

# Detection of (non-)existing participation in contested academic discourses

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## Abstract

This research-in-progress paper explores the potential external interference in academic freedom. Due to its large scientific output, China is taken as a case study. In some fields such as Taiwan, Tiananmen and Tibet, it is assumed that the academic freedom in regard to teaching, doing research and publishing is restricted. As yet, no study has assessed academic freedom with bibliometric data alone. This study aims to fill this gap, by proposing a bibliometric approach that indicates in how far Chinese publications differ from international publications in regard to the co-occurrence of terms related to contested topics. The three topics tested in this proof-of-concept study are Tiananmen, Tibet, and Uyghur. Results show that papers exclusively published by Chinese scientists on these topics lack terms that can be conceived as sensitive, whereas other nations than China use sensitive terms. The findings suggest that the bibliometric method is capable of indicating potential external interference in academic freedom to some degree. However, it cannot distinguish between censorship and self-censorship or genuine lack of national interest in a topic. Future research will focus on the automatic extraction of censored or restricted research topics based on bibliometric data.

## Introduction

Since Xi Jinping came to power in 2012, the ideological control in universities was strengthened and the academic discourse in China has narrowed (Pringle & Woodman, 2022). Censorship of narratives or data contradicting the Party's line on handling the Covid-19 pandemic is one among many examples demonstrating the Chinese restriction of academic freedom (GPPi, 2021). The Xi era not only limited the discourse in research and teaching but also in print and online publications. Notorious cases of censorship on the Internet were the pressure put on foreign publishing houses, such as Cambridge University Press and Springer Nature in 2017, to block sensitive content in order to remain present in China (Reuters, 2017). The censorship practices in China have attracted global scholarly interest and some studies tried to capture the curtailment of academic freedom by surveying scientists or country experts (Spannagel & Kinzelbach, 2022). Greitens and Truex (2020) surveyed more than 500 "China scholars" (i.e., international social scientists who research China at institutions outside of mainland China) on their experiences working temporarily in China. They found that repressive experiences are a "rare but real phenomenon" and that 70 percent of respondents agreed that "self-censorship is a problem in the China field", 22 percent were neutral and only 7 percent disagreed. In general, surveys of self-censorship in closed political systems can produce a significant bias on questions related to the citizen-regime relationship due to respondents' fear that opinions may be made known to authorities (Robinson & Tannenber, 2019). Self-censorship is often viewed from the lens of state regulations but may have more to do with individual-level calculations (Gueorguiev et al., 2017). Scientists may fear negative consequences for their academic career when they publish on sensitive issues. This risk-averse behavior may foster self-censorship. Both censorship and self-censorship would result in missing contributions to contested academic discourses and, hence, could manifest in bibliometric data. This assumption motivates our study to inspect the Chinese contribution to contested academic discourse. China has a large publication output, which eases the identification of any such missing participation. However, the issue of external influences on scientific discourses certainly affects other countries as well. So far, there are only a few comprehensive studies of external interferences on academic freedom to participate in academic discourses, in part because it escapes measurement. This research-in-progress paper thus aims to provide a bibliometric

approach based on Web of Science data to detect unexpectedly missing contributions to contested academic discourses. The thereby restricted academic freedom is used in this study as an umbrella term to capture the concepts of censorship and self-censorship, which are difficult to tell apart from each other, and moreover difficult to be distinguished from a genuine lack of interest in a particular topic. The restriction of academic freedom is operationalized as the unexpected lack of discourse on a specific topic. The bibliometric approach can obviously only indicate, but not prove external interferences. However, the availability of timely bibliometric data improves upon the current situation, where academic freedom is assessed via costly surveys among country experts. In the remainder of the paper, we address contested topics in China as case studies and explain the bibliometric approach to explore participation from China to these debates. After presenting the results, we discuss the findings and draw an interim conclusion.

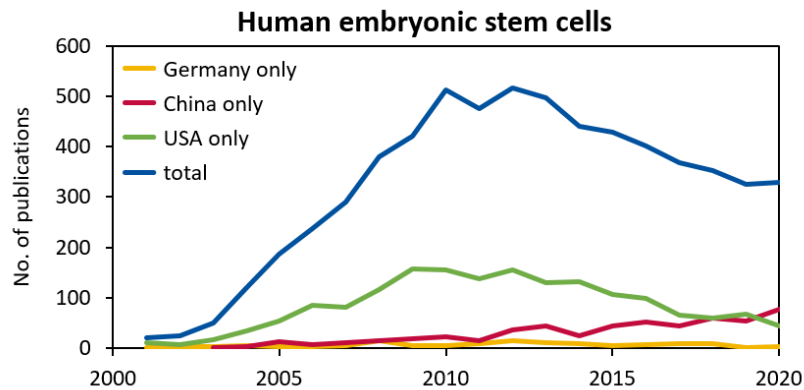
### **Contested topics in China**

In August 2017, Cambridge University Press (CUP) had removed about 300 papers published in the journal *China Quarterly* from its website in China, after a request from the Chinese government (Reuters, 2017). CUP had blocked articles on topics discussing the Tiananmen Square protests, the Cultural Revolution and Tibet, in order to save the access to other academic content in the country. This decision was understood by international peers as an affront to academic freedom and was reversed by CUP later in response to academic outcry. CUP thus restored the 300 politically sensitive articles and enabled full access to the journal. A few months later, Springer Nature had blocked at least 1,000 articles in mainland China to comply with local regulations, covering contested topics such as Taiwan, Tibet and Cultural Revolution (Enago, 2017). In contrast to CUP, Springer Nature's restriction remained in place. Chinese scholars in the humanities and social sciences are aware of curtailment of academic freedom and know that they have to avoid the so-called "3 Ts", i.e. Taiwan, Tiananmen and Tibet (Douglass, 2021). The 1989 Tiananmen Square protests and the crackdown are burned into the global consciousness but are not openly discussed at home. In 2008, when Tibetans held widespread protests calling for freedom and return of the Dalai Lama, Chinese authorities tightened control by using intrusive practices of mass surveillance and censorship to perpetuate human rights violations in Tibet (TCHRD, 2020). Authorities also imposed an extensive surveillance over the minority of Uyghurs and since 2017 interned an estimated 1 million Uyghurs in re-education camps (Douglass, 2021).

### **Bibliometric data and approach**

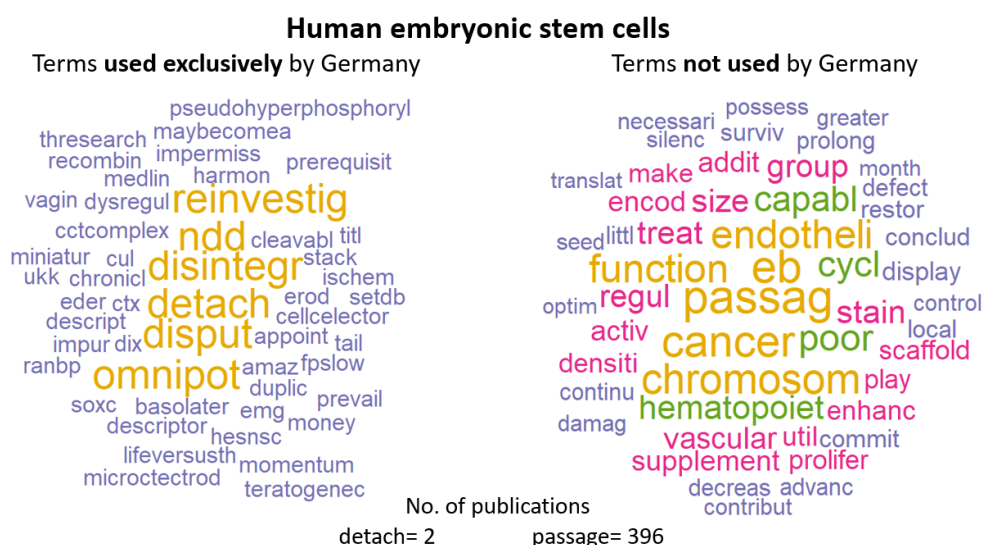
Contested topics such as the 3-Ts, Uyghurs, Cultural Revolution and Xinjiang were delineated and explored in Web of Science (WoS). For reasons of space limitation, the results section is limited to Tiananmen, Tibet and Uyghur. The bibliometric data used in this study are sourced from the German Kompetenznetzwerk Bibliometrie's in-house version of WoS. The analysis focuses on articles and reviews published in journals between 2001 to 2020. Chinese and non-Chinese publications are examined on the basis of their country code in affiliation data. Co-authored papers by China and other countries are treated as international publications. The method to detect academic freedom is as follows. The field delineation is based on the search for a contested topic (e.g., Tiananmen) in article titles and abstracts of publications. All lexical terms that co-occur with the term representing the contested topic were extracted. Terms used exclusively in Chinese publications were compared with terms used by other nations than China. The latter is represented as word clouds with stemmed words produced in R. Note that only the 50 most frequently occurring terms are visualized in the word clouds and that the size and color of the terms relate to the number of occurrences. In the following, the method is demonstrated on the basis of a notorious case of external interference in research. In Germany, the use of human embryonic stem cells (HESC) is restricted by the Embryo Protection Act of 1991

(EuroStemCell, 2022). The derivation of embryonic stem cell lines is a criminal offence, whereas the import of embryonic stem cell lines is permitted under strict conditions if they are vital in developing new medical knowledge. The imported embryonic stem cells must have been derived abroad before the 1 May 2007. In contrast to Germany, research on stem cells is not strictly regulated in countries such as USA, China, Great Britain and Israel. Figure 1 shows the publication growth on HESC in WoS between 2001 and 2020. One can infer that the interest in this research topic has steadily grown until 2010 and then declined at the expense of research on adult stem cells. Germany has a small number of papers that were exclusively published by Germany-affiliated scientists.



**Figure 1. Growth of publications on HESC in WoS in 2001-2020, distinguished by total publication output and only those from Germany, China and USA**

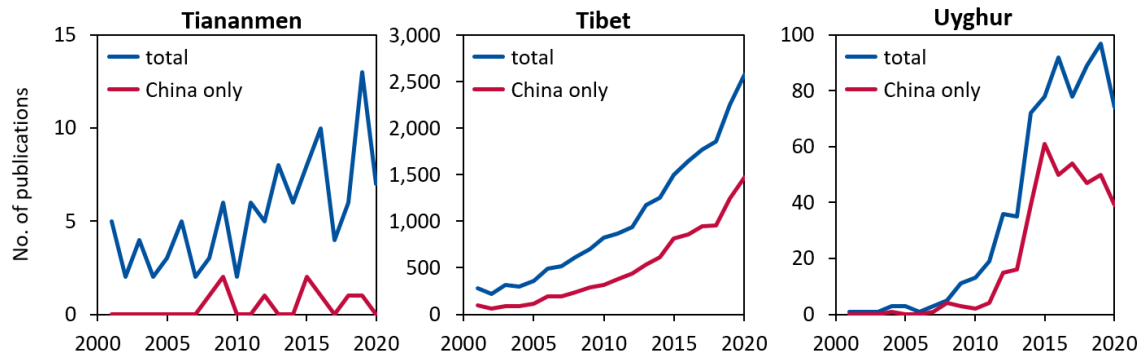
Figure 2 compares the German research on HESC with the rest of the world. On the left-hand side, terms related to HESC in abstracts or article titles published exclusively by German scientists are depicted. On the right-hand side, the word cloud represents terms German scientists do not use in publications, but other nations do. The word cloud on the left shows that there are only a few terms German scientists use related to stem cell research. In contrast, the word cloud on the right illustrates that German scientists do not publish on stem cell research related to *cancer*, *endothelial cells*, *chromosomes*, or *passage*. The word clouds suggest that the restriction of academic freedom on stem cell research manifests as a lack of discourse on the topic.



**Figure 2. Juxtaposition of terms used exclusively by German scientists on the topic of HESC and those terms that other nations than Germany use.**

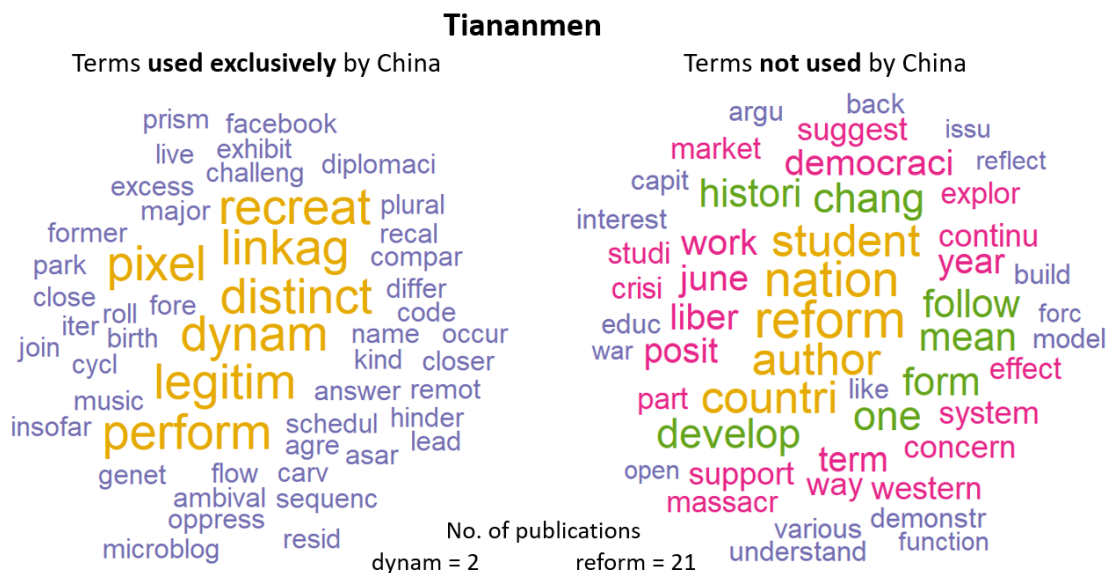
## Results

Figure 3 shows the number of articles and reviews delineated for each of the three topics, Tiananmen, Tibet and Uyghur. Except for the topic of Tiananmen, the publications by scientists exclusively affiliated in China constitute the majority of publications. Note that the y-axis is differently scaled for each of the topics.



**Figure 3. Growth of publications in WoS according to topic in 2001-2020, distinguished by total publication output and only those from China.**

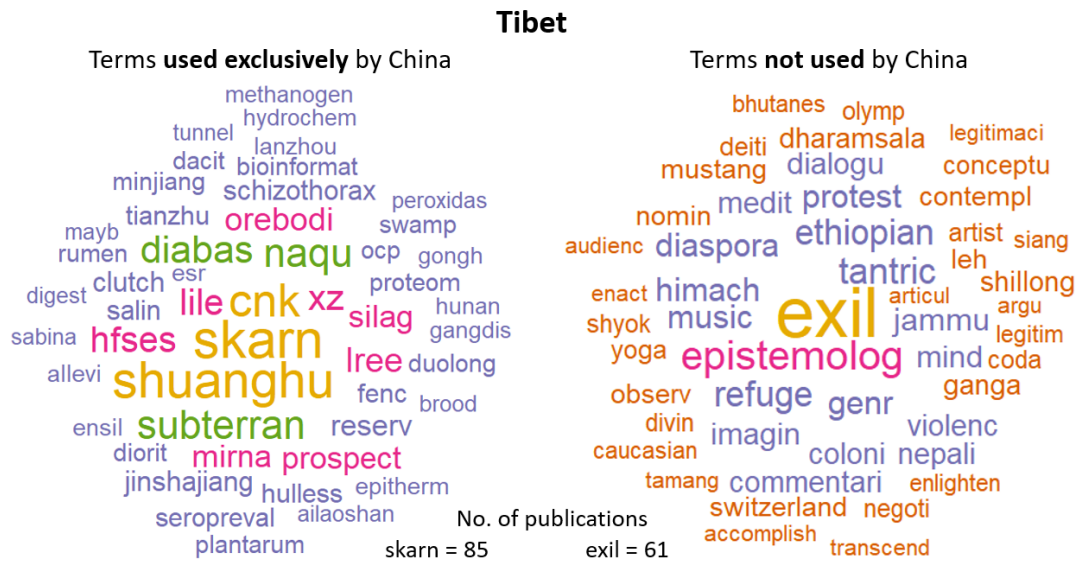
Figure 4 shows on the left-hand side the terms co-occurring with the term Tiananmen in abstracts or article titles published exclusively by Chinese scientists. On the right-hand side, the word cloud represents terms Chinese scientists do not use in publications, but other nations do. One can infer from Figure 4 that Chinese scientists use rather neutral terms related to Tiananmen, whereas there are 21 publications in WoS by countries other than China that write about *reform* in co-occurrence with Tiananmen. Other terms that Chinese scientists do not use in publications related to Tiananmen are *june*, *demonstr*, *student*, *massacre*, *liber*, and *war*.



**Figure 4. Juxtaposition of terms used exclusively by Chinese scientists on the topic of Tiananmen and those terms that other nations than China use.**

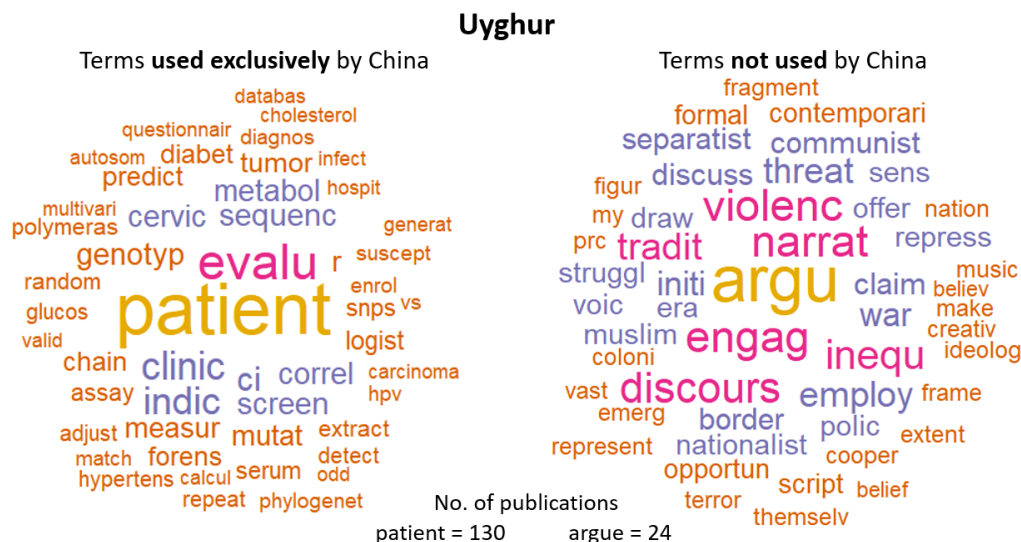
Similarly, Figure 5 shows the word clouds related to Tibet. Chinese publications focus on geological topics related to the geography of Tibet, e.g., *Shuanghu* (county), *Naqu* (city),

and (sedimentary) rocks, e.g., *lree* (light rare earth elements), *skarn*, *dacit*, and *diorite*. In contrast, non-Chinese publications use terms such as *exil*, *diaspora*, *protest*, *refuge*, *coloni*, and *violenc*.



**Figure 5. Juxtaposition of terms used exclusively by Chinese scientists on the topic of Tibet and those terms that other nations than China use.**

As mentioned in the chapter on contested topics in China, the government takes ruthless actions against its Uyghur muslim minority to suppress extremist ideas as a risk to the country. Figure 5 shows that Chinese scientists are unique in publishing on Uyghur and *patient*, *clinic*, *evalu*, *screen*, *genotype*, *detect* and *predict*. These terms are related to authorities collecting DNA from residents to build a comprehensive DNA database to fight crime, which was masked as a free health check (Wee, 2019). According to human rights groups and Uyghur activists, nearly 36 million people participated in 2016 and 2017 in the collection of DNA samples, images of irises and other personal data (ibid.). However, Chinese scientists are not visible in WoS with publications related to Uyghur and terms such as *argu*, *violenc*, *discours*, *threat*, *communist*, *repression*, *separatist*, *terror* or *war*.



**Figure 6. Juxtaposition of terms used exclusively by Chinese scientists on the topic of Uyghur and those terms that other nations than China use.**

## Discussion and conclusions

The results indicate that terms exclusively used by scientists affiliated to institutions in mainland China differ from terms used in publications by countries other than China, although publications from China quantitatively dominated on Tibet and Uyghur. The terms that Chinese scientists do not use in publications related to the three contested topics analyzed can be characterized as sensitive. The fact that scholars working in other countries than China use sensitive terms in the context of these topics, suggests that there is less interference than in China. Greitens and Truex (2020) write that the academic freedom of foreign scholars allocates them the responsibility of addressing sensitive issues because they are better positioned to do so than local Chinese scientists. Being censored is regarded as a “badge of honour” among certain scholarly communities, witnessing intellectual truthfulness (Greitens & Truex, 2020).

This research-in-progress paper shows that a lack of participation in contested topics becomes manifest in bibliometric data and may be indicative of external influences. The exemplary case of restricted research on stem cells in Germany illustrated the non-existing academic discourse on a contested topic. Moreover, the results were corroborated by the application of the method on the basis of Scopus data. Even though the coverage of Chinese journals in Scopus is much higher than in WoS, which would assumingly increase the chance of covering a broader range of terms used by Chinese scientists, the terms that are not used are overall similar to those in WoS. However, the bibliometric method proposed is not capable of telling censorship from self-censorship or lack of interest apart. Unlike directed acts of censorship by publishers, self-censorship is a non-expressive behavior (Gueorguiev et al., 2017). An author may avoid a subject due to reasons of interest and expertise rather than because it is censored. Censorship and self-censorship impacts research on social, ethical and political issues. It is therefore imperative to strengthen our knowledge on this aspect of the science system. To the best of our knowledge, this research-in-progress study is one of the first bibliometric studies trying to assess academic freedom. Future research will focus on the automatic extraction of censored or restricted research topics based on bibliometric data. Moreover, further analyses will include citation analysis of publications featuring sensitive terms to figure out in how far Chinese scientists have access to it and cite it in their studies.

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