The *Global Times* and The China Threat Narrative: An Empirical Analysis

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Abstract

China's *Global Times* has become more popular in the Australian media than ever, and its editor, Hu Xijin, has also gained worldwide attention. The *Global Times* presents a nationalistic narrative about China and the world. This study, the first of its kind in the academic literature, examines the relationships between the *Global Times* narrative and the China threat narrative in Australia and worldwide. By applying time series econometric models to weekly datasets from May 2020 to April 2021, this study finds that the *Global Times* narrative is significantly associated with the level of the China threat narrative in Australia, and the same is true for the corresponding global relationship. This study makes original and significant contributions to the academic literature and has useful implications for policymakers.

Keywords Global times · Hu Xijin · China threat · Australia–China relations · Time series data · Granger causality test

Introduction

There are no Australian journalists working inside China for Australian media outlets [5]; as a consequence, the *Global Times*, China's state-run news tabloid, is quoted frequently in Australian media, and has become the loudest Chinese voice in coverage of the Australia–China relations debate. For example, articles in the *Global Times* were quoted 1,163 times in Australian media outlets in the 12 months to April 2021, while Chinese President Xi Jinping had 769.

The *Global Times* (in Chinese: 环球时报; in pinyin: Huánqiú Shíbào), which focuses on foreign news, is a daily tabloid newspaper published alongside the Chinese Communist Party's flagship *People's Daily* newspaper. In 2009, it began to produce an English-language version, designed to expand China's international media capacity [17]. Its editorial approach is variously described as nationalistic [32, 33, 69], hard-line

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[45], anti-West [39], politicized and ideological [1], and echoing the Party's policies [38]. Based on a case analysis of the *Global Times*, [65] argued that China is developing an aggressive news strategy to explicitly challenge Western media competitors' integrity and legitimacy. Because of the role of the *Global Times* as a mouthpiece for the Chinese government, various studies have used it to examine the Chinese discourse on many topics, such as the nine-dashed line [64], sovereignty in the South China Sea [19], and the disappearance of Malaysian Airline flight MH370 [16].

Hu Xijin (in Chinese: 胡锡进; in pinyin: Hú Xījìn) has been the *Global Times*' editor-in-chief since 2005. He is regarded as a hardliner [24], and is essentially the newspaper's voice [14]. For example, during the recent United States (US)–China trade war, Mr. Hu declared that the sooner Chinese tariffs took effect, the better [61]; on 7 May 2021, [31] Mr. Hu threatened that China would launch a missile strike on Australia if it joined a war to protect Taiwan. These and other such declarations form a bellicose discourse, through which China seeks to achieve its political goals with respect to both Australia and the world.

This study aims to examine the role of the *Global Times* in Australia's China threat narrative, and its role in the China threat narrative worldwide. The study makes two novel contributions [33].

First, this study takes a new perspective on the China threat. Most previous research on the *Global Times* (mentioned earlier) has been conducted from a communications standpoint. In addition, previous studies of the China threat have focused on specific topics such as Confucius Institutes [70], Huawei's thwarted business activities [10], Chinese foreign direct investment (FDI) [68], China's high-speed railway diplomacy in Southeast Asia [49], and the 16 + 1 mechanism in Europe [63]. In contrast, this study looks at the relationship between the *Global Times* and the China threat narrative, the first of its kind in the academic literature.

Second, this study adopts a novel quantitative approach. Most previous research on the *Global Times* involved discourse analysis, and most previous studies of the China threat adopted qualitative or conceptual analysis [12, 25, 53] or survey-data-based cross-sectional empirical analysis [47]. Unlike these studies, this paper is based on high-frequency time series datasets consisting of Google Trends search results; it is an expansion of [40]'s application of Google Trends data to international relations. Time series models are used as a result.

The structure of this paper is as follows. Section 1 reviews the China threat theory and relevant literature. Section 2 introduces the source of the data. Section 3 looks at the relationship between the narrative of the *Global Times* coverage and the China threat narrative in Australia. Section 4 looks at the relationship between the narrative of the *Global Times* coverage and the China threat narrative worldwide. Section 5 concludes the paper.

Literature Review

According to [3, 63], the term "China threat theory" refers to fatalistic narratives and speculations about the world's future that are fuelled by anxiety, uncertainty, and fear in response to China's rise. The China threat theory assumes that China

cannot and will not rise peacefully, that it actively seeks to subvert the West and the current world order, and that the West must restrict China's rise to prevent serious global consequences.

The China threat narrative has a long history. In the US, for example, the China threat was already a hotly discussed topic in the 1990s [55]. [66] backed up this claim, claiming that as China's economy grew rapidly in the early 1990s, so did the first China threat assertions in the US print media. This threat was categorized as ideological, economic, and strategic [9]. Furthermore, [66] discovered that, while the focus of the China threat changed over time, perceptions of China as an economic/trade threat remained consistent between 1992 and 2006. As US–China relations approached a tipping point [46] during the Trump administration (January 2017 – January 2021), America's China threat narrative began to change. Many concerns, ranging from trade to human rights to national security, began to be addressed using a whole-of-government approach [37]. Meanwhile, as [18] argued, in the absence of any prompting from the US, China adopted policies that may have contributed to the US' China threat narrative.

A few researchers have examined specific instances of China threat in the US. According to [70], instead of developing Chinese soft power in the US, the establishment of Confucius Institutes has provoked a new form of China threat. [10] cited the China National Offshore Oil Corporation and Huawei as examples of how the US has manufactured the China threat narrative. [68] looked at Chinese FDI in the US and discovered that geopolitical concerns and nationalism had a negative impact on the public's opinion of the practice [35, 56]. examined US policy towards China's Belt and Road Initiative, and concluded that it characterised the initiative as a threat.

Although the US–China situation has been a leading international topic, the China threat has been a prominent subject in many Western and non-Western discourses since the 1990s [59]. Various researchers have studied the China threat in Europe [53], including Central and Eastern European countries [49, 63] and Italy [13], as well as in Russia [41], Canada [43] and Australia [25, 27, 47], and East Asia [32], including Japan [54] and South Korea [36], as well as Southeast Asia [50], Central Asia [51], and Africa [12].

Previous research on the China threat has employed qualitative, conceptual, and descriptive methods. [59], for example, used incorporation setting, episteme domain, and significant modality models to perform a discursive securitization of China's threat. By reviewing key think tank papers, [53] examined the discursive creation of a China threat narrative by European think tanks. Using the 16 + 1 mechanism as an example, [63] examined the resurgence of the China threat theory in Europe. [49] described and analyzed the Chinese threat (and China opportunity) paradigms within the framework of relations between China and Central and Eastern European nations (16 + 1 mechanism), with a focus on Sino–Serbian relations. [25] looked at the China threat narrative in Australia through three lenses: social issues, economic configurations, and foreign posture. [50] examined the China threat model using China's high-speed railway diplomacy in Southeast Asia as an example. [54] examined the evolution of the China threat narrative in Japan since the 1990s. [12] demonstrated that there is an evolving

China threat perception in Africa by examining existing literature and relevant knowledge about China in Africa.

Few empirical studies on the China threat have been performed, and most rely on cross-sectional survey data. [47], for example, used spatial economic data and survey analysis to examine trade and peace in relation to the China threat narrative in Australia. Based on an empirical study of survey data, [36] found that bilateral relations, including factors such as China's military build-up, opposition to a free trade agreement with China, and exclusive national identity, have a greater impact on South Koreans' feelings towards China than balancing behaviours.

This study takes a new perspective on the China threat narrative, namely, the role of China's *Global Times*. As discussed at the beginning of this paper, the *Global Times* echoes the Party's policies and is hard-line. Thus, it is assumed that the *Global Times* provides content that shapes the China threat narrative. As a result, the study's premise is that the *Global Times* narrative is strongly linked to the China threat narrative. The study is also novel in its use of weekly time series data, which is rare in political science research [6], and in its application of time series modelling.

Data source

The use of Google Trends data as a source of international relations variables in this study is based on [40]. Google Trends is a Google product that analyses the popularity of Google search queries across various regions and languages. Anonymity, subject categorisation, and aggregation are some of its characteristics. Google Trends offers real-time data for the previous seven days, daily data for a limited duration, and weekly and monthly data for a longer duration. High-frequency data enables more sensitive detection of relationships between variables. Also, considering the need to maximize the number of data items, this study relies on weekly data. Although Google Trends relies on samples of Google searches, rather than analyzing all searchers, this is more than adequate because Google handles hundreds of millions of searches every day [40]. Geographical regions with the same degree of interest in a term may have vastly different total search volumes, due to differing populations; by normalising results, it is possible to compare proportions of searches across dates and regions. Therefore, Google Trends figures reflect search interest for the given region and time period. With a score of 100, the term is at its most popular. A score of 50 means the term is half as popular, while a score of 0 means there isn't enough data to assess the term's popularity.

In Sects. 3 and 4, based on Google Trends search data and time series models, the relationships between the *Global Times* narrative and the China threat narrative in Australia (using the key phrase "Global Times") and worldwide (using the key phrase "Hu Xijin") are examined. The distinction between Australia and the world serves the same reason as that between the keywords "Global Times" and "Hu Xijin". Despite the fact that "Hu Xijin" seems to be more special than "Global Times", there are far fewer Google search results for "Hu Xijin" than for "Global Times" in Australia. As a result, it would be preferable to keep these two markets apart.

This study examines weekly Google Trends datasets generated from 10 May 2020 to 25 April 2021. While a longer time horizon would give more econometric power, the time period reflects the fact that the *Global Times* only became popular in Australia in 2020 (see subsection 3.2) and Hu Xijin's global popularity began to substantially rise in 2020 (see subsection 4.2).

Australia: The *Global Times* Narrative and the China Threat Narrative

In this section, the relationship between the *Global Times* narrative and the China threat narrative in Australia is examined. Subsection 3.1 introduces the dependent variable – the China threat narrative in Australia. Subsection 3.2 introduces the independent variable – the *Global Times* narrative in Australia. Subsection 3.3 describes the regression analyses.

Dependent Variable: The China Threat Narrative in Australia

Figure 1 shows the search results for the key phrase "China threat", interpreted as the volume of the China threat narrative in Australia.

Figure 1 shows that the first peak in the China threat narrative in Australia occurred in the week starting 5 July 2020 (100 points), and was followed by a nearly equivalent peak in the week starting 12 July 2020 (99 points). It is assumed that a time lag exists between media coverage and Google search results, meaning that Google search results may also reflect media coverage for the preceding week(s). For example, on 1 July 2020, Australia released its 2020 defence strategy update, stating that Australia needs to upgrade its weaponry urgently. As [28] argued, China
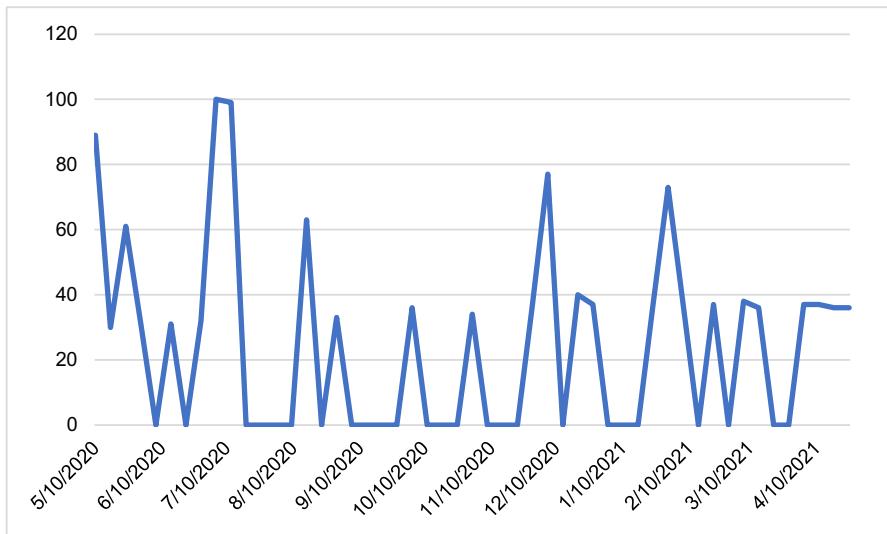

Fig. 1 Search results for "China threat", Google Trends weekly data, May 2020–April 2021, Australia

is the unnamed threat on which the strategy concentrates. In addition, on 2 July 2020, the Australian defence minister warned that China's activities have "deeply unsettled" the Indo-Pacific region, putting Australia's and its neighbours' security at risk [23]. These events explain the peaks in Google search data in the following week(s).

The third-largest peak in Australia's China threat narrative occurred slightly earlier, in the week starting 10 May 2020; this coincides with the start of China's trade war against Australia. On 10 May 2020, it was reported that China would impose tariffs of more than 80% on imports of Australian barley [15]. The fourth-largest peak happened in the week starting 6 December 2020, and can be related to a statement from the Trump Administration's most senior intelligence officer that China is the greatest threat to democracy and freedom worldwide since World War II [2].

Independent Variable: The Global Times Narrative in Australia

Figure 2 shows the results of a search for the key phrase "Global Times", interpreted as the volume of the *Global Times* narrative in Australia.

When the Google search is expanded to 2016 (not reported, but available upon request), the results show that the phrase "Global Times" became popular only in 2020. This reflects the fact that no Australian journalists were working for Australian media outlets within China after 2020, and therefore the *Global Times* began to be quoted more often in the Australian media.

Figure 2 shows that the largest peak of the *Global Times* narrative in Australia occurred in the week starting 29 November 2020. This was interpreted as the response to an online post by a Chinese foreign ministry spokesperson of a manufactured image of an Australian soldier holding a knife to a child's throat, as well as
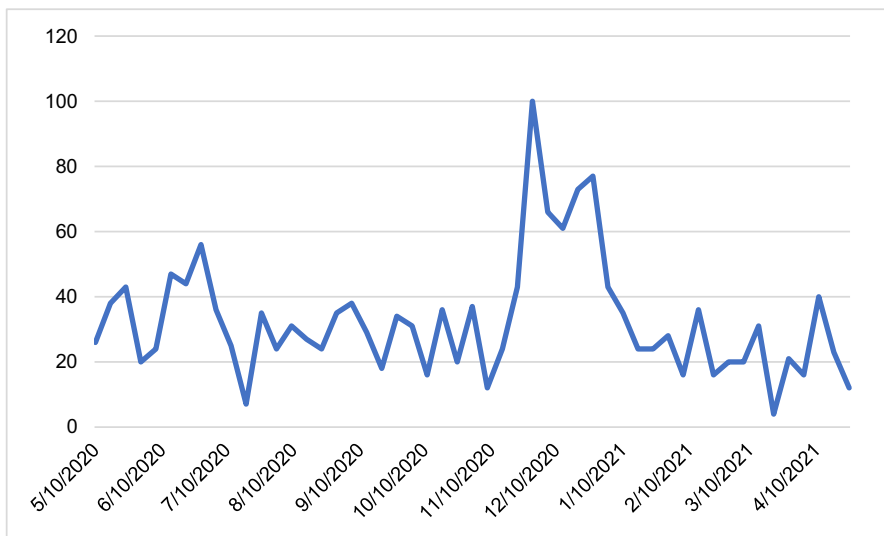

Fig. 2 Search results for "Global Times", Google Trends weekly data, May 2020–April 2021, Australia

the Australian media's and the *Global Times*' reactions. [5] backed up this assertion, saying that this image gained more attention in two weeks than the issue of mistreatment of Uyghirs in Xinjiang had in six months. The *Global Times* made several contributions to the narrative in this period. It called the Australian Prime Minister's demand for an apology for the image "ridiculous and shameless" [57]; it published a series of cartoons mocking Australia [11, 67]; it demanded a formal apology from the Australian Broadcasting Corporation (ABC) for airing a "racist" children's television show [42]; and it warned of Australian "evil" with respect to its deployment of warships in the South China Sea [44].

The second-largest peak of the *Global Times* narrative in Australia happened in the week starting 27 December 2020. Around this time, *The Australian* cited a news report from the *Global Times* saying that China's Shandong aircraft carrier group had sailed through the Taiwan Strait [60]. Regarding China's ban on imports of Australian coal, the *Global Times* ran a commentary stating that "Australia has repeatedly used wrong words and deeds on issues involving China's core interests and major concerns" and that this was "the root cause of the relationship falling to its lowest point" [58]. In addition, the *Global Times* confirmed the unofficial suspension of Australian lobster exports to China [8].

The third-largest peak of the *Global Times* narrative in Australia happened in the week starting 20 December 2020. Around this time, the ABC reported that the *Global Times* had confirmed China's ban on Australian coal imports [29].

Regression

In this subsection, Granger causality tests are conducted to examine the causality relationship between the *Global Times* narrative and the China threat narrative in Australia. A formal regression is also conducted.

Correlation does not necessarily mean causation. The method employed by [26] determines how much of the current *y* can be explained by past values of *y*, and then whether incorporating lagged values of *x* can boost the accuracy of the explanation. The essential question that the Granger causality test answers is whether *x* helps forecast *y*. As all variables are time series data, their stationarity must be checked. Augmented Dickey-Fuller tests (not reported, but available upon request) show that all variables are stationary. Table 1 shows the results of the Granger causality tests.

Table 1 shows that the null hypothesis that *GT_AU* does not Granger cause *CT_AU* is rejected within a 10% confidence level at lag orders 1 and 2. It means that the *Global Times* narrative in Australia contributes significantly to the information content used to formulate the China threat narrative in Australia. The fact that these results occur at lag orders 1 and 2 also makes sense, because they mean that the influenc1e is rapid, probably within two weeks.

Furthermore, based on an autoregressive distributed lag model (see Appendix 1), the coefficient of *GT_AU* is significantly positive at a 10% confidence level. While the small number of observations may prevent a strong conclusion, this result confirms the

Table 1 Granger Causality Test Results (Prob.), Google Trends weekly data, 10 May 2020 – 25 April 2021, Australia

Null hypothesis	Lag Order 1	Lag Order 2	Lag Order 3	Lag Order 4	Lag Order 5	Lag Order 6
GT_AU does not Granger cause CT_AU	6.6%	8.0%	17.7%	34.7%	32.6%	49.8%

GT_AU represents the volume of the *Global Times* narrative in Australia. *CT_AU* is the volume of the China threat narrative in Australia

findings of the Granger causality tests. It shows that the *Global Times* narrative is significantly associated with the level of the China threat narrative in Australia.

The World: The *Global Times* Narrative and the China Threat Narrative

In this section, the relationship between the *Global Times* narrative and the China threat narrative worldwide is examined. Subsection 4.1 introduces the dependent variable—the China threat narrative worldwide. Subsection 4.2 introduces the independent variable—the *Global Times* narrative worldwide. Subsection 4.3 presents regression analyses.
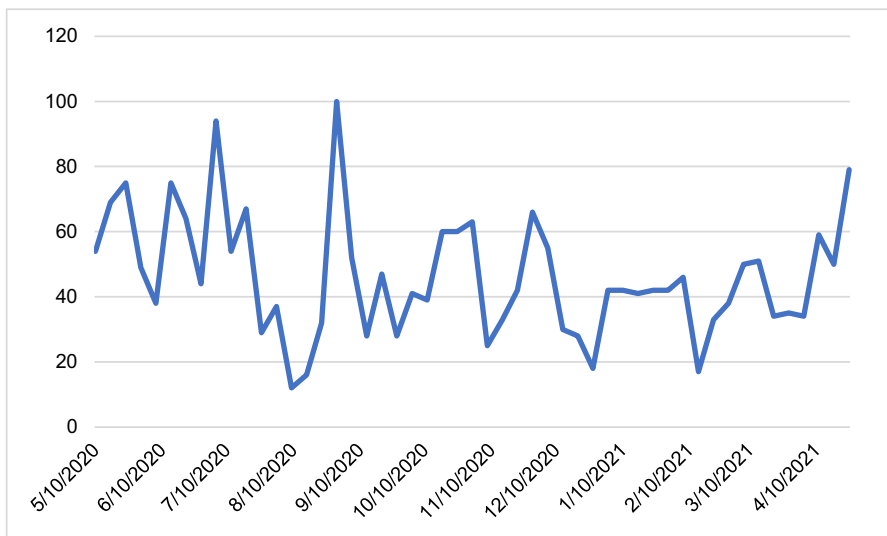

Fig. 3 Search results for "China threat", Google Trends weekly data, May 2020–April 2021, worldwide

Dependent Variable: The China Threat Narrative Worldwide

Figure 3 shows the search results for the key phrase "China threat", interpreted as the volume of the China threat narrative worldwide.

The largest peak in the worldwide China threat narrative occurred in the week starting 30 August 2020. On 1 September 2020, the US Department of Defence published its annual assessment of the Chinese military. As [48] interpreted, over the last two decades, China has marshalled money, technology, and political will to improve and modernise the People's Liberation Army in nearly every way. And the threat of Chinese arms to US assets in the western Pacific has increased dramatically in recent years. The second-largest peak was recorded in the week starting 5 July 2020, coinciding with Australia's defence strategy report (discussed in subsection 3.1). The third-largest peak in the worldwide China threat narrative occurred in the week starting 25 April 2021, during which the threat of a military clash between Australia and China was a hot topic. For example, during a deepening diplomatic dispute between the two nations, a senior Australian government official with close links to the defence minister said that "free nations" were hearing "the beating drums" of conflict once more, and they needed to prepare "for the curse of war" [34].

Independent Variable: The *Global Times* Narrative Worldwide

As discussed previously, the key phrase "Hu Xijin" is more special than "Global Times". It means that while both contain all words in any order, along with other words, the latter generates more random combinations. Figure 4 shows the search results for Hu Xijin, interpreted as the volume of the *Global Times* narrative worldwide.

When the Google search is expanded to 2016 (not reported, but available upon request), "Hu Xijin" became popular in 2019, and was more so in 2020. Preliminary results show that the relationship between the *Global Times* narrative, based on "Hu Xijin" as a key phrase, and the China threat narrative worldwide in 2019 differs from that in 2020. This may be related to the beginning of China's wolf warrior diplomacy in April 2020. The econometric implication is that there is a structural break in the long-run relationship, hence using full datasets may be inappropriate. As a result, only datasets between May 2020 – April 2021 are used in the following analysis.

Figure 4 shows that the largest peak in the *Global Times* narrative happened in the week starting 28 June 2020. Shortly after a press release issued by the former US Secretary of State Mike Pompeo, in which the latter criticised "empty promises made by the People's Republic of China in Africa", Mr. Hu called the US government "white supremacist" [62]. Then, following the China–India border conflict on 15 June 2020, Mr. Hu's editorials noted that China suffered casualties too, boasted about China's gross domestic product, and warned India about China's vastly greater military spending and power; all these points were headline news in India [20].
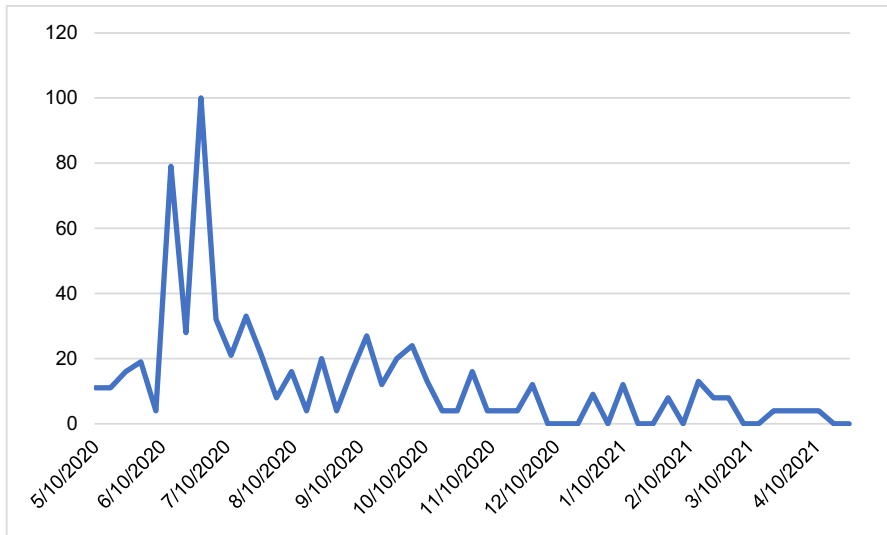
Fig. 4 Search results for "Hu Xijin", Google Trends weekly data, May 2020–April 2021, worldwide

The second-largest peak of the *Global Times* narrative happened in the week starting on 14 June 2020. In a Twitter post responding to a comment from former US Secretary of State Mike Pompeo [4], Mr. Hu asked: "who is more like Nazi Germany?". Then, Mr. Hu criticized the US' poor handling of the COVID-19 pandemic [30]. Finally, foreign news agencies cited Mr. Hu's comment that China suffered casualties in the clash with India [52].

The third-largest peak of the *Global Times* narrative happened in the week starting 19 July 2020. Around this time, Mr. Hu criticised the US, saying that American voters have to choose between two candidates, both of whom are in their 70 s, and that this is a tragedy of American democracy [21]. Then, criticising the Indian Prime Minister, Mr. Hu wrote that Indians "need to have some things more important than nationalism", gaining the attention of Indians on Twitter [22]. Mr. Hu also asked whether the US is "mentally retarded" [7].

Regression

In this subsection, Granger causality tests are conducted to examine the causal relationship between the *Global Times* narrative and the China threat narrative worldwide. A formal regression is also conducted.

Augmented Dickey-Fuller tests (not reported, but available upon request) show that *GT_WD* (the volume of the *Global Times* narrative worldwide) has a unit root. As a result, the first difference is adopted. The data is stationary after differentiating. Table 2 shows the results of the Granger causality tests.

Table 2 Granger Causality Tests (Prob.), Google Trends weekly data, 10 May 2020 – 25 April 2021, worldwide

Null hypothesis	Lag Order 1	Lag Order 2	Lag Order 3	Lag Order 4	Lag Order 5	Lag Order 6
D_GT_WD does not Granger cause *D_CT_WD*	4.4%	11.3%	2.9%	9.0%	7.9%	1.9%

D_GT_WD represents the first difference in the volume of the *Global Times* narrative worldwide. *D_CT_WD* is the first difference in the volume of the China threat narrative worldwide

Table 2 shows that the null hypothesis that *D_GT_WD* does not Granger cause *D_CT_WD* is rejected at a 10% confidence level. It means that the *Global Times* narrative contributes significantly to the information content used to formulate the China threat narrative worldwide. The lag orders 1, 3, 4, 5, and 6 imply that the influencing process is very quick, probably occurring within a week, and may last for up to six weeks.

Furthermore, based on an Autoregressive Distributed Lag model (see Appendix 2), the coefficient of *D_GT_WD* is significantly positive at a 10% confidence level. While the small number of observations may prevent a strong conclusion, this result confirms the findings of the Granger causality tests. It shows that the *Global Times* narrative is significantly associated with the China threat narrative worldwide. Note that if "Global Times" is used as the key phrase instead of Hu Xijin or only Chinese media sources are used, the results are unchanged (see Appendix 3).

Concluding Remarks

China's *Global Times* is increasingly cited in the Australian media, and its editor, Hu Xijin, has gained worldwide attention. This study examines the relations between the *Global Times* narrative and the China threat narrative in Australia, and the relations between the *Global Times* narrative and the China threat narrative worldwide. While previous researchers have studied either the *Global Times* or the China threat narrative, this paper is the first to link these two variables. Furthermore, unlike previous studies which used discourse analysis, conceptual analysis or cross-sectional empirical analysis, this study analyzes high-frequency time series data and employs time series modelling. Hence, this study makes original and significant contributions to academia.

Based on Google Trends weekly datasets from May 2020 to April 2021, this study finds that the *Global Times* narrative is significantly associated with the level of the China threat narrative in Australia. Also, based on Google Trends weekly datasets from the same period but for the entire world, this study finds that the worldwide *Global Times* narrative is significantly associated with the global China threat narrative. These findings have useful implications for current debates about Australia–China relations, and more broadly, debates about China's international

relations and the roles of its actors. For example, while China poses (or is perceived to pose) various types of threats – such as ideological, economic, and strategic threats – to other nations, this study demonstrates that some China threat narratives are based on propaganda and rhetoric. Hence, in order to reduce the China threat level abroad, the Chinese government may find it helpful to moderate its rhetoric. Meanwhile, other countries should craft their policy responses to such kinds of China threats carefully. In a sense, this may reflect the weakness of China's centralized governance system and the lack of diversity.

This study also has limitations. For example, the number of data items is small. In addition, Granger causality tests are essentially univariate regression techniques; multivariate regression should be used when more detailed datasets become available.

Appendix 1: Regression between the *Global Times* Narrative and the China Threat Narrative in Australia

Dependent Variable: CT_AU (the China threat narrative in Australia). Independent variable: GT_AU (the *Global Times* narrative in Australia).

Method: ARDL (Autoregressive Distributed Lag). Included observations: 44 after adjustments. Dependent lags: 7 (Fixed). Dynamic regressors (0 lag, fixed): GT. Fixed regressors: C

Variable	Coefficient	Prob
CT_AU(-1)	0.227	16.5
CT_AU(-2)	−0.170	30.2
CT_AU(-3)	−0.029	86.1
CT_AU(-4)	−0.140	38.5
CT_AU(-5)	0.172	28.6
CT_AU(-6)	0.103	53.0
CT_AU(-7)	0.132	37.9
GT_AU	0.419	7.3
C	−1.435	73.9
Adjusted R-squared	0.045	

Note: ARDLs are standard least squares regressions that include lags of both the dependent variable and explanatory variables as regressors.

Coefficient Diagnostics show that the Variance Inflation Factors for all variables' coefficients are smaller than 2, indicating that the multilinearity issue can be safely ignored. Residual tests including correlogram of standardised residuals and correlogram of standardised residuals squared show no existence of serial correlation. The Kurtosis value is 3.18, showing a very minor normality distribution issue. The heteroskedasticity test shows almost no existence of heteroskedasticity. The Ramsey Regression Equation Specification Error Test shows no existence of a non-linear functional form. These results are not reported

but are available upon request. In a word, the model adopted here is generally acceptable.

Furthermore, GT_AU may be endogenous. If using GT_AU(-1) as the independent variable, the results based on an ARDL model remain statistically unchanged. The coefficient of GT_AU(-1) is also significantly positive if using a robust least squared model.

Appendix 2: Regression between the *Global Times* Narrative and the China Threat Narrative around the World

Dependent Variable: D_CT_WD (the first difference in the China threat narrative worldwide). Independent variable: D_GT_WD (the first difference in the *Global Times* narrative worldwide).

Method: ARDL (Autoregressive Distributed Lag). Included observations: 45 after adjustments. Maximum dependent lags: 6 (Automatic selection). Model selection method: Akaike info criterion (AIC). Dynamic regressors (6 lags, automatic): D(HXJ). Fixed regressors: C. Selected Model: ARDL(6, 1).

Variable	Coefficient	Prob (%)
D_CT_WD(-1)	−0.417	1.0
D_CT_WD(-2)	−0.388	2.8
D_CT_WD(-3)	−0.656	0.0
D_CT_WD(-4)	−0.376	3.1
D_CT_WD(-5)	−0.345	4.9
D_CT_WD(-6)	−0.326	3.7
D_GT_WD	−0.055	83.1
D_GT_WD (-1)	0.541	3.1
C	0.798	77.0
Adjusted R-squared	0.392	

Note: Coefficient Diagnostics show that the Variance Inflation Factors for all variables' coefficients are smaller than 3, indicating that the multilinearity issue can be safely ignored. Residual tests including correlogram of standardised residuals and correlogram of standardised residuals squared show no existence of serial correlation. The Kurtosis value is 3.07, showing the residuals are almost normally distributed. The heteroskedasticity test shows no existence of heteroskedasticity. The Ramsey Regression Equation Specification Error Test shows no existence of a non-linear functional form. These results are not reported but are available upon request. In a word, the model adopted here works very well.

Furthermore, D_GT_WD may be endogenous. If using only D_GT_WD(-1) as the fixed regressor, the results based on an ARDL model remain statistically unchanged.

Appendix 3: Granger Causality Tests – Using Different Keywords and Chinese Sources

Time period: 10 May 2020 – 25 April 2021. Frequency of data: weekly.

Null Hypothesis	Lag order 1 (%)	Lag order 2 (%)	Lag order 3 (%)	Lag order 4 (%)	Lag order 5 (%)	Lag order 6 (%)
GT_WD2 does not Granger Cause *CT_WD*	92.5	81.3	8.3	6.5	13.8	8.4
GT_WD3 does not Granger Cause *CT_WD_CH*	2.0	8.1	15.7	32.1	35.7	69.1
GT_WD4 does not Granger Cause *CT_WD_CH*	8.6	29.8	46.7	51.5	66.2	74.3

GT_WD2 represents the volume of the *Global Times* narrative worldwide (keyword: Global Times) (please note that the previous *GT_WD* is defined the same but with "Hu Xijin" as the keyword*). CT_WD* is the volume of the China threat narrative worldwide (key word: China threat).

GT_WD3 represents the Chinese volume of the *Global Times* narrative worldwide (key word: 环球时报, in English: Global Times). *CT_WD_CH* is the Chinese volume of the China threat narrative worldwide (key word: 中国威胁论. In English: China threat theory).

GT_WD4 represents the Chinese volume of the *Global Times* narrative worldwide (key word: 胡锡进, in English: Hu Xijin).

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