented in the International Rescue Agreement of 1972. The duty to rescue astronauts in distress is only a part of the general duty to cooperate with one another with regard to activities in outer space. It is basically and fully accepted as a part of customary international Law.")*

<sup>15</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan 27, 1967, 18 UST 2410, TIAS No 6347, 610 UNTS 205

<sup>16</sup> Christol (n 13) 170, 171

<sup>17</sup> Lachs et al (n 5) 79, 81

<sup>18</sup> *ibid*

<sup>19</sup> Christol (n 13) 153, 155, 156, 159

<sup>20</sup> Gal (n 7) 224

Space Tourists undermine the very idea of representation, as their purely recreational activities within exclusively commercial ventures negates any public good and only adds to social costs of such an endeavor. The imposition of an obligation upon States to ensure the safety of Space Tourists, when they neither reap the benefits of their activity nor receive any representation from it, is to a large extent unfounded. Moreover the rescue of these Space Tourists places an additional burden upon Nations, especially developing countries, which are then made to extend this burden onto their citizens, in the form of increased taxation to offset the costs of such an endeavor. Thus, the provisions of the Rescue Agreement cannot be made applicable to Space Tourists simply because they do not comply with the overarching principle of envoys of mankind in order to avail of the benefits of the Agreement.

### ***B. THE RESCUE OF ASTRONAUTS PROMPTED BY THE SENTIMENTS OF HUMANITY***

An alternative point of view however promulgates the idea that the obligations imposed upon nations to effectuate the rescue of astronauts stem not from the role that they discharge as envoys of mankind but are an extension of the sentiments of humanity. As resonated within the preamble of the Rescue Agreement, this implies that its application is not only limited to astronauts but to any person in distress in the context of Outer Space travel and exploration.<sup>21</sup> This counter argument propounds the idea that the Rescue Agreement derives its strength and veracity from the sentiment of humanity which imposes an obligation upon all nations to assist in the preservation of the life of all human beings.

This principle, although relevant to the determination of the nature and extent of the preexisting obligations that Nations have by virtue of the Agreement, is not an embodiment of the objective of the Agreement itself. The idea that the obligations that nations owe towards the rescue and assistance of astronauts, is a manifestation of their ideals of humanity is inherently flawed. This is because this sentiment of human preservation espoused by all nations does not have the strength to impose upon them binding obligations, as it neither qualifies as customary international law nor is it concretized within the substantive provisions of a universally binding treaty.<sup>22</sup> The parties to the Rescue Agreement agreed to be bound by its provisions due to the benefits they received out of the scientific study and exploration of Outer Space; not out of sentiments of humanity.<sup>23</sup> This principle therefore does not entitle Space Tourists to derive the benefits of the norms of the Rescue Agreement, by virtue of this assistance falling under the ambit of the sentiments of humanity exercised by a nation. While these considerations may be undertaken voluntarily, they can at any time be repudiated by a nation that chooses to prioritize the preservation of its own self interest over providing assistance to a private individual to whom it does not owe any duty of care. The obligations imposed upon Nations to assist astronauts in the discharge of their role as the envoys of mankind are however binding and not voluntary simply because every nation owes a duty of care to its representatives, and in this instance this duty of care is shared by all of mankind.

Humanitarian considerations have time and again been superseded by perhaps selfish interests of economic viability, political clout and sustainable progress and development. Therefore, fixating the objective and intent of an Agreement on simply the sentiments of humanity when there exists substantial evidence to the contrary, within both customary international law and the substantive provisions of the treaty itself, is an inherently flawed approach to determining the application of the Rescue Agreement.

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<sup>21</sup> *The Preamble*, Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, US-Gr Brit-USSR, Apr 22, 1968, 19 UST (“...WISHING to promote international co-operation in the peaceful exploration and use of outer space, PROMPTED by sentiments of humanity”)

<sup>22</sup> Vienna Convention on the Law of Treaties, Art 18(a), May 23, 1969, 1155 DNTS 331

<sup>23</sup> Lachs et al (n 5) 79, 81

## 2. THE RESCUE AGREEMENT – AN ANALYSIS

The Rescue Agreement, 1968 stood as a testament to the clout of the two most powerful nations in the era of the Space Age. The primary objective of the agreement was to safeguard their interests in space as no other nation had the knowledge or expertise to engage in space activities at that time. The adherence of the majority of non space faring States to the Agreement was hinged upon the assurance provided to them that their concerns, of being reimbursed for the catastrophic damage caused by the accidental re-entry of space vehicles or objects into their territory, would be adequately addressed. The States that acceded to the norms of the Rescue Agreement also expressed their intention to establish a comprehensive liability regime as well as a system of registration to ensure the appropriate allocation of this liability; thus providing the necessary impetus for the establishment of both the Liability convention and Registration convention.<sup>24</sup> The preamble of the Rescue agreement establishes the intricate relationship between the Agreement and the Outer Space Treaty, especially Articles V and VIII, which it seeks to give "further concrete expression to."<sup>25</sup> The Rescue Agreement is second only to the Outer Space treaty in terms of the number of ratifications, its relevance having been enhanced by the engagement of new States in activities involving Outer Space.<sup>26</sup>

It is in this context that a number of its provisions need to be reevaluated with regard to its application to Space Tourists. As previously analyzed, Space Tourists do not fall within the definition of astronauts due to the purely commercial and recreational nature of their activity, and the question therefore arises of whether it is incumbent upon nations to use their resources to effectuate the rescue of these tourists, despite receiving no compensation for such rescue, either financially or in terms of scientifically beneficial knowledge that was a by-product of the space exploration carried out by astronauts. This section analyses certain aspects of the Rescue agreement that make it inapplicable to Space Tourists, and in doing so seeks to emphasize the need for the formulation of a specific set of norms with regard to the rescue of Space Tourists.

### *A. LAUNCHING AUTHORITY V. LAUNCHING STATE*

The definition of a launching authority under Article VI of the Rescue Agreement includes within its ambit international organizations in addition to launching States. The Rescue Agreement, in this respect, was the first of its kind not just in the arena of space law but also from a larger perspective to open up the partisanship to a treaty to intergovernmental organization.<sup>27</sup> This is reflected by the unique position of space law as a sphere of law which required absolute cooperation on an international front in order to effectively govern the activities of States and preserve the vast expanse of space for countries that were yet to develop their own space programs.<sup>28</sup>

Although seemingly altruistic in its inception, this provision levies a disproportionate burden on developing countries especially in the context of the rescue of Space Tourists. Article VI effectively implies that the financial burden of rescue operations is shared by the members of the respective International Organization subject to its acceptance of those rights and obligations expressed through a majority of its members.<sup>29</sup> However, as with all international organizations, this majority is merely of symbolic value and falls short of maintaining any semblance of balance in the allocation of obligations between developed and developing countries. This inherently inequitable status quo is a consequence of the ability of developed nations to strong-arm developing nations to accede to their interests in return for economic or political favors. This is especially problematic in the case of a Space Tourist, as the

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<sup>24</sup> Christol (n 13) 170, 171

<sup>25</sup> Rescue Agreement (n 1) paragraph 2, 3

<sup>26</sup> Rescue Agreement (n 1) paragraph 4, 5

<sup>27</sup> Gal (n 7) 219

<sup>28</sup> Christol (n 13) 200, 202

<sup>29</sup> Rescue Agreement (n 1) Article VI

developing countries do not benefit at all from the recreational commercial activity undertaken by these tourists.

Developed countries however benefit from the space tourism industry, as the majority of the commercial conglomerates operating in this arena are based within developed countries and carry out their operations within the jurisdiction of first world space faring nations. They thus benefit from the research in this field of Outer Space exploration for recreational purposes and through government contract that outsource costly activities in Outer Space to private enterprises. As a result of this the taxes that private enterprises pay for such operation as well as the incidental employment they generate in the maintenance and development of their facilities largely benefits these countries. Developing countries however are made to bear the financial responsibility of rescuing the participants of such an operation. This would to a certain extent be justifiable in the case of astronauts due to the generation of scientific knowledge from their exploration and scientific research and their role as the representatives of mankind in Outer Space. However, in the case of Space Tourists the imposition of this financial burden on developing countries is intrinsically unconscionable as they neither benefit in terms of tax revenue or employment generation nor do they gain access universally beneficial scientific knowledge. It is in this scenario of an inequitable balance of interests between developed and developing countries, that the formulation of a specific set of norms for the rescue of Space Tourists becomes all the more relevant.

### ***B. 'ASTRONAUTS' VS 'PERSONNEL OF A SPACE CRAFT' – AN INTENTIONAL DISTINCTION?***

The use of the term 'personnel of a space craft' in the substantive clauses of the Rescue Agreement and the term "astronaut" in its preamble forms the basis for the distinction between the two categories of individuals carrying out activities in Outer Space. This distinction differentiates between the activities undertaken by the personnel of a space craft and those carried out by an astronaut. As a result of this distinction in the duties carried out between the two, the nature of obligations that nations owe towards astronauts and those owed towards space personnel differ. In case of the former, a universal obligation of rescue and assistance is owed to astronauts by all Nations uniformly by virtue of Article V of the undisputedly binding Outer Space Treaty, now recognized as customary international law.<sup>30</sup> This has been emphasized within the preamble of the Rescue Agreement. However, the duty of rescue and assistance owed towards the personnel of a space craft is by virtue of Articles 1 to 4 of the Rescue Agreement. This duty is not an obligation imposed by an overarching principle of customary international law as in the case of astronauts, but is simply one that has been undertaken by the contracting parties to the Rescue Agreement.

The obligations that nations have towards astronauts and towards the personnel of a space craft are therefore differentiated by virtue of the fact that astronauts enjoy a universal entitlement to be rescued in the event of an emergency situation. The personnel of a space craft however only enjoy this right to receive aid and assistance from the parties to the rescue agreement. Articles 1 to 4 of the Rescue Agreement mandate that the specific nature and extent of the search and rescue of personnel of the space craft, be carried out by the State in whose territory the landing has occurred. This is an obligation that is imposed only upon the nations that are party to the Rescue Agreement and is not a part of the obligation towards astronauts imposed by customary international law or the undisputedly binding Outer Space Treaty.<sup>31</sup>

The discrepancy in the preamble of The Rescue Agreement, where it uses the term astronaut, and its substantive clauses which define the nature of the assistance to be provided to space personnel would imply an intention to restrict the application of the overarching principles of international cooperation and a universal obligation to rescue only to astronauts, and not allow their application to be extended

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<sup>30</sup> Ryszard Hara, Legal Status of Astronauts and Other Personnel on the Moon, *Proceedings of the 12th Colloquium on the Law of Outer Space* (1983), 165

<sup>31</sup> Rescue Agreement (n 1) Article I - IV

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to space personnel, whose rescue is exclusively determined by the treaty.<sup>32</sup> Space personnel would therefore only receive assistance by virtue of the obligations that Nations, who have contracted to the Agreement, have undertaken upon themselves. This distinction lies in the fact that the personnel of a space craft might only be engaged in assisting the astronauts or maintaining the space craft and may not be involved in exploratory or research activities, as a result of which they do not qualify as envoys of mankind.

Thus, the presupposed mandate of customary international law, imposing a universal obligation on nations to engage in rescue operations applies only to astronauts engaged in explorations or scientific discovery; as a result of which universally beneficial knowledge is accrued to the world at large. This distinction is especially relevant to defining the nature of the obligations that nations have towards Space Tourists. Space Tourists, by virtue of being engaged in a recreational commercial activity do not afford any scientific beneficial knowledge to the world at large and therefore do not fall within the ambit of astronauts, towards whom all nations owe a substantial obligation to rescue and assist. It is thus essential that a specific set of norms be formulated for the rescue of astronauts primarily because states would only undertake efforts to rescue them, provided they were reimbursed in some manner.

The 1968 Agreement can no longer be made applicable to Space Tourists because at the time of entering into such an Agreement, the contracting parties had not envisioned the possibility of man entering into space for purely recreational purposes within a commercial venture. Thus, the acquiescence of the parties to the agreement to assist with the rescue of the personnel of a space craft cannot be taken as an implied acquiescence to assist and rescue Space Tourists. This distinction derives its strength from the fact countries do not have a universal standing obligation under customary international law to rescue Space Tourists as they do not fall within the definition of astronauts, engaged in the exploration and study of Outer Space.<sup>33</sup> Thus, their rescue is bereft of the considerations implied within the principle of International cooperation in the peaceful use of Outer Space. This is primarily due to the recreational and not scientific or exploitative nature of the space tourism.<sup>34</sup>

### ***C. THE TERRESTRIAL NATURE OF THE OBLIGATION TO RESCUE***

Another shortcoming of the Rescue Agreement is the fact that it primarily focuses on the terrestrial rescue of astronauts subsequent to an unintended or accidental landing in the territory of a State other than the launching State or on the high seas. However, it does not address the nature and extent of assistance that may be afforded by the astronaut of one state to an astronaut of another State, in Outer Space.<sup>35</sup> This is inherently problematic with regard to Space Tourists because of the sheer number of tourists engaged in recreational activities in Outer Space at one time. It is imperative therefore to create a set of norms within which the tourists belonging to one state may be able to afford assistance to fellow tourists from another state without incurring any liability for the same, when such rescue or assistance is carried out in good faith and with bona fide intentions.

This lacuna has been redressed, although minimally, through the Agreement governing the Activities of States on the Moon and other Celestial Bodies, 1984. Article X of The Moon Agreement propounds that all State Parties shall take measures to safeguard the life and health of all persons on the moon.<sup>36</sup> However, it stipulates that in accordance with the treaty all states shall regard any person on the moon as an astronaut within the meaning of Article V of the Outer Space Treaty and as personnel of a space

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<sup>32</sup> Stephen Gorove, Major Definitional Issues in the Space Agreements, *Proceedings of the 35th Colloquium on the Law of Outer Space* (1992) 76, 77, 78

<sup>33</sup> Lissitzyn, 'The Treatment of Aerial Intruders in Recent Practice and International Law' (1953) 47 AM J INT'L L 559

<sup>34</sup> *ibid*

<sup>35</sup> Rescue Agreement (n 1)

<sup>36</sup> Agreement Governing the Activities of States on the Moon and Other Celestial Bodies 1363 UNTS 3 / 18 ILM 1434 (1979), Article X

craft within the meaning of the Rescue Agreement.<sup>37</sup> It also mandates that state parties shall offer any such persons in distress on the moon shelter in their stations, installations and other facilities.<sup>38</sup>

This Agreement reiterates the distinction between astronauts and personnel thus signifying the difference in the source, nature and extent of obligations that nations have with respect to the two. Moreover, the number of ratifications to the Moon Agreement is significantly fewer than the Outer Space Treaty and the Rescue Agreement, thus diluting the strength and veracity of its mandate to rescue fellow astronauts in Outer Space.<sup>39</sup> It is thus imperative that a new set of norms be formulated in order to ensure that Space Tourists have an appropriate assurance of rescue operations being undertaken in the event of a mishap either in Outer Space or as a consequence of the reentry of a space vehicle and its accidental landing within the territory of a state other than the launching state.

Articles 1 to 4 of the Rescue Agreement focus on the terrestrial rescue of personnel.<sup>40</sup> It is evident from the wording of Article 2 that the territorial sovereignty of the state determines the control that the Rescuing State has over all aspects of the rescue operation *vis a vis* the Launching Authority.<sup>41</sup> This would perhaps have to be restructured in the case of Space Tourists as due to the the damage being much greater the Rescuing State would have to consult the company operating within the Launching State. Further, the extent of the liability of the Launching State would also have to be gauged in accordance with the liability of the company engaging in the venture of space tourism within the launching State. Additionally, Article 3 determines the nature of the obligations of States in mishaps occurring on the high seas.<sup>42</sup> In instances of an accidental unintended landing of a space vehicle in the high seas, the obligation to rescue is contingent upon the State being "in a position to do so". The rescue is thus dependent upon the awareness of the rescuing State whereas in Article 2 this awareness is implied.<sup>43</sup> In the case of Space Tourists, the cost of rescuing or providing assistance to tourists entrapped in the high seas is significantly greater than the cost incurred for effectuating a rescue on land. It is therefore all the more necessary for a specific set of norms to be instituted in order to ensure a means of reimbursement for the States undertaking such a rescue operation.

### 3. THE FORMULATION OF ALTERNATIVE NORMS GOVERNING THE RESCUE OF SPACE TOURISTS

Space Tourism has been defined as "any commercial activity offering customers a direct or indirect experience with Space travel"<sup>44</sup>. An alternate definition propounded by the 1991 UNWTO Ottawa Conference on Travel and Tourism Statistics is "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure"<sup>45</sup> The propounded definitions of Space tourism however only refer to the reason for which private individuals undertake such activity. This however falls short of a legally tenable criterion for determining the extent and nature of their activities in Outer Space.

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<sup>37</sup> *ibid*

<sup>38</sup> *ibid*

<sup>39</sup> Nandasiri Jasentuliyana, *Perspectives on International Law* (Kluwer Law International 1995)

<sup>40</sup> Rescue Agreement (n 1) Article I (a, b)

<sup>41</sup> Christol (n 13) 174, 175

<sup>42</sup> Rescue Agreement (n 1) Art. III

<sup>43</sup> Rescue Agreement (n 1) Art II

<sup>44</sup> Stephan Hobe & Juirgen Cloppenburg, 'Towards a New aerospace Convention?' *Proceedings of the 47th Colloquium on the Law of Outer Space* (2005), 377

<sup>45</sup> World Tourism Organization, 'Technical Manual No 2 - Collection Of Tourism Expenditure Statistics' (1995), <<http://pub.unwto.org:811WebRootJStoreiShopsiinfoshop/Products/103411034-1.pdf>> accessed 28 February 2016

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As stated by the Andrew G. Haley at the First Colloquium on The Law of Outer Space, "The law must precede man into Outer Space."<sup>46</sup> The notion of jurisdiction is however founded in the fundamental principles of territorial sovereignty and non-interference with the affairs of states, within their domestic boundaries. This does not apply in Outer Space due to the undisputed covenant of the National non appropriation of Outer Space. There is therefore an imminent need to formulate a system wherein Space Tourists, their activities and their possible rescue are regulated within a specific set of norms depending on the jurisdiction of the country they subject themselves to.

The first instance of a civilian in Outer Space was the visit paid by Dennis Tito to the International Space Station as a guest of the Russian Government. However, this did not amount to an instance of space tourism, as he was a guest of the government and did not take part in a private commercial venture. This visit was however condemned by the other States who sought to protect their interests and the largely confidential research and development that they had been involved in, within the space station. As a result of this, an Agreement on the principles regarding the process and the criteria for the selection, Assignment, Training and Certification of the International Space Station (Expedition and Visiting) Crewmembers was signed in 2002 by Canada, Japan, The Russian Federation, The United States and the European Space Agency.<sup>47</sup> This agreement propounded the definition of Space Tourists and defined the nature and extent of their activities upon boarding the International Space Station. Thus, visitors to the International Space Station would be allowed on board only within the construct of this Agreement. This Agreement is in fact a testament to international cooperation with regard to Space Tourists and is the first such legal instrument, defining the rights and obligations of individuals other than astronauts.<sup>48</sup> However, this agreement applies only to the International Space Station and is not applicable within Outer Space at large. This model agreement could however be adopted in the formulation of specific norms that define the activities of Space Tourists in Outer Space as well.

The model of space tourism most likely to take form in the future is that of companies such as Virgin Galactic. Scheduled for its first flight in the near future, individuals from across the world have bought tickets costing \$200,000 each to board the flight.<sup>49</sup> Space tourism could in fact provide the biggest impetus to the Space race since the 1960s. However, under the current legal regime, Space Tourists can neither benefit from labour regulations that safeguard the employees of private space tourism companies nor can they avail of the protections enlisted within existing treaties such as the Rescue Agreement, The Outer Space Treaty or The Moon Agreement by virtue of not falling into the category of 'envoys of mankind'. They are therefore citizens who are no longer bound by the laws of their country and there is thus a need for the institution of a regime not only to protect their interests in Outer Space or regulate their actions but to also take responsibility for safeguarding their lives in case of an untoward incident. The ambit of this study is however restricted to the responsibility owed by a Nation towards the protection of its citizens, even in Outer Space and the requisite reimbursement that must be afforded to states, which carry out this rescue.

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<sup>46</sup> The Telegraph, 'Richard Branson's Virgin Galactic Space Flight Cleared For US Take Off' (2014) <<http://www.telegraph.co.uk/news/worldnews/northamerica/usa/10864337/Richard-Bransons-Virgin-Galactic-space-flights-cleared-for-US-take-off.html>> accessed 28 February 2016

<sup>47</sup> Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, Jan 29, 1998, State Dep't No 01-52, 2001

<sup>48</sup> R.P. Veldhuyzen and T.L. Masson-Zwaan, 'ESA Policy And Impending Legal Framework For Commercial Utilisation Of The European Columbus Laboratory Module Of The ISS', *The International Space Station - Commercial Utilisation From A European Legal Perspective* (1st edn, Martinus Nijhoff 2016) 47, 55

<sup>49</sup> P.J Blount, 'Jurisdiction in Outer Space: Challenges of Private Individuals in Space' (2007) 33 J Space L 299

### ***A. AN INTERNATIONAL TREATY ON THE RESCUE OF SPACE TOURISTS***

George Robinson, in his famed article "Astronauts and a Unique Jurisprudence: A Treaty for Spacekind" calls for a specific treaty to be instituted in order define the scope and nature of the applicable law to regulate the activities of individuals in Outer Space.<sup>50</sup> A treaty specifically regulating social norms of habitation in Outer Space would be irrelevant at this juncture because human habitation in Outer Space is not a prospect that seems plausible in the immediate future. However, the rescue of Space Tourists is a matter of immediate concern, given the possibility of an untoward incident occurring during the first commercial space flight itself, tentatively scheduled for the end of 2014 itself. It is thus imperative that nations be prepared to effectuate the rescue of their citizens.

The institution of an International Agreement similar to the Rescue Agreement would be effective in the determination of the rights and obligations of the contracting parties. This would not be based on an overarching duty to rescue but would remain contractual and contingent upon the reimbursement for the financial burdens undertaken by the rescuing state. This would be effective in ensuring that the burdens of the rescue operation are not uniformly borne by all nations despite some nations receiving no benefit even after undertaking commensurate costs to effectuate the rescue.

These regulatory norms must however only be restricted to rescue operations as their main purpose is to ensure the safety of private individuals in Outer Space, while at the same time mitigate the casualties from an untoward incident. The objective of such a treaty is not to regulate transactions or construct a just and equitable social order in Outer Space but merely to assign the responsibility of the effectuating the rescue of private individuals in Outer Space. It is thus an instrument through which nations would signify their willingness to undertake the rescue of Space Tourists, provided they would be reimbursed for the same. This would allow nations to protect the interests of their citizens in Outer Space. Further, the existence of such a treaty assuring them of their rescue in case of an emergency would in fact incentivize more participants to enter into space tourism ventures. The revenue earned from this could be a viable source of funding for the respective space programs of nations; which are currently dependent on a fast depleting resource base of taxpayer revenue. Space faring Nations would thus harbor a co existing moral obligation along with a viable incentive to enter into such an agreement and enhance the scope for future expeditions to Outer Space. Developing Nations could use their acceptance of such a treaty as a viable bargaining chip to ensure the transfer of knowledge, expertise and technology in exchange for undertaking the obligation to effectuate rescue operations within their territories, for which they would be adequately reimbursed.

### ***B. THE ESTABLISHMENT OF AN INTERNATIONAL POOL OF FUNDS TO REIMBURSE THE NATIONS EFFECTUATING THE RESCUE OF SPACE TOURISTS***

States which carry out the rescue of Space Tourists subsequent to an accidental landing within their territory or on the high seas, would be able to avail of an effective means of reimbursement through the establishment of an international pool of funds. This pool of funds would comprise of contributions from all parties to the treaty. The amount and extent of contribution that each country would be expected to make would be determined through a system of quotas and points, calculated based on the Gross Domestic Product of the particular country for the preceding financial year and the number of Space Tourists belonging to that country. This would allow for an equitable system of contribution and financial reimbursement, where each Nation would make a contribution to the pool in accordance with the resources available to it. States would still be eligible to be reimbursed to the extent determined by the committee in charge of controlling the finances of this pool of funds. There would therefore be no correlation between the amount contributed by a particular country and the extent of reimbursement that it may be entitled to. The reimbursement would be entirely dependent upon the extent of damage

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<sup>50</sup> George S. Robinson, 'Astronauts and a Unique Jurisprudence: A Treaty for Spacekind' (1983-84) 7 HASTINGS INT'L & COMP L REV 483

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caused and the losses incurred to rescuing state, calculated by the committee in charge of this pool of funds.

This quota system is similar to that instituted by the International Monetary Fund, which was established subsequent to The Bretton Woods Conference and aimed to assist in the reconstruction of the world's international payment system and resurrect the economies that had been destroyed in the wake to World War II.<sup>51</sup> The fundamental difference between the two however, being that the International Monetary Fund provides countries with a loan while this system of financing would entirely reimburse the particular country to the extent determined by the panel of experts. An additional benefit of this pool of funds would be that the Space Tourists themselves would have to pay a certain tax to the country that they belong to in order to avail of the benefits of this international pool of funds. This would act as a form of insurance thus assuring the respective Space Tourists that the country that they belong to would ensure their rescue in the event of a mishap. Moreover, this would enable the country that the space tourist belongs to make an additional contribution to the pool using the payment received from the Space tourist. As a result of this system, a corpus of funds would accumulate over time thus allowing the rescuing State to carry out the rescue operation to the fullest possible extent and with the greatest efficiency, having received an assurance of reimbursement.

This pool of funds would be controlled by a committee consisting of representatives from five to seven different Nations, elected by a two thirds majority of the committee. These representatives would ideally be assisted by a panel of experts, proficient in the financial, economic and legal aspects of space and aviation operations. They would thus be able to estimate the amount of damage caused as well as calculate the requisite reimbursement that the rescuing State would be entitled to. In addition to this there would also be an adjudicatory committee, comprising of legal luminaries from across the world nominated by the contracting State parties and then subsequently elected via a two thirds majority of all parties to the Agreement. Any dispute regarding the extent and nature of the reimbursement would be placed before this adjudicatory committee who would then make their decision in accordance with the norms laid down by the treaty and the advice provided by the panel of experts. This would ensure a transparent and accountable method of determining the extent of reimbursement that the state effectuating rescue operation is entitled to receive. This system would also ensure that all States have an equal voice in the determination of the extent of reimbursement. Further, the pool of funds would allow countries to undertake the rescue of Space Tourists without the entire financial burden of the rescue falling upon their citizens. This treaty is thus an effective instrument of incentivizing both developed and developing countries to enter into a mutually beneficial agreement for the rescue of Space Tourists as a means to safeguard their common but differentiated interests.

### 4. CONCLUSION

The realm of Outer Space remains a vast expanse replete with myriad conflicting interests: those of States, individuals and more recently private conglomerates. Its nuanced regulation thus requires international cooperation, multilateral dialogue and most importantly a willingness to ascribe to overarching norms that seek to effectuate the peaceful and equitable use of Outer Space. These norms have been effectively crystallized within the Outer Space Treaty, The Rescue Agreement and to a certain extent, the Moon Agreement. However, the various aspects of the application, nature and extent of these norms have required the institution of separate treaties, with a view to define the regime of liability and the allocation of this liability in a comprehensive manner. Similarly, the advent of Space Tourism has brought to the fore possibilities that were never imagined to have been within the reach of human enterprise. However, like with all other domains of human advancement is it imperative that a nuanced system of regulation be instituted to ensure the bona fide application of such advancement at

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<sup>51</sup> Chorev, Nistan, Sarah Babb 'The crisis of neo-liberalism and the future of international institutions: a comparison of the IMF and the WTO' (2009) 38 *Theor Soc* 459, 484

every step. It is in this regard, that the norms of the Rescue Agreement, 1968 cannot be made applicable to the rescue of Space Tourists. The several drawbacks of the Agreement in addition to its failure to address certain pertinent issues provide the necessary impetus for the formulation of an alternative legal instrument that would afford a sense of clarity in the procedure of rescue of Space Tourists. Such an instrument would effectively govern the rescue of those private individuals who do not embody the role of the envoys of mankind in Outer Space. This International instrument would derive its strength from a system of mutual obligations and adequate incentivization. The establishment of an International pool of funds would for the first time assuage the concerns of Developing Nations and ensure a sense of equity in the allocation of burdens and benefits amongst Nations. A treaty defining the nature and extent of the undertaking of Nations to rescue Space Tourists would not only provide the necessary impetus to renew the now almost lackadaisical Space race but would also incentive developing countries to invest in the development of their own Space programs. It is thus imperative that such an instrument of International cooperation and trust between nations be formulated at the earliest. The principles of equity, justice and good conscience have long preceded the entry of Nations into Outer Space; it is now time for them to precede the entry of man too, into Outer Space.