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Chinese Worldview and Perspectives on Space

An Analysis of Public Discourse

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Executive Summary

Corpora from three sources were examined using semi-automated discourse analysis to gauge the Chinese government's concerns in the space domain and how these interests are articulated with general political and cultural issues. The sources were releases from the Chinese MOFA (Ministry of Foreign Affairs) (2011 - 2017), stories reported by CPC (Communist Party of China) News (2013 - 2014), and two months of speeches by Chinese president Xi Jinping (2014). The primary findings from the discourse are presented as Chinese perspectives and worldview with respect to the space domain and general themes.[1]

Chinese Perspectives and Worldview Regarding the Space Domain

- In each corpus, *space was infrequently mentioned when compared to other issues*. The dominant concern in each corpus was the Chinese economy and development.
- The Chinese MOFA expressed much concern with **the DPRK's nuclear and missile programs** and US responses to them, especially the deployment of the THADD missile defense system.
- The **Chinese (MOFA)** primarily mentioned space in association with **danger**, **threats**, **deterrence,** and the **military**.
- The Chinese MOFA expresses significant **concern over the weaponization of space**.
- The Chinese MOFA often discusses cooperation with the US and other nations on developing space technologies, but it is *not clear how much of this **cooperation** is a government venture rather than a private sector one.*
- **The DPRK's missile** development was a key concern because of its destabilizing effects and because of US efforts to respond by deploying the THADD missile defense system; the radar's reach is a perceived threat to Chinese national security.
- **CPC news** trumpeted Chinese accomplishments in **space travel** and often associated them with President Xi Jinping.
- The primary insight provided by the quantitative analysis of CPC News is that space endeavors fall primarily within the government's domain.

General Worldview and Values

- The Chinese MOFA, CPC News and Xi Jinping's speeches focus on Chinese economic development and economic partners[2].
- A common theme expressed by all three sources involves issues of governance, including advocacy of effective governance and governmental procedure.
- The United States is the country of greatest concern to MOFA as measured by the density with which the US is mentioned and the amount of emotive language (emotive themes and rhetorical devices) associated with its discussion of the US.
- The Chinese MOFA self-references China as much as expected, and portrays China in positive, futuristic and nationalistic tones.

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[1] This analysis also provides insight on SMA-Space Question 2 regarding how different entities conceive of space for military and commercial purposes.

[2] Economic partners include ASEAN (Association of Southeast Asian Nations), BRICS (Brazil, Russia, India, China and South Africa), the US, Central Asian nations, Japan, and the Philippines.

- The most basic themes discussed by all three sources emphasize positive and future-oriented themes such as progress and success.
- Other elements included in the corpora include positive themes such as cooperation and friendship.
- The Chinese MOFA disassociates China from cyber-attacks, cyber security and democracy.

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Background

This study focuses on how language used in discussion about the space domain reveals the interests of state actors. Corpora from the Chinese Ministry of Foreign Affairs (MOFA), The Communist Party of China (COC) News, and speeches by Xi Jinping were analyzed using a codebook designed to generate quantitative measures of the extent to which emotive and cultural themes, political themes, entities and rhetorical devices are employed. These measures provide a quantitative analysis of Chinese worldview and goals and how the Chinese generally view space.

Methodology & Methodological Terms

People knowingly and unknowingly signal their values and intentions in the way they use language (Beeman, 2001; El-Badawy, Comerford, & Welby, 2015; Fairclough, 2001; Rahimi & Sahragard, 2006; van Dijk, 2005). Thematic analysis focuses on themes people employ that reveal what matters to them (Braun & Clarke, 2006; Guest, MacQueen, & Namey, 2012; Ryan & Bernard, 2003), while discourse analysis focuses on the linguistic tools people use to deploy and emphasize these themes (Farnell & Graham, 1998; Schiffrin, 2003; van Dijk, 2005). The approach used in this study combines thematic analysis and discourse analysis to identify which issues matter most to a speaker and to what degree they do so. Because people are often unaware of the extent to which they signal their values and intentions, identification of key themes can provide early indicators and warnings (I&W) of political actions. The authors have employed this approach in studies of both state (Fenstermacher, Kuznar, & Yager, 2012; Kuznar, 2013, 2014, 2016b; Kuznar, Popp, & Peterson, 2016; Kuznar, Suedfeld, Morrison, & Spitaletta, 2014; Kuznar & Yager, 2013, 2016; Kuznar et al., 2012) and non-state (Kuznar, 2016a, 2017b; Kuznar & Hunt, 2015; Kuznar & Moon, 2014; Kuznar & Yager, 2012) actors.

Codebook Typology

The codebook is a taxonomy of themes and rhetorical devices that represent topics mentioned, persons, places, things, ideas, and ways of using language that amplify the sentiment associated with the themes. The following terms describe the highest-level categories of the codebook taxonomy.[3]

- **Theme** – something that can be nominalized (named); can be a person, place, thing, idea, or emotion
- **Emotive Theme** – themes that convey emotion (sentiment); their mere mention evokes an emotive response
- **Rhetorical Device –** a way of using language to amplify or dampen sentiment
  - Includes repetition, lists, intensifiers (very, huge), lexicalization (special word choice), pejoratives (contemptuous or demeaning terms), use of kin terms, titles etc.

The primary categories of the themes, emotive themes and rhetorical devices include:

- **Entities** – countries, formal organizations, regions, and sub-state groups
- **Cultural Emotive Values** – themes that evoke emotions in audiences

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[3] As a convention, actual themes and rhetorical devices will be capitalized and italicized throughout the text, in order to differentiate them from more generic uses of the terms. When appropriate, footnotes defining themes will be given.

- o **Negative Extreme Emotive** – a cultural theme that tends to evoke an extremely negative response.
        - o **Negative Normal Emotive** - a cultural theme that tends to evoke a negative response that is not extremely negative.
        - o **Positive Extreme Emotive** - a cultural theme that tends to evoke an extremely positive response.
        - o **Positive Negative Emotive** - a cultural theme that tends to evoke a positive response that is not extremely positive.
- **Political Factors**
    - o **Positive Cohesive Concerns** – political issues that tend to imply cooperation.
    - o **Disruptive Security Concerns** – political issues that tend to imply conflict.
    - o **Other Security Concerns.**

Rhetorical Devices – ways of using language that amplify or dampen the sentiment associated with a theme (see above).

Space Themes – themes associated with outer space, which include but are not limited to:

- **Space themes aggregated** – all space-related themes, including those in sub-categories below
- **Space Technology** – general issues involving technology in space
- **Missiles** – space-bound missile technologies, especially including ballistic missiles
- **Satellites** – issues related to satellites
- **Space Business** – private sector connections to space
- **Space Military** – connection of military to space
    - o Space Military Organizations – specific military space organizations
- **Space Science** – general outer space science concepts
- **Space Travel** – prospects and operations involving human space flight

Semi-automated Coding

In order to facilitate rapid coding of large corpora of text, the autocode feature of MAXQDA qualitative data analysis software was used. This required development of a thesaurus of terms and phrases that would represent a particular theme. For instance, the strings, "seiz," "aggress," or "attack" might represent the theme of Aggression. The thesaurus is the accumulated result of ten years of research application to national security issues (Kuznar, 2013, 2017b; Kuznar & Hunt, 2015; Kuznar, Popp, & Peterson, 2017; Kuznar & Yager, 2012; Kuznar et al., 2012; Toman, Kuznar, Baker, & Hartman, 2010). The codebook contains 324 codes for themes and rhetorical devices, including 18 themes related to outer space and space technologies. The codebook is refined with each new project as new codes are added and better ways of representing themes and rhetorical devices are discovered. The coding for this project represents the codebook as it existed January 3, 2018.

Key Metric: Density

The key metric for measuring themes is **density**: the number of times a theme occurred in a document or speech, divided by the number of words in that document. This provides a normalized measure of how often a theme is used that can be compared across documents and between authors, groups, and through time. Comparison of densities between themes also places a theme in a broader context, and thus guards against bias by judging the relative importance of themes. The underlying assumption is that

the more densely a theme is used, the more important it is to the author, and therefore to a potential audience. Theme densities were calculated for each document, and the variations of these densities through time were used to identify trends and possible indicators and warnings (I&W). Only those trends that were statistically significant at the $p < .05$ level or less are reported.

Metrics for Sentiment and the Use of Emotional Language

The use of rhetorical devices and emotionally charged themes are ways to interject emotive appeal into an argument. When done unwittingly, this may be an indicator that the speaker is in a more emotive state, as opposed to a more rational and deliberative state. Therefore, the ability to detect departures from a rational state of mind can provide clues that the speaker's decision calculus is departing from the deliberative, cost/benefit calculus that is at the heart of traditional deterrence theory (USSTRATCOM, 2006).

In order to measure the use of more emotive language, themes were classified as Extreme Negative Emotive, Negative Emotive, Extreme Positive Emotive, and Positive Emotive. In addition, Rhetorical Devices were coded. Each of these categories was tallied for each document and subsequently normalized as densities. In addition to these categories, the Extreme Negative and Negative Emotive themes were summed as were the Extreme Positive and Positive Emotive themes. This provides nine measures of the use of emotive language against which different actors or speakers can be compared.

Chinese Ministry of Foreign Affairs (MOFA)

One of the Chinese government's primary means of communicating with the world is through its Ministry of Foreign Affairs. The Chinese MOFA is more than a mouthpiece, it is also responsible for developing foreign policy and negotiating foreign agreements, and often publishes statements of Chinese leaders. Therefore, the Chinese MOFA and their published missives are a key source for monitoring official Chinese policy and perspectives on world events.

Corpus

The China MOFA corpus contains official and public communiqués consisting of speeches, statements, addresses, transcripts, press releases and interviews given by senior CPC and PRC officials. These texts are pulled from various political, economic and diplomatic forums both within the PRC and at international locations spanning 2011-2017. Content spans a wide range of topical political events/crises such as terrorism, disputes in the South China Sea and the Syrian conflict, as well as long term visions and agendas; for example, international economic cooperation, relations and geopolitics. These texts were extracted from the official Chinese MOFA website (link) and are available in English, Chinese, French, Russian, Spanish and Arabic. This is the official interface for the Chinese MOFA to display select information and statements about their diplomatic operations. For this reason and for the wide array of public officials, format and topics contained therein, this corpus was chosen as the most comprehensive corpus of discourse by leading PRC (People's Republic of China) officials.

The corpus contains 495 documents that range from 152 to 7979 words with a mean of 1887 words. The documents span the period from November 13, 2010 to July 7, 2017. 85,390 segments of text were coded into 238 themes and rhetorical devices.

Space: What is the Ministry of Foreign Affairs Thinking?

Space-related themes are uncommon in Chinese MOFA releases as measured by density. Aggregating all space themes together yields a density of 0.000977 themes per word, which places space in about the 60th percentile of all themes and rhetorical devices. No space-related themes had densities that were more statistically significant than the average for all themes. For the Chinese MOFA, space is primarily associated with missiles and the military, and secondarily with general space science topics and space travel (Table 1).

Table 1. Density of Space Themes in Chinese Ministry of Foreign Affairs Releases

Rank	Rank Percentile	Theme	Density
96	59.7%	Space	0.0000977
134	43.7%	Missiles	0.0000416
154	35.3%	Space Military	0.0000241
187	21.4%	Satellites	0.0000096
203	14.7%	Space Science	0.0000061
205	13.9%	Space Travel	0.0000048

As there is much overlap in space-subcodes, most of this analysis focuses on the aggregate of all space themes. Examination of correlations between aggregated space themes and other themes appears to support a defense orientation toward space.

> "Meanwhile, with the growing reliance of mankind on outer space, the risk of the weaponization of an arms race in outer space are on the rise, and the uncertainties concerning outer space security are accumulating as well." Wang Qun, Ambassador for Disarmament Affairs of China 10/17/2011

Space is associated with the danger of nuclear threats, especially involving the DPRK, and interestingly, the need for deterrence (Table 2).

> "UNSC Resolution 2270 should be implemented. Adopted unanimously at the Security Council, Resolution 2270 voices clear opposition against the DPRK's nuclear and missile program." Foreign Minister Wang Yi 5/19/2016

Table 2. Themes Associated with Space in Chinese Ministry of Foreign Affairs Releases

Theme	r	p
DPRK	0.275	0.000
Nuclear Weapons	0.206	0.000
Danger	0.179	0.000
Security	0.168	0.000
Deterrence	0.127	0.005
Materiel	0.123	0.006
Russia	0.122	0.007
Threat	0.118	0.009
Masses	-0.104	0.021
Economic Development	-0.118	0.009

Focusing on themes associated with missile technology shows some interestingly stronger associations with nuclear weapons, danger and threat and deterrence, demonstrating that the Chinese MOFA primarily associated missiles with nuclear force as opposed to other more peaceful endeavors such as space travel and exploration (Table 3).

Table 3. Themes Associated with Missiles in Chinese Ministry of Foreign Affairs Releases

Theme	r	p
Nuclear Weapons	0.408	0.000
Danger	0.301	0.000
Deterrence	0.272	0.000
Materiel	0.270	0.000
Threat	0.187	0.000

> "China believes that the development of missile defense systems that disrupt global strategic balance and stability should be abandoned, multilateral negotiation process to prevent the

weaponization of and an arms race in outer space should be vigorously promoted, and the comprehensive, common and cooperative security should be actively pursued." Ambassador Wu Haitao 6/1/2012

Cultural and Political Themes: *What* motivates and concerns the Ministry of Foreign Affairs?

An understanding of the significance of space themes within Chinese MOFA discourse can be enhanced by understanding the broader context of which themes and actors the Chinese MOFA deem to be important, as indicated by density. The themes with the highest densities in the Chinese MOFA missives are overwhelmingly positive. Fourteen themes occurred statistically significantly more often than all themes together and were all in the top 10% of themes by rank. These themes include positive and cohesive political issues such as economy and development, cooperative relations, political process and governance, and political stability. Positive emotive themes such as progress, the masses, strength, success, friendship, ability and the future are listed below in (Table 4). Overall, the themes most often mentioned are hopeful, future oriented and largely concern economic development and functioning government.

Table 4. Density of Cultural, Emotive and Political Themes in Chinese Ministry of Foreign Affairs Releases

Rank	Rank Percentile	Theme	Density
2	99.2%	Economy and Development	0.0068395
4	98.3%	Cooperation	0.0052468
6	97.5%	Progress	0.0034968
7	97.1%	Political Process	0.0030559
8	96.6%	Masses	0.0029488
9	96.2%	Strength	0.0028331
11	95.4%	Peace	0.0022698
12	95.0%	Security	0.0021254
13	94.5%	Success	0.0020977
12	95.0%	Friendship	0.0016951
18	92.4%	Stability	0.0012909
19	92.0%	Ability	0.0012240
20	91.6%	Future	0.0010734
21	91.2%	Governance	0.0010329

For instance, the MOFA often employs language that highlights development and growth emphasize themes of progress and of hope in the future.

"Asia-Pacific emerging markets have made important contribution to world development and will continue to offer enormous development opportunities. The rapid development of emerging markets in our region has changed the state of backwardness in many countries and regions and improved the lives of hundreds of millions of people." Hu Jintao 11/13/2010

"In 2013, Asia enjoyed good governance and harmony, and boosts tremendous development potentials and bright cooperation prospects." 12/31/2013

Entities: *Who* concerns the Ministry of Foreign Affairs?

The entities that have the highest densities include China, the US, China's neighbors, economic competitor/partners and economic organizations. Only two entities, China and the Asian region in general are more statistically significantly mentioned than all other themes combined. The theme that is most densely mentioned of all 270 themes is China (Table 5).

Table 5. Densities of Organizations and Polities Mentioned in Chinese Ministry of Foreign Affairs Releases

Rank	Rank Percentile	Theme	Density
1	99.6%	China	0.0076309*
17	92.9%	Asia	0.0014436*
25	89.5%	US	0.0008549
32	86.6%	UN	0.0006742
33	86.1%	Africa	0.0006543
37	84.5%	ASEAN	0.0005657
43	81.9%	Europe	0.0004790
44	81.5%	EU	0.0004311
57	76.1%	G20	0.0003243
60	74.8%	Japan	0.0003081
61	74.4%	India	0.0003010

* Statistically more common than average theme density, $p < .05$

Chinese Associations

The density with which China is mentioned is both positively and negatively associated with many themes and rhetorical devices. China has a positive association with positive emotive themes, such as friendship, cooperation, trust and the masses, with economic development, military operations and nationalism. China is negatively associated with anything cyber related, with democracy as well as discussions of tolerance.

"The spectacular natural beauty and the rich folk culture of China and Southeast Asia are our unique assets for promoting mutual understanding and friendship between our people. At the China-ASEAN Summit last year, a target was announced to have 15 million mutual visits between the two sides by 2015. We need to further tap the potential of cooperation in education and tourism, and encourage more two-way flow of students and tourists so that our traditional friendship will win greater popular support and be passed on from generation to generation." 4/30/2011

"China follows a defense policy that is defensive in nature and never seeks hegemony or external expansion. These are absolutely not abstract or empty slogans. They are the strategic choice and solemn commitment to the international community made by the Chinese

government in keeping with the trend of the times, China's historical and cultural heritage, values, national condition and fundamental interests." 1/11/2011

What emerges from these associations is that the Chinese MOFA appears to regard China from a perspective that is nationalistic, militarized, and as a country that is aiming to develop cooperative relationships for economic development, lacks a positive association with democracy, tolerance and issues related to the cyber theme (Table 6). The latter disassociation of China with cyber, cyber security and cyber-attack may indicate an effort by the Chinese MOFA to separate China from accusations of aggressive uses of cyber.

Table 6. Themes Associated with China in Chinese Ministry of Foreign Affairs Releases

Theme	r	p
Friendship	0.322	0.000
Cooperation	0.272	0.000
Masses	0.163	0.000
Trust	0.154	0.001
Military Operations	0.131	0.003
Nationalism	0.096	0.032
Economic Development	0.094	0.037
Cyberattack	-0.105	0.020
Cybersecurity	-0.105	0.019
Governance	-0.113	0.012
Cyber	-0.134	0.003
Democracy	-0.141	0.002
Democratic	-0.152	0.001
Tolerance	-0.190	0.000

The Chinese MOFA's mentions of the US are positively correlated with mentions of China, major economic powers (ASEAN - Association of Southeast Asian Nations, the EU, Germany, India), and regions where China seeks to expand its economic influence (Latin America). There is a counterintuitive disassociation between China and BRICS (Brazil, Russia, India, China and South Africa) and Asia in general. Overall, the associations are indicative of a broad concern with economic partners and competitors (

Table 7).

> "Vice President Xi Jinping has paid a successful visit to the United States, which gives a strong boost to the growth of China-US cooperative partnership. The fourth round of China-US Strategic and Economic Dialogues has been a success, producing 50 deliverables on the strategic track and 67 on the economic track and achieving win-win results." 7/7/2012

Table 7. Organizations and Polities Associated with China in Chinese Ministry of Foreign Affairs Releases

Theme	r	p
US	0.235	0.000
ASEAN	0.219	0.000
Obama	0.200	0.000
EU	0.188	0.000
South Korea	0.186	0.000
Germany	0.140	0.002
Merkel	0.131	0.004
Latin America	0.113	0.012
India	0.106	0.018
Europe	0.092	0.041
BRICS	-0.163	0.000
Asia	-0.180	0.000

The use of language deployed by the Chinese MOFA when speaking of China indicates a high association with rhetorical devices, emotive language (emotive themes and rhetorical devices) and overall positive themes (Table 8). This indicates that the Chinese MOFA employs language that evokes a highly emotional and positive view of China.

> "China has given full play to the role of a responsible major country and made new contribution in the world." 12/16/13

> "China is the world's biggest developing country. China has made historic progress in development. It is now the second largest economy in the world. It has achieved in several decades what took developed countries several centuries to achieve. This is, without doubt, a proud achievement for a country whose population exceeds 1.3 billion." 4/2/2014

Table 8. Emotive Language Associated with China in Chinese Ministry of Foreign Affairs Releases

Theme	r	p
Rhetorical Devices	0.370	0.000
Emotive Language	0.183	0.000
Positive Themes	0.145	0.001

American Associations

Outside of Asia, the United States had the highest density among entities in the Chinese MOFA corpus. Other themes with which the US is associated with provide further insight into how the Chinese MOFA regards the US The strong positive correlation of the US with China testifies to the close relationship the Chinese MOFA sees between the US and China. The Chinese MOFA often discusses cooperation with the US and other nations on developing space technologies, but it is not clear from the texts on how much of this cooperation is a government versus private sector endeavor. Development is invoked as a

desideratum of peace building in space, indicating an economic angle to China's goals, but exactly what form the development takes and who will conduct it is not specified.

> "China attaches great importance to the development of science and technology. We have formulated a national program for mid- to long-term science and technology development, substantially increased R&D investment and successfully implemented a number of key programs, plans and projects, such as manned space exploration,…", indicating a government-lead development, but then states…

US-China relations in space are also an expressed concern of the Chinese MOFA.

> "Other strategic issues are related to the military-to-military relationship between China and the US and how the two countries see the 'global commons' - space, cyberspace and maritime space." 7/9/2013

The Chinese MOFA also see a close relationship between the US and Taiwan, with whom China has an adversarial relationship and disputes over territorial waters (Kuznar et al., 2017).

> "If the Taiwan issue is handled well, China-US relations will develop in a smooth way. Otherwise, the relationship will suffer interference and setbacks." 1/14/2011

The US is also associated with economic problems for China, indicating a more adversarial relationship with the US The high association of rhetorical devices with the US also indicates a heightened sensitivity of the Chinese MOFA to China's relationship with the US (Table 9).

> "On the other hand, the world economy is experiencing deep adjustment and there are many uncertainties and destabilizing factors in the global economic recovery. The underlying impact of the international financial crisis is lingering, and structural problems such as runaway debt, misaligned growth and North-South imbalance remain serious." 9/3/2013

Table 9. Themes Associated with the US in Chinese Ministry of Foreign Affairs Releases

Theme	r	p
China	0.235	0.000
Dignity	0.225	0.000
Respect	0.225	0.000
Taiwan	0.176	0.000
Date	0.159	0.000
Rhetorical Devices	0.154	0.001
Economic Problems	0.149	0.001
Courage	0.120	0.008
Cooperation	0.105	0.020
Unity	-0.141	0.002

C h i n e s e   W o r l d v i e w   a n d   P e r s p e c t i v e s   o n   S p a c e :
A n   A n a l y s i s   o f   P u b l i c   D i s c o u r s e

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Trends through Time

Only a few themes indicate any change over the seven-year span covered by the corpus (Table 10) and in all cases, these themes increase through time. Themes concerning economic problems and political instability increase the most dramatically over this time period. The Chinese MOFA also exhibits an increasing concern with the US and Japan; Japan is a nation with whom China has had escalating disputes over territorial waters in recent years (Kuznar et al., 2017). The Chinese MOFA also exhibits an increasing concern with energy through time, likely due to China's continual struggle to develop its economy, which is largely dependent on its ability to harness energy.

Table 10. Trends in Chinese Ministry of Foreign Affairs Language Use through Time

Theme	r	p
Economic Problems	0.289	0.000
Instability	0.258	0.000
US	0.159	0.000
Japan	0.141	0.002
Energy	0.129	0.004
Cooperation	0.120	0.008

Other Findings

Perspectives and Worldview Regarding the Space Domain

The Chinese MOFA primarily regards space as a government (more specifically a military) issue. Space is largely conceived as the domain of the military and as a result, themes and concerns associated with space in the Chinese MOFA corpus relate to military issues. A prominent concern expressed by the Chinese MOFA are the DPRK's nuclear and missile programs, and US responses to them. The deployment of the THADD missile defense system in particular, whose radar penetrates Chinese territory and is therefore perceived as a threat to China's sovereignty, especially concerns the Chinese MOFA.

> "The United States is considering the possibility of deploying THAAD in the Republic of Korea. Its up to the ROK government to make a final decision. We of course will not interfere with ROKs internal affair. We understand that under such a complex environment, the United States and the Republic of Korea have an urgent need to ensure their own security. But what you may not know is that the X-band radar associated with the THAAD system has a radius that goes far beyond the Korean Peninsula and reaches into the interior of China. In other words, China's legitimate national security interests are likely to be jeopardized or threatened." 2/25/2016

The Chinese MOFA expresses much concern over the weaponization of space. The theme of peace is highly related (r=.113, p=.012) due to appeals to keep the peace in outer space.

> "On the one hand, the international community should continue to implement, develop and improve the existing international rules and norms in nuclear, biological, chemical and other

areas. On the other hand, it should also pay due attention to the absence of rules and norms in the emerging frontiers such as cyber and outer space, and actively push for the establishment of relevant rules and norms in order to make these frontiers benefit mankind to the maximum extent." 10/12/2016

The Chinese MOFA often discusses cooperation with the US and other nations on developing space technologies, but it is not clear from the texts on how much of this cooperation is a government versus private sector endeavor. Development is invoked as a desideratum of peace building in space, indicating an economic angle to China's goals, but exactly what form the development takes and who will conduct it is not specified.

"China attaches great importance to the development of science and technology. We have formulated a national program for mid- to long-term science and technology development, substantially increased R&D investment and successfully implemented a number of key programs, plans and projects, such as manned space exploration,…", indicating a government-lead development, but then states…

US-China relations in space are also an expressed concern of the Chinese MOFA.

"Other strategic issues are related to the military-to-military relationship between China and the US and how the two countries see the 'global commons' - space, cyberspace and maritime space." 7/9/2013

General Worldview and Values

The Chinese Ministry of Foreign Affairs highlights pressing issues of economic development, concerns over economic problems, and often mentions other economic powers and organizations in this corpus. The Chinese MOFA's discourse also indicates that it seeks cooperation, friendship and effective governance, but not in every circumstance. In terms of the polities to which the Chinese MOFA directs its attention, the United States is their greatest concern as measured by the density with which the US is mentioned and the amount of emotive language (emotive themes and rhetorical devices) associated with their discussion of the US. China is the most referenced polity by the Chinese MOFA and China is portrayed as an agent of positive economic growth and political cooperation in Asia for the future. Interestingly, China is disassociated from cyber-attacks, cyber security and democracy.

Chinese CPC News

The Communist Party of China News is promoted as the "People's Daily Online" and has emerged as the dominant news organization of China. Its service to the central government is clear as it features a government organization chart of leadership on its home page; therefore, the CPC News provides a key source for monitoring how the Chinese government depicts itself to its domestic audience. The CPC News also provides an English version, which allows it to project Chinese government perspectives globally.

Corpus

The Communist Party of China's English News corpus consists of 182 articles from the official English media website (link) that catalogues the activities of prominent CPC leaders and party officials. Such activities span the spectrum of international engagements, national ceremonies and declaring different economic, diplomatic and political agendas. The sources of these articles are from state controlled media agencies such as Xinhua and China Daily on party leaders and a variety of political pursuits. This corpus was chosen to represent the political pursuits that CPC officials selected to display. The corpus contains 182 documents that range from 19 to 1377 words with a mean length of 293 words. The documents span the time period from May 30, 2013 – April 25, 2014. 2429 segments of text were coded into 147 themes and rhetorical devices.

Space: What are they thinking?

As with the Chinese Ministry of Foreign Affairs (MOFA), the CPC News did not often mention space-related issues. The most densely, and almost only, mentioned space theme was space travel, while military-related space themes such as missiles and space military were mentioned very infrequently (Table 11).

Table 11. Densities of Space Themes in CPC News Releases

Rank	Rank Percentile	Theme	Density
24	83.7%	Space	0.0005456
28	81.0%	Space Travel	0.0005156
132	10.2%	Missiles	0.0000186
139	5.4%	Space Military	0.0000154

Space Travel was most associated with rhetorical devices used (i.e., overall rhetorical devices, magnitude, intensifiers, emotive language) to amplify its significance and President Xi Jinping (

Table 12).

> "President Xi Jinping said that the Chinese people will take bigger strides in space exploration, during his talk to astronauts aboard the orbiting space module Tiangong-1 on Monday." 6/24/2013

Table 12. Themes and Rhetorical Devices Associated with Space Travel in CPC News Releases

Theme	r	p
Rhetorical Devices	0.828	0.000
Magnitude	0.775	0.000
Intensifiers	0.768	0.000
Xi Jinping	0.744	0.000
Emotive Language	0.508	0.000

Cultural and Political Themes: *What* motivates and concerns them?

Similar to the Chinese Ministry of Foreign Affairs (MOFA), CPC News exhibits thematic densities that emphasize positive emotive themes such as progress and success, and cohesive political issues such as economics, governance issues, the masses and stability (Table 13). Overall, the themes most often mentioned are hopeful, future oriented and largely concern economic development and functioning government.

"Stronger China-US cooperation will drive economic growth in both countries, Premier Li Keqiang said on Tuesday. If both countries work more closely to combine China's huge market and the leading technology of the United States, the cooperation will create a stronger impetus for economic growth and turn development opportunities into cooperative results, Li said at a seminar held with a delegation of US business leaders and former senior officials." 6/5/2013
"The newly published articles show Zhu's determination to establish clean governance and his efforts to promote economic reform, improve people's livelihoods, protect the environment and construct Pudong New Area in Shanghai." 8/13/2013

Table 13. Densities of Cultural, Emotive and Political Themes in CPC News Releases

Rank	Rank Percentile	Theme	Density
6	95.9%	Political Process	0.0023217*
7	95.2%	Economy and Development	0.0020217*
8	94.6%	Cooperation	0.0016848*
9	93.9%	Progress	0.0016276*
10	93.2%	Governance	0.0012123*
11	92.5%	Success	0.0009805
13	91.2%	Masses	0.0009005
14	90.5%	Education	0.0008829
15	89.8%	The Masses	0.0007976
16	89.1%	Stability	0.0007104
17	88.4%	Security	0.0006821
18	87.8%	Political Reform	0.0006749

* Statistically more common than average theme density, $p < .05$

Entities: *Who* concerns them?

CPC News, like the Chinese Ministry of Foreign Affairs (MOFA), primarily self-references China but also often mentions Xi Jinping, and is therefore an outlet for providing the President of China's notoriety. Other entities often mentioned include regions where China has been spreading economic and political influence, especially in the developing world such as Latin America and Africa (
Table 14).

> "President Xi Jinping's tour in Latin America marks the full launch of China's ties with the region that is increasingly important to both sides" 6/7/2013

> "President Xi Jinping praised the state of China-Africa cooperation on Wednesday, calling on both sides to remain sincere partners." 6/27/13

Neighbors of concern such as Taiwan, the DPRK and Japan are also often mentioned. Interestingly, the US is seldom mentioned in the corpus and exhibited no strong associations with any themes or rhetorical devices.

Table 14. Densities of Organizations and Polities in CPC News Releases

Rank	Rank Percentile	Theme	Density
1	99.3%	China	0.0048527*
4	97.3%	Xi Jinping	0.0030767*
25	83.0%	Obama	0.0005420
38	74.1%	Latin America	0.0003453
53	63.9%	Africa	0.0001808
54	63.3%	Asia	0.0001769
55	62.6%	Russia	0.0001761
59	59.9%	Taiwan	0.0001523
69	53.1%	DPRK	0.0001070
74	49.7%	Europe	0.0001012
81	44.9%	Japan	0.0000910
82	44.2%	UN	0.0000883
122	17.0%	US	0.0000240

* Statistically more common than average theme density, $p < .05$

China is associated most with honor, the use of titles, Xi Jinping and extremely positive themes, thus reinforcing the use of CPC News as a vehicle for celebrating China's president and leader. There is also a negative association between China and political reform (

Table 15).

> "In Costa Rica, Xi received the Key to San Jose, the highest honor awarded to foreigners by the city. Xi was also awarded the key to Mexico City during his trip in Mexico." 6/7/2013

Table 15. Themes Associated with Chine in CPC News Releases

Theme	r	p
Honor	0.403	0.000
Title	0.366	0.000
Xi Jinping	0.299	0.000
Extremely Positive Themes	0.148	0.046
Political Reform	-0.175	0.018

Trends through Time

Given the only 2-month span covered by the corpus, trend analysis does not seem useful.

Other Findings

Perspectives and Worldview Regarding the Space Domain

The primary insight provided by the quantitative analysis of CPC News releases reveals the importance of government involvement in space endeavors.

> "Zhang watched the live broadcast of the return and recovery of Shenzhou-10 spacecraft at the Beijing Aerospace Control Center Wednesday morning. Zhang said the mission is of great significance in shoring up China's economic and technological power, enhancing the national cohesion and demonstrating the nation's road, spirit and strength." 6/26/2013

> "Xi said the mission marked the perfect finish of the first phase of the second step of China's manned space program. China's space technology has reached an advanced level, adding the country has created a hard-working and dedicated team of aerospace scientists and astronauts, the president said." 7/29/2013

General Worldview and Values

The most basic concerns of the Chinese Ministry of Foreign Affairs (MOFA) include positive emotive themes such as progress and success, and cohesive political issues. The CPC News clearly serves as a vehicle for celebrating President Xi Jinping's character, leadership and accomplishments.

> IDEOLOGICAL PURITY Xi called for unremitting efforts to arm servicemen with socialist theories of Chinese characteristics and ensure their purity, reliability and firmness in ideological fronts. 7/30/13

> Chinese President Xi Jinping on Friday met astronauts and scientists who participated in the Shenzhou-10 mission, extending congratulations to the success of the mission…. Xi said the mission marked the perfect finish of the first phase of the second step of China's manned space program. China's space technology has reached an advanced level, adding the country has created a hard-working and dedicated team of aerospace scientists and astronauts, the

president said. Xi said he hopes the manned space program will continue to see success in the future with the support of authorities and the public. 7/29/13

Xi Jinping

Xi Jinping is currently China's paramount leader; He is General Secretary of the Communist Party of China, President of the People's Republic of China, and Chairman of the Central Military Commission. As such he sits at the head of the top policy and decision-making organizations of China, controls the military and is China's official figurehead to the world. Therefore, his missives are key to understanding the perspectives on space that China is likely to take.

Corpus

The Central People's Government of the People's Republic of China corpus ([link](#)) is an official ".Gov.Cn" directory of highlighted speeches given by Xi Jinping during the course of 2012. While there are entries to over 30 speeches from this source, the majority of them are broken links and could not be used for this project. As a result, only 9 articles are sourced. The corpus contained 9 documents that ranged in length from 184 to 1087 words with a mean length of 414 words. The documents span the period from September 21, 2012 to November 19, 2012. 423 segments of text were coded into 47 themes and rhetorical devices.

Space: What is Xi Jinping thinking?

There is no mention of space in this small collection of Xi Jinping speeches from September to November 2012. However, triangulating the themes CPC News and the Chinese Ministry of Foreign Affairs associated with space to themes prominent in Xi Jinping's general discourse may provide insights into how Xi regards the space domain.

Cultural and Political Themes: *What* motivates and concerns him?

Similar to the Chinese Ministry of Foreign Affairs, CPC News exhibits thematic densities that emphasize positive emotive themes such as progress, success, and cohesive political issues such as economics, governance issues, the masses and stability (

Table 16). Overall, the themes most often mentioned are hopeful, future oriented and largely concern economic development and functioning government.

> "The Party shall continue to hold high the great banner of socialism with Chinese characteristics, maintain an ideological state to free up the mind, implement the policy of reform and opening up, pool the strength and overcome all difficulties, promote economic, political, cultural, social, and ecological progress and Party building in an all-around way." 11/8/2012

Table 16. Densities of Themes in Xi Jinping Speeches (2014)

Rank	Rank Percentile	Theme	Density
4	91.5%	Cooperation	0.0070879*
5	89.4%	Intensifiers	0.0069583*
6	87.2%	Economic Development	0.0068157*
7	85.1%	Political Process	0.0065334*
8	83.0%	Governance	0.0060568*
10	78.7%	Ability	0.0040791
12	74.5%	Ideology	0.0033504
13	72.3%	Progress	0.0032966
14	70.2%	Communism	0.0031661
15	68.1%	Success	0.0025582
16	66.0%	Strength	0.0022185
17	63.8%	Stability	0.0016719
19	59.6%	Future	0.0013652
20	57.4%	Prosperity	0.0013429

* Statistically more common than average theme density, $p < .05$

Entities: *Who* concerns Xi Jinping?

In Xi Jinping's speeches during this brief period, he primarily self-references China and ASEAN (Table 17).

Table 17. Densities of Organizations and Polities in Xi Jinping Speeches (2014)

Rank	Theme	Density
1	China	0.0208503*
3	ASEAN	0.0125025*
18	Asia	0.0015168

* Statistically more common than average theme density, $p < .05$

China is statistically significantly associated with only one theme, ASEAN ($r = .687$ $p = .041$), indicating a concern with China's neighbors and economic partners in the Asian region. The United States is not mentioned by Xi Jinping during this period.

> "While setting up economic and trade cooperation zones inside ASEAN countries, China will also encourage capable Chinese enterprises to expand their investment in ASEAN countries…" 9/21/2012

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