

**CHARLES UNIVERSITY IN PRAGUE**

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Institute of Political Studies

**Jonathan Arenson**

**Apocalyptic Imagined Futures as Securitizing Speech Acts in the  
Reconceptualization of Outer Space as a Private Domain:  
Applied to Discourse from the Pro-Privatized Outer Space  
Epistemic Community**

*Master's Thesis*

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**Author:** Jonathan Arenson

**Supervisor:** PhDr. Vít Střítecký, M.Phil., Ph.D.

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## **Abstract**

The privatization of outer space has in recent years crossed the boundary from science fiction to science fact. As such, this thesis argues that creating and diffusing an intersubjective shared idea of an apocalyptic imagined future through securitizing speech acts, where humanity's only chance of survival will be an established permanent privately owned and operated colony in outer space, will be a crucial aspect required to build an epistemic community large enough and with enough influence to reconceptualize outer space from an international regulatory and regime perspective. This in turn will serve as a catalyst for the normalization and legitimization of free-market private enterprise in outer space.

## **Keywords**

Outer space, privatization, speech acts, epistemic community, apocalyptic, free-market, legitimization

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## **Abstrakt**

Privatizace meziplanetárního prostoru se v posledních letech posunula z roviny fikce do roviny vědecky představitelné skutečnosti. Tato práce jako taková prezentuje názor, že vytvoření a šíření intersubjektivně sdílené idey apokalyptických představ budoucnosti prostřednictvím důvěryhodného řečového jednání, ve kterých jedinou šanci pro záchranu lidstva představuje založení stabilní, soukromé kolonie v meziplanetárním prostoru, je klíčovým aspektem nutným k vytvoření expertní sítě, která bude natolik velká a vlivná, aby nově uchopila meziplanetární prostor z hlediska mezinárodních regulací a režimu. Dále to poslouží k normalizaci a legitimizaci fungování tržních soukromých podniků v meziplanetárním prostoru.

## **Klíčová slova**

Meziplanetární prostor, privatizace, řečové jednání, expertní síť, apokalyptický, volný trh, legitimizace

**Rozsah práce:** 121,566 znaků

## **Declaration of Authorship**

1. The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.
2. The author hereby declares that all the sources and literature used have been properly cited.
3. The author hereby declares that the thesis has not been used to obtain a different or similar degree.

In Prague on November 17, 2015

Jonathan Arenson

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## Table of Contents

List of Abbreviations.....	1
Chapter 1: Introduction.....	4
1.1 Importance of Topic.....	4
1.2 Main Argument.....	7
1.3 Thesis Layout.....	8
1.4 Original Contribution.....	9
1.5 Limitation.....	10
Chapter 2: Literature Review .....	11
2.1 First Epoch.....	11
2.2 Second Epoch.....	15
2.3 Third Epoch.....	19
2.4 Private Outer Space Epistemic Communities.....	22
2.5 Public Perception.....	28
2.6 Securitization of Outer Space.....	30
Chapter 3: Theory.....	36
3.1 Constructivism.....	36
3.2 Critiques of Constructivism.....	42
3.3 Legitimization.....	44
3.4 Securitizing Speech Acts.....	49
3.5 Epistemic Communities.....	54
3.6 Conclusion of Theory Chapter.....	58
Chapter 4: Empirical Analysis.....	60
4.1 Peter Diamandis and Eric Anderson – Solve For X.....	60
4.2 Steven Wolfe – SpaceNews.....	62
4.3 Charles Bolden – NASA Head Chief.....	62

4.4 Elon Musk – 60 Minutes, CBS.....	64
4.5 Tony Milligan – Academic – Journal of Space Policy.....	65
4.6 Conclusion of Empirical Analysis Chapter.....	67
Chapter 5: Conclusion.....	68
References.....	73



## List of Abbreviations

ACDA	Arms Control and Disarmament Agency
APSCO	Asia-Pacific Space Cooperation Organization
APRSAF	Asia-Pacific Regional Space Agency Forum
COPUOS	Committee on Peaceful Uses of Outer Space
COMSAT	Communications Satellite Corporation
CS	Copenhagen School
ESA	European Space Agency
GATT	General Agreement on Tariffs and Trade
IAF	International Astronautical Federation
IGO	International Governmental Organization
IISL	International Institute of Space Law
IR	International Relations
ISS	International Space Station
INTELSAT	International Telecommunications Satellite Organization

ITU	International Telecommunications Union
INTERSPUTNIK	Intersputnik International System and Organization of Space Communications
LEO	Low-Earth Orbit
NASA	National Aeronautics and Space Administration
NEA	Near-Earth Asteroid
NTBT	Nuclear Test Ban Treaty
PSAC	President's Science Advisory Committee
RAND	Research And Development Corporation
SEA	Sea Exploration Alliance
OST	Outer Space Treaty
UN	United Nations
WTO	World Trade Organization

## 1. Introduction

### 1.1. Importance of topic

“We have a moral obligation to become a multi-planetary species, to back up the biosphere so that no natural disaster or man-made disaster can ever wipe out all that we have created.” - Peter Diamandis, Planetary Resources Inc., co-founder (Diamandis & Anderson, 2013).

Planet Resources Inc. is a private outer space company which bills itself as “The Asteroid Mining Company” (Company, 2015). Its website states that mining near-Earth asteroids (NEA) “will play a key role in the development of a space economy and be the main driver in allowing humanity to become a flourishing multi-planetary species” (Company, 2015).

It has also been estimated that there are over 1.5 million asteroids in our solar system that are one-kilometre in length or larger, with 981 of them being NEA (Anderson & Diamandis, 2013). In 2013, Peter Diamandis, co-founder of Planet Resources Inc., singled out a NEA called *2011 UW158*, which would only take 8 months to reach, and has an estimated value of between \$300 billion and \$5.4 trillion (Anderson & Diamandis, 2013).

This is perhaps the most potentially profitable aspect of the commercialization of outer space. The company, backed by director James Cameron and Google executives Larry Page and Eric Schmidt, is taking the lead to make this a reality. In April 2015, it launched its Arkyd-3 telescope which is currently in low-Earth orbit (LEO) and was built to search out profitable asteroids, as well as having an ancillary benefit of searching for asteroids with the potential of impacting with earth (Conklin, 2015). The telescope and launch were partially financed with \$1.5 million raised from the online public-fundraising site Kickstarter, leading the company to label the launch as the “first public space telescope” (Conklin, 2015).

This initial example of the very real drive for the commercialization of outer space, and the others to follow, will demonstrate the fact that this is not some far-fetched, far-off plan. It is already happening today, and the privatization and commercialization of outer space is a topic worthy of exploration.

In May 2012, private space company SpaceX's delivery ship *The Dragon* docked with the International Space Station (ISS) in the first ever private resupplying run, which cost the company \$520 million, compared to the estimated \$1 billion it would have cost NASA (Pasztor, 2012). In early 2015, it was reported that the Google had invested \$1 billion into SpaceX, bringing the company's value to an approximated \$10 billion (Berger, 2015). In May 2015, it was reported that the U.S. Air Force had certified that the company's Falcon 9 rocket was qualified and eligible to be awarded national security space launches (Air Force's, 2015). It has also been reported that by 2017, NASA plans to privatize all deliveries of cargo and astronauts to the ISS (Pasztor, 2012).

In 2013, it was reported that NASA had signed a \$17.8 million deal with Bigelow Aerospace that will have the company build an inflatable module to be added to the ISS (David, 2013). It is set to launch in 2015, and be carried by SpaceX's *Dragon* (David, 2013). In addition, Bigelow is working on creating its own inflatable space station, called the *BA 300*, which will allow private companies the privacy needed to work on their "proprietary technology" in outer space (Shiga, 2011).

Commercialization of outer space will also extend to the medical industry with exomedicine, as moving pharmaceutical manufacturing into space can result in a level of purity that cannot be reached on earth (Vorobieva, 1995, p. 192). This is as a result of the "ultra clean vacuum" of space, and has the potential to revolutionize how we approach the treatment of illnesses (Avchare et al., 2014, p. 1 & 9). This approach is far from new. In the

early 1980s, McDonnell Douglas Corporation, Ortho Pharmaceuticals, and NASA teamed up to work on projects in space that involved the separation of “biological materials from preservative solutions,” to help create a hormone that aided in making red blood cells (Ackerman, 1993). Of course, what is new about this idea is that companies will no longer have to rely on NASA to hitch a ride to space, and there is potential that new projects can be worked on in privacy and perhaps without oversight or regulation thanks to Bigelow's soon-to-be released inflatable space station. More recently, it has been shown that in space, bacteria can replicate “faster and denser, proteins bond more directly and antibiotics grow at an 'enhanced' level” (Ma, 2009). Companies that are currently involved in outer space pharmaceutical research include Merck and Bristol-Myers Squibb.

Probably the most publicized aspect of the drive to commercialize space is the idea of space tourism. However, Alan Stern, a former associate administrator “in charge of all space and Earth science studies” for NASA contends that the companies involved in space tourism are also going to make huge contributions to overall space research (Stern, 2013). These companies, including “XCOR Aerospace, Virgin Galactic, Armadillo Aerospace, Masten Space Systems and Blue Origin,” are developing or have already developed reusable suborbital vehicles (Stern, 2013). This is a big improvement from NASA's suborbital flights which used “throwaway” vehicles and were unmanned, costly, and relatively infrequent (Stern, 2013). While NASA usually flew between 20 and 25 flights a year, Virgin Galactic alone is planning on flying one flight every day (Stern, 2013).

The preceding section established that the privatization and commercialization of outer space is already underway. Given this reality, this thesis will explain the exact focus it takes on the drive for a new privatized outer space paradigm.

## 1.2. Main Argument

The quote cited at the outset of this thesis is of the utmost importance to the overall continuing focus. This quote from the co-founder of Planetary Resources Inc. can be categorized as a securitizing speech act in the sense that it securitizes the idea of private, for-profit space exploration, and attempts to recast our normative view of outer space. The orator of the quote, Diamandis, is the securitizing actor, and is casting private outer space companies as the ones who can mitigate the threat of annihilation to the referent object, in this case, humanity as a whole. This quote is an example of what will be explored in this thesis, namely, the use of an imagined apocalyptic future, diffused to the audience in the form of a securitizing speech act, in an attempt to enlarge the already existing pro-privatized outer space epistemic community, which in turn will be crucial for legitimizing on an international scale, the reconceptualization of outer space as a private domain.

My hypothesis is the following:

Creating and diffusing an intersubjective shared idea of an apocalyptic imagined future through securitizing speech acts, where humanity's only chance of survival will be an established permanent privately owned and operated colony in outer space, will be a crucial aspect required to build an epistemic community large enough and with enough influence to reconceptualize outer space from an international regulatory and regime perspective. This in turn will serve as a catalyst for the normalization and legitimization of free-market private enterprise in outer space.

### 1.3. Thesis Layout

Chapter two of the thesis will overview the existing literature on the securitization of outer space, as well as the history of what led to this current epoch of outer space privatization and commercialization.

Chapter three will establish the theoretical lens through which to view these securitizing speech acts by pro-private outer space proponents. As speech act theory is a form of constructivist theory, this section will begin by explaining constructivist theory, and justifying using this approach as opposed to neorealism and neoliberalism.

From there, I will establish the role legitimization plays in the entrenchment of international rules, norms, and institutions. I will demonstrate that aside from coercion and self-interest, legitimization is a key factor, and an understudied one, in understanding the reconceptualization of any shared norm, rule, legal regime, etc. In the case of the topic at hand, the idea that private companies be seen as legitimate entities in outer space is a crucial factor for their success.

The next subsection will explore and establish the importance of speech act theory as a theoretical lens through which to view securitization. The Copenhagen School (CS), especially Buzan et al. (1998), will be key in laying out what speech acts are, how they work, and why it is an appropriate approach to explore how issues become security issues.

The final subsection of the theoretical chapter will explore what epistemic communities are, how they are established, as well as giving previous historical examples of how they have played crucial roles in changing internationally held norms, beliefs, laws, and regimes.

Finally, chapter four will provide five empirical examples of speech acts which fit the model previously described. The examples will cover a variety of actors through a variety of

mediums, including private companies, NASA employees, the political realm, scientists and academics. The speech acts selected will demonstrate the varied and multifaceted nature of the pro-privatization epistemic community, including its varied members from very different professional backgrounds and the varied venues in which the speech acts are transmitted to the intended audience.

#### 1.4. Original Contribution

There is existing literature which will be utilized in the thesis that does indeed point to the importance of epistemic communities, and their use of speech acts, to the process of legitimizing international regimes, and coupling that based with the idea of outer space as a potentially private domain.

However, there is no literature that explicitly draws a connection (red line) through constructivism, legitimization of international regimes, securitization as a speech act, epistemic communities, and finally the idea that the use of an imagined apocalyptic future. A future that will play a crucial role in the reconceptualization and ultimately, legitimization of outer space as a private domain. In addition, the use of a referential object in a speech act, in this case humanity without our Earth, is a new one, as until very recently, the idea that we could back up the biosphere in outer space was merely science fiction. However, we as a species are on the cusp of that becoming science fact as opposed to fiction.

That being stated, I envision that the 'red line' I will draw through these theories all the way to recent empirical examples of these securitizing speech acts of an apocalyptic imagined future, with the referential object being humanity without our biosphere on Earth, will be my original contribution, as it has not been done before.



## 1.5. Limitation

Although my hypothesis runs the risk of being non-falsifiable, my contention is that the risk should not inhibit the exploration of the idea. Furthermore, the hypothesis does not claim to be an all-encompassing explanatory theory on how reconceptualising outer space as a private domain will be achieved. Instead, it is an explanatory theory, based on descriptive inference and recent empirical examples, of one part of a much greater whole that is the reconceptualization of outer space as a private domain, with the establishment of my narrow aspect of the overall theory acting as a catalyst for future, nuanced, perhaps quantitative research on private space companies and the epistemic communities that have formed around them, using apocalyptic imagined futures as speech acts.

## 2. Literature Review

Edith Weeks (2012) identifies three main epochs in outer space development. The first epoch, beginning with the launching of the Soviet's Sputnik in 1957, ran until 1979 and featured space exploration and related activities as "purely a governmental enterprise" (p. 22). The second epoch, running from 1980-1991, is identified by a shift "from the international into the domestic arena" with domestic laws, especially in the U.S., being passed which led to an increase in "participation by private corporations" in space activities (p. 22). The third epoch, beginning in 1992 until present time is labeled by Weeks as "hyper privatization" which has seen new industries develop in the fields of "space tourism, space settlement, and space mining" (p. 23). For sake of clarity, unless otherwise mentioned, all page numbered references in sections 2.1 through 2.5 are attributed to Weeks (2012). It should also be noted that these same sections, 2.1 through 2.5 rely heavily on Weeks' work. However since she offers such a comprehensive history of the increase in the drive for privatization of outer space, an in depth exploration of her work is integral for putting today's outer space realities in proper historical context.

### 2.1. First Epoch

During the first epoch, 1957-1979, originally it was the Soviet Union who were against the privatization of outer space, and without the Soviets, we might have already had "free-market" principles enshrined in our normative understanding of outer space (p. 8).

1958 was labelled as the "International Geophysical Year" with the plan that the International Council of Scientific Unions, made up of various countries, were planning to launch a communications satellite (p. 23). The Soviet Union, who was a member of the council, decided to launch Sputnik earlier, without permission or acquiescence from the

council “which sparked grave concern within the international community” (p. 23). As a result, the UN created the Committee on Peaceful Uses of Outer Space (COPUOS) and the International Institute of Space Law (IISL). Weeks states that the push for privatization from the U.S. can be traced to 1959, when President Eisenhower wanted private companies to come on board to create and operate satellites for communication purposes (p. 42). Undaunted, the Soviets continued their push when in 1961 Yuri Gagarin became the first human launched into outer space, with the U.S. following behind in the next year with the launch of Alan Shepard (p. 46).

Weeks argues that the drive to commercialize certain segments of outer space development is not new. In 1962, the Communications Satellite Act was passed by the U.S. Congress which created the private Communications Satellite Corporation (COMSAT) (p. 58). The end goal of the act was to have “foreign governments or business entities” invest in the corporation with an eye on “creating competition” in the satellite communications industry (p. 58). This also gave the U.S. government a form of control over the launching of satellites as the initial board of directors for the corporation were all put in place by President Kennedy. COMSAT eventually led to the creation of the International Telecommunications Satellite Organization (INTELSAT), a similar idea to COMSAT, but more focused on the international stage, with the U.S. owning approximately 20% of the INTELSAT (p. 58).

In August, 1963, the Nuclear Test Ban Treaty (NTBT) was signed, which banned the use of nuclear weapons “in outer space, in the atmosphere, and underwater” (p. 57). A month before the treaty was signed, President Kennedy gave a commencement speech at the American University in what can only be labeled a securitizing speech act in regard to the nuclear weaponization of outer space. Kennedy portrayed nuclear tests in outer space as an existential threat, with humanity on Earth as the referential object. This portrayal led to a

new rule of increased communication and cooperation with the Soviets, which also can be characterized of breaking free of entrenched norms.

Kennedy stated that “I realize that the pursuit of peace is not as dramatic as the pursuit of war – and frequently the words of the pursuer fall on deaf ears. But we have no more urgent task” (Kennedy, 1963). He also stated that “above all, while defending our own vital interests, nuclear powers must avert those confrontations which bring an adversary to a choice of either a humiliating retreat or a nuclear war” (Kennedy, 1963). I include this example to give further credence to the idea that securitizing speech acts have long been used to recast our normative shared understanding of outer space and how and for what purposes it should be used.

According to Weeks (2012) the result of everything that happened in the first epoch, including the passing of the Outer Space Treaty (OST) in 1967, would be viewed through the lens of the “Cold War balance of power” (p. 23).

The OST was passed in the UN and includes the following three principles that are today the most contentious in terms of whether they allow privatization, and as a consequence, potential ownership and property rights in outer space (Treaty, 2015):

- the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries and shall be the province of all mankind;
- outer space shall be free for exploration and use by all States;
- outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means;

Weeks, citing Von Bencke, 1997, states that the U.S. and the Soviets would not have signed onto the OST if the term “common heritage of mankind” was included, as they feared

this would lead to sharing their proprietary space technology with other countries (p. 47). This is a vital point as even back in the 1960s we witness the seeds of proprietary interest in outer space being of immense concern.

However, although their official doctrine was one of anti-free market principles, Weeks contends (citing Vereshuchetin and Silvestro, 1992) that the Soviets unofficially began to participate in the increasing commercialization of space by signing the Intersputnik International System and Organization of Space Communications (INTERSPUTNIK) which, similar to the idea behind COMSAT, allowed for the leasing of the “Sputnik communication channels” (p. 79).

Although she does not directly mention the idea of speech acts being used to shape the public perception of outer space in the first epoch, Weeks does allude to it when citing Launius and McCurdy, 1997, and writes that leaders of nations have “always been cognizant of and sensitive to the general public’s views regarding outer space” (p. 50). She adds that in the early stages of the space race and the successes by the Soviets, U.S. President Kennedy gave a series of speeches that changed the domestic public perception of outer space “from absolute fear to pure excitement” (p. 50). Weeks cites Krug, 1991, when stating that one of the ways the Kennedy convinced the public and the House of Representatives for a massive 10-fold increase in NASA’s budget between 1960 and 1965 was arguing that the U.S. had to “prevent tyranny from overshadowing democracy,” or in other words, they had to beat the Soviets (p. 55).

Additionally, when the détente between the Soviets and the U.S. began to weaken around 1979, the world witnessed a new lack of cooperation on the international stage in terms of creating and updating outer space legal regimes (p. 44). This becomes evident the same year with the passage of the Moon Treaty, which the U.S. and the Soviets did not sign

precisely because it contained the “common heritage of mankind” term that was successfully avoided in the OST (p. 48). Weeks contends that because the Moon Treaty only has seven signatories as opposed to the 96 countries that signed onto the OST, the former is generally not considered as “being part of international space law” (p. 48). Specific to the Moon Treaty, which is missing from the OST, is the statement that the Moon and its resources cannot “become property of any State, international intergovernmental organization or non-governmental entity or of any natural person” with the emphasis for our purposes on the non-governmental entity or natural person aspect (p. 48).

## 2.2. Second Epoch

The second epoch ran from 1980-1991. Weeks (citing Goldman, 1996), states that one of the reasons the U.S. started to pass space law domestically instead of at the international level through the UN is because the process of international lawmaking was “too slow and too unpredictable to keep pace with the rapid development of commercial applications of space technologies” as it took almost 10 years to finally pass the OST (p. 24 & 63). Weeks adds that this changing over of epochs “marks a significant period of regime change,” and a period in which “private industry could demonstrate its greater efficiency” (p. 24). In addition to changes in domestic law, government incentives were also employed to get private industry involved, which resulted in the development of many products and services we use today such as cell phones, cable television, and the internet (p. 23 & 24). Overall, Weeks argues that the public accepted the increasing commercialization and privatization because “they were viewed as successful and profitable” (p. 24). Another reason for the focus on domestic space law was that although the Soviets would eventually see their demise at the end of the decade,

they still had a powerful place in the UN and had the ability to block any attempt by the U.S. to push through pro-privatized outer space legislation at the international level (p. 65).

A big push for the commercialization of outer space came from President Reagan, who favored deregulation in most forms and whose administration was focused on finding greater “efficiency” in how the government was run, as well as focusing on freeing up government funds for other purposes (p. 67). A report written by NASA given to President Reagan shortly after his election in 1980 outlined the initial steps his administration should take in regards to outer space, with one of the steps being an increased focus on the “economic exploitation” of outer space (p. 69). Following in the same vein as Kennedy in the 1960s in terms of influencing public perception of outer space, Reagan, in 1982 gave a speech outlining his National Space Policy which included creating “economic and scientific benefits through the exploitation of space” as well as increasing the involvement of “the United States private-sector investment and involvement” in outer space (p. 70). Weeks highlights Reagan’s pressure on Congress to draft various bills and pass various acts to support small private business, especially in the field of technology, as being crucial to pushing along the perception that private business in outer space was a good thing for the U.S. (p. 71).

Weeks goes on to contend that it was the U.S.’s lead in passing domestic space legislation that paved the way for today’s reality of the commercialization of outer space (p. 43). Other countries soon followed suit in the passing of domestic laws in order to increase the commercialization of, and private enterprise in, outer space with economic concerns now viewed in the same light as security interests (p. 62). A key piece of legislation came in 1983 with the passing of the Presidential Directive on the Commercialization of Expendable Launch Vehicles, its goal being to facilitate and aid in the creation of outer space launch vehicles by the private industry by way of providing already existing technology “to private

industry at no cost” (p. 72). The following year, the NASA Act, originally passed in 1958, was modified by the U.S. Congress to include a provision that it was in the interest of the U.S. and NASA to pave the way for the maximum commercialization of outer space as possible (p. 74). In the fall of 1984, NASA produced a “Commercial Space Policy” that set out to remove the barriers and “risks” for private industry to operate in outer space (p. 75).

Also in 1984, the Commercial Space Launch Act was passed which gave birth to the private “space launch and transportation industry” (p. 76). As a result, the Office of Commercial Space Transportation was created to streamline the bureaucratic process for companies wanting to develop and launch space vehicles (p. 76). A crucial component to the passing of this act were the Congressional Subcommittee meetings on Space Science and Applications which focused on “Space Commercialization” and took place in the spring and fall of 1983 and the summer of 1984 (p. 76 & 77). On the heels of the Challenger disaster, an event which was used to further push for privatization in outer space, the Federal Technology Transfer Act was passed by Congress in 1986, whose goal was to “facilitate the transfer of government-owned technology and intellectual property...to the private sector” (p. 77).

Although the U.S. had been the leader in the drive for further commercial involvement in space, and other foreign entities, such as China, Japan and Europe followed suit, it was actually France in the early 1980s who oversaw the creation of the “first private commercial operations space carrier” named Arianespace (p. 78).

By 1985, the European Space Agency (ESA) adopted a resolution called the “Long-Term Space Program and Plan covering 1987-2000” which, in part, stated that the ESA needs to make changes to create opportunities for private companies to invest in space infrastructure more readily available (p. 80).



Towards the end of the second epoch, in 1987, a bilateral agreement on “cooperation in space” was signed between the U.S. and the USSR (p. 64). This agreement was a big step in cooperation between the the US and the Soviets and came about because Gorbachev nixed the demand that arms control be tied into cooperation in outer space (U.S. – Russian, 1995). The agreement cited 16 areas of cooperation including “space biology and medicine, solar system exploration, astronomy and astrophysics, space physics, and earth sciences (U.S. – Russian, 1995).

Weeks (2012) contends that at the same time as the Soviet Union began to unravel, the notion of free-market enterprise was beginning to take a much stronger hold on a global scale (p. 64). This increased cooperation was further entrenched in the fall of 1988 with the signing of the International Space Station Multilateral Intergovernmental Agreement at the behest of the U.S., and included the Russian Federation and 13 other countries (p. 81). The agreement states in part that the “Space Station will enhance the scientific, technological, and commercial uses of outer space” (p. 81).

Throughout this second epoch, the International Telecommunications Union (ITU) freed up “orbital slots” for satellites to nations that were a part of the union, which further liberalized trade policies for satellite communications (p. 82). In the second half of the decade, the ITU changed its policies from a wide open access to the orbital slots where whichever nation applied to use it first would be allotted the slot, to a system where each member state was given a pre-set amount of slots (p. 82). This further increased the drive of commercialization because certain member states did not have the technology or even resources to use the slots, and thus, they were able to sell or lease their slots to the private industry (p. 82 & 83).

It is important to note that according to Weeks (citing Finch and Moore, 1985), although during the second epoch private industry was a player in outer space development, their involvement only came in the form as “a contractor for a government space program” (p. 67).

### 2.3. Third Epoch

At the beginning of the third epoch, we witness the end of the Cold War as well as liberal free-market ideologies beginning to spread, and be embraced, around the globe. Throughout the 1990s, reports and documents created by the U.S. Executive Branch all shared a similar trend, which in part was that “the commercial and economic interests of the private sector must be treated as a national priority” (p. 90).

In 1992, the old Land Remote Sensing Policy Act originally passed in 1984 was replaced by a new version of the act (p. 91). Weeks (citing Bourbonniere, 1997) states that this new act increased the involvement of the private sector in remote sensing by granting licenses for private remote sensing satellites (p. 91).

In 1994, the World Trade Organization (WTO) came into force on the base already set up by the General Agreement on Tariffs and Trade (GATT), with the former having a “stronger mechanism for enforcement and compliance” and helped to entrench and legitimize “free-market ideology and principles on matters of international law” (p. 89). In another step forward, Weeks (citing Salin, 2002) states that the passage of The Telecommunications Act in 1996 allowed for the deregulation of that industry (p. 92).

The Commercial Space Act was passed in 1998, which stated that the ISS, which was completed in 2001, should be focused on “economic development of orbital space” (p. 96).

Although the ISS was owned by sixteen countries, it was this U.S. domestic legislation that made sure the station would be “operated in accordance with free-market principles (p. 96).

By 1999, as a result of two bills passed in the U.S. House of Representatives and the U.S. Senate, the previously mentioned INTELSAT was completely privatized, as the authors of the bills argued that international governmental organizations (IGO) “are monopolies which are impeding free market competition” (p. 95 & 96).

In 2000, the United States Chamber of Commerce’s Space Enterprise Council was formed with one of its goals being to ensuring the participation of the private space industry in the development of regulations, policies, programs, and laws concerning outer space (p. 118).

In 2002, as part of the Department of Defense Appropriations Act, the Commercial Reusable In-Space Transportation Act of 2002 was passed by the U.S. Congress (Salin, 2003, p. 200). The main goal of the act is to facilitate “the production of private launchers, on a commercial basis, in order to stimulate space exploration and the use of private means by NASA and the Department of Defense” (Salin, 2003, p. 200). The act allocated up to \$1.5 billion USD as potential guaranteed loans to U.S. companies who were “suppliers of systems and reusable commercial launchers” as long as the companies could not find funding from another source and the companies were “US corporations subject to US laws, with more than 50 per cent US control” (Salin, 2003, p. 200).

According to Weeks (2012), in April, 2004, the Federal Aviation Administration’s Associate Administrator for Commercial Space Transportation granted the first ever license that allows a private space craft to be launched into outer space. On the heels of this license being granted to the private space company Mojave Aerospace Ventures came a huge milestone in private space exploration (p. 116). The company’s SpaceShipOne won the

ANSARI X Prize of \$10 million by being the first company to design, build, launch, and fly a manned private space craft in outer space (p. 112). Shortly after the launch at the end of 2004 the U.S. passed the Commercial Space Launch Amendments Act (p. 96). The act lessened the amount of bureaucratic regulations, laws, and restrictions for outer space launches and development (p. 113).

The 2005 U.S. Space Transportation Policy follows the similar vein set out throughout the Bush administration, and states in part that the government must “capitalize on the entrepreneurial spirit of the U.S. private sector” (p. 110).

In August, 2006, the Bush administration launched its National Space Policy, which rejected “future arms-control agreements that might limit U.S. flexibility in space and asserts a right to deny access to space to anyone ’hostile to U.S. interests’” (Kaufman, 2006). The policy focused on security in space and private involvement by U.S. companies in space (Kaufman, 2006). This adds further evidence to the idea that as U.S. space policy goes, so does international policy. With this policy, the U.S. continues to carve out and protect the new niche created for U.S. companies to operate in outer space. The U.S. government will protect the interests of these companies in the face of those who would wish to interfere with their exploration and development.

In 2010, U.S. President Obama signed the NASA Authorization Act, which gave \$58.4 billion for outer space development (p. 7). In 2011, NASA’s space shuttle program was decommissioned, leaving NASA astronauts with no way to get to the ISS or beyond on their own (p. 8).

In closing the historical review section, the latest bill proposed in the U.S. Congress continues the legal march the U.S. legislative community is making to entrench privatized outer space exploration and development. In May, 2015, a bill was introduced in the Congress

titled the “Space Resource Exploration and Utilization Act of 2015” (Koebler, 2015). The bill states in part that “any asteroid resources obtained in outer space are the property of the entity that obtained such resources, which shall be entitled to all property rights thereto” (Koebler, 2015). The May, 2015, news article detailing the bill contends that its goal is to provide American companies “legal cover against competitors,” and goes on to speculate that the passing of this bill may result in the U.S. walking away from the OST, a move which would require one-year advance warning to the UN (Koebler, 2015).

Overall, this chapter, up until this point, has established that the U.S. has led the way in influencing and determining international norms and legal regimes regarding outer space and it continues to do so up to the present day. In addition, because the U.S. has been so influential in this process, both historically and today, it is a justifiable and indeed vital approach to focus on its domestic legislation regarding outer space activities in an effort to place the securitizing speech acts to be explored in chapter four into the proper historical context.

## 2.4 Private Outer Space Epistemic Communities

In chapter three, the thesis will explore the role epistemic communities played in the development of international norms and regulations over nuclear proliferation and disarmament in the theory section. This will be done in order to further demonstrate the role epistemic communities can play in affecting legislation, laws, rules, and norms on both a domestic and international level. However, this current section will outline examples of how epistemic communities are influencing not only our normative understanding of outer space, but also laws, regulations, and policies as well.

Weeks states that today, private industry, including interest groups and “business moguls have taken political action to secure laws and policies” in an effort to normalize this hyper-privatization of outer space (p. 26). Weeks uses the term “organic intellectuals” including the U.S. President, “President’s Commission members, business leaders, business moguls, and various academics” and goes on to contend that they have developed a shared focus on free-market principles for outer space and have been instrumental in dictating the discourse of hyper-privatization of space (p. 102 & 103). She adds that the “dominant transnational capitalist class” has used both U.S. and international “institutional organs” to “legitimize the hyper-privatization of outer space” (p. 103). She further argues that “legal loopholes are being created to allow the hyper-privatization of publicly owned space resources” (p. 104).

A big part of the epistemic community is ProSpace, Inc., which was formed in 1997 and is a nonprofit corporation which acts as an immense lobbying regime for the private outer space industry (p. 119). Since its inception, the nonprofit has participated in “more than 3000 meetings” with various government representatives, including “congressmen, senators, White House officials...government officials within NASA and other government agencies” (p. 120). In 2006, the non-profit lobbied for, and receive, the passing of The Space Act of 2006, which produced \$250 million in taxpayer funded prizes to be given out to the private industry to develop new technologies for space exploration (p. 120).

Another vital part of this epistemic community is The Coalition for Space Exploration, which is comprised of 38 business organizations, 10 trade associations and 2 aerospace unions (p. 122). Its board of advisors includes former astronauts, NASA engineers, professors, scientists, engineers and former politicians (About The, 2015).

Sea Exploration Alliance (SEA), created in 2004, is another coalition focused on pushing the pro-privatized view of outer space, and is made up of other coalitions which includes ProSpace, Space Frontier Foundation, and the National Space Society (p. 123). According to Weeks, the lobbying done by the group resulted in Congress giving NASA \$15 million more in 2006 than what was originally slated to be given in the 2006 budget (p. 123). This extra funding as a result of pro-privatized lobbying exemplifies the increasingly close and interconnected relationship between the private sector and NASA.

Also in 2004, U.S. President Bush unveiled his New Vision for U.S. Space Exploration Policy which takes a huge step forward for privatization as the “report calls for ‘assuring appropriate property rights’ are granted to ‘those who seek to develop space resources and infrastructure’” (p. 105). Weeks contends that the presidential commission set up to look at ways to implement the Bush Administration's space policies was made up of “political and economic elites supplemented by several academics, connected to top levels of government and transitional corporations” (p. 105). She adds that the majority of the 96 witnesses called before the commission represented the same pro-privatization interests as the commission itself (p. 106). Congressional and Senate hearings on outer space development during this same time period also had little to no involvement from the tax-paying public (p. 111).

Weeks offers an example of W. F. Mitchell of the Altari Development Corporation testifying before the U.S. Senate Committee on Commerce, Science and Transportation in 2004 and stating that his company would be able to save the Earth from asteroids and comets with its NEO Safety International project, which would have to be funded through “Ownership of private property, minerals and natural resources” in outer space (p. 124). This of course is a perfect example of a securitizing speech act, but with humanity and the biosphere on Earth as the referential object, and not just humanity in general.

Another example from 2004 comes from Michael Kearney, CEO of Spacehab, Inc., testifying before the President's Commission on Moon, Mars and Beyond (p. 125). He stated that his company, which had been awarded contracts from NASA for research laboratory missions with the Space Shuttle for a cost of \$184 million, was able to complete the projects for 20% less than it would have cost NASA using "standard government procurement practices" (p. 125 & 126). An additional example comes from Stephen Fleming from EGL Ventures during the same panel discussion, stating that the railroads, automobile industry, and aviation industry were all built by private companies and were successes (p. 126). He questioned why there shouldn't be the same approach to outer space (p. 126).

A further example comes from Cort Durocher, the Executive Director of the American Institute for Aeronautics and Astronautics (AIAA). The institute is said to represent 35,000 people from more than 90 countries from all facets, including "engineers, scientists, executives, the educators, leaders in...academic and government" (p. 126). Once again, he championed the involvement of private sector in developing new launch systems as one example (p. 126). Weeks goes on to include many more examples of "organic intellectuals and members of the dominant outer space development regimes" testifying before the commissions and Congressional hearings, mainly using securitizing speech acts in the realm of economic security for the United States to justify privatizing outer space (p. 127, 128, & 129).

Actors from the international space community have also played a vital role in establishing and normalizing the current trend towards private outer space. Weeks states that the international space law epistemic community consists of two institutions, the UN's COPUOS, Legal Subcommittee, and the International Institute of Space Law (IISL)" (p. 131). Although they are charged with deciding "when to create law, and when to change existing



law” they have still failed to define the key contentious terms in the OST as to whether they allow for property rights or ownership (p. 131). However, Weeks contends that the UN appears to be leaning to accepting some semblance of property rights.

COPUOS passed Resolution 51/122 in 1996 which states in part that “Contractual terms” in relation to international cooperation for outer space exploration “should be in full compliance with the legitimate rights and interests of the parties concerned, as for example, with intellectual property rights” (p. 133). COPUOS also held regional workshops in the Asia-Pacific region, with one in particular being of note held in Daejeon, Korea in November 2003. The conclusion of the workshop, which featured actors from 27 countries was in part that the private use of space resources “did not impute ownership of territory or resources in situ” and that the “development of an appropriate legal framework could encourage and facilitate the private use of space resources in ways that would be fully consistent” with the OST (p. 134). Furthermore, although the IISL appears to be against the issuance of property rights in outer space, they stated back in 2004 that “non-governmental entities, including private individuals, companies, and organizations, have the right to conduct activities in space in accordance with international space law, and subject to the authorization and continuing supervision of the appropriate State Party” (p. 138).

Another important international actor is the International Astronautical Federation (IAF) Congress. The annual meeting includes government, business, professional and other outer space relevant groups (p. 143). Weeks contends that today, the IAF is used as a venue to further push the international community towards acquiescing to the commercialization and privatization of outer space (p. 144). She provides evidence of this by citing the 53rd congress held in 2002 in Houston, which was termed “The New Face of Space” and which was partly

sponsored by “the Boeing Company, Lockheed-Marin Space Operations, Honeywell and the American Institute of Aeronautics and Astronautics” (p. 144).

Before moving on to the public perception section, this thesis will move away from Weeks and introduce Ezra Reinstein (1999) as an example of an academic from the pro-privatized epistemic community. Reinstein argues that the OST is outdated and must be rewritten (p. 66). As demonstrated with Weeks earlier, Reinstein states that the interpretation of the OST is divided, with one school interpreting the benefit for all mankind statement as non-binding and merely a “moral exhortation” while another school views it as “packing a powerful legal mandate” (p. 67). Reinstein cites Reynolds and Merges, who contend that the principle of no sovereignty does not prohibit the “exploitation of space resources” and instead bans the “staking of exclusive claims to tracts of celestial bodies or space” (p. 69). For his part, Reinstein argues that any new space legal regime needs to “create maximum incentives for efficient development” and that developers, private companies in this case, should be given “comprehensive property rights” (p. 72). Reinstein also argues that giving space territory to those who can profit most from it will maximize the benefit to all humankind, and that property rights be unlimited, except in regards to “environmental regulations and the developer’s domestic law” (p. 73 & 74).

Although this thesis focuses on the pro-privatized outer space epistemic community and their securitizing speech acts, it is important to note that there is an anti-privatization epistemic community in existence, especially in terms of the granting of property rights.

In 2012, Tanja Masson-Zwaan, who is the president of the International Institute of Space Law, was interviewed by NBC News on its website. In the article, she is quoted as saying that she interprets the OST as not having a legal loophole in terms of private companies being able to claim property rights in outer space (Private, 2012). She contends

that the OST does state that signatory nations are “responsible for the extraterrestrial activities of their citizens (Private, 2012). The article goes on to state that James Dunstant, who is a Senior Adjunct Fellow at TechFreedom and is considered a “legal expert” agrees with Masson-Zwaan’s contention (Private, 2012). The goal of including these examples of anti-privatization viewpoints is not to explore them in any more or even extensive detail, but merely to establish that they do exist.

However, it should be noted that the OST does not mention restricting the property rights of citizens or companies in outer space. It states the following: “States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.”

Clearly, the OST does indeed state that nations are responsible to make sure that the outer space activities of non-governmental entities from that nation are in line with the provisions set out in the treaty. But since there are no provisions restricting the appropriation of celestial bodies by non-governmental agencies, this thesis takes the stand that there is indeed a legal loophole which is currently being filled by U.S. domestic legislation.

## 2.5 Public Perception

Returning to Weeks, she moves on to explore how public perception of outer space is influenced culturally in order to manufacture consent (p. 149-153). The types of outer space movies produced by Hollywood tend to mirror the geopolitical realities of the day, or more

specifically, the perception of the geopolitical realities that was trying to be imparted to the viewing audience. During the 1950s, the movies tended to portray space as a frightened and dangerous place, which matched the nuclear tensions of the day (p. 151). During the 1970s space movies had more of a fun and safe character to them, but by the 1980s with renewed global nuclear tensions, the movies once again switched to outer space as a danger place (p. 151). Finally, Weeks contends that today, new movies are being made to represent “space as a place (for) wealth, fun and adventure” (p. 153).

In addition, we are seeing today the advent of private space celebrities, such as Sir Richard Branson, owner of Virgin Galactic and the public face of space tourism, as well as Dennis Tito, who in 2001 became the first space tourist aboard a Russian craft, a trip which came with a \$20 million price tag (p. 153 154)

The pro-privatized space proponents are well aware of the need to influence and change public opinion to get them on board with this new space age. The 2004 President’s Commission discussed earlier in the thesis stated in its report that “Such support requires sustainable, systematic, effective marketing and communication programs, employs professionals who are trained in the art and science of communication, and uses new and even novel means for communicating with the public about space” (p. 156). The empirical analysis section will demonstrate the idea of effective marketing and communication programs in action.

In addition, the promise of job creation is a key element in persuading public opinion, especially in light of recent economic uncertainty (p. 157). The President’s Commission report stated that “This focus is good for jobs, good for the economy, and good for American families” (p. 159). As has been demonstrated in this literature review section thus far, most of the securitizing speech acts come in the form of economic security. Weeks identifies two

logics being used to legitimize the privatization of outer space. First, the government cannot be trusted with outer space development using public resources; and second, granting private-property rights in outer space will “free up space resources in a such a way as to generate multi-trillion dollar industries” (p. 158)

## 2.6. Securitization of Outer Space

This section will begin by introducing some of the extensive work of outer space securitization by Collumba Peoples. Peoples (2010) states that the “cold war architecture” of the current space law is out of date in comparison to the increasing number of varied actors vying for their place in space (p. 205). Furthermore, Peoples (2011) adds that a “shared consensus on a revised international framework” in terms of the new realities of outer space does not exist and as such, there needs to be an increased focus on how the interests of vital international actors create, conceptualize and reconceptualize our shared understanding of outer space (p. 76).

In terms of the securitization of outer space, Peoples (2010) contends that this idea goes well beyond the current “militarization/weaponization debate,” stemming from space arms control, and that securitization in general is where non-military issues are reconceptualized to be viewed as “issue(s) of security” (p. 206). Furthermore, in recent years, space policy has witness a steady increase in “securitizing moves” which conceptualize space as “crucial to national security and survival in a variety of ways,” (p. 206).

Peoples (2011) identifies two forms of securitizing moves. In the first, the earth, which can include outer space as well, is taken to be the referent object, or in other words, the object at risk that needs to be securitized to warrant protecting, which often results in a “more multilateral approach to space security” (p. 91). In the second form, the referent object

becomes national or regional entities, for example, the U.S. and EU respectively (p. 91). This form of securitizing move was discussed previously in the sections outlining the three epochs of outer space exploration, which pinpointed that economic security has become a large focus in the United States, especially in the effort of trying to pass domestic legislation to allow for greater privatization. Peoples contends that the second form “undermines visions of *global* space security” (p. 91).

This identification by Peoples is a key point for the focus of this thesis, as I will demonstrate in the empirical analyses section that a third form of securitizing move is now being employed as an effort to reconceptualize outer space as a private domain. This third form, as was demonstrated with the example in the introduction, makes the referential object humanity as a whole, detached from our habitat on earth, while the first form described by Peoples makes our habitat on earth the true referential object, and not merely the survival of the species by backing up the biosphere in case of an apocalyptic disaster.

More recently there have been further examples of other countries and political entities placing an increased focus on the securitization of outer space. Peoples (2011) states that the EU outer space policy debate on space security now includes elements of environmental disaster discourse (p. 207). In fact, the EU has drafted a proposal for an International Code of Conduct for Outer Space Activities, with the latest version of the draft completed in March, 2014 (Code of Conduct, 2015). An official EU website states that the latest draft emphasizes that the EU “supports the notion that voluntary ‘rules of the road’, grounded in best practices among space actors, offer a pragmatic approach to achieving, and strengthening, adherence to norms of behavior in space” (Code of Conduct, 2015). It is important to note that this code of conduct makes no mention of the potential for the granting of property rights in outer space to private companies or non-governmental entities. However, it does make mention of respecting

and adhering to previously passed international treaties on outer space, which, as has been established, are vague in terms of the privatization issue at hand (Draft, 2014). Furthermore, the code states that it is not legally binding (Draft, 2014).

Many countries, in addition to the traditional big two, U.S. and Russia, are placing far greater importance over the last several years on space security in their national security strategies and discourse. This includes China, France and Japan (p. 297). For instance, Japan, in 2005, announced that it would be investing in its space development in an effort to have a “manned space programme by 2025” (Peoples, 2013b, p. 135). In addition, as of 2008, Japan no longer adheres to its former “ban on military space activities,” (Peoples, 2011, p. 297).

Even North Korea has entered the fray with the launching of its first ever satellite in December 2012 (Peoples, 2013, p. 95).

Peoples (2013a) states that China’s increasing importance on the international stage in terms of its outer space activities began in 2003 with its first launch of a manned space flight (p. 95). Today, one of the main space rivalries exists between China and Japan. The Asia-Pacific region has not one, but two main organizations relating to outer space. The Asia-Pacific Cooperation Organization (APSCO), which is led by China, and the Asia-Pacific Regional Space Agency Forum (APRSAF) which is led by Japan (p. 95). Some commentators, such as Moltz, has argued that this is leading to a potentially dangerous Sino-Japanese space race that may lead to a military confrontation in the future (p. 96). However, other commentators such as Suzuki, states that just from the very idea that both countries are leading regional, collaboration based organizations shows their willingness to cooperate with other states and each other in terms of future outer space development and engagement (p. 96).

Peoples (2012), citing Moltz again, contends that there are currently other Asian space races taking place, as opposed to just one (p. 202). In addition to Japan and China as stated above, India is also showing a greater interest in militarizing outer space, which is a new development from its past focus on launching satellites for largely peaceful purposes (p. 202). The outcome has been that India and China have developed a shared normative understanding of a rivalry between the two when it comes to militarization of space (p. 202).

A part of these strategic and policy changes taking place around the world includes debates over the weaponization of space. As it relates to the privatized component of this thesis, Peoples (2011) argues that non-military uses of commercial space technology “may generate dynamics of military competition due to the latent dual-use potential” (p. 76). Johnson-Freese (2007) states that private industry is investing in research and development at rates far exceeding governments (p. 29). She goes on to state that there are four essential consequences to the increase in research and development and overall commercialization of technology. First, governments can save money by allowing private industry to undertake research and development (p. 29). Second, governments must now make a concerted effort to get access to this new technology and cites the Pentagon’s Dual Use Science And Technology (DUST) program as example of trying to stay involved (p. 29). Third, “the government, including the military, becomes increasingly dependent on commercial technologies” (p. 29). And fourth, the government cannot predict that other entities, such as enemy states, are not able to purchase the very same technology (p. 29). She gives many examples of space based dual use technologies, one of them being satellites that focus on remote sensing and imaging (p. 31). When in the hands of a private company, these can be used for Earth resource observations; however, in the hands of a military it can be used for reconnaissance systems (p. 31).



According to Johnson-Freese, historically, the U.S. has tried to stop the export of dual use technologies to other countries, but, its ability to control the market is weakening everyday (p. 49). One example of this comes in 2003 when a French space company, Alcatel Space, was given a contract to construct a Chinese communication satellite named Chinasat 9 (p. 49). The French company did not use any parts for building the satellite that were made in America in order to avoid American export laws, and because of these laws, American companies were unable to participate in the bidding process for the contract (p. 49). This is an important example to remember alongside the multitude of laws the U.S. has been passing to encourage American-based companies to begin to flourish in outer space, which was discussed in earlier subsections of this chapter.

The idea of dual-use technologies in space becomes more important when factoring in Mutschler's (2013) contention that there is currently no real international regime in place to deal with the potential weaponization of outer space (p. 8). He also theorizes that transnational epistemic communities will play a vital part in potentially establishing an international regime for controlling the weaponization of outer space (p. 13). This thesis argues that while Mutschler's contentions add greater legitimacy to the idea that epistemic communities are currently and will continue to influence our broad perceptions of outer space, there will however not be an international consensus, or regime, put in place that reins in the weaponization of outer space. However that is not too suggest that there will not be a change to, or a new internationally recognized norm, understanding or even regime. This thesis argues that the private companies that will operate in outer space will be too powerful and important economically to their host nations to allow for any type of restriction of potentially profitable operations in outer space, including weaponization.

Furthermore, as was demonstrated earlier in this chapter, the US has regularly and increasingly passed domestic legislation to foster the commercialization and privatization of outer space, and it seems to be a stretch to suggest that this progress down this road will slow down anytime soon. With that being the case, if the US does not agree, participate, and help form an international regime to limit the weaponization of outer space, the regime would undoubtedly be lacking in legitimacy, and thus would fail to even be an actual international regime.

The preceding subsection is meant to demonstrate the varied interests of countries and political entities around the world in securitizing outer space. The singular goal of this section is to provide greater context in which to view the drive by the pro-privatized outer space epistemic community to securitize outer space for its own interest, and to establish that there are many actors trying to do the same thing, that being securitizing outer space for their own interest.

### 3. Theory

To reiterate the premise of my hypothesis for this thesis, pro-privatized outer space proponents are using securitizing speech acts to create an apocalyptic imagined future in order to legitimize their presence and need and grow a big enough epistemic community to, in part, change our normative understanding of outer space, to one where private companies establishing permanent colonies in outer space will give humanity a safety net for the continuation of the species in the event of a cataclysm on earth. When discussing securitization through speech acts, Buzen et al. (1998) state that they are providing a “constructivist operational method for distinguishing the process of securitization from that of politicization” (p. vii). As a result, it is vital to first lay out what constructivism is and why it was chosen as an exploratory theoretical lens rather than other approaches, such as neoliberalism and neorealism.

#### 1.1 Constructivism

Nicholas Onuf is largely credited with inventing the term constructivism. Onuf (1998) states that constructivism allows one to “theorize about matters that seem to be unrelated” because the “concepts and propositions” that are normally employed to discuss these matters are “also unrelated” (p. 58). Taken to its most basic element, Onuf contends that constructivism asserts that we are “social beings” and that without our “social relations” we would cease to be human (p. 59). Furthermore, he adds that “talking” is the number one vital way “that we go about making the world what it is” (p. 59). He states that “people make society, and society makes people” and that our shared understanding of “social rules” is what makes this back and forth process possible (p. 59). In addition, at various times, most of us can act as agents, in the abstract sense, and that we, as agents, can make choices based on the

normative prevailing societal rules (p. 60). These rules and the actions that result from them can form a “stable (but never fixed) pattern” and consequently, the patterns become “institutions” (p. 61). Onuf goes further, suggesting that the combination of “rules, institutions and unintended consequences give society a *structure*” (p. 61). Although there are scholarly disagreements over the idea of structures and whether they exist in reality or in the abstract, Onuf stresses that the key point is that “structure is what observers see, while institutions are what agents act within” (p. 62).

In terms of our interests, Onuf contends that we (agents) do not need to have an idea about what our interests are to “act on them” (p. 64). Furthermore, when agents act as observers in the process of being told by other agents what their own interests are, the newly informed observer “may act differently” when returning to his or her role as an agent (p. 64). In addition, he states as a result of the sometimes restrictive nature of social rules, that no “individual human being, as an agent, has full *autonomy*” and as a corollary, “agents acting together never have full *independence*” (p. 65). When enough people act together as an agent, and they have agents acting on their behalf, they will obtain “considerable measure of identity” as well as “some place identified as theirs” (p. 65). This will be an important point to remember when exploring the idea of epistemic communities and the power they can possess to influence our shared normative understanding of ourselves and our world; in essence, our shared understanding of social rules.

Before moving on to other theorists' take on constructivism, Onuf states that agents can “formulate” rules simply by speaking them, by saying what the rule is with enough authority and legitimacy that other actors internalize this rule and behave as though it actually exists (p. 66). Onuf states that the “act of speaking in a form that gets someone else to act is commonly called a speech act” (p. 66). However, further theoretical background must be established

before this thesis explores what speech acts are. The thesis will return to Onuf in the speech act section.

In an effort to further understand constructivism, and its employment in this thesis as a theoretical lens, I now introduce Alexander Wendt (1999) who states that a constructivist view of international politics can be traced back to theories of Grotius, Kant, and Hegel; and underwent a resurgence after the end of the Cold War with neoliberal and neorealist theories unable to explain the Soviet demise (p. 3 & 4). Wendt contends that constructivism offers a greater focus on “social” theory that is lacking in neorealism and neoliberalism (p. 7).

The idea that international politics is socially constructed rests on two basic points. According to Wendt, the first point is that “shared ideas” are the driving force behind the “structures of human association;” and second is that “identities and interests” of the relevant actors are built on the “shared ideas” (p. 1). Wendt terms constructivism as a type of “structural idealism,” (p. 1).

Wendt (1992) states that the rationalist approach to international regime theory, shared by both neoliberals and neorealists takes the “identities and interests of agents as exogenously given” (p. 391). In addition, neorealists claim that the anarchic nature of the international system is in actuality a “self-help” system and “redefinitions of identity and interest,” is not possible (p. 392). He states that the neorealist self-help approach and neoliberal power politics are institutions in and of themselves and “do not follow either logically or causally from anarchy,” (p. 394 & 395). Wendt, citing Stephen Walt, states that the determinant of state behavior is not “balance of power,” but “balance of threats,” with the latter being “socially constructed,” (p. 396). Wendt adds that “collective meanings” are responsible for how we interpret structures “which organize our actions” (p. 397). Identities are social definitions,

held “collectively” and individually by actors (p. 398). These identities are the basis for “the structure of the social world,” as well as the “basis of interests” (p. 398).

Furthermore, Wendt goes on to state that at the core of constructivist social theory is that “people act towards objects, including other actors, on the basis of the meaning that the objects have for them” (p. 396 & 397). Copeland (1999) expands on this, stating that constructivism does allow for accounting of “the intersubjectively shared ideas that shape behavior by constituting the identities and interests of actors” which other approaches fail to do (p. 187).

Wendt breaks down his argument into three stages. The first stage is that if two actors “identify negatively with one another,” then change through cooperation logically becomes a much harder prospect to realize, but can be rectified by “self-conscious efforts to change structures of identity and interest,” or in other words, “the personal determination of choice,” (p. 418 & 419). However, Wendt points to two preconditions that must be met for this “personal determination” to take place: first, “new social situations” arise that require a reconceptualization of the self; and second, the costs of this reconceptualization leveled by the other actor must be lower than the potential dividend (p. 419). He gives an example in which the reason for the Soviet change in identity was a promise of non-invasion from the West (p. 420). The giving and receiving of the promise lowered the transactional costs for the Soviets.

The second stage occurs when there is no longer identity consensus. The potential reification of identities, ideas or structures is now open for critique and a possible process of “denaturalization,” followed by “identification” of potential future selves (p. 420).

The third stage happens when one actor wants to reconceptualise the self, usually, a reconceptualization of the other’s identities and interests is required (p. 421). Wendt calls this “altercasting” and is sequentially connected to the idea of “mirror theory of identity-

formation” (p. 421). An empirical example of this was given in the previous chapter with Weeks describing how Senate and Congressional hearings which had speakers trying to recast the government’s identity as costly and inefficient in terms of outer space exploration.

Wendt also states that constructivists have a “cognitive, intersubjective conception,” of how identities and interests function within international “interaction” rather than functioning outside of it (p. 394). For this reason it is important to include some points by Hasenclever et al. (1997) and their cognitivist critiques of other theoretical approaches that were mentioned previously in a further effort to justify their non-inclusion and as an ancillary, to justify the constructivist lens employed by this thesis. The authors distinguish three theories or schools of thought in explaining international regimes: power-based or realist approach; interest-based or neoliberal; and knowledge based or cognitivist (p. 1 & 2). The authors state that cognitivism critiques the limits of neoliberal theories which can be traced back to three “realistic 'heritages” (p. 5). First, the idea that states are rational actors whose makeup is determined before the stage of international interaction; second, the “static” nature of how IR is viewed, which leaves it not able to adjust for “learning...and history;” and finally, the third critique is that the reliance on a “positivists methodology,” is a hindrance to understanding how social norms really work (p. 5).

Moving on to Martha Finnemore (1996a), she states that she is going beyond constructivism to a theory she labels as “sociology’s institutionalism” (p. 326). She states that the sociologists term “institution” focuses on the “social and cognitive features of institutions rather than structural and constraining features” and operates very differently from “rational-choice scholars or historical institutionalists” (p. 326). She suggests that this approach is vital for understanding IR in that it reflects “similarities in behavior caused of common global culture” which differs from the realist or liberalist approaches that would predict “differences

in behavior by differently situated actors with different interests (p. 326). However, it is important to note that Finnemore differentiates sociology's institutionalism from constructivism (p. 327). Although she concedes that they both share certain features, she contends that this form of institutionalism does more than "simply argue that social structure matters; they tell us what the social structure *is*" (p. 327).

She claims that constructivism has not made an all-pervasive argument for "how the various norms in different areas fit together" while claiming that institutionalists have accomplished this feat (p. 328). She also asserts that our social structure "creates actors; it is not created by them" (p. 333).

However, this thesis takes the stand that Finnemore is selling the constructivist approach well short, and as a result, she does not go beyond constructivism as she states. At best, she adds some nuanced layers to constructivism, and at worst, she misunderstands the theoretical approaches that have spawned from constructivism and their explanatory power. Although there is value in her suggestion that "the social structure is ontologically primary" (p. 333) in terms of creating a new approach for exploring how actors are created and why they act in the ways they do, she appears to be throwing the baby out with the bathwater. Clearly, this thesis does embrace the idea that a materialistic understanding of actors' interests and actions is short-sighted; and the idea that our normative shared understandings is an important framework to explore the speech acts by private outer space proponents that will be discussed further on. However, this approach does not mean that the actor cannot be the primary focus of research. If the reader will allow for a brief departure from the overall focus of this thesis, I argue that the social structure does not have to be ontologically primary, and, the actor does not have to be ontologically primary either, but rather, a constant back and forth interaction between actors, and the social system, and our shared normative understanding of



all of it that creates our reality. It seems rather specious to pinpoint any one thing as ontologically primary.

However, Finnemore is still an important theorist to include in this section as she strengthens the argument that constructivism is a more appropriate choice than the neoliberal or neorealist approaches. In another work of hers on constructing norms of humanitarian interventions, she states, quite rightly, that “standard analytic assumptions about states and other actors pursuing their interests tend to leave the sources of interests vague or unspecified” while adding that “international normative context shapes the interests of international actors” (Finnemore, 1996b, p. 310).

### 3.2 Critiques of Constructivism

Before moving on to discussing legitimation and the role it plays in the entrenchment of international rules, norms and institutions, it is of interest to include some critiques of constructivism, followed by explanations of why they should have no bearing on employing a constructivist approach for this thesis.

Zehfuss (2001) contends that Wendt “needs identity to be constructed but at the same time in some ways given” (p. 316). She goes on to claim that, as a result of the “interactionist convention” between two potential actors, ego and alter, that “we have to imagine states as prior to and independent from social context in order to follow his argument” (p. 332). My reaction is two-fold. First, I believe this to be a misreading of Wendt. It is rather disingenuous to suggest that Wendt is trying to say that states, as actors, are independent from social context. My second point is that, even if we allow for her first point to be true, that we have to imagine states as prior to social context, (a point which is not conceded), this would still have no bearing on the idea that speech acts are being used to legitimize the idea of a privatized

outer space, to increase the pro-privatized epistemic community, and thus reconceptualize our shared normative understanding of what outer space is, how it should be used, and by whom.

Jackson & Sorensen (2006) lay out some of the more mainstream critiques of the constructivist approach to IR. The authors cite Mearsheimer's view that although constructivism tries to say that the social interaction between states can result in them becoming "friends" it is not, however, "realizable in practice" because "(a)narchy, offensive capabilities, and uncertain intentions" coalesce and drive states to "compete aggressively with each other" (p. 173). To respond to Mearsheimer's view, the idea of whether or not states can become friends through social interaction is really not the main concern or focus in constructivism and how it is employed in this thesis. Reintroducing Wendt (1999), what is vital for this thesis is "shared ideas" are the driving force behind the "structures of human association;" and "identities and interests" of the relevant actors are built on the "shared ideas," (p. 1). The fact that states (or any other actors on that relevant stage) may compete aggressively with each other, is based on a shared, normative, intersubjective understanding of anarchy, offensive capabilities, and uncertain intentions. Trying to distinguish between states being friendly or aggressive with each other is not a sufficient critique of the basic premise of constructivism, or the exploration of the role speech acts play in the construction of these shared ideas.

Jackson & Sorensen go on to ask the question, "are states really peaceful or do they merely pretend to be peaceful?" (p. 173). The answer to this question, whatever it may be, is once again, not a sufficient critique of the logic behind constructivism. If states are legitimately acting in peaceful ways, there is nothing in this critique to suggest that their actions are not based on shared ideas of identities and interests of actors and their subsequent

actions. Furthermore, if states are merely pretending to be peaceful, the exact same constructivist logic of how they arrived at this mode of action still holds.

The final critique for the section is that constructivism does not provide enough information of change. Jackson & Sorensen cite Jervis (1998), who contends that constructivism does not give sufficient description of “how norms are formed, how identities are shaped, and how interests are defined as they do” (p. 174). In response to this critique, the authors cite Wendt (1999) and Adler (2001), with the former stating that neorealists pay not enough attention to change and view IR as “the same damned things over and over again” and the latter, that the constructivists focus on “collective learning, cognitive evolution, epistemic change and the ‘life cycles of norms;’” all examples of how the paradigm of change is indeed addressed by constructivism (p. 174).

In terms of the topic of this thesis, it is vital for the reader to be reminded that I do not aim to provide a full explanation of how a reconceptualization of our shared understanding of outer space is occurring, in other words, a full explanation of this change. The goal is merely to establish one aspect of the driving force behind this reconceptualization, and to connect the empirical examples to come later, with the theoretical basis which justifies the idea that securitizing speech acts are important in this process of reconceptualization, and to place all that in a wider context of the increase in privatized space exploration established in the literature review section.

### 3.3. Legitimization

This section will establish the role legitimization plays in the entrenchment of international rules, norms, and institutions. Ian Hurd (1999) who contends that out of the three reasons, which he calls “currencies of power,” that actors may obey rules (coercion, self-

interest, and legitimacy), it is legitimacy which is being ignored in most studies of the international system (p. 380). The claim that IR has largely ignored the idea of legitimacy is echoed by many others, including Bodansky (1999) and Rues-Smit (2014).

However, first it is instructive to establish what is meant by coercion, which is a process in which rules and norms are obeyed as a result of “asymmetrical physical power among agents” (Hurd, 1999, p. 383). Because of the large amounts of resources needed for “enforcement and surveillance” by the more powerful actors, coupled with the lack of “compliance” by the weaker agents when they can get away with non-compliance, coercive social orders either break down over time as a result of “instability” or parts of the order end up becoming legitimized because “stable expectations among actors” have been established (p. 834 & 835). In other words, a shared, normative intersubjective understanding of the social rules has been established.

The next currency of power is self-interest. This is an instrumentalist view of social structures and actors, and results in the “assessment of the net benefits of compliance versus non-compliance” (p. 385). Although it can be said to have similarities to coercion, the differences lie in the idea that “self-interest involves *self-restraint*” while “coercion operates by *external* restraint” (p. 386). The difference between legitimacy and self-interest stems from the difference between “interest and self-interest” and also involve differing opinions on “how interests are formed” (p. 386 & 387).

Most importantly, there is legitimacy. Hurd cites Mark Suchman who states that legitimacy is “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system or norms, values, beliefs, and definitions” (p. 387). A rule, norm, or institution develops into a legitimate one, and thus “behaviorally significant” when an individual or actor, the latter which can come in

many forms, internalizes the content of the rule, and said individual or actor reconceptualizes his/her “interests according to the rule (p. 388).

Hurd then gives five methods to measure and determine if a rule has been obeyed as a result of coercion, self-interest, or legitimacy, although he does concede they are non-falsifiable: “rates of compliance;” “reasons given for compliance;” “reasons given for noncompliance;” “do other centers of power come to the aid of an institution under threat?;” and “logical necessity of legitimacy” (p. 390, 391, & 392).

Finally, in order to justify legitimacy as a currency of power, Hurd points to the idea of sovereignty and employs the fifth method he mentions; logical necessity of legitimacy. In the case of coercion, “sovereignty as a shared belief, as an institution, or as an idea, does not matter,” (p. 394). He suggests that there are numerous borders throughout the world that are “undefended” and because of an asymmetry of power between neighbors and there are numerous borders that are simply “*indefensible*” (p. 395). As a result, we would witness the death and destruction of far more states than we actually do if coercion was indeed the currency of power that keeps territorial sovereignty in place (p. 395).

If self-interest was the power currency really driving sovereignty, Hurd contends that there would be a constant calculation by all states to follow or not follow the rules of sovereignty (p. 396). However, instead one witnesses “calculations made only at the margins of the institution...or only by those few states that reject the basic premise of the system,” (p. 396 & 397).

Lastly, for sovereignty to be followed as a rule on the basis of legitimacy, the idea would have to be internalized “by state actors of the rules of nonintervention in how they define their interests” (p. 397). As a result, the action of states following the rule of nonintervention would not stem from self-interest or from a balance of power, but rather from

“states pursuing their *interests*,” the formation of which has been touched upon previously in this thesis (p. 397). States may internalize these rules in a “decentralized, rule-by-rule basis” or the actor may construct an identity for itself as a “rule-following agent” (p. 398).

In addition, actors who appear to go against the status quo, or to be “revisionists” may be viewed as “dangerous by others” in that they are seen to be employing a “self-interested model” (p. 398).

Reus-Smit (2014) echoes Hurd’s view of legitimacy by stating that power as a result of material prowess is largely “taken for granted” while adding that the reality of how power operates and is acquired “is not so simple” (p. 342). Reus-Smit states that this material view of power is “problematic” and offers an empirical example of the George W. Bush Administration’s failure to gain legitimacy for its war in Iraq within the United Nations despite having “military, economic and technological superiority” (p. 344). Citing Weber, Reus-Smit offers four reasons by which actors may see an “order,” which I also take to mean a rule, norm or institution, as legitimate: first, by way of “tradition;” second, “by virtue of affectual attitudes;” third, because of a “rational belief in its absolute value;” and fourth, because there is a shared, normative understanding of the order’s legality (p. 345).

Reus-Smit also states that legitimacy is a “social phenomenon” that rests on the “perception of others,” adding that actors can state that their actions are legitimate (p. 345). However, unless other relevant actors acquiesce to this claim, the currency of power, as Hurd would call it, becomes rather bankrupt (p. 345). The idea that the perception of others is crucial to legitimacy is a key point for the reader to remember when the topic of securitizing speech acts is introduced.

In addition, the perception of norms can be “open to conflicting” views or “in tension with one another,” but that does not take away from the idea that legitimacy is based on social

interaction and that perception plays a key role (p. 345). Furthermore, Rues-Smit points to the idea of a crisis of legitimacy which occurs “when perceptions of...legitimacy fall to the point where...power will decline” (p. 347). Once again the reader is reminded of the literature review section where it was established that the U.S. and NASA does not have its own transport to the ISS for its astronauts, which can clearly be interpreted as a crisis of legitimacy in terms of its role in outer space.

Rues-Smit discusses states accepting the rule of sovereignty stemming from legitimacy much in the same way Hurd does. Since this is a recurring theme in the discussion of legitimate currency of power, it is instructive and intriguing to point out that, during the same time period in which the idea of sovereignty was almost fully entrenched globally as a legitimate norm, the opposite was taking place in outer space (as discuss in the literature review section). With the passing of the OST and the following decades of international social interaction by states, the idea that sovereignty should not exist in outer space was indeed, seen as legitimate and became an entrenched norm. As has already been established, this norm is being challenge in terms of the granting of property rights, and even full ownership in outer space in gaining traction.

On a final point from Rues-Smit, the author states that “special responsibilities are key focal points in the politics of legitimacy” (p. 355). This idea stems from the fact that responsibilities are crucial in defining “actors’ role identities, and because responsibility entails accountability” (p. 355). As will be made evident in the empirical analysis section, these private outer space companies are, in part, presenting themselves as the ones who should be responsible for backing up our biosphere, and ensuring the survival of the human race no matter what may take place on Earth. Rues-Smit states that “using one’s resources in the performance of a responsibility is to act rightfully” (p. 356). With this idea in mind, once

the private companies have gotten other relevant and influential actors to acquiesce to the idea that giving humanity a second chance will be a private responsibility, that will aid in the view that their further exploration, development, and even ownership of outer space is legitimate.

Bodansky (1999) states that legitimacy “has both a sociological and a normative dimension” (p. 601). He defines one such aspect of legitimacy as “popular legitimacy” which takes place when the public has positive “attitudes about an institution’s right to govern” (p. 601). In the topic at hand, this can mean the public’s positive attitudes about private companies' right to govern in outer space (p. 601). In addition, according to Bodansky, the normative aspect of legitimacy is based on “whether a claim of authority is well founded” (p. 601). Furthermore, he states that “persuasion is one of legitimacy’s functions” meaning that certain actors or institutions are called legitimate in an effort to persuade the public of their authority (p. 601). While agreeing with this point, it should be added that legitimacy is a function of persuasion, in so much as the public can also be persuaded to accept legitimacy through other means than just saying something is legitimate. In turn, that burgeoning legitimacy can then be used as Bodansky prescribes. Overall, Bodansky claims that the base of how effective a regime or institution (or norm or rule) can become is highly influenced by “perceptions of legitimacy” (p. 603). It will be shown in the next subsection that securitizing speech acts can and have been used to influence and change these perceptions of legitimacy including our normative shared understanding of international norms and rules.

### 3.4. Securitizing Speech Acts

With the idea of legitimacy established, the thesis now moves on to exploring speech acts as securitizing discourse. Buzen et al (1998) state that the underlying dictate that makes an issue a matter of security can be traced to a “military-political understanding” which



purports that “security is about survival” (p. 21). Securitizing an issue is basically establishing the idea that, if a particular issue is ignored and not dealt with, all other issues will be “irrelevant” as a result of the disastrous effects of the issue at hand (p. 24). The dialogue that takes place in an effort to portray an “existential threat to a referent object” is called a “securitizing move” (p. 25). However, the issue has not been fully securitized until there is acceptance by the intended audience about the seriousness of the threat (p. 25). The authors call securitization a “self-referential practice” in that an issue does not have to be an actual threat to be securitized; it just has to be presented and accepted as one (p. 24).

Before discussing speech acts as a securitizing move, it is instructive to establish some basic theories behind speech acts. The majority of literature points to John Austin as a founding father on the theories on speech acts. Austin contends that every sentence contains three types of acts: Locutionary; Illocutionary; Perlocutionary; or as Habermans presents it, “to say something, to act in saying something, to bring about something through acting in saying something,” (Balzacq, 2011, p. 175). Balzacq (2011) cites Searle when laying out five different types of speech acts: Assertive (what is the case); Commissive (What does the speaker want to do?); Directive (What shall the hearer do?); Declarative (What shall be the case institutionally?); and Expressive (What has to be done in view of a new social or personal reality?) (p. 189).

Waever (2014) states that the idea of securitization of an issue with a speech act must be explored as an illocutionary act, and not a perlocutionary act (p. 123). He does this in order to focus on the social aspect of the speech act, rather than an “external cause-effect relationship between speech and effects” (p. 123). I conclude he is embracing a constructivist, normative approach to understanding speech acts and their securitizing effects.

Buzen et al. (1998) lay out two aspects of speech acts which make them more apt to securitize an issue, or what they call “external aspects of a speech act.” First is the “social capital” of the speaker, or “securitizing actor” (p. 33). This actor must convey authority on the issue, but does not need to be in a position of “official authority” (p. 33). The second aspect is that it helps the securitization process if the object that is being portrayed as a threat can “generally held to be threatening” (p. 33). The authors lay out three steps for successful securitization, which are: establishing an existential threat, formulating emergency action, and lastly, the effect that stems from the “breaking free of rules,” more specifically, our shared normative understanding of these rules (p. 26). As will be shown in the empirical analysis section, the establishing of an existential threat is accomplished by creating an imagined future where an asteroid, or a man-made disaster, perhaps nuclear, could wipe out everything on Earth. The emergency action is the passing of domestic laws to further allow and propagate the privatization of outer space, as it was established previously in this thesis that U.S. domestic legislation is paving the way for creating new international norms and rules. The breaking free of rules then can then be seen as the change in our shared understanding of outer space domain where privatization is not only acceptable, but desirable, and even imperative for our survival.

The use of speech acts as securitizing moves has been used to influence, change, and even create international regimes in the past. Woods (2007) contends that from a constructivist approach, the language or speech acts used in regards to nuclear weapons constructed the true reality of our nuclear world, while adding that most nuclear language scholars are misguided in their belief that language only creates an “illusion” of some objective true reality (p. 99 & 100). Woods states that during the 1950s, the term “dissemination” was used when discussing the spread of nuclear weapons (p. 94). However, the term put the focus on states that already had nuclear weapons and as a result, the term

“dispersion” was also used (p. 94). However, the idea of the dispersion of nuclear weapons did not convey the real danger inherent in their further spread (p. 94). Neither term served “the interests of nuclear states” (p. 94). The term “proliferation” was not used initially by nuclear states, and thus did not enter the public discourse until the 1960s (p. 93 & 94). The term was taken from biology, and was related to the spread of disease and death (p. 94).

With the term entrenched and the discourse over, the blame for the spread of nuclear weapons now focused on nonnuclear states which were to “submit themselves to the surveillance, regulation and denial institutions” of the nuclear states, (p. 94). The term “proliferation” can be traced back to Ireland’s push in the UN in the late 1950s to create a committee to explore the dangerous “spread of nuclear arms” (p. 105). Although they ultimately backed off on the push for the resolution, they did succeed in pushing for a vote that acquiesced to the idea and use of the term “proliferation” as both existing and “dangerous” (p. 105). The result was an almost decade long debate, negotiation and discussion within the UN over nuclear weapons which further implanted the idea of nuclear proliferation as a threat into our shared normative understanding of the world, more specifically, our nuclear world. Woods contends that “states reject nuclear arms because ‘proliferation’ is a real and known thing...because we use language to make and maintain it as real via the social construction of reality” (p. 104). To surmise Woods' contention, nuclear weapons, or the states that possessed them, were not ultimately seen as a threat or a problem. It was the non-nuclear states who became the problem through the securitization of the idea of proliferation.

A further example of securitizing speech acts being used to influence international regimes is explored by Crick (2012) who looks at the securitization of drugs on a global scale. Crick points to the UN Single Convention of Narcotic Drugs in 1961 as an example of how

drugs used to be perceived on an international scale, which was that they were a “social and economic danger to mankind” (p. 407). However, since the end of the Cold War, increasingly the discourse on illegal drugs has changed to where they are now being considered threats to “the security of the State” as well as “global peace and security” (p. 407). With the UN Single Convention, which Crick calls a speech act in and of itself, the referential object was portrayed as “Mankind” or “Human Security” with the existential threat being portrayed as drug users or “Others”, however, slowly over time this other expanded to include drug traffickers and growers/producers (p. 408 & 410). The “other” was further established as an existential threat by the use of the word “evil” in the convention, adding an aspect of a moral threat (p. 408). The primary actors behind this speech act were the US, as well as manufacturing and producing nations, through the auspices of the UN (p. 410). The extraordinary measure that was proposed from this speech act was the “global prohibition” of illegal drugs “through the international regime” (p. 410).

In 1988, the UN Convention Against Illicit Trafficking of Narcotic Drugs and Psychotropic Substances, mainly championed by the US, was passed (p. 410). Instead of mankind or humanity being the referent object, now we see the safety and security of the state become the main concern with the existential threat being the producers and traffickers of illegal drugs and their connection with “organized crime” (p. 410). In both UN conventions, Crick contends that the intended audience of these speech acts were “UN country representatives and member states’ national governments” (p. 410). The emphasis on the “evil” nature of drugs and drug-users was changed to a “war-metaphor” thus helping along the idea that the referential object was the security of the state (p. 411). In this latter UN convention, the extraordinary measure was the “increased militarization of law enforcement and eradication strategies” (p. 410).

Post 9/11, the idea of drug growing and producing funding organized crime shifted to it helping terrorism (p. 412). Now the new referential threat became global terrorist networks (p. 412). Russia's 2010 Rainbow-2 plan is an example of a speech act that tried to implement and entrench this new shared normative understanding that illegal drugs were now a threat to global/international security (p. 410). In this case, the extraordinary measure was trying to get the UNSC and NATO to "support the eradication of opium poppy in Afghanistan" with the audience being NATO, the UNSC, and the Russian public (p. 410).

Both of the preceding examples, the nuclear regime and the drug regime, although very different, show how speech acts can and do inform, change, direct, and even create our shared normative understanding of what constitutes threats to our security and what exactly needs to be protected and what changes to our normative understanding of the 'rules' need to take place in order to achieve security for the referential object from the existential threat.

### 3.5. Epistemic Communities

Moving on to epistemic communities, I begin with Hurd (1999) who states that "when several individuals share a common definition of what is legitimate, we say they constitute a community" (p. 388). One definition describes epistemic communities as "a network of professionals with recognized expertise and authoritative claims to policy-relevant knowledge in a particular issue area" but these professionals can come from a variety of backgrounds and are not confined by geography (Clunan, 2015). This thesis has already explored in the literature review section how pro-privatized outer space epistemic communities (which I obviously take to include the aforementioned lobbyist organizations) have been influencing US domestic policy, which has increasingly become the main catalyst for influencing internationally accepted norms on outer space, as well as general public perception.

The purpose of this section is to provide an historical example when epistemic communities played a similar role in influencing international norms and understanding over pertinent issues that led to regime development and/or change. Adler (1992) explores the role that national epistemic communities played in the development of nuclear arms control. Towards the end of the 1950s, nuclear deterrence “was only a concept,” and not yet enough of a shared understanding of reality in terms of its perceived importance (p. 101). The American epistemic community consisted of strategists and scientists (p. 101). This epistemic community concluded that collaboration among super powers on the issue of nuclear weapons would be beneficial to the US and the world as a whole, and were able to reach “into places where decisions are made and into the minds of the people who made them” (p. 101 & 102). In addition, they were able to impart this idea of cooperation to the Soviet Union as well, and the ideas put forth by the now enlarged epistemic community ended up being the “conceptual basis,” for the ABM regime (p. 102).

Adler contends that transnational epistemic communities will share their theories with national scientists and experts, who in turn, bring those theories to their own “transnational meetings” (p. 105). For this reason, he maintains that focusing on national epistemic communities will help to understand how new “concepts and meanings” of reality make their way to the relevant political actors on the national stage, and eventually to the international stage, for example through negotiations between nations (p. 106). Furthermore, national epistemic communities can be viewed as political actors in their own right, by the process of selecting which “ideas” and “policies” they choose to pass on. (p. 106). In addition, epistemic communities have the ability to create “national strategies,” a function that is general linked to “government or state agencies,” (p. 106 & 107). Once again, this was demonstrated with Weeks’s examples in the literature review section.

There were two main schools of thought, or epistemic communities in the late 1950s and early 1960s on the nuclear issue. One community theorized that the Soviets and the U.S. could have a shared understanding of the value of deterrence and nuclear arms control that would favor both actors, while the other community theorized that the U.S. could win a nuclear war, and being in a position to espouse that threat credibly would keep them safe, and thus reduce the likelihood of war (p. 109 & 110). The latter group actually “opposed a partial test ban treaty...and supported ABM deployment” (p. 111). Actors in the former group that advocated arms control “used their scientific prestige to gain legitimacy and authority within the political system” (p. 112)

After the Soviets tested intercontinental ballistic missiles and launched Sputnik in 1957, U.S. President Eisenhower created the Gaither Committee, which recommended “an across-the-board military buildup,” and as a result, a worried Eisenhower became “more receptive to arms control ideas” (p. 116). Scientists from the President's Science Advisory Committee (PSAC) proposed to Eisenhower that he create a “peace agency,” which Kennedy actually created during his presidency and named it Arms Control and Disarmament Agency (ACDA) (p. 117). Adler cites Saville Davis who states that political momentums, in this case, created by new presidential advisors, were responsible for the implementation of these new arms control policies (p. 117 & 118).

A meeting between the Soviets and US epistemic communities entitled The Surprise Attack Conference, saw PSAC scientists and strategists from the Research And Development Corporation (RAND) coming together in what Adler calls the birth of the “arms control epistemic community” (p. 118). Evidence presented showed the Soviets that nuclear deterrence “could be stabilized and managed by means of arms control,” which eventually led to “cognitive negotiations” over these ideas (p. 118). The interaction between Soviet and U.S.

scientists resulted in the American scientists taking the ideas that were formulated in the meetings to the “U.S. political system, where they became part of a collective understanding about what should be done to control the nuclear arms race” (p. 122). Subsequently the Kennedy administration had given important positions to many key players in the arms control epistemic community (p. 126). Eventually, after the idea of ballistic missile defense was picked up by the main-stream media in the U.S., the arms control epistemic community grew to include “peace and grass-roots groups” thanks to an increased awareness (p. 131 & 141). Finally, Adler contends that international regimes may be formed when “the parties converge on a recognition of what has to be prevented rather than of what has to be mutually achieved” (p. 144). To reiterate in terms of the focus of this thesis, Adler’s contention can be a lens to view what the pro-privatized outer space epistemic community is trying to accomplish, which is entrenching a shared understanding of a need for all humanity to have a backup of the biosphere, which only they can provide.

Adler contends, when theorizing about a subject that has little or no experience operating as a reality that “assumptions must rest partly on a theory of international behavior, arrived at mainly on the basis of conjectures, assumptions and nonscientific expectations,” (p. 107). This is a vital notion for this thesis, as the idea that private space companies need to be given free reign to operate in outer space, to back up our biosphere, so that if it is destroyed humanity can live on obviously as fits into the preceding sentence. Theories based on this framework can be said to be constructivist theories that rely on shared expectations of the epistemic community, as well as “intersubjective and consensual meanings” followed by “domestic political selection” of these shared expectations or ideas, and finally the “fulfillment of these expectations in practice, once they are diffused to other nations,” (p. 107). In addition shared understanding of theories at the epistemic community and domestic political level creates “evidence’ that confirms that validity of norms” (p. 108).



### 3.6. Conclusion of Theory Chapter

Overall the preceding chapter established the following: international politics and the rules, norms, identities and structures that exist around it and are the basis of it are socially constructed through interaction between actors and agents. How collective meanings are established are key to understanding how interaction on the international stage (and all the levels leading up to that stage) operate.

Next it was established that actors obey rules and norms because we have come to view them as legitimate. Legitimization, as a currency of power, requires not only an actor to state that a proposed rule or norm is legitimate, but for other actors to acquiesce to this claim. The next section establish that one of the ways that a proposed rule or norm can be seen as legitimate is through a securitizing speech act. If an actor with enough authority (perceived authority) states that something is an existential threat to an important enough referential object, and other actors accept this premise of a threat, and then the speaker provides their solution to mitigate the threat which can often involve a change in shared norms or rules, and once again this is accepted, then this change or 'extraordinary measure' becomes legitimate. Empirical historical examples of such were given.

Lastly, it was established that epistemic communities can and have played roles in influencing and changing internationally shared norms and rules and even the creation of regimes. If the technical, professional, intellectual, political, and sheer size of these communities are strong enough, they will be able to influence the perception of politicians and media in an effort to change the overall understanding of the issue at hand. An empirical example was given of the arms control debate that took place in the 1950s and 1960s. Partly through the use of speech acts (stating how dangerous an ABM building up could be, and having that threat be believable and accepted), the anti-ABM epistemic community was able

to increase in size by adding their Soviet counterparts. Then, as an increased community, they were able to convince the appropriate political forces in their respective countries. In summation, the epistemic community was seen as legitimate and used speech acts to change our shared normative understand of how best the new realities of the bi-polar geopolitical landscape should operate.

## 4. Empirical Analysis

The following chapter will demonstrate that a wide ranging and multifaceted epistemic community exists today that is extolling the virtues of private outer space development and exploration. The chapter will provide empirical examples that give credence to the idea that this epistemic community is using a variety of venues to influence both public perception of outer space, and the politicians who are needed to hop on board to pass laws favourable to these private companies. Furthermore, it will show that members of this epistemic community are using securitizing speech acts, and creating a hypothetical future in which humanity on Earth is wiped out, but the species itself continues because private industry has been allowed to develop and explore outer space. Overall, they are trying to recast our shared normative understanding of outer space to one where its privatization is perfectly normal and indeed warranted for humanity's survival.

The actors chosen to exemplify the varied and multifaceted nature of this community include two CEO's of major private outer space companies, a former congressional aide and legislative author, a NASA head chief and an academic. The venues in which these securitizing speech acts were disseminated included a scientific convention, similar to the TED Talk model, an article on the spacenews.com website, another article on the techtimes.com website with quotes taken from a 2015 outer space convention held in Washington, a segment from an American newsmagazine show broadcast on network television, and finally an academic article published in the journal of Space Policy.

### 4.1 Peter Diamandis and Eric Anderson – Solve For X

To begin I will return to the original quote used at the beginning of this thesis. “We have a moral obligation to become a multi-planetary species, to back up the biosphere so that

no natural disaster or man-made disaster can ever wipe out all that we have created.” -Peter Diamandis, Planetary Resources Inc., co-founder (Diamandis & Anderson, 2013). This quote is from a 2013 event called Solve For X which is a convention put on by Google and runs very similarly to the idea behind TED Talks in that experts in their chosen fields give presentations to pertinent issues facing humanity. According to its website, Solve For X tries to connect new ideas and projects “with others in our community with the subject-matter knowledge, technical expertise, and other resources to help accelerate process” (Who We Are, 2015). In essence, it is an epistemic community that helps to build other epistemic communities. Diamandis goes on to extol the virtues of private outer space exploration, while delegitimizing governments' role when he states that “exploration funded by governments starts and stops and starts and cancels” and adds “it is only literally when we have what I call exothermic economic reactions, exploration driven by making money that we are able to really have consistent long-term exploration” (Diamandis & Anderson, 2013).

Diamandis's partner, Eric Anderson, who co-hosted this particular talk, states that in terms of finding near-earth asteroids for mining that “the most important part beyond the data, is to actually make the claim of ownership, of whatever form that takes. Right now the law says we can go and take resources from space and use them. The law needs further definition. For example, if we go to a target, we want to be able to have exclusive rights to that target if we do something there, if we perfect our right, if we plant a flag or a beacon. That right does not exist yet, but as we develop the frameworks for that on an international level, then this will become important to not only characterize it, but plant that flag.” Clearly the preceding quote by Anderson lays out what the exceptional measure or new norm is in terms of their presentation as a speech act, that being the granting of property rights in outer space.

## 4.2 Steven Wolfe – SpaceNews

In April, 2014, Steven Wolfe wrote a commentary for Spacenews.com in which he extolled the imperatives of establishing a Noah's Ark in space. Wolfe is a former congressional aide, a former executive director of the Congressional Space Caucus, the author of the Space Settlement Act of 1988 and currently serves on the Board of Editors for the Journal of Space Philosophy (About The Author, 2015). Wolfe cites the then recently released film Noah when stating that "the space community is reminded again of an enduring metaphor for our present-day quest to ensure human survival by building arks in space" and adds that "certainly the potential for annihilation is an ever-present reality we collectively seem satisfied to ignore" (Wolfe, 2014). Wolfe references the aforementioned Diamandis along with Elon Musk, the CEO of SpaceX as modern day Noah's who are already hard at work building this celestial ark (Wolfe, 2014).

In answer to those who laugh at the idea or do not think it is a pertinent issue, Wolfe states that "it's time to tell the villagers that you will be building the ark with or without their help, for yours is the responsibility to ensure survival of the life that emerged on this planet" (Wolfe, 2014). He closes out his commentary reinforcing the idea that humanity, the referential object, is faced by an ominous existential threat, and that we need to support these private companies who are the only ones in a position to mitigate this threat. He does this by stating that "We have to get it out of our heads that space settlement is anything other than an urgent necessity of our species and for our evolving world" (Wolfe, 2014).

### 4.3. Charles Bolden – NASA Head Chief

At a 2015 summit in Washington, D.C., titled “Humans to Mars” the head chief of NASA, Charles Bolden was quoted as saying “if this species is to survive indefinitely we need to become a multi-planet species, we need to go to Mars, and Mars is a stepping stone to other solar systems” (Saltarin, 2015). During the summit, NASA unveiled its plans to put humans on Mars by 2030 (Saltarin, 2015). The article about the summit was published on the Tech Times website, a news organization which “covers news on technological innovation and how business and technology intersects, influences and impacts different markets and industries to bring about cultural transformation in our lives, and how that is relevant in our increasingly interconnected world” (About Us, 2015). The article then discussed NASA’s plan to colonize the planet, stating that the first stage of the process will see that “American companies will be providing space transportation up into low-Earth orbit” (Saltarin, 2015). Various companies and corporations are already engaged in a private space race that could drastically bring down the costs of sending up cargo and passengers up into orbit (Saltarin, 2015).

Although this particular speech act is admittedly not as overt as the previous two examples in terms of painting an apocalyptic imagined future, it still does present the inclusion of private space companies as the remedy to a potential threat, which is that humanity may not survive indefinitely on Earth. Furthermore, this example is illustrative and important in that the speech act is not coming from a private industry actor, but from NASA’s head chief, who is one of the most important government employees in terms of outer space development and exploration. This securitizing speech act demonstrates the multifaceted scope for the pro-privatization outer space epistemic community, and as a result, even though it is not as overt as the previous examples, it is instructive to include in this thesis.

#### 4.4. Elon Musk – 60 Minutes, CBS

In March, 2012, CEO and founder of SpaceX, Elon Musk, was featured on the American newsmagazine television show 60 Minutes. Although I have previously included a securitizing speech act from the top brass at Planet Resources Inc., I include another CEO of a private space company because of the venue in which the speech act took place. 60 Minutes is the preeminent news program in America and has been broadcast weekly since 1968 (About us, 2014). Within America, it has an average audience of 12.2 million people per episode, which is number one for all television news shows in America (About us, 2014). This segment ran twice in 2012, once in March and once in June, and given the pervasiveness of American broadcast television within the culture, it is vitally instructive to include an example from the medium of American broadcast television.

At one point in the 15 minute segment, the host states that “Musk truly believes that low cost space exploration is essential to the survival of mankind” (Musk, 2012). This statement is followed by one from Musk in which he states that “I think it’s important that humanity become a multi-planet species. I think most people would agree a future where we are a space faring civilization is inspiring and exciting compared with one where we are forever confined to Earth until some eventual extinction event. That’s really why I started SpaceX” (Musk, 2012).

Throughout the segment, Musk’s history as a computer programmer child prodigy, followed by the sale of his company, PayPal to Ebay for \$2 billion USD, and then his creation of Telsa, a high-end electric car company is outlined (Musk, 2012). Musk is portrayed as a brilliant entrepreneur and down to earth and ready to do what people say is impossible (Musk, 2012). The show then highlights how all the components and parts of SpaceX’s rockets are

made in their own factory and not outsources, followed by Musk's contention that this is a far more efficient and cheaper way to build rockets (Musk, 2012). Next, Musk's staff is highlighted, ranging from recent engineering grads to former NASA astronauts who have spent time on the ISS (Musk, 2012). The host then quotes Musk's contention that "a manned version of (the company's) dragon capsule will be safer than the space shuttle and a lot cheaper" (Musk, 2012). The segment ends with the host mentioning former NASA astronauts Neil Armstrong's and Gene Cernan's criticisms of the drive to privatize space exploration, saying that it is unsafe and costly (Musk, 2012). Musk responds teary-eyed with a quivering lip and states that "I was very sad to see that. Those guys are heroes of mine," adding that he is hoping to make space flight "available to everyone" (Musk, 2012).

Overall Musk is made to look like a young, up and coming genius who cares about humanity, its existence and continued progress towards more streamlined and advance space exploration, while the only criticisms came from old looking men who are characterized by a tone of seeming out of touch and ignorant; ironically enough, like dinosaurs on the verge of extinction.

Finally, it has also been widely rumored that the lead character of Tony Stark in the recent series of Iron Man movies is actually based on Elon Musk, which adds further credence to the idea that Musk is a pop-culture icon, who has the personality, credibility, and professional credentials to highly influence public opinion through the securitizing speech acts displayed through the 60 Minutes segment (Smith, 2014).

#### 4.5 Tony Milligan – Academic – Journal of Space Policy

In November 2011, Dr. Tony Milligan, a Teaching Fellow in Ethics and the Philosophy of Religion at King's College in London published an academic article in the journal of Space



Policy titled “Property rights and the duty to extend human life” (Milligan, 2011). Milligan argues that we have a moral duty to allow property rights in outer space in order to ensure human survival (Milligan, 2011, p. 191). Since this section looks at actual empirical examples of securitizing speech acts, it is important to quote him verbatim. He states that:

“We have a duty to secure the future survival of humanity (to extend human life). Ultimately this can only be done by spreading it elsewhere. As a step towards this we need to develop efficient and repeatable ways to get out of the Earth’s atmosphere. We need to begin to explore the nearby region of space. We have an opportunity to do so now but it is by no means clear that the window of opportunity will remain open indefinitely. The technological and political preconditions may not always be in place, the window may turn out to be far smaller than we may imagine, it could be measured in centuries rather than millennia. We therefore have a duty to exploit our present opportunity. This may best be done (and perhaps it may only be done) by promoting the kind of incentives that will encourage the private sector to invest heavily in space. This, in turn, requires us to allow, recognize and (as far as possible) enforce, private property rights with regard to non-artefacts. Initially this should involve recognition of private property with regard to sub-lunar and sub-planetary sized objects (the weak conclusion) but ultimately such rights will have to be extended to claims upon lunar and planetary real estate (the strong conclusion)” (Milligan, 2011, p. 191).

He calls the preceding statement an “argument from duty” (Milligan, 2011, p. 191). It should be noted that Milligan concludes his article by stating that if the argument of duty is used as a justification for granting property rights in outer space to private companies, then he believes in the “weak conclusion” of his initial argument (Milligan, 2011, p. 193). While I have included this last point in terms of clarity in an effort to not misrepresent Milligan’s argument, his “weak conclusion” is really merely a side note in terms of the purpose of this

thesis. What is of importance for our purposes here is that Milligan is stating that humanity is in danger of some cataclysmic event, and the granting of property rights in outer space to the private industry (which is a recasting for our shared normative understanding of outer space) is essential to ensuring a permanent presence in outer space, and thus the continuation of the species, potentially sans planet Earth.

#### 4.6 Conclusion of Empirical Analysis Chapter

This chapter exemplifies the variety of different actors who are using securitizing speech acts in many forms and through many venues in order to shape and change our shared normative view of outer space and how and by whom it should be used. The actors include two CEO's of major private outer space companies, a former congressional aide and legislative author, a NASA head chief and an academic. The venues in which these securitizing speech acts were disseminated included a scientific convention, similar to the TED Talk model, an article on the spacenews.com website, another article on the techtimes.com website with quotes taken from a 2015 outer space convention held in Washington, a segment from an American newsmagazine show broadcast on network television, and finally an academic article published in the journal of Space Policy. Overall, these actors, who are part of a largely pro-privatized outer space epistemic community are trying to recast our shared normative understanding of outer space to one where its privatization is perfectly normal and indeed warranted for humanity's survival in the face of an apocalyptic cataclysmic event on Earth..

## 5. Conclusion

The preceding thesis was undertaken with a goal of providing evidence to prove the following hypothesis: creating and diffusing an intersubjective shared idea of an apocalyptic imagined future through securitizing speech acts, where humanity's only chance of survival will be an established permanent privately owned and operated colony in outer space, will be a crucial aspect required to build an epistemic community large enough and with enough influence to reconceptualize outer space from an international regulatory and regime perspective. This in turn will serve as a catalyst for the normalization and legitimization of free-market private enterprise in outer space.

Chapter one began by exploring the realities and current situation of private companies involved in outer space development and potential exploration. From asteroid mining, to medical research, to space tourism, to supply runs (eventually manned) to the ISS, chapter one established that the privatization of outer space has come a long way from science fiction in past decades and is now a firmly entrenched reality and science fact.

Chapter two began by providing an overview of the history of involvement in outer space by private industry. It established that there are three epochs of space exploration, with the third, our current epoch, being dubbed by Weeks as hyper-privatization. In addition, the chapter established that the U.S. has led the way in terms of influencing international norms, regimes, and laws in relation to outer space. This was achieved partially through international treaties, but mainly through domestic legislation. It is for this reason that the history of private involvement in outer space was explored through a U.S.-centric lens. The chapter then established that pro-privatized epistemic communities have played a key role in influencing politicians and subsequent legislation in regards to facilitating and allowing for increased access and role in outer space for private companies. Next, it was established that beyond

influencing the politicians themselves, it was and is vital for this epistemic community to influence overall public perception, or in other words, our shared normative understanding and perception of outer space. Chapter two then wrapped up by establishing that the securitization of outer space has increasingly become a main concern for a variety of countries and political entities, such as China, Japan, India and the EU, in addition to the traditional big two of Russia and the U.S. The topic at hand and space constraints did not allow for a more in-depth exploration of this securitization by state/international actors outside of the pro-privatized epistemic community. However, the singular goal of that subsection was to provide greater context in which to view the drive by the pro-privatized outer space epistemic community to securitize outer space, and to establish that they are competing with the interests of other power states and political entities.

Chapter three then established the theoretical lens through which to view the securitizing speech acts explored in chapter four. First, the constructivist theory of international relations was presented and established as an important and appropriate theoretical base. Overall it was established that we are social beings, and communication is one of the most important ways that we socially interact with each other, thus creating intersubjective shared normative understandings of our reality and the rules we have agreed upon, which in turn creates our perception of reality and indeed the world we live in. This was followed by a section of critiques against constructivism which this thesis argued were either faulty or not relevant for the topic of exploration in this thesis. Building on the base established by the constructivist section, theories on legitimation were explored. It was established that by and large rules are followed, in general and especially on an international scale, because they are seen as legitimate. The process of legitimization, which is a general shared intersubjective understanding that the rules are legitimate, is established through the

process described in the constructivist sub-section. In simple terms, if a rule or norm is perceived as legitimate, it is in fact legitimate; our perception constructs our reality.

The next sub-section explored securitizing speech act theory. The section established that securitizing an issue is basically establishing the idea that if a particular issue is ignored and not dealt with, all other issues will be non-important as a result of the disastrous effects of the issue at hand. The dialogue that takes place in an effort to portray an existential threat to a referent object is called a securitizing move. However, the issue has not been fully securitized until there is acceptance by the intended audience about the seriousness of the threat. For securitization to take place, an issue does not have to be an actual threat to be securitized, it just has to be presented and accepted as one. Again, our intersubjective shared understanding of norms and rules creates our reality. The underlying theme continues that perception is king. If the speaker has enough social capital amongst the audience, and the proposed threat can generally be believed as legitimate, this can allow for the breaking free of established norms or rules. In the case of the topic of the thesis, the breaking free of rules entails changing our shared understanding of outer space as a domain of governments and the overall international community to one where privatization is not only acceptable, but desirable, and even imperative for the survival of our species. To close out this subsection, it was established that securitizing speech acts have influenced international norms, rules, and laws with empirical examples being the NPT and the evolution of the international approach to quelling the use and sale of illegal drugs.

The last subsection of the theory chapter established that epistemic communities can and have played roles in influencing and changing internationally shared norms and rules and even the creation of regimes. If the technical, professional, intellectual and political capital, as well as the sheer size of these communities are strong enough, they will be able to influence

perception of politicians and media in an effort to change the overall understanding of the issue at hand. An empirical example was given of the arms control debate that took place in the 1950s and 1970s. Partly through the use of speech acts (stating how dangerous an ABM building up could be, and having that threat be believable and accepted), the anti-ABM epistemic community was able to increase in size by adding their Soviet counterparts, and then they were able to convince the appropriate political forces in their respective countries. In summation, the epistemic community was seen as legitimate, and used speech acts to change our shared normative understand of how best the new realities of the bi-polar geopolitical landscape should operate.

Chapter four then took the multifaceted theoretical lens already established in the previous section, coupled with the historical context and current private involvement in outer space, again already established, to explore the securitizing speech acts by members of the pro-privatized outer space epistemic community. The chapter provided empirical examples that give credence to the idea that this epistemic community is using a variety of venues to influence both public perception of outer space, and that of the politicians who are needed to hop on board to pass laws favorable to these private companies. Furthermore, it showed that members of this epistemic community are using securitizing speech acts, and creating a hypothetical future in which humanity on Earth is wiped out, but the species itself continues to live on because private industry has been allowed to develop and explore outer space. Overall, it was established that these actors are trying to recast our shared normative understand of outer space to one where its privatization is perfectly normal and indeed warranted for humanity's survival.

The limitation of the thesis it runs the risk of being non-falsifiable. However, the risk should not inhibit the exploration of the idea. Furthermore, the thesis does not claim to be an

all-encompassing explanatory theory on how reconceptualizing outer space as a private domain will be achieved. Instead, it is an explanatory theory, based on descriptive inference and recent empirical examples, of one part of a much greater whole that is the reconceptualization of outer space as a private domain, with the establishment of my narrow aspect of the overall theory acting as a catalyst for future, nuanced, perhaps quantitative research on private space companies and the epistemic communities that have formed around them, using apocalyptic imagined futures as speech acts.

Finally, the gain of this thesis is the gap it fills in the literature on private space exploration. There is no literature that explicitly draws an exploratory red-line through today's private outer space realities, its history, and then the theories including constructivism, legitimization of international regimes, securitization as a speech act, epistemic communities, the use of an imagined apocalyptic future playing a crucial role in the reconceptualization and ultimately, legitimization of outer space as a private domain. This red-line also ran through, the use of a new referential object in these speech acts which is humanity without our Earth

In drawing this exploratory red-line this thesis has established that creating and diffusing an intersubjective shared idea of an apocalyptic imagined future through securitizing speech acts, where humanity's only chance of survival will be an established permanent privately owned and operated colony in outer space, will be a crucial aspect required to build an epistemic community large enough and with enough influence to reconceptualize outer space from an international regulatory and regime perspective. This in turn will serve as a catalyst for the normalization and legitimization of free-market private enterprise in outer space.

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