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What Chinese Internet Users "Like" to Read: Selective Exposure in a Restricted Information Environment

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Abstract

We study the phenomenon of selective exposure in China's restricted online information environment. Through an experimental survey study, we measure to what extent features of online news, such as popularity (i.e. number of "likes"), influence information selection among Chinese internet users ("netizens"). We find evidence of preferences for news information according to news topic and the nationalist sentiments of individuals. Generally, for news about domestic affairs, Chinese netizens prefer articles that take the opposite position of the government; for foreign affairs, they prefer articles aligned with the government's position. However, nationalistic individuals are more likely to select domestic affairs articles congruent with the Chinese government's issue framing. We also find social endorsements to be highly influential on news selection behaviour. Popular posts with many "likes" attract Chinese netizens to the point where they select content they may not otherwise read, even though the internet environment is easily manipulated.

摘要

我们研究中国网络信息控制环境中选择性接触的现象。利用一项实验性调查问卷，我们测试了在线新闻的特征在多大程度上影响中国互联网用户（"网民"）的信息选择。例如，受欢迎程度（即"点赞"数量）。我们找到对新闻信息的偏好因新闻主题和个人民族主义情绪而异的证据。 一般来说，对于内政新闻，中国网民更喜欢与政府立场相反的文章，而对于国际事务新闻，中国网民更喜欢与政府立场一致的文章。 然而，民族主义人士更有可能选择与中国政府的问题框架相符的内政文章。 我们还发现社会认可对新闻选择行为有很大影响。 尽管互联网环境很容易被操纵，但有很多"点赞"的热门帖子会吸引中国网民，致使他们选择原本可能不会阅读的内容。

Keywords: selective exposure; news; information control; social media; social endorsements
关键词: 选择性接触; 新闻; 信息控制; 社交媒体; 社会认可

The Chinese Communist Party (CCP) has generally wielded significant power over the media in contemporary China, allowing authorities to easily frame issues and events in their favour.[1] In recent years, however, media commercialization and the internet have allowed for greater diversity in China's information ecosystem, making it easier for the public to consume content from a wide array of perspectives.[2]

Nevertheless, recent events indicate that the Chinese government is still effective at controlling the messaging around important issues. The initial outbreak of Covid-19 in China highlighted the growing tension between the information freedoms brought by the internet and the Chinese government's restrictive powers. The CCP worked to stem not only the spread of Covid-19 but also the spread of information. While the prevalence of smartphones facilitated citizens' abilities

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1 Zhao 1998.
2 Bandurski and Qian 2011.

to freely create content and share it online, the CCP could quickly censor, block and punish individuals who shared unfavourable information. For example, two video bloggers who shared harrowing footage from Wuhan, China – the centre of the outbreak – disappeared after attracting the attention and ire of the authorities.[3] Additionally, the videos they shared, along with many other online posts and messages, were taken down to quash any public dissatisfaction with the government.[4] Chinese netizens are well aware of the government's information control practices, as well as the potential consequences of sharing information unfavourable to the CCP, but many citizens are still willing to generate and consume such content.[5] Thus, while the CCP can set the agenda through broad media control, individuals also have agenda-setting powers through their ability to create and selectively consume information, particularly in the era of social media and smartphones.

Studies show that citizens living in controlled information environments tend to consume the information that is readily available to them rather than attempt to access censored information that may be unfavourable to the authorities.[6] Yet even in restricted information environments, scholars have found evidence of information preferences and selective exposure behaviour.[7] Chinese citizens are likely to exhibit diverse content preferences, as researchers have found evidence of a spectrum of nationalist beliefs and other ideological cleavages among the population.[8] Few scholars have studied the phenomenon of selective exposure in the Chinese context though. To understand how Chinese netizens respond to their information environment and their media diet preferences, researchers must develop a better understanding of news consumption behaviour – especially in the online sphere, where traditional media and new media must compete for the attention of internet users.

We contribute to the extant literature by assessing online news selection behaviour in China, specifically exploring how modern news consumption through social media affects selective exposure. Following Solomon Messing and Sean Westwood, we test if social endorsement cues ("likes") move citizens to consume content they may not otherwise select.[9] We also consider the effects of varying news sources, news topics and the ideological framing of news information. We use an experimental survey study to assess what factors Chinese netizens consider most when selecting news information online. We note that China's media environment is quite unique owing to the CCP's control over news information and online content; our study thus provides a novel contribution to the literature by examining selective exposure in a restricted online information environment. Using a national web sample in China (drawn to match the demographics of China's internet users), we show that typical Chinese internet users have different preferences for news information based on the news topic and the ideological leaning of the headline, and that these preferences vary according to the individual's nationalist sentiments. We also find empirical evidence that articles with high levels of popularity are more likely to be selected, which is similar to results drawn from the US context. Social cues drive Chinese internet users to consume "popular" information, even in an online environment that is known to be easily and regularly manipulated.

China's Information Environment

Over the past few decades, commercialization and the shift from print to online have dramatically changed China's media industry. China's media commercialization began during the reform era in the late 1970s and led to both a loosening of government control over news organizations and an

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3 Wang 2020.
4 Yuan 2020.
5 For example, in spite of the clear dangers of creating and sharing unflattering information about China's Covid-19 outbreak, Chinese citizens are still finding ways to access and archive this information. See, e.g., Koettl et al. 2020.
6 Chen and Yang 2019; Roberts 2018.
7 See, e.g., Huang and Yeh 2019; Robertson 2015.
8 Pan and Xu 2018; Cairns and Carlson 2016; Reilly 2014.
9 Messing and Westwood 2014.

increase in the variety of media content and publications.[10] No longer able to rely solely on government funding, news outlets began to create more commercialized off-shoots that published less propaganda and more stories that attracted public interest.[11] Notably, commercialization created space for more critical voices about China and government policy, even within the CCP's flagship newspaper, *People's Daily* (*Renmin ribao* 人民日报), which began accepting letters to the editor as a means to encourage public criticism and discourse.[12]

While commercialization has allowed for greater diversity of content in Chinese media, most prominent news outlets are still under the control or influence of the CCP. For example, government institutions have the power to temporarily or permanently suspend the publication of a newspaper, influence the major hiring decisions for a news organization's staff and even jail or punish journalists who publish content the CCP finds unfavourable.[13] This government oversight means that newspapers are only pseudo-commercialized as they must cater to two audiences: the government and the public. Media organizations therefore are faced with the double pressure of generating profits through advertising and sales, as well as advancing CCP ideology and messaging. To meet these dual requirements, media outlets often mix "hard" and "soft" content to appeal to both consumers and the government.[14] For example, *Jiefang Daily* (*Jiefang ribao* 解放日报) typically devotes the front page of its print publication to political content that may not appeal to many readers, while the rest of the paper is full of society news and entertainment content that drives sales.[15]

Today, the internet is one of the top sources of news information in China. Over 80 per cent of internet users in the country access online news sites,[16] and the China Internet Network Information Center (CNNIC) has acknowledged that online media now stands equal to mainstream media in terms of their coverage of important events, such as the 2008 Beijing Olympics.[17] The internet has also spurred even greater diversity in media content, broadening the choices available to Chinese readers. Private citizens can publish their thoughts and ideas through blogs, bulletin board systems (BBS) and other social media platforms such as Weibo 微博 and WeChat (*weixin* 微信), the latter of which boasts around 500 million individual users in China.[18] These platforms act as important information dissemination tools for both private users and media organizations. For example, official news outlets such as *Xinhua* 新华 use social media sites to share their articles. In order to compete for public attention in the crowded space of online media, these news outlets have found new ways to attract readers to their content.[19] Thus, "official" media compete with "unofficial" media in the online sphere.

While the internet generally allows for a greater diversity of accessible content, the Chinese government still exercises significant control over the online media and internet environment.[20] In the past few years, the CCP has instituted increasingly restrictive policies that include a combination of content blocking and content removal.[21] Content blocking is powerful in that it inhibits access to information by preventing netizens from opening certain websites. In the case of China, these

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10 Stockmann 2010.

11 Ibid.; Bandurski and Qian 2011.

12 Hazelbarth 1997.

13 For example, 272 journalists were arrested in China in 2016. See Beiser 2020.

14 "Hard" content or news is information about topics such as politics, current events, etc. while "soft" content or news is generally entertainment information such as news about celebrities. See, e.g., Lehman-Wilzig and Seletzky 2010.

15 Scotton and Hachten 2010.

16 CNNIC 2019.

17 Deibert et al. 2010.

18 Yang 2018.

19 Xin 2018.

20 See, e.g., Wong 2017; "Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other." *The Economist*, 31 May 2018, https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other. Accessed 22 July 2018.

21 Pan 2017.

websites include international giants such as Google, Facebook and Wikipedia, as well as prominent foreign news outlets such as *The New York Times* and *The Economist*. Outside of blocking specific sites, there have been times when the Chinese government has simply unplugged the internet and prevented all domestic users from going online, such as in 2008 when violent protests broke out in Tibet.[22] Such drastic measures have only been implemented a few times though, and typical content-blocking practices can usually be circumvented by technologies such as virtual private networks (VPNs).[23] Content removal consists of taking down information deemed to be inappropriate and, as a more covert form of information control, the public is less likely to be aware that information is being curated by the government.

The Chinese government also controls what information is available to the public by "flooding" platforms with their preferred information. In 2005, the CCP recruited a team of students from Nanjing University to work part-time as "web commentators."[24] These students trawled websites for information unfavourable to the CCP and argued issues from the Party's standpoint, acting as advocates for the state under the guise of ordinary internet citizens. This tactic is also known as "astroturfing," which is a public relations technique used to generate the appearance of grassroots support for an individual or issue position.[25] Since 2005, the CCP has expanded this programme and employees carrying out this work are now colloquially known as the "fifty-cent army" (*wumaodang* 五毛党), as some speculate that these employees are paid fifty cents per post. Researchers have found evidence that one of the primary goals of the "fifty-cent army" is to distract the public from major events and hide information unfavourable to the CCP, as opposed to guiding public opinion.[26] This information "flooding" can effectively bury online information under a sea of CCP-approved posts and may sway public opinion towards the Party line.[27]

However, few modern-day authoritarian regimes can exert complete control over the media, and some find it beneficial to avoid enacting harsh restrictions. Thus, even restricted information environments such as China's have a greater diversity of information than is often assumed.[28] In China, researchers have found that central authorities cannot exercise full control over the Chinese media, as competing motives at different levels of government can cause the coverage and content of national Party publications to differ from those of provincial publications, and Party and non-Party papers sometimes frame issues differently.[29] In fact, there are times when media affiliated with the central government are more willing than local media to write unfavourable information about local government authorities, potentially to preserve a sense of credibility with the Chinese public.[30] Additionally, the Chinese government does not apply a broad censorship of all online government criticism, and censors do not always fully comply with given directives.[31] Authorities also avoid overt acts of censorship as these can backfire and push public opinion in an unintended direction. Furthermore, severe restrictions on information access can even encourage citizens to actively seek ways around information blocking.[32]

Overall, media commercialization, the shift to online media, and new information control practices have together reshaped China's information environment. These developments have not only changed the content available to Chinese citizens but also the factors they might consider when selecting the information they wish to consume.

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22 Simon 2014.
23 In China, it is estimated that approximately 31% of internet users have used a VPN. See Marvin 2018.
24 Bandurski 2008.
25 Han 2015.
26 See, e.g., King, Pan and Roberts 2013; Gallagher and Miller 2017; Roberts 2018.
27 Stockmann 2010.
28 See, e.g., Egorov, Guriev and Sonin 2009; Liebman 2011; Lorentzen 2014.
29 Jaros and Pan 2018; Kuang and Wei 2018.
30 Kuang 2018.
31 King, Pan and Roberts 2013.
32 Hobbs and Roberts 2018; Jansen and Martin 2003.

Selective Exposure and Consumption of News

Selective exposure, whereby citizens opt to consume information consistent with their ideological preferences, is largely studied within multiparty systems where citizens often have unrestricted access to a wide range of ideological information.[33] Unconstrained by the centralized control of media, citizens of countries with open information environments regularly opt to consume content from sources that align with their political beliefs.[34] Many partisans in the US also avoid information sources they perceive as running counter to their beliefs.[35] A key factor behind such behaviour is the increased emotional distress or discomfort caused by conflicting information.[36] However, there is evidence that individuals sometimes seek out attitude-discrepant information when they expect it to be useful.[37] Studies have also found other factors can be more important to content selection than the perceived political ideology of the source; whether a news topic is "hard" or "soft" can influence whether an individual chooses to consume information.[38]

Scholars have also considered how selective exposure behaviour varies in restricted-information environments. While this area remains underexplored, some initial research demonstrates that there are parallels with how citizens choose what information to consume when there are information controls in place. Some scholars theorize that citizens of both democratic and authoritarian regimes process information in similar ways, with the only difference being that the two populations have varying levels of access to information on which a choice can be based.[39] For example, Graeme Robertson shows that similar to US citizens, citizens of authoritarian regimes may exhibit the same selective exposure behaviour based on their political beliefs or biases, even if there are limited opportunities to express such preferences.[40] He finds that in Russia, citizens opposed to the government are more likely than supporters of the regime to seek out information about election monitoring.

Existing studies on information consumption behaviour in China demonstrate that Chinese consumers have unique preferences that constrain their media diets. Before the internet became a primary source of news information, researchers found that, likely in response to known propaganda and information control in the media, Chinese citizens prefered commercialized, non-state news sources when the political stance of state newspapers diverged from public opinion.[41] Furthermore, Chinese citizens exhibit varying degrees of trust in different news sources depending on the extent of the commercialization of the news source, leading Chinese citizens to favour certain information channels over others. Chinese citizens tend to see official Party newspapers as more knowledgeable about government policy and view more commercialized sources as being more in line with the concerns of the public and thus more credible sources of news content.[42] A more recent study has shown that Chinese citizens also display selective exposure behaviour in their media preferences based on their personal beliefs about the government. Chinese citizens with a low opinion of the Chinese government or a higher opinion of the West tend to prefer news articles which frame foreign countries positively, or stories that frame China negatively.[43]

While this literature offers some insight into possible selective exposure behaviour in China's restricted information environment, there has been little research about how this behaviour may

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33 See, e.g., Iyengar and Hahn 2009; Stroud 2010; Skovsgaard, Shehata and Strömbäck 2016.
34 Dilliplane, Goldman and Mutz 2013; Stroud 2008; Goldman and Mutz 2011; Knobloch-Westerwick and Meng 2011.
35 Baum and Gussin 2008; Coe et al. 2008; Iyengar and Hahn 2009.
36 Jean Tsang 2019.
37 Frey 1981; Valentino et al. 2009.
38 Baum 2002.
39 Geddes and Zaller 1989.
40 Robertson 2015.
41 Stockmann 2010.
42 Stockmann 2013.
43 Huang and Yeh 2019.

differ when news selection is conducted online – the current, most popular method of accessing news information. Accessing news through the internet and social media introduces other factors that likely influence news selection behaviour, such as promoted or featured content, social interactions and endorsements and, in many authoritarian regimes, online government surveillance and manipulation. For example, in Russia and China, authorities employ individuals to generate online posts that support the government, spin news in favour of the government or distract citizens from unwelcome information.[44] These tactics serve as a subtle means of public opinion manipulation and the content generated by netizens employed by the government can be difficult to distinguish from the content posted by regular netizens.

Researchers have found that certain features of the online environment can influence selective exposure behaviour. A study conducted in the US found that even for readers with a preference for politically-aligned information, the relevance of a topic and the number of social endorsements of an article are both sufficient to attenuate partisan selective exposure.[45] It is possible in the Chinese context that the effect of social endorsements are even more pronounced, as Chinese citizens are considered more collectivist than their US counterparts,[46] and collectivist countries have been shown to have greater levels of conformity than individualist ones.[47] Thus, Chinese netizens may be more inclined to select an article owing to its social endorsements.

There are a variety of factors at play in the Chinese context that might influence what information Chinese netizens prefer to consume, such as a restrictive information environment with censorship and information flooding, propaganda, varying degrees of trust in different media sources and the manipulation of the online information environment. We contribute to the literature on selective exposure by examining the factors that have been proven to influence selective exposure in open information environments and then measuring the likelihood that these factors impact the news selection behaviour of Chinese netizens living in a restricted information environment. Although the study cannot draw causal claims about the impacts of the Chinese media environment on selective exposure behaviour, we provide a novel contribution to the literature by shedding light on selective exposure in China and on which features of online news influence news selection behaviour and to what degree.

Methods

We seek to understand what factors Chinese citizens consider most when selecting what content to consume in China's competitive, commercialized online media environment. In particular, we look at aspects unique to the online environment, such as social endorsements. We fielded our survey over nine days, from 21 to 30 March 2017, on the Cint panel, and recruited 1,499 participants.[48] Overall, our sample resembled the Chinese internet user population in terms of gender identity but was skewed towards the older, urban and more educated.[49] We instituted several measures to ensure valid responses.[50]

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44 Bandurski 2008; Shuster and Ifraimova 2018; King, Pan and Roberts 2017.
45 Mummolo 2016; Messing and Westwood 2014.
46 Hofstede and Bond 1988; Earley 1989.
47 Bond and Smith 1996.
48 Participants were required to provide consent and be 18 years of age or older. There was no deception in the experiment.
49 We used data from CNNIC's January 2017 statistical report on internet development to determine how representative the sample was compared to the general Chinese internet population. See CNNIC 2017.
50 We required participants to pass two quality control measures in order for their responses to be considered valid. One quality control method was to include a question that began by asking participants to select their desired monthly income. The question text then stated that we were testing for whether they were reading the questions, and we asked them to ignore the income question and select two conflicting responses from the multiple-choice options available (i.e. "No income" and "8,000 yuan or more"). The second quality control method was to give participants a randomly generated confirmation code at the beginning of the survey and ask them to write it down in order to receive

To determine what factors Chinese netizens consider most when selecting news information, we used a conjoint experiment design. While this experimental design does not fully capture Chinese netizens' experience of selecting from among a variety of online information sources, as the conjoint design presents a binary choice, research suggests that it nevertheless provides an externally valid estimate of treatment effects.[51] In our experiment, we varied four different attributes of online news posts that have been shown to influence news selection behaviour: (1) the news topic,[52] (2) ideological leaning, which we operationalize as congruence or incongruence with the Chinese government's issue alignment,[53] (3) news source,[54] and (4) the number of social endorsements on the post.[55]

We created 12 headlines in total that varied in terms of news topic and congruence with the Chinese government's issue alignment (see Table 1). Eight of the headlines used in this study were categorized as "hard" news, while the remaining four were "soft" news. We operationalized these categories in the same way as most of the literature on the subject, with "hard" news generally defined as political, social, economic or serious environmental news that has significant national or international impact and must be reported immediately, and "soft" news defined as coverage of a light or "exotic" topic without great public significance that can be reported at a later time or not at all.[56] We also subcategorized the "hard" news topics as being related to either foreign or domestic issues.

Several studies on selective exposure look at selection behaviour based on the political or ideological leaning of readers and news information and find that readers tend to prefer information that aligns with their ideological preferences.[57] However, since China has no competitive multiparty system, there is not an "official" or clearly defined spectrum of political ideology in the Chinese context; the absence of a defined political ideological spectrum does not mean that there is no diversity of thought or opinion among the Chinese populace though.[58] We varied the ideological leaning of news headlines by adjusting the framing of the news topics, and since we could not vary the ideological leaning based on a defined ideological spectrum like most studies on selective exposure, we instead used alignment with or opposition to the CCP's position as the two ends of an "ideological spectrum." We applied this variation to "hard" news topics only, and we adjusted the article's congruence with the CCP's position by changing one single word or phrase in a headline so that there was one version aligned with the Chinese government's issue stance and one misaligned.

We selected four news sources for our experiment: *People's Daily*, *Southern Metropolis Daily* (*Nanfang dushi bao* 南方都市报), the *BBC* and *The Wall Street Journal*.[59] The first two news sources are well-known domestic news outlets in China, while the latter two are foreign news outlets that were both accessible in China and had active Weibo accounts during the time of the study. Research conducted in 2005 found that few members of the Chinese public accessed foreign media.[60] However, with the internet penetration rate in China increasing five-fold between 2005

compensation for completing the survey. At the end of the survey, we asked participants to input the confirmation code and confirmed its accuracy. Approximately 30 per cent of individuals passed.

51 Hainmueller, Hangartner and Yamamoto 2015.

52 Mummolo 2016; Baum 2002.

53 Stroud 2010; Huang and Yeh 2019.

54 Stockmann 2010.

55 Messing and Westwood 2014.

56 Lehman-Wilzig and Seletzky 2010.

57 Dilliplane, Goldman and Mutz 2013; Stroud 2008; Goldman and Mutz 2011; Knobloch-Westerwick and Meng 2011.

58 Pan and Xu 2018.

59 At the time this study was undertaken, each of the news sources we used had a sizable following on social media, indicating that they had wide name recognition among Chinese netizens. *People's Daily* had 50 million+ followers and 70k+ posts on Weibo, *Southern Metropolis Daily* had 11 million+ followers and 4k+ posts on Weibo, the *BBC* had 160k+ followers and 14k+ posts on Weibo, and *The Wall Street Journal* had 18 million+ followers and 109k+ posts on Weibo.

60 Shi, Lu and Aldrich 2011.

Table 1. Headlines Used in the Conjoint Experiment

Congruent with CCP Position	News Topic	English Headline	Chinese Headline
Yes	Hard (foreign)	Leading scholar states that China's claims in South China Sea are justified	知名学者宣称中国对南海的主权有据可循
No	Hard (foreign)	Leading scholar states that China's claims in South China Sea are unjustified	知名学者宣称中国对南海的主权无据可循
Yes	Hard (foreign)	US senators meet with president of Taiwan, Tsai Ing-wen, disrespecting diplomatic protocol	美国参议员无视外交惯例，会晤台湾总统蔡英文
No	Hard (foreign)	US senators meet with president of Taiwan, Tsai Ing-wen, respecting diplomatic protocol	美国参议员遵照外交惯例，会晤台湾总统蔡英文
Yes	Hard (domestic)	Beijing's high house prices reflect growing economy	北京的高房价是一个正面指标，证明中国强大经济
No	Hard (domestic)	Beijing's high house prices reflect growing inequality	北京的高房价是一个负面指标，证明中国的贫富不均正愈演愈烈
Yes	Hard (domestic)	Prominent world leader praises China's anti-corruption campaign	中国的反贪腐运动受到世界著名领袖的赞扬
No	Hard (domestic)	Prominent world leader criticizes China's anti-corruption campaign	中国的反贪腐运动受到世界著名领袖的批评
N/A	Soft (n/a)	Chongqing rated city with best restaurants in China	重庆被评为拥有最好餐馆的中国城市
N/A	Soft (n/a)	Group of "restless seniors" bike from Hangzhou to Beijing	一群"好动的老人"从杭州骑行至北京
N/A	Soft (n/a)	Zootopia sequel in the works – will it be a love story?	《疯狂动物园》续篇即将推出---会是爱情故事吗？
N/A	Soft (n/a)	Fan Bingbing is the highest paid actress in China	范冰冰是中国收入最高的女演员

and the time of this study, it is likely that far more Chinese citizens now consume foreign news information online.[61] Chinese citizens can circumvent internet restrictions using VPNs, and foreign outlets such as *The New York Times* have invested heavily in developing free, online Chinese-language news, which attracts millions of monthly users to their news sites, even though these sites are blocked in China.[62] Thus, foreign news is still present in China and blocked news organizations still cater to Chinese audiences to increase their readership within the country. It is, therefore, important to understand whether the fact that a news source is foreign influences Chinese netizens to select an article or not, and the magnitude of that influence. Research has also documented criticism of foreign information sources by Chinese citizens and finds that they trust foreign media less than they do domestic sources.[63] So, including foreign news sources in this study sheds light on whether this lack of trust in foreign news sources might affect news selection behaviour of Chinese citizens.

In order to determine a realistic range of values for social endorsements that signalled whether a post was "popular" or "less popular," we collected social endorsement data from Weibo between 24 November 2016 and 21 January 2017. We used a VPN to access Weibo from a Chinese server, and we counted the number of "likes" Weibo posts from various news outlets received, recording 384 observations in total.[64] The lower range (90 to 191) fell below the median and signalled a comparatively "unpopular" post, while the higher range (3,171 to 9,544) fell above the median and signalled a more "popular" post.

To ensure the external validity of this study, we reviewed the headlines of articles on Chinese social media and created headlines that had similar phrasing to those available online.[65] We also selected topics related to prominent events in China's news cycle during the time the study took place.[66]

To understand news preferences based on the factors we considered, survey participants completed ten selection tasks in which they were asked to pick which of two articles they would be more likely to read (see Figure 1 for an example). They then answered a series of questions about themselves, including demographic questions.

We also included a question in our survey to assess participants' levels of pro-China or nationalist beliefs, allowing us to analyse whether preferences towards nationalism influence news selection behaviour. We wanted to understand whether individuals in this study with nationalist preferences were more likely to select headlines that were congruent with the CCP's position on the news topic, as these headlines offered a positive framing of China and Chinese government policy. Participants answered a "feeling thermometer," which was used to measure nationalist sentiments. Participants rated how "warm" or favourable they felt towards the People's Republic of China on a scale of 0 to 100, with higher numbers indicating greater favourability. The American National Election Studies (ANES) survey regularly uses "feeling thermometers" to measure participants' attitudes, and researchers have used this tool to measure individuals' opinions of other countries.[67]

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61 CNNIC 2017.

62 Timmons 2015.

63 Stockmann 2010.

64 We recorded the number of "likes" for posts that had just been shared and so only had a few views and a few "likes." We also counted "likes" for "hot" or trending posts from news outlets, which had hundreds of thousands of "likes." As a result, the distribution of this data was zero-skewed with two extremes.

65 See, e.g., "Baxun laoren qixing shangqian gongli duiyou hanqi 'Xiao Wang ge'" (An 80-year-old man's teammates called him "Brother Xiao Wang" after riding thousands of kilometres). *Tencent Sports*, 17 June 2016, https://sports.qq.com/a/20160617/015636.htm. Accessed 29 December 2020.

66 For example, Senator Ted Cruz's meeting with Taiwanese president Tsai Ing-Wen in January 2017 was extensively reported in the media and regarded with consternation by Beijing. See, e.g., "Mei canyiyuan bugu Zhongfang tixing jian Cai Yingwen cheng Zhongfang wuquan ganshe" (US senator ignores China's warning about meeting with Tsai Ing-wen, saying China has no right to interfere). *Sina*, 9 January 2017, http://news.sina.com.cn/c/gat/2017-01-09/doc-ifxzkfuh6188269.shtml. Accessed 28 December 2020.

67 Aldrich, Lu and Kang 2015.

Figure 1. Example of the Respondents' Selection Task
Notes: The article on the left is attributed to *The Wall Street Journal*, with a headline of "Group of 'restless seniors' bike from Hangzhou to Beijing." The article on the right is attributed to the *BBC*, and the headline states: "US senators meet with president of Taiwan, Tsai Ing-wen, disrespecting diplomatic protocol."

Analysis of the tool suggests that it serves as a reliable measure of affective responses towards groups or actors.[68]

Results

We find that news source has little influence on the news selection behaviour of Chinese netizens. As shown in Figure 2A, respondents in our study are generally ambivalent about whether the information came from a foreign (0.50, 95 per cent confidence interval [0.49, 0.50]) or domestic (0.51, 95 per cent confidence interval [0.50, 0.51]) news source.

The content or topic of a news article, however, has substantial influence on whether Chinese internet users choose to read it (see Figure 2B). Chinese netizens tend to prefer "hard" news stories, such as articles related to politics and current affairs, over "soft" news stories (0.44, 95 per cent confidence interval [0.43, 0.45]). However, their interest in "hard" news stories is influenced by whether the story concerns foreign or domestic affairs, and whether the story is congruent with the Chinese government position (see Figure 2B). The probability of a Chinese netizen selecting a foreign story with an incongruent position (0.50, 95 per cent confidence interval [0.49, 0.52]) is approximately equal to the probability that they would select a domestic story with a congruent position (0.50, 95 per cent confidence interval [0.49, 0.52]), suggesting that they are ambivalent about these two types of articles. However, foreign stories with congruent positions and domestic stories with incongruent positions are far more appealing. Participants in our study demonstrate a greater than 50 per cent likelihood of selecting a foreign story with a congruent position (0.54, 95 per cent confidence interval [0.53, 0.55]) and an even greater probability of selecting a domestic story with an incongruent position (0.58, 95 per cent confidence interval [0.56, 0.59]). This result suggests that preference for news topics – whether they concern foreign or domestic affairs – varies according to whether an article's position aligns with that of the Chinese government.

As shown in Figure 3B, this preference for domestic incongruent articles and foreign congruent articles varies based on whether an individual has positive sentiments regarding the People's Republic of China, which we use as a measure for nationalism. We find that while participants generally have a preference for stories about domestic affairs that are incongruent with the government's issue stance, participants who rated their feelings towards China above the median of 94 or higher are less likely than their non-nationalistic counterparts to select such articles (0.55 "nationalist," 95 per cent confidence interval [0.53, 0.57]; 0.60 "non-nationalist," 95 per cent confidence interval [0.58, 0.62]). Nationalists also have a stronger preference for news articles about domestic affairs that align with the CCP's stance (0.52, 95 per cent confidence interval [0.51, 0.54]), compared to non-nationalists (0.48, 95 per cent confidence interval [0.46, 0.50]).
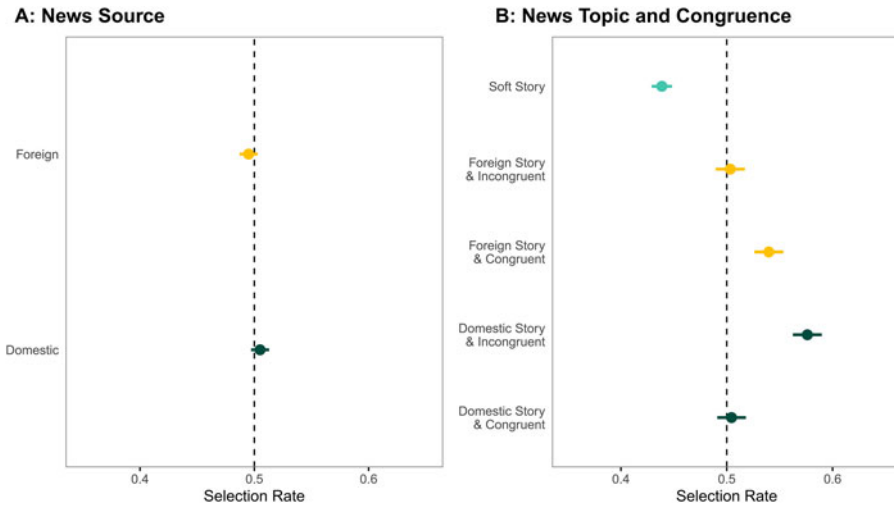
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68 Lupton and Jacoby 2016.

Figure 2. Chinese Netizens' News Preferences Based on News Source, News Topic and Topic Congruence

Figure 3A also shows that participants with more positive sentiments towards China have differing preferences for news information based on whether the news source is foreign or domestic. While both nationalists and non-nationalists are generally ambivalent about news sources when selecting news articles, nationalists are slightly more likely to select news articles from domestic publications (0.52, 95 per cent confidence interval [0.51, 0.53]) than non-nationalists (0.49, 95 per cent confidence interval [0.48, 0.50]). Nationalists are also less likely to prefer articles from foreign publications (0.48, 95 per cent confidence interval [0.47, 0.49]) compared to non-nationalists (0.51, 95 per cent confidence interval [0.50, 0.52]).

Finally, we also find that the popularity of an article (i.e. the number of social endorsements it receives) has a substantial effect on news selection behaviour (see Figure 4A). For "soft" news stories as well as "hard" news stories that are either congruent or incongruent with the Chinese government position, "popular" articles with more social endorsements are much more likely to be selected than
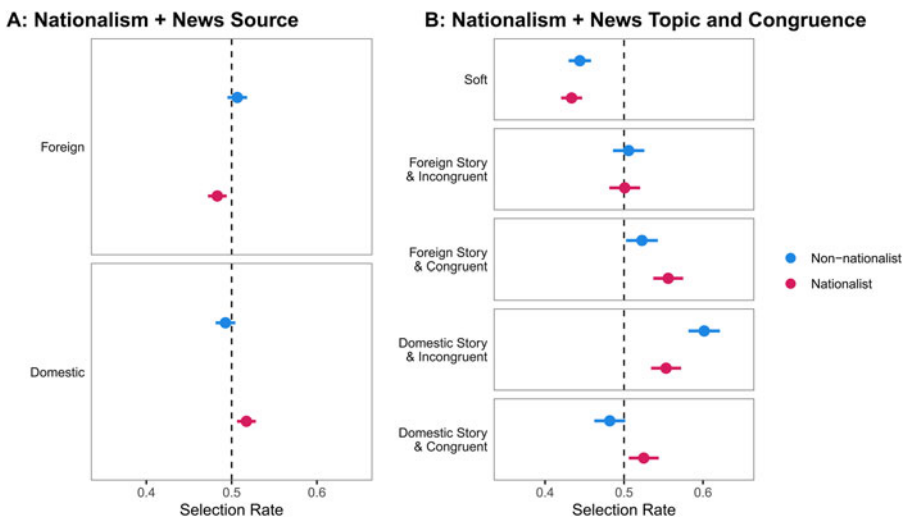

Figure 3. Chinese Netizens' News Preferences, Varying by Negative or Positive Sentiments towards China
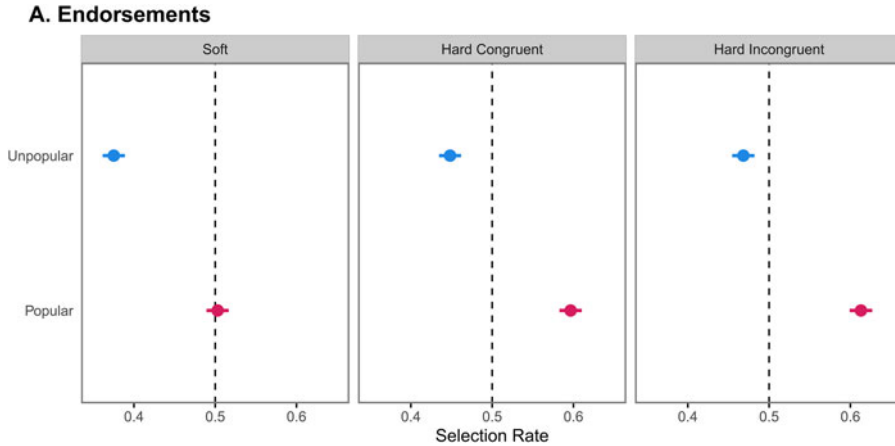
A. Endorsements

Figure 4. Impact of Social Endorsements on the Likelihood a Chinese Netizen Chooses to Read a News Article

"unpopular" ones. For "soft" news articles, a high number of social endorsements increases the selection probability by 0.12 (0.38 "unpopular," 95 per cent confidence interval [0.36, 0.39]; 0.50 "popular," 95 per cent confidence interval [0.49, 0.52]). For "hard" news articles congruent with the Chinese government position, a high number of social endorsements increases the selection probability by 0.15 (0.45 "unpopular," 95 per cent confidence interval [0.43, 0.46]; 0.60 "popular," 95 per cent confidence interval [0.58, 0.61]), and for "hard" incongruent news articles the selection probability increases by 0.14 (0.47 "unpopular," 95 per cent confidence interval [0.45, 0.48]; 0.61 "popular," 95 per cent confidence interval [0.60, 0.63]). Thus, social endorsements can increase the likelihood that a Chinese netizen selects an article to a probability of 0.5 or higher.

Conclusion

Our study offers strong evidence that factors such as the topic, ideological leaning and the "popularity" of online news articles shared on social media influence whether Chinese netizens choose an article or not. Similar to phenomena in the US context, social endorsements substantially increase the likelihood that a consumer will choose to read an article, even when the Chinese government may find the content unpalatable. These results indicate that social endorsements can easily direct internet traffic to specific online information, even if it is not content that a netizen would generally consume.

We also find evidence of selective exposure behaviour along ideological cleavages among Chinese citizens. Compared to their less nationalistic counterparts, nationalistic Chinese netizens are more likely to prefer articles about domestic affairs that align with the government's issue stance, and they are also less likely to prefer a story about domestic affairs that is incongruent with the CCP's framing. Chinese netizens with more nationalist sentiments are also slightly more likely to prefer news content from domestic sources rather than content from foreign sources. These results align with other scholarship on selective exposure behaviour that finds that individuals prefer consuming information that conforms to their ideological beliefs.[69]

The implications of our study are significant and deserving of further research. Our findings suggest that fostering greater patriotism and nationalism among Chinese citizens could reduce the likelihood that they would consume information that does not align with the CCP's issue framing, even if that information were available to them. In the status quo, Chinese netizens already display a preference for news that aligns with the government's position when it comes to foreign affairs. Although

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69 Robertson 2015; Stroud 2008; Dilliplane, Goldman and Mutz 2013.

Chinese citizens are more likely to choose information incongruent with the government's position when it comes to domestic affairs, this preference is reversed among individuals who have stronger positive feelings towards China. Thus, our findings partially support those of other studies, which conclude that simply providing Chinese internet users with access to a wider variety of content may not result in significant consumption of articles that are difficult to find under existing information control practices (for example, articles framing Taiwanese independence in a positive light); Chinese netizens – especially those with nationalistic tendencies – are less likely to prefer reading these types of articles.[70] While our study does not deeply and robustly explore the mechanisms of this preference – which could include knowledge of government surveillance, nationalism or other factors – it exposes a new facet of Chinese netizens' information consumption preferences.

Our research and study design face certain limitations. We could only use a select number of foreign and domestic news sources in our experiment, and we also had a limited number of topics, both domestic and foreign, in our study. Thus, we generalize our results from a sample of possible sources and topics. Additionally, our study sought to simulate the experience of selecting news on social media websites; however, we were not able to provide a perfect replica of reality in our survey study. Also, we are unable to draw causal connections between specific aspects of the Chinese media environment and their influences on selective exposure behaviour, as the study design only allows us to understand the likelihood of a Chinese netizen selecting a news headline based on a particular feature of the headline. Future studies could build on the findings from this research to understand what aspects of the Chinese media environment make social endorsements such an influential factor in news selection behaviour.

Our strongest finding about the effects of social endorsements on news selection behaviour has significant implications. The online environment is easily manipulated, particularly in China where individuals are sometimes paid by the government and other organizations to guide consumers towards specific information that aligns with a desired ideological position.[71] Thus, the fact that social endorsements have such a substantial effect on selective exposure behaviour suggests that artificially inflating the popularity of online content can drastically change the amount of attention that the content receives – which could potentially sway netizens' opinions. Some publications in China have already leveraged this method of subtle information manipulation to direct readers towards certain articles. The Chinese state news publication, *China Daily* (*Zhongguo ribao* 中国日报), has updated its mobile app to award users for reading, sharing and *liking* articles with points that can then be used to make purchases from an online store.[72]

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70 Chen and Yang 2019.
71 See Conger 2019.
72 Cook 2019.

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