China’s Newsmakers: Official Media Coverage and Political Shifts in the Xi Jinping Era

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Abstract
Xi Jinping’s rise to power in late 2012 brought immediate political realignments in China, but the extent of these shifts has remained unclear. In this paper, we evaluate whether the perceived changes associated with Xi Jinping’s ascent – increased personalization of power, centralization of authority, Party dominance and anti-Western sentiment – were reflected in the content of provincial-level official media. As past research makes clear, media in China have strong signalling functions, and media coverage patterns can reveal which actors are up and down in politics. Applying innovations in automated text analysis to nearly two million newspaper articles published between 2011 and 2014, we identify and tabulate the individuals and organizations appearing in official media coverage in order to help characterize political shifts in the early years of Xi Jinping’s leadership. We find substantively mixed and regionally varied trends in the media coverage of political actors, qualifying the prevailing picture of China’s “new normal.” Provincial media coverage reflects increases in the personalization and centralization of political authority, but we find a drop in the media profile of Party organizations and see uneven declines in the media profile of foreign actors. More generally, we highlight marked variation across provinces in coverage trends.

Keywords: media; newspapers; Xi Jinping; text analysis; China

A growing body of research has shown that the function of official media in authoritarian settings like China is to signal political power to citizens and elites as much as to indoctrinate them or shape their underlying belief structures and values.1 Regime elites’ ability to dominate official media coverage implies that they have power over key organizations and information flows and thus signals a strong political grip. Which specific political actors and content appear in

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1 Huang 2015; Shih 2008; Zeng 2016.
official media also matters, because authoritarian regimes are not monolithic. In a context where there are continual power struggles between different factions, bureaucratic interests, and government tiers, publicity in official media can project the authority of the political actors who receive coverage, and can indicate the loyalty or acquiescence of those who directly control media content. Official media are thus both an arena of and a window into elite politics, and which people and organizations receive media coverage offers important clues about who is up and who is down in politics.

Whereas China-watchers have long paid careful attention to which actors appear in the *People’s Daily* and other central media outlets to gauge trends at the top of the political system, provincial official media offer important insights into political developments across the country more broadly. Even with the rise of new media forms, Party-run newspapers in China’s provinces remain an important channel for political communication with both an elite and a mass audience, reaching individuals across geographies, age groups, and socio-economic levels. Because provincial daily newspapers fall under the direct management of provincial Party committees rather than the Central Propaganda Department, their coverage patterns show which actors and topics provincial-level leaders – and not simply officials in the national capital – are inclined or compelled to publicize. If the coverage of central media outlets such as the *People’s Daily* shows which people and policies the Party centre wants to promote, subnational media coverage shows the extent to which central priorities have traction in the provinces. The amount of coverage given to different actors and topics in the provincial media thus sheds light on countrywide political trends.

In this paper, we focus on this power-signalling function of China’s provincial-level official media to address important but unresolved questions about political shifts in the first years of the Xi Jinping era. There has been continued debate about the degree to which and speed with which Xi consolidated and personalized power after taking over top leadership posts in 2012. James Mulvenon writes, “The Xi Jinping era has been marked by a greater degree of personalized command, sometimes veering towards cult of personality, than any leadership period since the death of Mao Zedong.” But others have disputed this view, arguing that personalization of power under Xi has been more limited than it might appear. Observers have also debated the extent of political-administrative recentralization occurring under Xi. Some have perceived a reimposition of central authority at the expense of localities and a stronger assertion of CCP power over the state. Scott Kennedy notes a “radical centralization” of politics.

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2 Qin, Strömberg and Wu 2014.
3 Shih 2008; Zeng 2016.
4 Tsinghua University Research Center on Data and Governance 2015.
5 Wu 1994; Shih 2008.
6 Mulvenon 2015.
7 Miller 2014.
8 Browne 2015.
and David M. Lampton describes how CCP power now penetrates domains previously belonging to the government bureaucracy. Yet this view, too, is disputed by scholars who see greater continuity with the Hu Jintao era. Furthermore, there has been uncertainty about the depth of nativism and anti-Western sentiment in the early Xi era. Scholars point to “anti-Western sentiment, bordering on xenophobia, that has emanated from the highest levels of the Communist Party.” It is unclear, however, whether or to what extent this trend has taken hold across the country more broadly. Many of China’s provinces have globally oriented economies, and their leaders may hope to avoid antagonizing foreign actors.

By analysing the groups of actors that dominate media coverage in China’s provincial-level newspapers, we bring new evidence to such debates about the nature and extent of political shifts under Xi Jinping. Of course, generations of China scholars have carefully examined media coverage patterns and linguistic formulations to assess elite-level political trends in China. Scrutiny of media reports offers key insights into China’s politics, but it is difficult through traditional close reading of texts to gain a comprehensive picture of which actors enjoy media coverage and how this evolves over time. Recent advances in the size and quality of media text datasets and improvements in the sophistication of automated text analysis techniques have made possible a more panoramic view of the media landscape. Although much shallower than close reading in some respects, large-scale quantitative analysis of texts complements close reading by providing a picture of media content in the aggregate.

To determine how the landscape of official media coverage in China changed after a major political transition in 2012, we use innovations in natural language processing and quantitative text analysis. We apply named-entity recognition (NER) methods from computer science to analyse a novel corpus of nearly two million articles from provincial-level Party-run newspapers, thereby forming a more complete picture of the individuals and organizations appearing in the news and their relative dominance of media coverage. A key advantage of NER, relative to other ways of assessing the media coverage of political entities, is that NER makes it possible to identify and tabulate virtually all the mentions of different organizations and individuals appearing in a collection of media texts and not simply those entities the researcher thought to look for in advance. Based on this approach, we are able to calculate a given political entity’s (or set of entities’) share of all named-entity occurrences in the media. This offers a substantively clear and easily comparable metric of different actors’ shares of media attention, allowing us to detect systematic shifts in the media coverage of individuals and organizations before and after Xi Jinping’s rise to power. To our knowledge, this is the first time this technique has been used in the study of Chinese politics.

9 Ibid.; Lampton 2015.
10 Cabestan 2009; Miller 2014.
11 Wong 2014.
12 Grimmer and Stewart 2013; King, Pan and Roberts 2013.
Our analysis confirms that the landscape of media coverage shifted significantly after Xi Jinping’s rise, but it also qualifies the prevailing view of China’s “new normal” by showing that media power trends were substantively mixed and regionally varied. First, we find that Xi Jinping received proportionately greater media coverage than Hu Jintao, which is consistent with perceptions about his personalization of power. As we show, however, it is necessary to qualify perceptions that Li Keqiang 李克强 was marginalized in the media after Xi’s rise. More broadly, there were limits to Xi’s media dominance across China during the first 18 months of his tenure. Looking at changes in the set of organizations that dominate provincial-level news coverage, we find an increased media presence of central Party and government organizations, which is consistent with perceptions of greater political centralization. Surprisingly, however, we do not find evidence that the profiles of Party organizations in provincial media rose. Finally, we find that while there was a drop-off in mentions of Western political organizations and military agencies, which are among the foreign entities appearing most frequently in provincial Party media, the media presence of foreign entities remained stable when taking into account a more diverse array of organizations, including non-Western political entities and foreign companies. More generally, we highlight considerable variation across different provinces in media coverage, which suggests that even under a stronger leader, the centre did not impose uniform control over media or politics in the provinces.

We readily acknowledge that media coverage patterns alone cannot provide a full picture of China’s political power structure or of how this structure is changing. Indeed, a key question we consider is whether or to what extent the actors who command media publicity are the same as those who possess other types of power. Nevertheless, the political shifts we focus on here – personalization of power around Xi Jinping, centralization of authority, expansion of CCP control, and a turn against the West – are of interest because they relate to aspects of politics where power and publicity are closely intertwined.

The paper proceeds as follows. The following section explains the choice of data and methods used in our study, including why we focus on provincial-level Party newspapers. The third section discusses the political signalling functions of official media in authoritarian settings and provides empirical validation that top newsmakers in China’s provincial newspapers are the types of actors one would expect to receive high publicity. The fourth section analyses how media coverage of both individuals and organizations has changed following the rise of Xi Jinping to power. We conclude by reviewing key findings and providing a more nuanced assessment of the political shifts in the early Xi era.

Data and Methods
To determine which political actors command the greatest media coverage in China, and how this set of newsmakers has been changing in the midst of a political transition, we analyse data from a large corpus of provincial-level official daily newspapers using tools from computer science.
In China’s increasingly crowded and competitive media environment, newspapers remain a key channel for disseminating news and political messages. Although a large share of China’s citizens now get their news from television, web news portals and social media, newspapers are widely available in both print and online formats and are widely read. The role newspapers play in covering political affairs is particularly important, and it is not solely a function of readership size. Official newspapers – from the People’s Daily down to Party dailies at the provincial and sub-provincial levels – have long served as authoritative platforms for political communication. While they are not the newspapers with the largest readerships, their political content and compulsory distribution to Party and state institutions help them to reach a politically oriented audience.

Provincial daily newspapers provide an especially useful body of data for addressing the questions we have posed about contemporary political shifts in China. Provincial dailies fall under the control of provincial Party committees and serve both as official mouthpieces and news outlets for provincial authorities. They are similar in terms of their mission and operating arrangements and thus allow for ready comparisons across provinces. As part of a nationwide Party-controlled official media, provincial Party dailies are subject to central-level control. Yet provincial newspapers are under the immediate leadership of provincial Party leaders who have “substantial autonomy” in managing them and use them for their own political purposes. As such, provincial dailies constitute a critical link in China’s official media system, bridging the gap between central party-state and localities. Since their content is directly controlled by provincial authorities and only indirectly determined by central authorities or market forces, provincial Party papers can serve as a bellwether of broad-based political trends. They show us which actors and topics provincial authorities are attempting to publicize, and not simply what Beijing is promoting in the channels it fully controls. And, although Party dailies co-exist with more commercialized newspapers and carry at least some news that is appealing to the broader public, state subsidies and compulsory institutional subscriptions insulate them from full competitive pressures.

Our dataset consists of a new corpus of content from 21 provincial-level, daily Party newspapers. We have data for provinces going as far back as 2006,

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13 According to the nationally representative 2015 China Urban Governance Survey conducted by the Research Center on Data and Governance at Tsinghua University, official newspapers are a main source of domestic news for 17% of the population, and 49% of the population believe that newspapers are the best way for the government to communicate its policies and programmes.

14 Wu 1994; Zhu and Huang 2002. Chen and Shi (2001) and others since have found a strong relationship between newspaper readership and political participation.


16 Shih 2008.

17 Ibid.

18 Hu 2003; Stockmann 2010; 2013; Stockmann and Gallagher 2011.

19 These provincial daily newspapers include the following: Beijing ribao, Chongqing ribao, Fujian ribao, Gansu ribao, Nanfang ribao (Guangdong), Guangxi ribao, Hainan ribao, Heilongjiang ribao, Henan
although data are most uniform across provinces starting in 2011. The analyses in this paper are based on 1,949,409 full-text articles, representing on average 85 articles per day per newspaper. In general, the volume of articles per day is similar across newspapers.20 Our dataset includes the text of the articles, without advertisement or other content, as well as metadata such as the title of the article, the date published, the author’s name, the page number, and URLs of images associated with the article, if any. This newspaper content spans the recent period of political transition, covering the 18 months prior to the November 2012 leadership shift as well as the 18 months thereafter. We divide the dataset into pre-transition and post-transition samples for our main analysis.

**Entity count share**

To address our research questions, it is necessary to: (1) identify the individuals and organizations who command the most publicity in China’s provincial daily newspapers; (2) measure the degree to which these actors dominate newspaper coverage; and (3) determine how coverage patterns change over time. We seek a metric of actors’ media coverage that is meaningful in its own right and also comparable across time and regions. Instead of simply comparing the absolute number of appearances different individuals or organizations make in Party newspapers, we calculate the proportion of all entities’ occurrences in the newspapers during a given time period which these specific individuals or organizations account for. We call this measure of actors’ media profiles their *entity count share*.

We calculate entity count share by identifying and tabulating the number of mentions of each unique individual or organization as a share of the mentions of all unique organizations or individuals:

\[
\text{Entity Count Share}_i = \frac{x_i}{\sum_i^n X_i}
\]

where \(x_i\) is the number of times a particular entity \(i\) appears in the text, and entity count share \(i\) is the number of times that the entity appears in the text divided by the number of times all \(X_i\) entities from \(i = 1\) to \(n\) appear in the text. For example, if organization \(i\) appears 20 times in 10 newspaper articles, and it is one of 25 organizations that appear a total of 100 times in these 10 newspaper articles, entity count share \(i\) is 20/100, or 0.2.

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20 See the Supplemental Appendix, available at: http://jenpan.com/jen_pan/newsmakers_cqy_appendix.pdf, for information on the daily volume of articles by provincial newspaper over time. For provinces where we have little data, e.g. Qinghai, the province is excluded from analyses that entail provincial comparisons.
This approach to measuring media prominence has two important advantages. First, entity count share provides a contextualized measure of how high a media profile different individuals or organizations have. It tells us how large a piece of overall newspaper coverage a given individual or organization captures. This metric is meaningful in its own right and allows for direct comparisons across different time periods and geographic units. Second, entity count share lets the data speak for themselves; it does not rely on prior knowledge or judgements as to which list of entities should be used for content analyses and which should be left out. It thus provides a more comprehensive picture of media dominance than one could obtain by comparing the number of search hits for different entities, or the share of all articles in which a particular entity appears. While entity count share can be used for individual entities, it can also be used to assess the media presence of different sets of entities. Below, we examine changes in the collective entity count share of different kinds of political organizations.

Natural language processing

The challenge of calculating entity count share is that it is necessary to identify all the different entities appearing in a given media source and not simply the entities the researcher has thought to search for in advance. While this would be extremely difficult and time consuming using conventional methods, advances in automated text analysis methods, and particularly in segmentation and NER techniques for Chinese-language texts using conditional random field (CRF) sequence models, have made it possible to conduct more open-ended and comprehensive analysis of media content.21 Named-entity recognition – which automatically detects the individuals and organizations that appear in a text rather than searching for a pre-determined list of terms – provides a powerful tool with which to identify and record media occurrences of different political entities.

To determine the total number of times different entities appear in media content, we first segment Chinese text and then detect named entities from among the segmented words.22 Since NER evaluates whether or not words should be labelled as specific types of entities, word segmentation is an essential first step. For segmentation, each character is assigned one of two labels, denoting a character at the beginning of a word or a character that is the continuation of a word. Following both Chang, Galley and Manning and Tseng et al., we conduct segmentation using a CRF sequence model that uses linguistic features, morphological and character reduplication features, and lexicon features to delineate the boundaries between words.23

22 At root, both word segmentation and named entity recognition are natural language processing tasks that involve the assignment of labels. Chinese words can be composed of single or multiple characters, but there are no white spaces to delineate boundaries between words.
Once text is segmented, we embark on the task of NER using the CRF sequence model described by Finkel, Grenager and Manning to label text by estimating the probability of labels given to entire sequences of words. This model is based on a manually constructed training set of newspaper data where every word has been hand-labelled as a particular type of entity, for example a person or organization, or denoted as not being an entity.

We check the performance of our segmentation and named-entity recognition algorithm by comparing the count of occurrences of individuals found by NER against the number of occurrences detected through string searches in unsegmented text. Looking at a sample of central committee members including all members of the 17th and 18th Party Congress Politburo, we find that NER recovers 93 per cent of names found through string search. This gives us confidence that our algorithms are working effectively, especially since string searches can overestimate the occurrences of individuals.

After words are labelled as organizations or persons in the text, we tabulate the occurrences of all organizations and persons. We then calculate the number of occurrences of each unique entity by article, by date, by newspaper, and across all articles. Using this raw data on the occurrences of different entities, we can calculate entity count share – the measure of media coverage described above – for each given organization or individual by dividing the number of mentions of a given entity by the total number of entity occurrences for all detected entities.

The Political Signalling Functions of Official Media

Powerful actors receive media coverage both because they are intrinsically important and because they can use their power to influence media content. Media coverage can function as a political signal in at least two ways. For elite actors, securing media publicity is a way to project authority. Meanwhile, for those in control of media, providing media coverage to particular actors is a way to express political loyalty and support. These political signalling functions

24 Finkel, Grenager and Manning 2005.
25 For example, if a similar approach were being applied to the English-language sentence, “John went to the Naval Academy,” “John” would be labelled as a person, “Naval Academy” would be labelled as an organization, and the other words, “went,” “to” and “the,” would be labelled as non-entities.
26 Whereas surnames such as Li and Liu are very common, the surname Xi is rare, and it is even rarer to find someone with the surname Xi and the given name Jinping. Together, the rarity of the name of China’s paramount leader poses problems for Chinese word segmentation, and subsequently for the named-entity recognition method we use, which was trained on newspaper data from prior to Xi’s rise to power. Using “ ” to denote separation between words, Xi Jinping is sometimes incorrectly segmented as 习近平, and other times as 习近平. When the segmentation is incorrect, this set of characters is not labelled as a person entity. Even when segmentation is correct, the characters 习近平 are sometimes not correctly labelled as a person. Because of the uniqueness of Xi’s name and Xi’s importance to our analysis, all results pertaining to Xi Jinping are bolstered with string search results for his name. Given the rarity of this string of characters, we are not worried that this will lead to over estimation, and the incremental increase in Xi’s entity count is added to the overall entity count generated through NER.
27 Ban et al. forthcoming; Hopmann, de Vreese and Albæk 2011; Roshco 1975.
of the media are especially pronounced in authoritarian systems such as China, where regime elites have direct control over media content and routinely manipulate it for political ends. In these systems, which individuals, organizations and topics receive coverage in newspapers and on television is not just a passive reflection of their political power; it is itself an assertion of their authority.

While media control helps the party-state to project its authority over society, the ability to dominate media coverage is also important for specific elite actors as they vie for power. As Haifeng Huang notes, the regime signals its political hegemony over society by showing that it can disseminate propaganda of its choosing through media outlets. But there are political conflicts within the party-state, as different leaders or political interest groups compete, and the signalling power of media coverage is also important in the midst of such struggles. For instance, scholars have noted how provincial leaders manipulate coverage of ideological campaigns in the official papers they oversee to show their loyalties to different leaders or factions.

Perhaps the clearest, most powerful political signal conveyed by official media is which actors receive pride of place. Qin, Strömberg and Wu note that a key function of Party-controlled newspapers is the positive publicity they give to political leaders and their achievements. These authors note how "newspapers routinely cover top CCP leaders’ policy directives, visits and works. News content is highly positive, for example covering the achievements of individual factories, counties or persons.” They find that almost a quarter of articles in official Party daily newspapers mention top political leaders. The emphasis placed on particular individuals and organizations in political propaganda underscores the importance of media presence in projecting different political actors’ authority and legitimacy.

The signalling functions of media are especially salient at times of political transition or uncertainty. During such moments, it is not entirely clear who is in charge and how firm their control is. As different elite actors jockey for influence, media publicity is crucial for demonstrating strength relative to one’s competitors. Meanwhile, those in charge of media outlets must decide, based on their own preferences and the external political pressures they face, which individuals, organizations and topics to feature most prominently. Which specific actors win media coverage thus gives a sense of which actors have successfully appealed to, or gained control over, the political apparatus more broadly.

China’s 2012 transition was just such a period of competition and uncertainty. Since Deng Xiaoping left the political stage, two fully fledged leadership transitions have occurred in China. While China is widely regarded as a relatively institutionalized and stable authoritarian regime, many observers saw the 2012

29 Huang 2015.
31 Qin, Strömberg and Wu 2014.
32 Ibid., 10.
transition as a watershed moment. Marked by political scandal, the recent transition appeared “nasty and brutish,” involving high-level struggle and instability, and it initiated a new phase in Chinese politics. Notwithstanding Xi Jinping’s apparent progress in consolidating power in Beijing, it was unclear initially how effectively his leadership was controlling politics and political discourse across the country more broadly. As noted above, one helpful way to assess the nature, extent and uniformity of political shifts in the early years of the Xi era is by looking at how the set of individuals and organizations dominating provincial media coverage changed after 2012.

Top newsmakers

Before looking at how media coverage patterns changed following the 2012 leadership transition, we seek to validate empirically our premise that media coverage signals political authority – that the actors with the highest profiles in official media are the types one would expect to find portrayed in a positive and authoritative light. In this section, we look at which individuals receive the most coverage in China’s provincial Party newspapers, drawing on the full corpus of text. To identify the top newsmakers, we measure which actors dominate coverage in the 36 months between May 2011 and May 2014, a period for which we have relatively complete data for the 21 provincial Party newspapers in our sample. This period straddles China’s November 2012 leadership transition, covering the final 18 months of the Hu–Wen leadership and the first 18 months of the new Xi–Li leadership.

We expect to see a strong association between media coverage and political authority, although we do not assume that all actors with high coverage have political power, or vice versa. First, we expect high volumes of coverage for top national and provincial politicians, and especially for incoming leaders Xi and Li. Both Xi and Li, unlike Hu and Wen, hold high-level posts throughout the full 36-month period. Moreover, as incoming leaders, they face a particular imperative to raise their public profiles and project political authority. Apart from China’s top leaders, we expect other high-ranking political figures, such as other Politburo Standing Committee members, to receive high shares of coverage. And, given the premise that official media coverage consists largely of positive publicity for regime-affiliated actors, we expect other iconic public figures with whom the Party links itself to appear frequently. By contrast, we expect to see less frequent mention of actors who wield less domestic political power or who are politically unsavoury from the standpoint of the regime, even if they are otherwise important public figures.

We find that the top individual newsmakers are indeed the kinds of actors one would expect to see presented as politically authoritative and appealing. In our
data from May 2011 to May 2014, we identify 606,109 unique individuals, who appear a total of 6,627,447 times.\textsuperscript{34} Table 1 shows the individuals who are mentioned most often in provincial Party newspapers between these dates overall, pooling across different newspapers.\textsuperscript{35} In accordance with our expectations, Table 1 reveals that China’s top national leaders – both present and past – dominate newspaper coverage overall. Xi Jinping alone accounts for 2.15 per cent of all 6,627,447 entity appearances in our sample, and Hu Jintao accounts for 1.11 per cent. Also near the top of the list, as one might expect, are premiers Li Keqiang and Wen Jiabao 温家宝, and other contemporary Party leaders. In addition, historical leaders with whom contemporary elites politically identify themselves, such as Mao Zedong 毛泽东, Deng Xiaoping, and Sun Yat-sen 孙中山, also get high-profile coverage. One non-Chinese figure, Vladimir Putin (0.29 per cent), and one non-political figure, tennis star Li Na 李娜 (0.30 per cent), rank among the top newsmakers. These figures’ appearances show the way official media confer political authority on individuals who symbolize strong leadership and nationalistic achievement. Even though Putin is a foreign head of state, Xi Jinping and other Chinese leaders have linked their own images with his, according him the type of positive publicity usually reserved for domestic heroes.\textsuperscript{36} Meanwhile, Li Na’s success in winning a grand slam title in 2011 has been heralded as a symbol of China’s achievement on the world stage, and official media have groomed her as a nationalistic icon.

\textit{Provincial newsmakers}

The power-signalling and positive publicity function of provincial newspapers can also be seen by examining the provincial-level actors who receive the greatest share of media coverage in each province during the 36-month period we analyse. Given that provincial Party committees control the content of these news outlets, one would expect the top provincial leaders to command high levels of coverage in their regions’ newspapers. Table 2 shows the provincial-level actor receiving the most mentions in each provincial Party daily between May 2011 and April 2014. With only one exception, this individual is a top official of that province – the provincial Party secretary or the provincial governor.\textsuperscript{37} The only exception is Guo Mingyi 郭明义 in Liaoning’s provincial daily newspaper. Guo is a philanthropist and former state-owned enterprise official who surprised many by becoming an alternate member of the Communist Party’s Central Committee in 2012.

\textsuperscript{34} The tabulation of appearances includes multiple occurrences in any one news article.
\textsuperscript{35} Isolated surnames have been removed from this list. They cannot be linked to a specific individual without closer reading and appear frequently in media text.
\textsuperscript{37} Note that in provincial-level municipalities such as Beijing and Chongqing, the top government official is called mayor instead of governor.
Following his rise to national political prominence, Guo was portrayed as a model citizen.\(^{38}\)

We also examine the top provincial organizations for each province. Without exception, the provincial-level organization that receives the greatest media coverage in provincial newspapers is the provincial Party committee (in 17 provinces) or the provincial government (in four provinces).

In short, the set of top newsmakers seen in provincial newspapers is consistent with our understanding of how media power works in China. High levels of media coverage either reflect the power of, or actively bestow authority upon, key public figures. The actors with the highest media profiles include those who already possess considerable power, like top national and provincial political leaders. They also include those figures, like Putin and Li Na, whom the regime has elevated to prominence and portrayed in a positive light. Notably, these top newsmakers do not include international political figures with a less desirable political valence, such as US president Barack Obama, or widely popular celebrities like Fan Bingbing 范冰冰 or Jay Chou 周杰伦. These findings therefore suggest that official media coverage patterns are a useful way of discerning which political actors have power over or political appeal for provincial-level authorities in China. This, in turn, serves as the premise for our main analysis below, which explores media coverage trends to help characterize the political shifts underway after Xi Jinping’s rise to power.

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xi Jinping</td>
<td>Government/Party</td>
<td>General secretary</td>
</tr>
<tr>
<td>Hu Jintao</td>
<td>Government/Party</td>
<td>General secretary</td>
</tr>
<tr>
<td>Mao Zedong</td>
<td>Historical</td>
<td>Paramount leader</td>
</tr>
<tr>
<td>Li Keqiang</td>
<td>Government/Party</td>
<td>Premier</td>
</tr>
<tr>
<td>Wen Jiabao</td>
<td>Government/Party</td>
<td>Premier</td>
</tr>
<tr>
<td>Deng Xiaoping</td>
<td>Historical</td>
<td>Paramount leader</td>
</tr>
<tr>
<td>Li Na</td>
<td>Athlete</td>
<td>Tennis star</td>
</tr>
<tr>
<td>Putin</td>
<td>Foreign</td>
<td>Russian prime minister, president</td>
</tr>
<tr>
<td>Liu Yunshan</td>
<td>Government/Party</td>
<td>Politburo Standing Committee</td>
</tr>
<tr>
<td>Sun Yat-sen</td>
<td>Historical</td>
<td>Founder of Republic of China</td>
</tr>
<tr>
<td>Zhang Dejiang</td>
<td>Government/Party</td>
<td>Politburo Standing Committee</td>
</tr>
<tr>
<td>Li Changchun</td>
<td>Government/Party</td>
<td>Politburo Standing Committee</td>
</tr>
</tbody>
</table>

38 The provincial-level actor that follows Guo closely in media coverage is Chen Zhengguo 陈政高, Liaoning’s governor from 2009–2014.
In this section, we examine media coverage trends before and after the 2012 power transition, assessing changes in the personalization of media power and changes in the types of organizations dominating coverage, as well as the degree of uniformity across provinces. While our analysis supports the idea that political power has grown more concentrated under Xi Jinping, it also shows that trends in media coverage between 2012 and 2014 were less clear-cut or uniform than perceptions of “radical centralization” might suggest.

### Personalization of power

Unlike Hu Jintao, who spent the first years of his tenure shoring up power, many observers perceived Xi Jinping as wielding substantial power from the moment he entered office. While Hu was confined to the role of “first among equals,” Xi was

#### Table 2: Top Provincial Newsmakers, May 2011–May 2014

<table>
<thead>
<tr>
<th>Province</th>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chongqing</td>
<td>Huang Qifan</td>
<td>Chongqing mayor (2010–2016)</td>
</tr>
<tr>
<td>Fujian</td>
<td>Su Shulin</td>
<td>Fujian governor (2011–2015)</td>
</tr>
<tr>
<td>Gansu</td>
<td>Liu Weiping</td>
<td>Gansu governor (2010–2016)</td>
</tr>
<tr>
<td>Guangdong</td>
<td>Zhu Xiaodan</td>
<td>Guangdong governor (2011–2016)</td>
</tr>
<tr>
<td>Hubei</td>
<td>Li Hongzhong</td>
<td>Hubei Party sec (2010–2016)</td>
</tr>
<tr>
<td>Liaoning</td>
<td>Guo Mingyi</td>
<td>Philanthropist from Liaoning</td>
</tr>
<tr>
<td>Qinghai</td>
<td>Hao Peng</td>
<td>Qinghai governor (2013–2016)</td>
</tr>
<tr>
<td>Tibet</td>
<td>Wu Yingjie</td>
<td>Tibet deputy Party sec (2011–2016)</td>
</tr>
</tbody>
</table>
almost immediately perceived as having gone beyond formal equality. Several analysts, indeed, saw Xi as quickly consolidating his power and building a cult of personality. For some observers, one symptom of this trend was the apparent way Xi “upstaged” China’s premier, Li Keqiang, by elbowing Li out of policymaking roles historically associated with the premier’s office, or by deliberately eclipsing Li in China’s official media so as to signal his own preeminence. However, other observers were less persuaded by the idea of radical personalization of power under Xi, and saw greater continuity with Hu-era elite politics.

We evaluate Xi Jinping’s media dominance by comparing coverage of Xi against that of Hu, and by comparing the relative media coverage of Xi vis-à-vis his peers in the Politburo Standing Committee to that of Hu vis-à-vis his peers. We find that Xi’s entity count share exceeds Hu’s, but it does not appear that Xi achieved overwhelming media dominance across China during the first 18 months of his tenure. And while Xi’s media profile was higher relative to that of premier Li than Hu’s profile was relative to that of former premier Wen Jiabao, Li’s entity count share is similar to Wen’s entity count share.

First, we evaluate the perception of Xi Jinping’s media dominance by comparing coverage of Xi against that of his predecessor Hu Jintao, and by comparing the relative coverage of Xi against his peers to the coverage of Hu against his peers. The left panel of Figure 1 shows the number of times Hu Jintao and Xi Jinping are mentioned in all provincial newspapers in our dataset. Based on this figure, there appears to be a clear trend of increasing media dominance by Xi Jinping after the 18th Party Congress as compared to Hu Jintao before November 2012. Indeed, the peak volume of Xi Jinping’s media appearances is almost double the peak volume of Hu Jintao’s appearances.

The right panel of Figure 1 shows entity count share – the number of times Hu Jintao and Xi Jinping are mentioned as a proportion of all mentions of all individuals in provincial newspapers. Comparison using entity count share shows that Xi’s media presence is proportionately higher than Hu’s, but the difference is not as dramatic as what one finds using the raw count of appearances. This divergence between count and count share occurs when an increase in mentions of one individual coincides with increases in mentions of individuals across the
board. After the 18th Party Congress, as a new cohort of leaders entered office at all levels of power in China, individuals in general were mentioned with greater frequency in provincial Party media. As a result, the absolute number of occurrences for many actors may have increased, but this does not mean they necessarily dominated coverage in relative terms.

The difference between count and entity count share is more stark when we examine trends in individual newspapers. The left panel of Figure 2 shows the absolute number of times Hu Jintao and Xi Jinping are mentioned in Henan provincial newspapers over a seven-year period, and the right panel of Figure 2 shows the share of mentions received by Hu Jintao and Xi Jinping during the same period. While the absolute number of times Xi Jinping is mentioned exceeds

Figure 1: Raw Entity Count and Entity Count Share for Hu (Left) and Xi (Right), All Newspapers

Figure 2: Raw Entity Count and Entity Count Share for Hu (Left) and Xi (Right), Henan ribao
the absolute number of times Hu is mentioned, Xi’s entity count share is not higher after his rise than Hu’s entity county share prior to November 2012. The Supplemental Appendix to this paper, available online,\textsuperscript{44} compares absolute counts and entity count share for Xi and Hu across all provinces in our dataset.\textsuperscript{45}

Next, we compare the relative entity count shares of Hu Jintao and his premier, Wen Jiabao (we call this measure “entity count ratio”), with the relative entity count shares of Xi Jinping and his premier, Li Keqiang. The left panel of Figure 3 shows the entity count ratio of Hu Jintao vis-à-vis Wen Jiabao prior to November 2012 with a dotted black line, and the entity count ratio of Xi Jinping vis-à-vis Li Keqiang after November 2012 with a solid line. This figure shows that Xi Jinping is covered more than five times as much as Li Keqiang, while Hu Jintao is covered less than three times as much as Wen Jiabao. Meanwhile, the right panel of Figure 3 shows the entity count ratio of Hu Jintao vis-à-vis Wen Jiabao against the entity count ratio of Xi Jinping vis-à-vis Li Keqiang (in black circles) for each province, with bootstrapped 95 per cent confidence intervals. In all provinces, the relative coverage of Xi vis-à-vis Li is greater than the relative coverage of Hu vis-à-vis Wen; however, this result is statistically significant in only slightly more than half of the provinces in our data.\textsuperscript{46}

The fact that Xi Jinping has greater media dominance relative to his premier than Hu Jintao owes more to Xi’s high entity count share as compared with Hu’s entity count share than to Li’s low media profile as compared with that

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Hu–Wen and Xi–Li Entity Count Ratios over Time (Left) and by Province (Right)}
\end{figure}

\textsuperscript{44} Available at: http://jenpan.com/jen_pan/newsmakers_cqy_appendix.pdf.
\textsuperscript{45} In some provinces, count and count share do correspond, i.e. Xi Jinping has a higher absolute number of mentions as well as a greater share of mentions than Hu Jintao.
\textsuperscript{46} We also compare the entity count ratio of Hu Jintao vis-à-vis all other members of the 17th Party Congress Politburo Standing Committee to that of Xi Jinping vis-à-vis his standing committee, and we find a similar pattern (see the Supplemental Appendix).
of Wen. Figure 4 disaggregates entity count ratio by showing the entity count share of Hu Jintao and Wen Jiabao in the left panel and the entity count share of Xi Jinping and Li Keqiang in the right panel. The entity count share of Li Keqiang in the 18 months after he becomes premier is actually similar to the entity count share of Wen Jiabao in the last 18 months of Wen’s term as premier. Thus, while it is true that Li has been overshadowed in provincial Party media by Xi, this has more to do with Xi’s over-performance than with Li’s media under-performance.

Taken together, these results suggest that while Xi has a higher profile than his predecessor, provincial newspapers have continued to devote considerable space to other top leaders as well. While the analysis here shows that Xi’s media profile appears high in comparison with that of his predecessor and that of his most important peer, it does not support the conclusion that Xi consolidated overwhelming media dominance across China in the first 18 months of his tenure. Indeed, Xi’s peak entity count share was only slightly higher than that attained by Hu, and Li’s media profile, although far lower than Xi’s profile, was not significantly lower than Wen’s. Also, as is clear from Figure 3, there was considerable variation across different provinces in Xi’s media dominance.

Shifts in media prominence of central-level, Party and foreign organizations

Beyond the question of whether Xi quickly personalized political power, there has been debate over whether China experienced greater political centralization,

47 A potential limitation of this analysis is that we compare media power in the last 18 months of Hu Jintao and Wen Jiabao’s tenure to media power in the first 18 months of Xi Jinping and Li Keqiang’s reign. We do not know how Hu and Wen’s media power has changed over their tenures at the top echelons of power. It is possible that during the early years of the Hu–Wen administration, Hu and Wen had higher or lower entity count shares than they did in their final years.
Party dominance and ethnocentrism following Xi’s rise. Some observers pointed out a reassertion of central power over local governments, and of Party power at the expense of the governmental apparatus. These trends were perhaps best exemplified by the aggressive anti-corruption campaign launched after the 18th Party Congress. Analysts also noted efforts by the central Party to assert greater control over media organizations at all levels following Xi’s rise to power. At the same time, China-watchers described “a turn toward outright xenophobia” under Xi’s rule, with increasingly aggressive nationalism and more criticism and political pressure levelled at Western organizations operating in China. Despite an abundance of anecdotal evidence, however, these political realignments have been hard to document in a systematic fashion.

To help clarify the extent of such trends and whether they unfolded uniformly across the country, we track shifts in the media prominence of Party organizations, central-level organizations and foreign entities in provincial newspapers by analysing the subsets of organizations with the highest entity count share before and after Xi Jinping’s rise to power. Specifically, we calculate changes in the combined entity count shares of Party, central and foreign organizations, respectively, among these sets of top newsmakers. To do so, we focus on the 20 most frequently mentioned organizations from each province and the 100 most frequently mentioned organizations across our full sample during the pre- and post-November 2012 periods. We also analyse random samples of 1,000 organizations for these pre- and post-transition periods. After identifying organizations through named-entity recognition, identified organizations are manually categorized according to straightforward rules as Party organizations, central-level organizations and foreign organizations.

Party organizations include CCP organizations at all levels of administration and across different bureaucracies. Table 3 provides examples of entities coded as Party organizations.

Central organizations include government, Party or other official entities situated at the national level, as opposed to lower levels of the state. Central entities

<table>
<thead>
<tr>
<th>Table 3: Examples of Party Entities</th>
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<tbody>
<tr>
<td>Provincial Party Committee</td>
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<tr>
<td>Politburo of the Central Committee</td>
</tr>
<tr>
<td>Central Commission for Discipline Inspection</td>
</tr>
<tr>
<td>Politics and Law Committee</td>
</tr>
<tr>
<td>Propaganda Department</td>
</tr>
<tr>
<td>Chinese Communist Youth League</td>
</tr>
</tbody>
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48 Browne 2015; Denyer 2013; Economy 2014.
49 Wong 2016.
50 Browne 2014.
51 We limit our random sample to organizations appearing ten or more times in the time period of interest.
include state-owned enterprises that are managed by the central-level government.\textsuperscript{52} Central entities also include national-level military organizations, national-level mass organizations and national-level state academic institutions. Table 4 provides examples of central entities.

Foreign entities include foreign countries, institutions in foreign countries, international organizations and foreign firms. Table 5 provides examples of such entities.

For our purposes, organizations can simultaneously belong to different categories, such as Party and central. For example, China’s Politburo is both a Party organization and a central organization, as is the case with the Central Commission for Discipline Inspection.

\textit{Frequently appearing organizations}

Looking at the sets of organizations that appear most frequently in provincial media, we surprisingly do not find an increase in the media prominence of Party organizations in the 18 months after Xi came to power. In fact, the prominence of Party organizations declined slightly after November 2012. The left panel of Figure 5 plots the change in the combined entity count share of Party organizations by province and across all provinces in the 18 months before

\textsuperscript{52} State-owned enterprises held by provincial and lower levels of government are not counted as central-level organizations.
and after Xi Jinping’s arrival in office. The combined entity count share of frequently mentioned Party organizations in provincial dailies was 4.7 per cent on average in the former period, falling to 4.4 per cent in the latter period. While in general there were no dramatic changes in the prominence of CCP organizations in the media, Party organizations had an increased media presence under Xi in some provincial newspapers (for example, those of Zhejiang, Yunnan and Jilin), while the media profile of Party organizations diminished in other provincial dailies (for example, Tibet (Xizang), Chongqing and Hainan).

We do, as expected, observe a trend of increased coverage of central organizations following Xi’s rise. As with the media presence of Party organizations, however, there is a great deal of provincial-level variation. The right panel of Figure 5 shows the difference in the combined entity count share of central organizations for each province and across all provinces in the 18 months before and after Xi Jinping took power. Prior to the leadership transition, the combined entity count share of central organizations among the set of frequently mentioned organizations in provincial dailies averaged 11.6 per cent. Afterwards, the average rose to 12.0 per cent. While many provincial newspapers (for example, those of Chongqing, Yunnan and Heilongjiang) saw substantial increases in the coverage of central organizations, the media prominence of central organizations declined in four provinces (Tibet (Xizang), Guangdong, Hainan and Liaoning).

Interestingly, when we look at pre- to post-transition trends in Party entities’ and central entities’ count shares simultaneously, we find that several provincial newspapers grew more centre- and Party-oriented after November 2012, while others moved in the opposite direction. In the former category are provinces like Yunnan, Heilongjiang and Jilin, while the latter category includes Xizang, Guangdong and Hainan. This variation across provinces in the orientation of media coverage stands at odds with the idea that the centre has imposed uniform media controls over the provinces; it may also hint at underlying political

Figure 5: Changes in Media Profile of Party Entities (Left) and Central Organizations (Right) Before and After Xi
divisions. Along these lines, it is noteworthy that Shanghai and Guangdong, which historically have been counterweights to Beijing’s authority, are among the provinces whose media coverage appears least in line with political trends at the centre. Shanghai, long seen as the power base of Jiang Zemin’s network, shows a much smaller increase in the entity count share of central entities than most provinces and shows a drop in the entity count share of Party entities. It is also the province with the lowest ratio of coverage of Xi Jinping relative to Li Keqiang. Although Guangdong has a higher ratio of media coverage of Xi Jinping to Li Keqiang, it saw a sizeable drop in the entity count share of frequently appearing central organizations and Party organizations after 2012.

Finally, as expected, the media profile of foreign organizations among the set of frequently mentioned entities declined after November 2012. Prior to the leadership transition, the average entity count share of frequently mentioned foreign entities in provincial dailies was 3.4 per cent. Following the transition, this share dropped to 2.4 per cent. The left panel of Figure 6 shows the difference in entity count share of foreign entities by province and across all provinces in the 18 months before and after Xi Jinping took power.

**Random sample of all organizations**

Beyond examining coverage trends among the most frequently appearing organizations, we also compare the media presence of Party, central and foreign organizations before and after the leadership transition using a larger random sample of 1,000 organizations. For Party and central organizations, we find the same trend seen in our analysis of top organizations. For foreign organizations, however, the results differ. The right panel of Figure 6 shows the differences in means of the entity count shares of Party organizations, central-level organizations and
foreign entities among 1,000 randomly sampled entities before and after the 2012 transition with bootstrapped 95 per cent confidence intervals.

In line with results from our analysis of frequently appearing organizations, we find declining coverage of Party organizations after Xi’s rise when we examine a broader set of organizations. For the period prior to November 2012, the average entity count share of Party organizations is 0.46 per cent. Afterwards, the entity count share falls to 0.38 per cent. Similarly, we find increased coverage of central organizations when broadening our analysis to include a larger set of entities. Prior to November 2012, the average entity count share of central-level organizations is 0.75 per cent. Afterwards, the entity count share is 0.77 per cent. The changes in coverage of Party organizations and central organizations before and after Xi’s rise are statistically significant at the 95 per cent level.

In contrast with the findings from analysis focused on the most frequently occurring organizations, however, the entity count share of foreign organizations in the random sample remains constant over time at 0.32 per cent. The fact that we see a decline in mentions of foreign organizations when looking at frequently appearing entities but not when examining a more diverse set of organizations may reflect qualitative differences in foreign entities that appear frequently and those that appear with less frequency. Frequently occurring foreign entities are predominantly international organizations and Western military agencies such as the United Nations, the US Armed Forces and NATO, while the random sample of entities contains a much broader array of foreign entities, including political and military organizations of non-Western countries (for example, the Iranian Foreign Ministry, the Russian Navy and the Arab League) as well as economic entities (for example, BMW and GlaxoSmithKline). While media mentions of prominent Western political organizations declined after 2012, the media profile of non-Western foreign entities seemed to remain more constant.

Conclusion
This paper has explored changes in the landscape of media coverage in China to shed light on the realignment of politics in the first years of Xi Jinping’s leadership. To explore which actors dominated media coverage and how this set of actors changed, we have used a novel corpus of data from provincial daily newspapers and named-entity recognition methods that enable us to identify and tabulate virtually all appearances of individuals and organizations in media reports. While our analysis confirms some common perceptions about political changes following Xi Jinping’s rise to power, we have also highlighted some unexpected trends and shown that media coverage patterns were far from uniform.

Because provincial newspapers are not under direct central control, their coverage patterns offer insights into political trends across China broadly, and not simply in Beijing. As expected, we find that top Party leaders and public figures with positive political auras feature prominently in China’s provincial Party newspapers, which echoes the finding from past research that coverage in official
media serves to signal actors’ authority. Although there is not a uniform correspondence between actors’ political power and their media profiles, the rough correlation between official media publicity and political power means that changes in the set of newsmakers can offer insights into broader political shifts.

The focus of our analysis has been to assess in a more comprehensive way apparent shifts in Chinese politics – and media politics in particular – following Xi Jinping’s rise to power. According to our analysis, provincial media coverage patterns from the early Xi era reflect growing personalization of power in the figure of Xi Jinping, but they also qualify the view of Xi as an omnipotent leader who monopolizes official media publicity. During the first years of his tenure, Xi did indeed command a higher media profile in absolute terms and relative to other top leaders than his predecessor, Hu Jintao. But Xi’s dominance of media appears less dramatic when looking at entity count share and not simply the raw number of media appearances. And while Xi achieved a higher media profile relative to premier Li Keqiang than Hu did relative to former premier Wen Jiabao, Li was not marginalized in official media to the extent that is sometimes perceived. If, as one observer noted, Xi Jinping’s efforts to assert control over media coverage sought to “announce his absolute authority,” these efforts were not fully successful, at least initially.

Beyond qualifying the degree of Xi’s media dominance, we identify mixed political trends in China’s media landscape. Media coverage patterns confirm a trend of political centralization after 2012, with central organizations accounting for a growing share of entity appearances in provincial media. Yet, surprisingly, we find that the media profile of Party entities declined in the 18 months following the leadership transition. Moreover, we do not see a straightforward trend with regard to the appearance of foreign actors in China’s media: while foreign actors became less dominant in the upper ranks of media coverage, coverage of foreign entities was relatively stable when taking into account a broader swath of China’s media landscape.

Just as significant, we have highlighted considerable variation in trends across provinces. Party newspapers in some provinces became more oriented towards Beijing and/or the Party after 2012, while others shifted away. Of particular note is the fact that provincial media in Shanghai, the political base of Jiang Zemin, gave less publicity to Xi and displayed less centralization of coverage than most of their counterparts. These differences in coverage patterns may point to subnational variation in the nature and extent of China’s Xi-era political realignment. They may also suggest that the Chinese media and propaganda system as a whole remains more regionalized and idiosyncratic than one might think based on reports emphasizing top-down control under Xi Jinping.

53 Wong 2016.
54 Yang 2014 notes the revival of a strong ideological tendency in Party newspapers as well as internet, television and social media under Xi. Economy 2014 notes a systematic effort to “eliminate alternative political voices” from media outlets.
Beyond its substantive findings, this paper illustrates how large datasets and new text analysis methods can facilitate detection and analysis of large-scale political trends. To our knowledge, our analysis is the first to date to provide a comprehensive picture of China’s newsmakers and the extent to which they dominate media coverage of people and organizations. There is ample scope for further work along these lines to explore a variety of questions at the intersection of Chinese politics and media studies. For instance, one might use similar methods to identify and compare the sets of political actors associated with different news or policy areas. One could also use NER methods to analyse which political actors tend to appear jointly in media coverage. Finally, one might use such techniques to assess the political slant of media coverage based on which types of actors are appearing and how frequently. In short, such approaches broaden the range of questions China scholars can address. They also make it easier to harness the data churned out daily by Party media organizations and to survey the political landscape as a whole.

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Biographical notes
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摘要: 2012 年习近平上台以来，中国政治呈现出不少变化，但学者很难清晰地描绘出这些变化的范围和深度。在本文中，我们评估习近平上台后几个公开察觉到的趋势（政治权力个人化，中央权威的集中，共产党权力的巩固，以及反西方情绪的增长）是否在省级官方媒体上有所反映。根据以往的研究，中国媒体可以帮助政治精英发送信号，媒体的报道经常揭示不同政治人物的沉浮。通过使用新颖的自动化文本分析方法对数百万报刊文章进行分析，我们统计了个人与团体在所有官方媒体上出现的频率。我们希望借此能清晰地描绘出习近平执政初期所带来的政治变化。我们的分析表明，省级官媒对政治人物的报道方式相当混杂，并具有区域性差异。这意味着各地官方媒体中的“新常态”是不一致的。2012 年以来，省级官方媒体对外国政治人物的报道有不同程度的减少。但是，党的组织机构在官方媒体的出现频率有所下降，而媒体报道内容在不同省之间存在不少差异。

关键词: 媒体; 党媒; 信号功能; 自动化文本分析; 中国
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