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Convergence and Divergence Amongst China's Foreign Policy Think Tanks

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Abstract: Due to the opaque nature of China's think tanks, understanding their behaviour can often be a tea-reading exercise. Through a novel application of natural language processing methods, particularly structural topic models, this article analyzes foreign policy topics, position variance, and changes over time amongst China's think tanks. Think tanks in our sample represent different geographical locations, and are further refined by organizational types such as government, government-operated, and university-affiliated think tanks. We find evidence for convergence in the topics covered by China's think tanks, however, this varies over time and by organizational type. Further, policy issues in China are especially responsive to topics of sovereignty and domestic governance, while space exists for divergence on less-critical topics. Overall, our findings represent evidence of the foreign policy tenants that China considers as crucial in the present and near future.

Keywords: China; foreign policy; think tanks; text analysis; government-operated think tanks (GOTT); university-affiliated think tanks (UATT).

Foreign policy-making processes are a fundamental source of information for explanations of state behaviour. In liberal democratic contexts, foreign policy inputs are extensively recorded through public opinion surveys, legislative debates, and diplomatic, bureaucratic and executive communiqués. Observation of these processes in authoritarian regimes is less straightforward: party deliberations are not made public, intricacies of feuding elites are abstruse, and it can even be difficult to identify the inputs that cause policy output variances.

Contemporary China is an exemplar case of this challenge. Information which scholars typically rely upon, are subject to state constraints such as economic statistics and the press. As in other political contexts, the veracity of elite statements is questioned (Wallace 2014: 11). Innovative analytical techniques have circumvented these constraints with regards to the press and social media activity (see King et al. 2017), but such progress has not been recorded on foreign policy-making processes. This is an increasingly critical gap to bridge in the present context of China's re-emergence as a key international power and in the midst of a global leadership retreat by traditionally key nations such as the United States and United Kingdom (Oliver and Williams 2016; Schweller 2018).

This study takes one step towards bridging this gap through an investigation of foreign policy thought and processes in the People's Republic of China (PRC) under the Xi Jinping administration. In the wider literature, a current dominant dimension of debate regards the extent to which Xi Jinping has personalized and centralized power at the expense of local authorities and government bureaucracies (Kou 2017; Lee 2017). This article contributes to this debate through an exploration of domestic Chinese foreign policy topics. We draw on a corporatist-inspired political sociological framework to investigate foreign policy topic variances; whether these topics have further converged or diverged under Xi, and if so, does this exert equal influence on different foreign policy issues?

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In particular, we direct analytical focus to the role of think tanks who conduct foreign affairs research in China. Over the past two decades, think tanks have rapidly populated the policy entrepreneurial space: today, China has the second largest number of think tanks globally, trailing only the United States (McGann 2015: 32). Originally serving as ideological legitimizers under Mao Zedong, China's think tanks today serve as pragmatic sources of policy research and technical expertise (see Shambaugh 2002). While research on China's think tanks was traditionally inhibited by a lack of access to empirical data, contemporary Chinese think tanks place their analyses, opinion pieces, and media interviews into the public domain to increase their profiles and reputations (Abb 2015). For the study of Chinese foreign policy, this provides a valuable opportunity to better understand the range of foreign policy thought in China and to shed new light on the domestic primacy of those policies.

We collect and analyze every publicly available policy statement from these think tanks from mid-2014 through 2016. This was a key period that witnessed Xi Jinping's anti-corruption campaign, as well as legal and military reforms. These think tanks represent different geographical locations and organizational types such as government (GOV), government-operated (GOTT), and university-affiliated (UATT) think tanks.¹ We descriptively analyze similarities and correlations in think tank policy positions, and leverage tools from natural language processing, namely structural topic modelling, to explore temporal changes in policy topics, prevalence, and content under the Xi administration.

Our study finds evidence that confirms and challenges extant findings with respect to power centralization under Xi. While think tanks exhibited increasing similarity relative to the positions of government think tanks from mid-2014 through 2015, more divergent positions are expressed during 2016. Interestingly, university-affiliated think tanks appear to position themselves proximately vis-a-vis government think tanks, but exhibit more independent and varying positions relative to think tanks that are not directly-government operated. Furthermore, the policy topics of sovereignty, regional politics, and the Chinese economy account for nearly half of the content of the corpus, and think tanks are most responsive to events that concern sovereignty disputes and domestic governance and social issues. These findings represent novel evidence of divergence on less-critical policy topics and relative conformity on the policy tenants that are considered crucial to China's domestic and international developmental strategies.

THINK TANKS AND CHINA'S FOREIGN POLICY

The foreign policy literature traditionally considered decision-making processes to primarily be a function of the basic characteristics associated with a nation's political system. Western liberal democracies were conceived of as pluralistic in process, whereas authoritarian systems were considered hierarchical and cohesive. As Hermann (2001: 50) explains, however, authoritarian states "have at times been governed more by coalitions of interests and group dynamics than by the views and goals of a single actor, while highly bureaucratized governments have seen a dominant leader centralize authority and push a particular ideology or cause." Contemporary Chinese politics is often marked by varying levels of both features. To better understand Chinese foreign policy processes and assess potential centralization under Xi Jinping, we specifically approach these dynamics through the role of think tanks. This approach helps to uncover the micro-processes of foreign policy formation to better understand expected policies and behaviours at the state level.

¹ These classifications are discussed in the next section.

The Concept of a 'Think Tank' in China

China's unique institutional environment necessitates a refined contextual specificity with which to understand the concept of a 'think tank'. Zhu's (2011: 669-670) describes think tanks in China as "organizations that research and consult on policy issues to influence the policy process ... depending on internal and external factors". "Internal and external factors" points to the need to approach Chinese think tanks not as independent entities free from government oversight, as in most Western contexts, but rather as embedded within a bureaucratic, corporatist government structure (see Hsu and Hasmath 2013).

Originally inspired by the Soviet model, foreign affairs-oriented research institutes in China were traditionally situated within a formal bureaucratic system, in which tasks flowed down the system, and research "went up" in response (Glaser and Saunders 2002). As China's presence in international politics expanded, however, think tanks evolved into pragmatic sources for intelligence, policy consultation, and technical expertise (Abb 2015; Shambaugh 2002). Akin to their Western counterparts, Chinese think tanks place emphasis on research and disseminate their views on public policy issues; or as Wiarda (2010: 30) puts it, "they seek not just to do abstract or 'pure' research on specific issues, but to influence the policy debate toward the think tanks' point of view and to put forth solutions to public policy problems". Their primary target audience are solely political elites in individual ministries and party-affiliated organizations, rather than ordinary citizens, civil society actors, or the media (McGann 2009). Although Abb (2015: 531) points out that think tanks have bolstered their public profiles through media appearances and interactions, their dependence on the patronage and attention of political elites for influence places constraints on their research and analyses (Morrison 2012).

For analytical purposes, we disaggregate Chinese think tanks into three categories: government, government-operated, and university-affiliated. Government think tanks refer to those institutions within the Party Central Committee or the State Council, such as the Development Research Centre of the State Council² and the Chinese Academy of Social Sciences (CASS). From a hierarchical standpoint, these government think tanks are at, or above, the ministerial level. The second category is government-operated think tanks that are not strictly speaking part of the government organ, but operate within the government's bureaucratic structure and under the supervision of the government organs with which they are affiliated. The lack of independence from the government makes this category of think tanks similar to government-organized, non-governmental organizations (GONGOs), notably in terms of financial reliance and personnel administration (see Hasmath et al. 2016; Hsu et al. 2016). Foreign affairs-oriented GOTTs are under the Ministries, ministerial-level Commissions, and local governments, such as the China Institute of International Studies (CIIS) affiliated with the Ministry of Foreign Affairs (MFA), the China Institute of Contemporary International Relations (CICIR) affiliated with the Ministry of State Security (MSS), and the Shanghai Institute of International Relations (SIIR) under the Shanghai municipal government. The third, and final, category of think tanks are those attached to universities, such as the School of International Studies, Peking University or the Centre for American Studies, Fudan University. These

² Note, the DRC is one of main the planning and evaluation organization for economic and social policy in China. While much of its activities is domestically-oriented, it does produce foreign policy research looking at foreign economic relations, and international social and economic development (cognizant DRC sections include: Euro-Asian Social Development Research Institute, Institute of World Development, and Asia-Africa Development Research Institute).

institutes' orientation in educating students and conducting academic research perhaps gives them greater intellectual autonomy. We expect that differences in expressed foreign policy positions will vary dependent upon these different organizational types. With these classifications in mind, the next section describes the contemporary context within which these think tanks operate.

THE CONTEMPORARY INSTITUTIONAL ENVIRONMENT

The Role of the Domestic Context in Foreign Policymaking

Think tanks in China are situated within a domestic foreign policy context that has become more complex in the post-market reform era. There have been fundamental changes in the structure of Chinese society, including the pluralization and diversification of social interests, and increased social differentiation and stratification (Hasmath and Hsu 2009). As Lampton (2001: 27) aptly puts it, "the increasing number of individuals and organizations getting involved in making major decisions, the circle of those involved in consultation and subsequent policy implementation, and the space in which society and local systems can operate have all expanded."

Meanwhile, China's interactions with the world are no longer limited to the state level. Epistemic communities, which diffuse transnational groupings of like-minded individuals, are an example of one of the many non-state channels for such an interaction (see Hasmath and Hsu 2014; Hsu and Hasmath 2017). Similarly, Fewsmith and Rosen (2001) assert public opinion is able to establish a delimited space within which the Chinese leadership must operate. In response, the Chinese leadership has a tendency to rapidly absorb information to fashion decisions through various channels. By co-opting societal forces, the bureaucracy has become more specialized, and much of its added capacity has come in areas that permit China to better fit into the international organizations in which it now participates (Hasmath et al. 2016; Lampton 2001).

While China may not have a full-blown corporatist system, and there is healthy debate in the literature reinforcing this fact (see for example Gilley 2011), there are arguably corporatist elements at the national and sub-national government levels that make such a framework uniquely suited for our analysis (see Hsu and Hasmath 2013, 2014). Indeed, corporatism can help to explain the three types of think tanks' relative positions within China's institutional structure, and why these organizations adopt certain modes of practices. The power of a small political elite still predominates, and the decision-making process, overall, lacks plurality. In other words, by no means is the state retreating from its control and influence over entities focused on dominant policy issues.

Consider Odom's (1992) classic criteria for evaluating the influence of organizations such as a think tank in the Western democratic context: (1) it must capture the core elements of the political system; (2) it must be comparative in nature; and, (3) it must account for change. Similar to their counterparts in Western democracies, Chinese foreign affairs think tanks attempt to influence policy outcomes, but this is achieved by providing *consultation* (and generally behind closed doors) rather than overtly shaping policy debates or lobbying decision-making bodies. Nor do foreign affairs think tanks challenge the predominant power of elite Party members – to openly and willingly challenge the elites within the CCP is contra to the hidden rules for success in China's political environment, and is paramount to organizational suicide in the

domestic context. Suffice to say, foreign affairs think tanks in China, operating within a corporatist bureaucratic institutional environment, are not overtly ambitious in their public claims for overt political change.

To further this notion of corporatism as a significant process in the activities of Chinese foreign affairs think tanks – notably as a process in which the state controls their activities – it is useful to observe corporatism through a tacit sanctioning lens. As the Chinese state gradually loosened its grip on various sectors of society there was a transformation from overt sanctioning to tacit sanctioning in state-society relations (Hsu and Hasmath 2014). Varying from the previous strategy of primarily relying on tools of coercion and propaganda to manage the economy and society during the pre-reform era, today, the Chinese state has a tendency to "tacitly" provide space for new and hybrid forms of organizations such as GOTTs or UATTs to develop. Three main features are important in the understanding of the corporatist institutional framework under tacit sanctioning: "first, the state creates and maintains the relationship; second, select organizations and groups are granted the privilege to mediate interests on behalf of their constituents to the state; third, these organizations and groups must adhere to the [stated and hidden] rules and regulations established by the state" (Hsu and Hasmath 2014: 522).

Effectively, a think tank such as a GOTT or UATT are tacitly sanctioned to operate by the state, on behalf of scholarly communities specialized in certain areas. Foreign affairs GOTTs or UATTs act akin to epistemic communities (see Hasmath and Hsu 2014; Hsu and Hasmath 2017; Zhao 2006), whereby they are a network of professionals with recognized expertise and competence in the foreign policy domain, and an authoritative claim to policy-relevant knowledge within this field. The experience and knowledge used by them to develop policy may become important resources to the elite policy-makers in addressing a range of foreign policy issues.

Furthermore, think tanks operate in a relatively singular institutional environment, whereby competing ideas do not lead to real contestation or much variation in institutional designs. To wit, GOTTs are similar to GONGOs in the sense that they are created, sponsored, and supervised by bureaucratic organizations. In fact, the organizational classification of GONGOs and GOTTs are quite similar since they are both considered public service units (*shi ye dan wei*). The 1988 Interim Regulations on the Management of Public Sector Units (PSUs) defines this entity as "organizations with the provision of social services in nature, established by the governmental agencies or other organizations with state-owned assets, working for the public good in activities such as education, science and technology, culture and health" (OECD 2005: 9). Unlike most domains that GONGOs concentrate, from poverty alleviation to the improvement of women's rights, foreign policy is confidential and is seen as part of the core national interest that can potentially threaten the CCP's regime stability. While those GONGOs primarily focusing on economic or social issues might be reorganized or licensed by the state, and enjoy certain levels of independence and autonomy, foreign affairs-oriented GOTTs are generally created by the state and operate within the state structure. Nevertheless, think tanks may have a liberating potential through their consultative channels which would lead to theoretical expectations of policy position divergence.

Liberalization of Decision-Making?

The emergence and growth of foreign affairs think tanks can be attributed to the collectivized decision-making characterized by China's top elite leadership. At the same time, newly opened

consultative channels at lower levels have decentralized the policy network and enriched the diversity of opinions reaching the top level. The two concurrent developments were noted by Lampton (2001: 4) with great clarity: "Previously peripheral actors were becoming more numerous and proximate to the decision-making arenas, particularly with respect to routinized non-crisis categories of policy choices." Some individuals and organizations may not formally become involved in the foreign policymaking process, but they are given broader, tacitly-sanctioned space to act. Particularly, with the trend towards professionalization, the Chinese elite and sub-elite foreign policymakers tend to have a higher level of specialized knowledge. It is not clear from Lampton's explanation whether the proliferation of expert-based bureaucracies lied more in the decision-makers as such, or in co-opting the intellectual community akin to corporatist tenets. Nonetheless, this observation leads to the expectation that more variance in policy positions will exist on topics that are not deemed to be core interests by the CCP.

Professionalization and specialization in foreign policy consultation was also emphasized by Shambaugh (1987). Although he did not designate research institutes as GOTTs or UATTs in the early years of market reforms – when some GOTTs or UATTs were still under establishment or reestablishment in the wake of the Cultural Revolution – Shambaugh foresaw that under better-coordination, the national security research bureaucracy would become increasingly specialized and competent in knowledge generation. Thirty years later, Chinese elite leaders' need for better intelligence about international affairs has resulted in foreign affairs-oriented think tanks becoming more relevant and necessary than ever before. Today, think tanks are given better access to collect confidential documents and to report their research results directly through "special channels" to the top political elites.

There are, of course, cautionary tales about overestimating think tanks' influence in the opaque and often ideologically driven Xi Jinping administration (see Eaton and Hasmath 2017; MacDonald and Hasmath 2018). In an environment of increasing re-centralization and reduced "risk-appetite" by policymakers in Xi's "new era" (see Hasmath et al. 2018; Lewis et al. 2017; Teets et al. 2017), we must be mindful that the influence of policy entrepreneurs is tacitly-sanctioned by the state, and can be removed at the state's bequest.

Influencing the Top Policy Elites

While the above discussion outlines the possibility to observe both divergence and convergence in think tanks' policy positions, the remaining question is the conditions under which these organizations can influence the party's top leadership. Informal and non-traditional channels play a crucial role in Chinese foreign affairs-oriented think tanks' engagement in decision-making processes. Particularly, most think tanks enjoy a privileged channel of influence in relation to high-level leadership through the establishment of personal connections. They include not only direct individual influence, such as familial relations, school ties, or government service in the same geographic area (Morrison 2012), but also seniority privileges and favours at higher levels (Bondiguel and Kellner 2010). This has the effect of compartmentalizing think tank analyses to their direct network in government, and potentially impedes horizontal organizational communication from other sources of policy advice. Sun (2004) suggests a more optimistic analysis, whereby network relations can directly facilitate the flow of valuable information upwards, as they often enable researchers to circumvent complicated bureaucratic procedures. Glaser and Saunders (2002) also saw ambivalence concerning policy research resulting from the informal consultations. However, their argument that institutional distance from the regular

Party-state bureaucracy could be essential in promoting innovation suggests decision-makers' lack of trust at the institutional level would strengthen the role played by personal patronage.

While network capital is an important aspect for influence in China's foreign affairs policymaking apparatus, we should not underestimate think tanks' "positional influence" as well – which is one of the underlying themes of our analysis and corresponds with our organizational classifications. As noted by Glaser and Saunders (2002), since positional influence stemmed from a research institute's formal position within the government, it has a tendency to endure despite fluctuations in personnel. CIIS and CICIR, affiliated with the MFA and the MSS respectively, have regular channels to policymakers, access to classified information and institutional relationships. This could explain why they could appear to be more influential than those lacking these assets. Similarly, the bureaucratic position of think tanks can be extremely important in its capacity to influence. For instance, although CIIS is well-recognized and influential, its influence was to a large extent limited by the MFA's marginal position compared with the Foreign Affairs Small Leading Group of the CCP Central Committee and the Politburo – the two organs deemed to have the final say.

There are other factors, which in sum, suggest we should not understate the significance of think tanks' bureaucratic network. First, bureaucracy brings about social recognition. Second, a government budget guarantees the stable financial support of a GOTT or UATT. Third, sponsorship with bureaucratic organs provides more direct communication channels. Finally, think tanks position in the bureaucratic network determines how authoritative its research outputs are. As Zhu (2009) argues, an organization – such as a GOTT or UATT – can be seen as legitimate and trustworthy given their bureaucratic positioning.

Nonetheless, there are some institutional supplements to the privileged channels of individual and bureaucratic network, such as the internal reports (*nei can*) and the evaluation system (*pi shi*), where senior officials and leaders rate the value of a given report sent by the lower levels. Varying from their Western counterparts, the primary means by which Chinese foreign affairs think tanks export research outcomes are generally through writing *nei can* and publishing articles on their official journals, rather than in producing by-line reports on media. A *nei can* is usually more tailored to officials' policy needs and therefore more likely to draw their attention, especially those generated from specific projects financed by the government. The decision as to which individual or group of individuals the project will be assigned can be rather arbitrary. A high level *nei can* delivered to key figures and the corresponding *pi shi* would be essential elements for the career of a think tank researcher, since they result in enhanced reputation. This correlation may further reinforce the significance of personal connections. Some pathways, such as informal consultations, usually require either a reputation based on previous written reports or a personal relationship with a policymaker (see Xue and Zhu 2009).

Another consideration is the lack of a revolving door amongst think tanks and officials in China that is generally prevalent in Western polities. The revolving door analogy refers to the phenomenon that people with previous or current government experience may currently hold, or have held, a professional position in the non-state sector, where they seek to influence public policy decisions (Center for Responsive Politics, n.d.). The lack of personnel switches between policymaking organs and intellectual institutions has consolidated the peripheral status of think tanks, and made them less likely to function effectively in inner circles. Nevertheless, some have noticed similar arrangements with the *jie diao*, who are "experts lent to the Ministry of Foreign Affairs by GOTTs [who] work in embassies where they will not conduct the typical tasks of diplomats, but rather advise the ambassador on policy matters" (Bondiguel and Kellner 2010:

20). For example, some staff members of CIIS are sent to work at Chinese embassies overseas, and the opportunity to serve in a relatively senior position in the MFA gives these CIIS analysts a direct policy role, along with the chances to strengthen personal contacts.

Chinese foreign affairs think tanks' lack of political stance differentiation has drawn considerable attention. Think tanks in China still operate with distinctly Chinese paradigms and stubbornly cling to realist, state-centric and sovereign-based analysis. This is due, in part, to Sun's (2004) conclusion that, think tanks are limited to serve as policy advisors internally and policy propagandist externally, while failing to fully fulfil their potential in connecting and educating the public, popularizing foreign policy, and facilitating public understanding. It is thus a relatively moot exercise to divide think tanks along the ideological spectrum in China, despite some sharp conflicting voices.

METHODOLOGICAL APPROACH

The above discussion makes clear that the literature contains differing expectations for the extent to which China's foreign affairs think tanks exhibit variance in policy positions. In the case of estimating the influence of think tanks generally, Abelson (2014: 142) points out that "isolating the impact that think-tanks have had at different stages of the policy cycle remains a formidable undertaking". He suggests that the use of interviews and case studies with key participants in the policymaking process and the examination of relevant archives might help shed light on this question. Indeed, existing research on think tanks in China often adopts an interview based approach, as well as case studies (see for example, Abb 2015; Shambaugh 2002). Given the highly opaque nature of the foreign policymaking process, however, it is a challenge to know who to interview and what information will be disclosed.

Instead, we choose to employ the tools of statistical text analysis. These tools offer the ability to rigorously and precisely measure the positions of think tanks on several dimensions and to compare changes over time. Further, we are able to test for associations between policy topic content, prevalence, and covariates of interest, such as think tank type, date, and geographic location. Thus, we conduct the first data-driven study of variances in the positions of Chinese foreign affairs think tanks, and consider whether these positions have converged under Xi Jinping.

We collected every policy-related text available on the websites of 10 think tanks who conduct research relevant to the foreign affairs of China from July 2014 through December 2016. These texts are often short opinion pieces released by think tank scholars that provide commentary on current events and political developments. Some pieces are slightly longer essays or policy briefs. The corpus contains 1,875 documents with 16,084 features. Standard text pre-processing criteria were applied to the corpus, including stemming, tokenization, and the removal of punctuation, numbers, and stopwords. The actors in our sample, along with their abbreviations, mean tokens, mean frequency, and government (GOV), government-operated (GOTT) or university-affiliated (UATT) labels are presented in Table 1.

Our analysis proceeds in two steps. First, we explore the topics which exist in the corpus to better understand the policy issues that are discussed, how this varies by think tank and area of expertise, whether topics are correlated, and how similar think tanks' positions are to each other. Once this is established, it is then possible to assess how these dynamics change over time, such as the extent to which think tanks are responsive to current events and whether think tanks display increased convergence in their expressed policy positions under the Xi administration.

Table 1: Corpus Summary Statistics

<i>Name</i>	<i>Org. Code</i>	<i>Think Tank Type</i>	<i>Tokens (Mean)</i>	<i>Types (Means)</i>
Institute of American Studies, Chinese Academy of Social Sciences	IAS	GOV	4246	914
Institute of World Economics and Politics, Chinese Academy of Social Sciences	IWEP	GOV	894	299
Development Research Center of the State Council	DRC	GOV	803	291
China Center for Contemporary World Studies	CCCWS	GOTT	2359	716
Charhar Institute ³	CHI	GOTT	803	350
China Institutes for Contemporary International Relations	CICIR	GOTT	1590	535
China Institute of International Studies	CIIS	GOTT	2789	797
Shanghai Institutes for International Studies	SIIS	GOTT	1100	445
Center for American Studies, Fudan University	FD.CAS	UATT	1324	436
School of International Studies, Peking University	BD.SIS	UATT	2015	539

To accomplish this task, we employ structural topic modeling (STM) using the STM package developed for the R statistical computing environment (see Roberts et al. 2014, 2017). The STM is an extension of the popular latent Dirichlet allocation (LDA) topic model (Blei 2012). In traditional LDA, topic mixing proportions or observed words are drawn from global priors. In STM, a key innovation is the prevalence component which allows document topic proportions to vary as a function of the matrix of observed document-level covariates, rather than arising from single priors shared by all documents. This implies that we can model the mean vectors as a simple linear model such that the topic prevalence model takes the form of a multivariate normal linear model.

An attractive feature of the STM is that it allows for the modeling of covariates which might affect topic prevalence and content. In our case, we expect prevalence to vary as a function of think tank type (GOV, GOTT, UATT), date (such as discussing a topic when the issue is prevalent in the news), and the organization itself (e.g. the Development Research Center of the State Council is expected to discuss economics more than other think tanks). The model presented below contains prevalence as the outcome variable and think tank type, data, organization, and city as right-hand covariates. Type corresponds to the type of think tank, namely GOTT, GOV, or UATT. Date corresponds to the month-year date of publication estimated with a spline to control for nonlinearities. The organization name controls for think tank-specific differences in language and research area. City is an indicator variable that equals 1 if the think tank is located in Beijing, and 0 otherwise. In our sample, think tanks outside of Beijing are located in Shanghai, except for the Charhar Institute, which is in Hebei Province.

Although there is no correct number of topics, we take advantage of the data-driven approach – the *searchK* function – available through the package and choose the model with the highest held out log-likelihood and a balance of average exclusivity and semantic coherence for K=5 through K=12 topics. As a qualitative check, we use the *selectModel* function to estimate a number of models over each of these topic distributions and found that K=8 topics provides a good trade-off between semantic coherence and exclusivity.

³ Sometimes referred to as Chahar Society.

To assess position convergence over time, we finally extract frequent and exclusive words for each topic in the STM and calculate the cosine similarity over time between think tanks. The intuition is that, if convergence exists under Xi Jinping, then we should see think tanks employ increasingly similar language when discussing the same topic. We first present the topics located by the STM and examine variance in policy positions as a static snapshot. Then, the temporal results are presented and discussed.

EMPIRICAL RESULTS AND DISCUSSION

Policy Topics and Correlations

Table 2 presents the resultant topics, discriminating terms based on frequency (Freq.) and frequency and exclusivity (FREX), and the proportion of the corpus which is devoted to each topic. Labels are qualitatively assigned based on the terms and a reading of the terms in context. The model recovers a relatively coherent range of topics which we would expect to find in a corpus on Chinese foreign policy. These are discussed sequentially.

Topic 1 discusses European politics. Tensions in the region (ukrain-) surface, as well as attention to the United Kingdom which might be a function of the June 2016 European Union referendum vote.

Topic 2 includes terms associated with international development (trade, invest-), as well as regional initiatives, particularly the "One Belt, One Road" project. China's recent attention towards Africa also appears under this topic.

Topic 3 engages with regional politics, evident by terms such as "cooper-," "region," "asia," and "secur-." Terms like "neighbor," "common," and "mutual" appear in this topic and are often present in Chinese diplomatic discourse.

Topic 4 looks at domestic governance and terms surface that relate to civil society and social concerns such as "social," "peopl-," "work," "public," and "rural." Ji Dengkui, a political figure during the Cultural Revolution, surfaces in this topic. Environmental concerns ("carbon," "emiss-") also appear here. Indeed, a qualitative reading of the documents uncovered a surprising amount of domestic attention in the foreign policy texts.

Topic 5 is of notable interest since content relating to sovereignty and territorial disputes constitute a distinct topic. Terms like "reef" and "island," as well as Vietnam – who continues to challenge China's territorial claims in the South China Sea – suggest that this is an issue on par with or exceeding the proportion of the corpus dedicated to an issue like European politics.

Topic 6 engages with US politics and relations, with terms such as "American," "presid-," and "Trump.". Discussions of US relations also appear to be tied to issues regarding Taiwan, evident by terms such as "strait" appearing in this topic.

Topic 7 relates to issues regarding the macroeconomy and economic relations. China's foreign policy appears to be discussed with domestic economic concerns in mind.

Finally, Topic 8 covers issues related to regional and international security. In the case of the former, terms like "Korea," "Japan," and "DPRK," and in the case of the latter, "nuclear," "militari-," and various points of tension in the Middle East. It is interesting to note the consideration of international events through an understanding of regional issues across multiple topics.

Table 2: Identified Topics with Suggested Labels

<i>Topic</i>	<i>Label</i>	<i>Discriminating Terms</i>	<i>Proportion</i>
1	European Politics	<i>Freq:</i> state, unit, countri, polit, world, europ, European <i>FREX:</i> ukrain, german, britain, british, germani, european, cameron	.09
2	Regional/International Development	<i>Freq:</i> trade, countri, econom, invest, cooper, develop, road <i>FREX:</i> african, belt, india, silk, indian, africa, road	.14
3	Regional Politics	<i>Freq:</i> countri, develop, cooper, intern, secur, region, asia <i>FREX:</i> african, belt, india, silk, indian, africa, road	.20
4	Governance/Social Issues	<i>Freq:</i> govern, develop, system, peopl, social, work, public <i>FREX:</i> rural, dengkui, internet, farmer, carbon, emiss, Tanzania	.13
5	Sovereignty/Territorial Disputes	<i>Freq:</i> state, unit, south, relat, sino, issu, countri <i>FREX:</i> philippin, arbitr, reef, vietnam, island, tribun, sino	.12
6	US Politics/Relations	<i>Freq:</i> polit, parti, elect, american, polici, presid, trump <i>FREX:</i> trump, voter, elect, cuba, republican, strait, presidenti	.07
7	Macroeconomy/Economic Relations	<i>Freq:</i> economi, econom, growth, market, rate, global, financi <i>FREX:</i> rate, monetari, hike, growth, debt, currenc, price	.17
8	Regional/International Security	<i>Freq:</i> nuclear, japan, militari, secur, korea, east, iran <i>FREX:</i> iran, saudi, dprk, arabia, nuclear, yemen, missil	.09

With the topics and proportions established, the next step is to descriptively assess how the texts of think tanks are (dis)similar, as well as which topics tend to correlate, i.e. discussed in tandem with each other. This helps to uncover affinities shared between think tanks and topics which might not otherwise be obvious. Although a variety of correlation and distance metrics can be used to calculate similarity between texts, cosine similarity is perhaps the most commonly employed measure in the natural language processing literature. This is represented as:

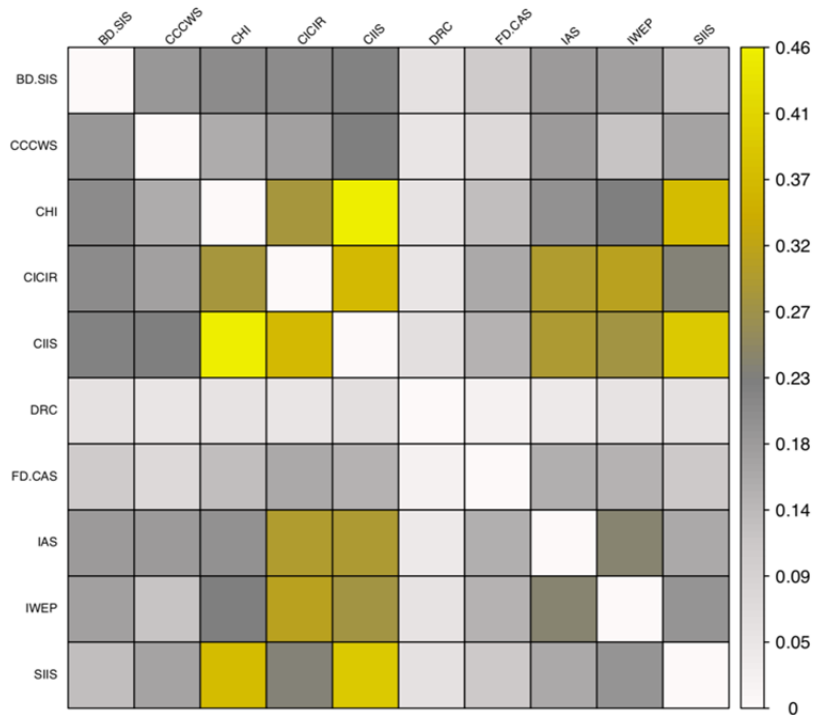
$$s(\mathbf{x}, \mathbf{y}) = \frac{\mathbf{x} \cdot \mathbf{y}}{\|\mathbf{x}\| \cdot \|\mathbf{y}\|}$$

where the similarity between vectors (of terms) \mathbf{x} and \mathbf{y} is the measure of the cosine angle between them and which we bound between $[0,1]$ to work in positive space. This measure is shown to perform well on high-dimensional data, such as text, and is considered to provide a

measure of positional similarity in several applications similar to ours (see Acree et al. 2016). These results are presented in Figure 1.

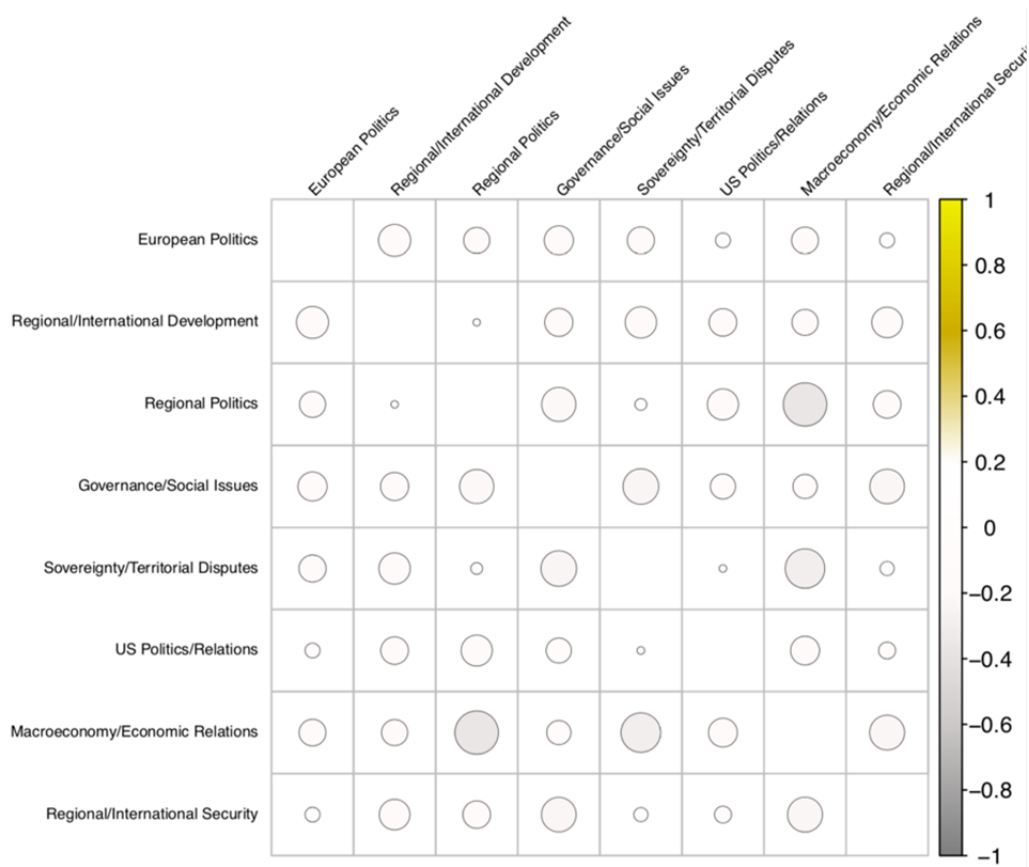
We see in Figure 1, that SIIS, IWEP, CIIS, CICIR, and CHI tend to display higher aggregate levels of text similarity. This is noteworthy because all of these are GOTTs except for IWEP, which is government affiliated via the CASS system. Furthermore, it is noteworthy, that despite both being government affiliated and researching economics issues, the DRC and IWEP display quite low levels of text similarity. This is possibly testament to the DRC’s focus on domestic macro-economy and IWEP’s focus on international political economy. In Figure 2, the largest correlations occur between the Regional Politics and Sovereignty/Territorial Disputes topics, Regional Politics and Macroeconomy topics, and Macroeconomy and Sovereignty topics. It is noteworthy that these are negatively correlated, because from Table 2 we found that these three topics together account for nearly half of the content in the corpus. It is possible that this indicates that the issues are quite important to the central party.

Figure 1: Cosine Similarity Measures Between Think Tanks



Note: Think tank labels are provided in Table 1. Cosine similarity between think tanks applied to term document matrix. Higher cosine similarity indicates that the pair of think tanks produce similar texts.

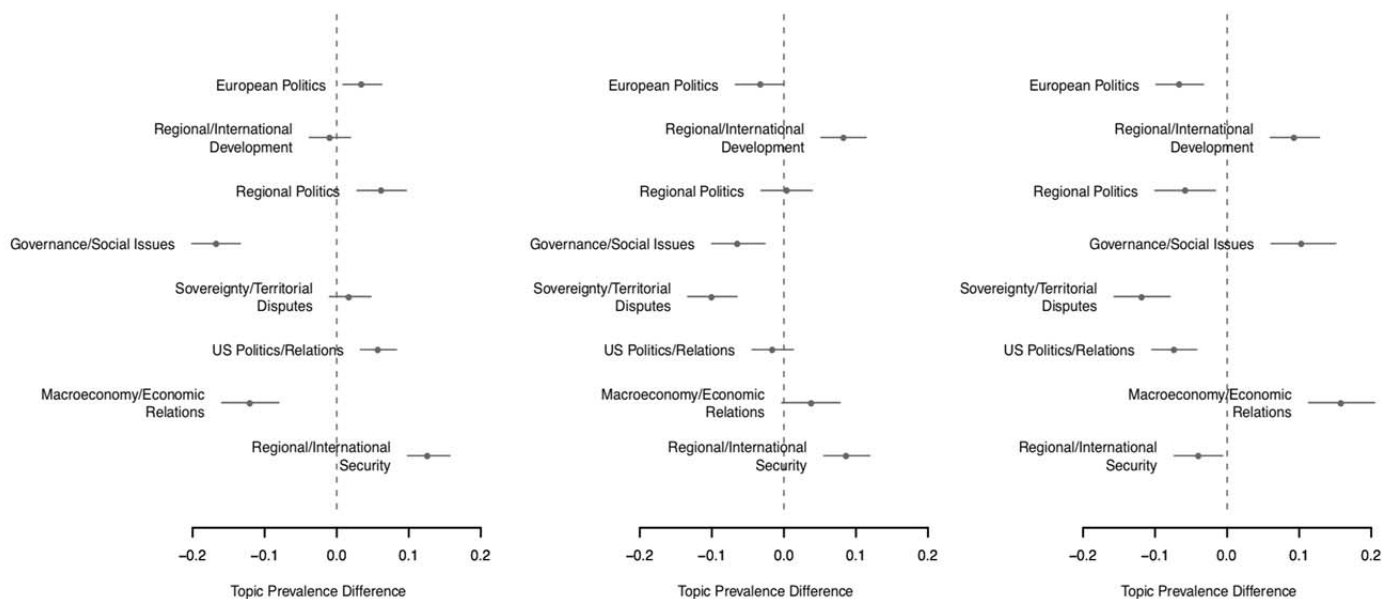
Figure 2: Pearson Correlations between Topics



Note: Pearson correlations between topics in documents. A more positive or negative correlation coefficient indicates that topics tend to be or not to be discussed together.

These descriptive measures are instructive, but it is also necessary to investigate topic prevalence based on institutional type. Figure 3 presents the prevalence of topics based on GOTT vs. GOV vs. UATT labels. It appears that GOTTs discuss and comment on issues related to European politics, regional politics, sovereignty and territorial disputes, US politics and relations, and regional and international security more often than government think tanks in our dataset. In contrast, GOVs tend to produce commentary and analyses on regional and international development and issues related to the macro-economy and economic relations. Interestingly, they also produce documents in which appeals to or reliance on civil and social discourse exists. This indicates that foreign affairs think tanks which are only indirectly affiliated with the government might enjoy greater scope to conduct less-ideologically laden research, or at least research that employs subtler ideological language. It might further be the case that directly government operated research institutes are charged with the analysis of economic issues given the critical role of these issues in generating and maintaining CCP legitimacy through continuous economic growth in China.

Figure 3: Differences in Topic Proportion by Think Tank Type



Note: From left to right, GOTT vs. GOV; GOTT vs. UATT; and GOV vs. UATT.

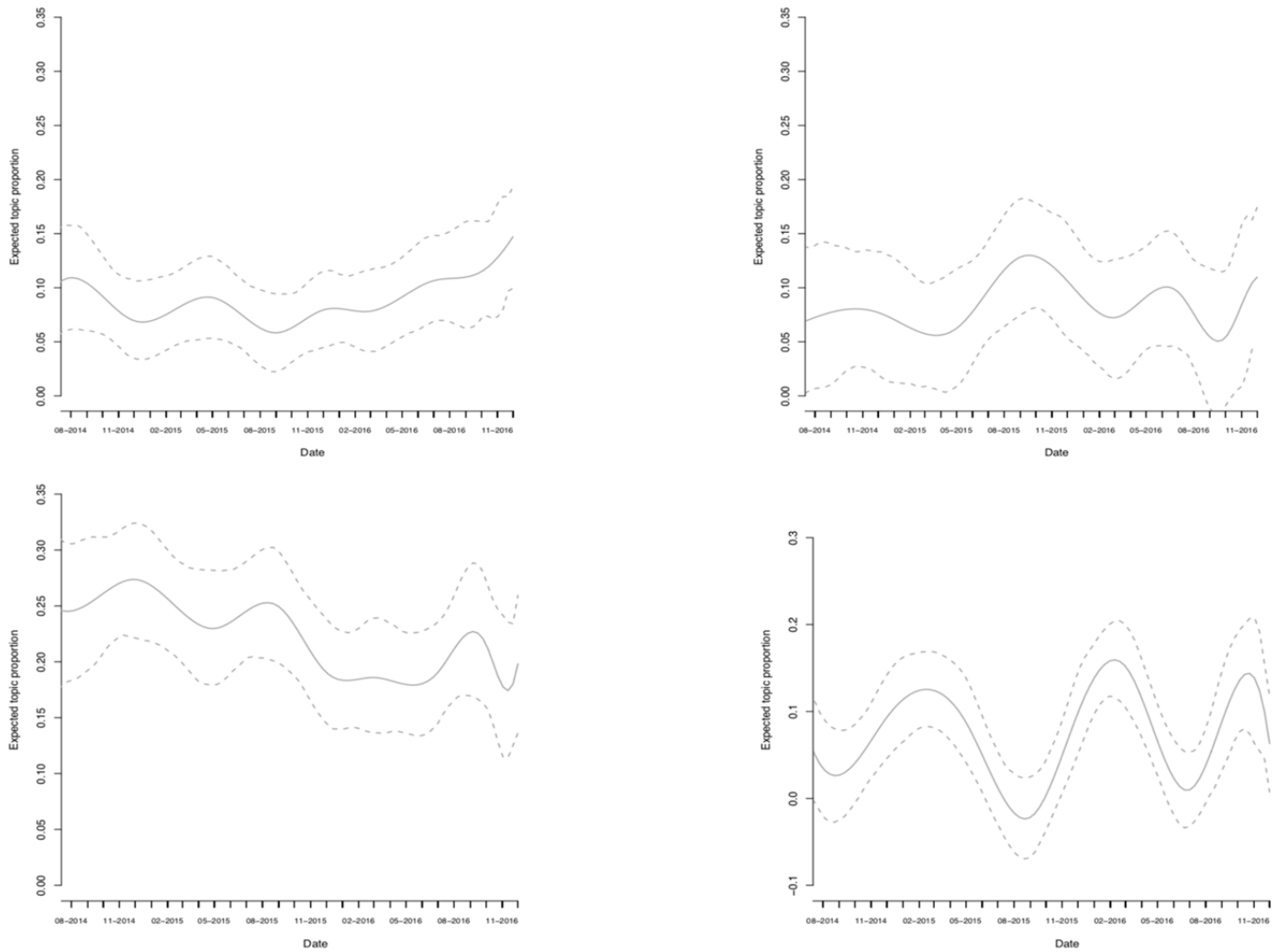
Temporal Changes under Xi Jinping

The above analysis presents the first statistical findings related to the output of think tanks in China which conduct foreign affairs-related research. In order to assess the extent to which positions change over time, and particularly whether evidence exists that positions converge under the Xi administration, time series analysis is required. That is, we need to assess not only that different think tanks talk about different issues, but also how their positions diverge when they are discussing the same topic. First, we consider how topic proportions change over time in the corpus in order to identify the most sensitive and responsive policy issues. Figures 4a and 4b presents changes in expected topic proportions over time for each of the topics in the corpus.

Consider Topic 5, Sovereignty/Territorial Disputes in Figure 4b. Two clear bumps in policy attention occur in September and October of 2015 and July of 2016. Interestingly, the former period was a tense time when Xi Jinping visited the White House, the agenda of which placed China’s activities in the Spratlys as a priority topic for discussion, the US Navy conducted sailing operations close to the artificial islands, and the Hague’s arbitral tribunal ruled that they had jurisdiction over the submissions filed by the Philippines against China related to its nine-dotted line claim. For the latter period, July 2016 was the month of the ruling by the international tribunal in The Hague in the successful case brought by the Philippines against China’s claims in the South China Sea (philippin- and tribun- are both terms which also appear in Table 2 under Topic 5, above). This indicates that the foreign policy research output of think tanks is quite responsive to pertinent events concerning territorial disputes.

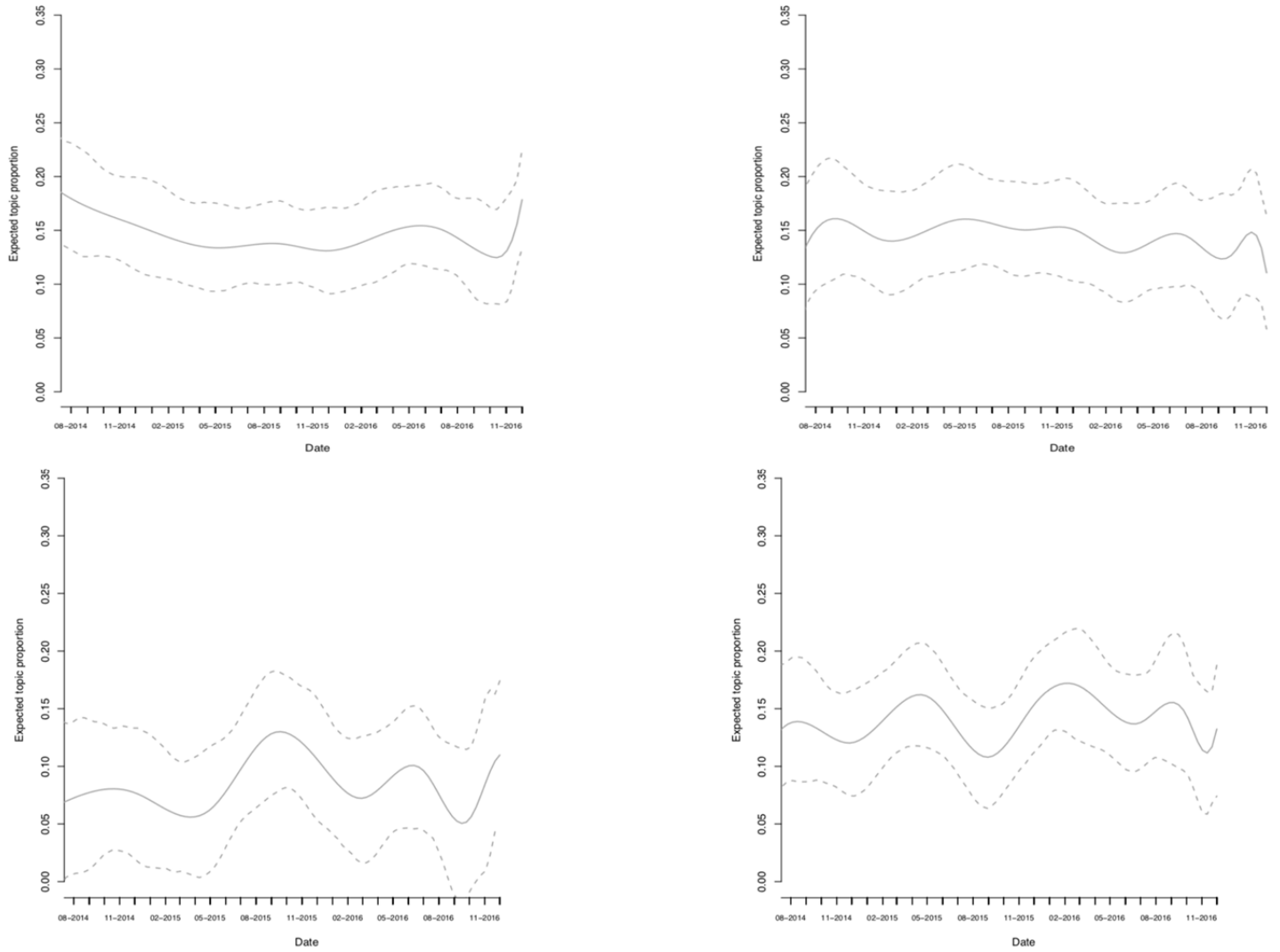
Similarly, we see greater variation in topic proportions for regional politics, governance and social issues, macroeconomic and economic relations issues, and issues in regional and international security. By contrast, relatively consistent attention is devoted to European politics,

Figure 4a: Differences in Topic Proportion over Time



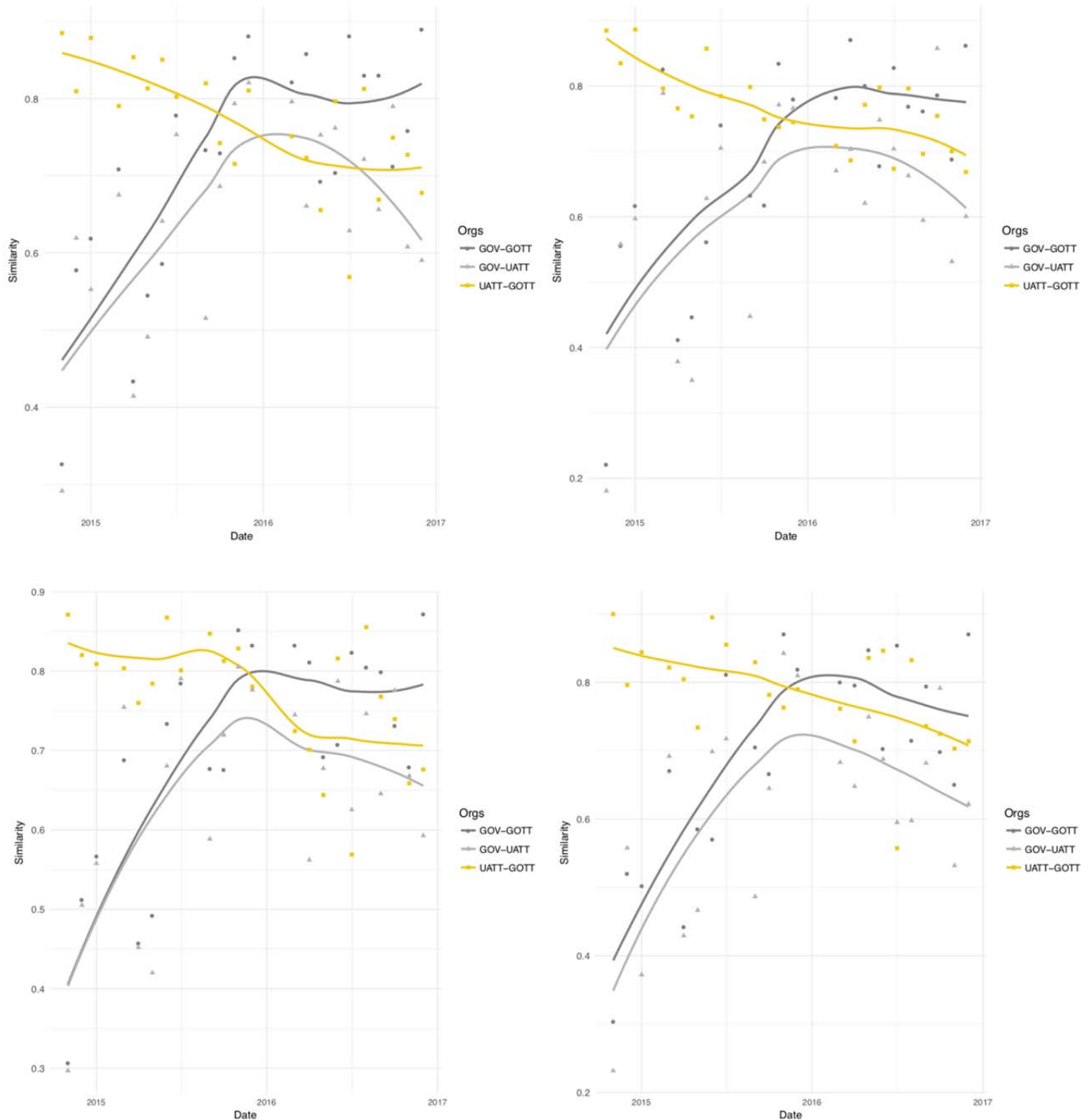
Note: Clockwise from top-left, Topic 1 (European politics), Topic 2 (regional/international development), Topic 3 (regional politics), and Topic 4 (governance/social issues).

Figure 4b: Differences in Topic Proportion over Time



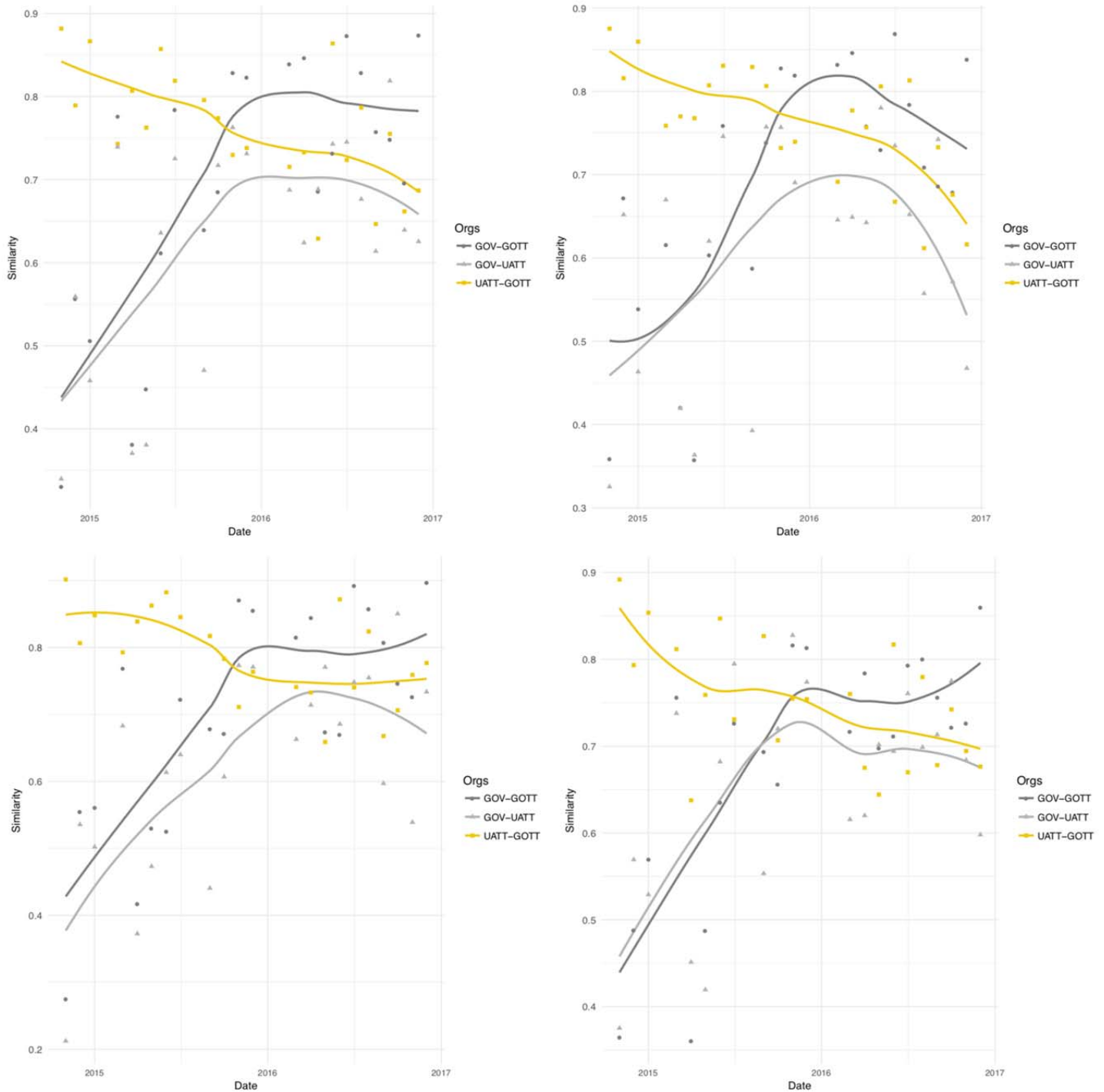
Note: Clockwise from top-left, Topic 5 (sovereignty/territorial disputes), Topic 6 (US politics/relations), Topic 7 (macroeconomy/economic relations), and Topic 8 (regional/international security).

Figure 5a: Position Similarity over Time



Note: Clockwise from top-left, Topic 1 (European politics), Topic 2 (regional/international development), Topic 3 (regional politics), and Topic 4 (governance/social issues). Similarities in expressed positions over time by think tank type with a fitted Loess curve. An increase on the Y-axis indicates an increase in pairwise similarity in positions.

Figure 5b: Position Similarity over Time



Note: Clockwise from top-left, Topic 5 (sovereignty/territorial disputes), Topic 6 (US politics/relations), Topic 7 (macroeconomy/economic relations), and Topic 8 (regional/international security). Similarities in expressed positions over time by think tank type with a fitted Loess curve. An increase on the Y-axis indicates an increase in pairwise similarity in positions.

regional and international development, and US politics and relations. This is interesting because it implies that China's foreign affairs think tanks devote quite consistent attention to certain topics and are less responsive to the events of the day vis-à-vis these topics.

Finally, we present the results of our assessment of potential policy position convergence under the Xi administration. To approach this question in our dataset, we extract the top 300 frequent and exclusive words most probabilistically associated with each topic in the model. Then, we extract these same words from term-document matrices for each think tank grouped by type. This provides vectors of word frequencies employed by different think tank groups that are associated with each topic. The cosine similarity between these vectors is calculated and presented in Figures 5a and 5b. An increase on the Y-axis is associated with an increase in similarity between think tank groups for each of the eight topics. If think tanks face increasing control from the central party, we should observe an increase in similarity over time, and perhaps a convergence towards the positions of the government think tanks.

Interestingly, a consistent trend emerges. On each policy topic, GOV-GOTT and GOV-UATT similarities increase through 2015, and then level out or decrease slightly through 2016. This is broadly consistent with findings of centralization under Xi Jinping. The starkest decreases during this period relate to the European politics and US politics topics, with university affiliated think tanks expressing quite dissimilar positions relative to government think tanks. Surprisingly, UATT-GOTTs consistently decrease in similarity throughout the date range of the corpus. This indicates that think tanks that are not governmental think tanks are indeed carving out unique policy positions relative to each other. This could be because, as discussed earlier, think tanks are in competition for resources and elite attention and therefore must establish unique positions on foreign policy topics. Taken together, these results add nuance to the debate surrounding centralization under the Xi administration from a foreign policy perspective.

IMPLICATIONS AND CONCLUSION

This study considers foreign policy topic convergence and divergence under Xi Jinping by assessing foreign policy topics, position variance, and changes over time. Think tanks exhibited increasing similarity relative to the positions of government think tanks from mid-2014 through 2015, but more divergence is expressed during 2016. University-affiliated think tanks appear to position themselves proximately vis-a-vis government think tanks, but exhibit more independent and varying positions relative to think tanks that are not directly-government operated.

In addition, the policy topics of sovereignty, regional politics, and the Chinese economy account for nearly half of the content of the corpus, and think tanks are most responsive to events that concern sovereignty disputes and domestic governance and social issues. These findings represent novel evidence of divergence on less-critical policy topics and relative conformity on the policy tenants that are considered to be China's core domestic and international developmental strategies.

Moreover, our analysis illustrates that text analytical methods provide a set of tools which can augment our current capacity to analyze Chinese foreign policy. Textual data provides a high-resolution view of policy variation. The structural topic model recovers relatively coherent and reasonable policy content groupings and allows for inspection of policy variance across actor types. The analysis further confirms that a relationship exists between think tank type and policy position similarity as measured by their textual output.

As China's global role in political, economic and military affairs grows, the Chinese government has encouraged a proliferation of think tanks. In fact, Xi Jinping at the Third Plenum in 2013, urged the creation of more think tanks "with Chinese characteristics", and backed with significant capital (>100 million RMB or ~15 million USD) in order to improve decision-making in policy formulation. Two important items should be highlighted in this regard.

While the terminology "with Chinese characteristics" has been used in the past by authorities to defend the authoritarian system, in this instance it should be interpreted as "with overt government influence", or adhering to the party line. More acutely, the underlying goal for Xi Jinping is to have a new wave of think tanks to support his viewpoints and policies; and possibly to temper the influence of think tanks backed by prominent political figures. For instance, Zeng Peiyan (former member of the Politburo of the CCP and Vice-premier of the PRC), Zeng Qinghong (former member of the Politburo Standing Committee – China's highest leadership council, top-ranked member of the Secretariat of the Central Committee, and Vice-President of the PRC) and Jiang Zemin's (President of the PRC) son Jiang Mianheng have either established or were/are patrons of their own think tanks.

An increased number of think tanks should not be equated to the government's relaxation of control over the ideological and intellectual domain, and the political development of civil society. While Western think tanks typically strive for independent and critical analysis, such goals are difficult to achieve in China when think tanks are generally called upon to support policy decisions already finalized or enacted by political elites.

We are thus at a stage in contemporary China where "10,000 horses are all not muted", but neither are "a hundred flowers blossoming and a hundred schools of thoughts contending". The administrative relationship between think tanks and the government is the most important resource to help think tanks exert policy influence. Radical political views are discouraged through regulation, guidelines, financial and material constraints, and the idea of creating think tanks "with Chinese characteristics" inevitably reduces the potential for think tanks to achieve full intellectual independence. It is important to reiterate, once again, that they are organized or (tacitly) sanctioned by the government. Their research agendas are not primarily driven by contemporary policy concerns, but rather by the needs of the Chinese elite political leadership. Chinese think tanks remain nested firmly within a hierarchical, corporatist bureaucratic system "with Chinese characteristics", albeit operating in Xi Jinping's self-professed "new era".

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