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# The United States in Chinese environmental policy narratives: Is there a trump effect?

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**Abstract**

Drawing on insights from studies of environmental politics, the policy process, and the Narrative Policy Framework (NPF), this study examines the Trump administration's influence on how the United States is characterized by Chinese environmental policy scholars. Using an NPF approach and policy narratives on the topic of global environmental governance, our empirical results suggest that the Trump administration has shifted Chinese environmental policy scholars' constructed role of the US but not China's relationship with the US in these narratives. Specifically, there was a widening polarization of the US being portrayed as hero and villain over the sampled time frame (2010–2020) yet the portrayal of the US as an ally remained stable. These portrayals of the US also do not vary across narrators' knowledge and professional backgrounds. Our findings help confirm previous arguments that the Trump Administration's influence on environmental policy and politics in China is more rhetorical than substantive, and indicate that, despite the escalating rivalry between the two countries, Chinese environmental policy scholars continue viewing the US as an ally in global environmental governance. The findings likewise provide insights for rebuilding international climate cooperation and global climate governance leadership.

**KEYWORDS**
Chinese policy narratives, cross-system interactions, global environmental governance, NPF, public policy process, US-Sino rivalry

# INTRODUCTION

The Trump administration has been a source of controversy in environmental policy and politics both in the US and internationally (Bomberg, 2017; Pulido et al., 2019). Some disputes stem from the administration's more visible movements such as rolling back environmental regulations and withdrawing from the Paris Agreement, while others are embedded in concerns about ideational shifts that may have challenged or even contradicted established principles of environmental policymaking (see Bomberg, 2021; Dallas & Waring, 2017). Although the Biden administration has made attempts to reverse many of its predecessor's policy actions, it is likely that these actions will have long-lasting effects. This is because invalidating such effects normally requires significant efforts to reshape pertinent organizational structures, policies, and norms and values, as well as buy-in from relevant actors and interests (Bomberg, 2021).

Following the developments in the political arena, scholars in the fields of public policy and political science have been studying the influence and legacy of the Trump administration on environmental policy and politics. Examples range from follow-through assessments of the administration's environmental movements and their political and policy implications (see Bomberg, 2017, 2020, 2021), to analyses of the reconfigured federal-state dynamics in environmental politics and policymaking (see Balthasar et al., 2020; Bromley-Trujillo & Holman, 2020; Konisky & Woods, 2018), and to discussions on alternative arrangements in environmental governance and regulation (see Arroyo, 2017; Ba, 2021; Green, 2018). Despite contributions, most studies have focused on the administration's domestic influences, leaving consequences in the international arena understudied (for exceptions, see Bomberg, 2020; Jotzo et al., 2018).

On the transnational level, although less emphasized in the literature, studies do show that the Trump administration may have led to an array of political and policy challenges for global environmental actions. For instance, the administration's climate agenda and policy changes may have undermined global emissions reduction commitments (Jotzo et al., 2018), furthered anti-climate movements around the globe (Urpelainen & Van de Graaf, 2018), diminished funding for adaptation and mitigation in developing countries (Zhang et al., 2017a), and weakened the leadership in the global environmental governance regime (MacNeil & Paterson, 2020; Natasha Geiling, 2017). Such studies are premised on the notion that the US is a major contributor and a de facto leader in the global response to climate and environmental challenges, and that the Trump administration has severely challenged these roles (see Bomberg, 2020; Jotzo et al., 2018).

The global response to climate and environmental challenges is largely characterized by a "global commons" approach in which cooperation and collective action are considered necessary and the default (Bernstein & Hoffmann, 2019). That means, interactions between the US and other countries and regions, as well as their reactions to the Trump Administration, are key to understanding the administration's influence on global climate and environmental actions. From a policy process perspective, understanding interactions among policy subsystems is necessary to delineate their mutual influence on one another as well as the systematic patterns of policy change, design, and learning (Jones & Jenkins-Smith, 2009). From a social constructionist perspective, interpretations of, and reactions to, the Trump administration by policy communities in other regions and countries likewise aid in constructing the administration's policy influence (Burr, 2003).

We add to this line of research by examining the Trump administration's influence on how the US is characterized by an important Chinese environmental policy community, the scholarly community. Specifically, we analyze how the Trump administration shaped the

way in which Chinese scholars construct the role of the US and the China-US relationship on the topic of global environmental governance. In doing so, we also examine whether the constructed role of the US and the China-US relationship vary across scholars' knowledge and professional backgrounds. While it seems intuitive to assume heterogeneity across narrative output of policy narrators with varied knowledge and professional backgrounds, the authoritarian political system and social norms in China may nevertheless make the assumed variation less obvious (Chua et al., 2019; Shen et al., 2009). Our motivation for focusing on a Chinese environmental policy community is twofold. First, China is a key stakeholder in the global response to climate and environmental challenges and the China-US relationship is likewise critical to global actions and agenda (Nordhaus, 2015; Tagliapietra & Wolff, 2021). The escalating hostility between the two countries in the wake of the Trump administration might have also introduced new risks and uncertainties (Lu et al., 2020; Zhao, 2021). Second, the scope and depth of China-US interactions on global environmental actions indicate sufficient data. Understanding reactions of Chinese environmental policy communities to the Trump administration aids in further delineating the administration's influence on global climate and environmental actions.

Below, we proceed via the following steps. We first provide a synthesized review of Chinese environmental policy communities' responses to policy dynamics since the Trump administration as well as of the NPF literature more broadly. We then propose four hypotheses regarding the effect of the Trump administration on how the US is characterized in Chinese policy narratives on the topic of global environmental governance. We test our hypotheses through an NPF research design focusing on Chinese environmental policy scholars and conclude with a discussion of our results, the contributions and limitations of our study, and our reflections on applying the NPF to non-liberal-democratic contexts.

## LITERATURE REVIEW

## The US and China in global environmental governance

On the transnational level, the dynamics in US environmental policy and politics since the Trump administration have furthered discussions about the possibility of other regions and countries, such as the European Union and China, leading global climate and environmental actions (Urpelainen & Van de Graaf, 2018). The reasoning behind proposing China's leadership primarily stems from the scale of China's emissions, its technology production capacity, overseas finance and cooperation, renewable energy progress, and authoritarian political system (see Beeson, 2010; Busby & Urpelainen, 2020; Wang & Wang, 2017). Such arguments have been challenged by some studies, arguing for instance that the proposed Chinese leadership could be complicated by its internal disagreements, low public or business participation, and countervailing strategies to secure China's global market advantages (Engels, 2018). Research also points out that authoritarian environmentalism might be less effective in generating policy outcomes (Gilley, 2012).

Responding to the narrative of China's possible climate leadership and to policy dynamics since the Trump administration more broadly, the Chinese government is largely in line with the international community, highlighting the administration's potential negative impacts on international climate cooperation, actions, and leadership (G20 Summits, 2017). Yet what

distinguishes the Chinese government's response is a careful emphasis on shared and collective global leadership, rather than assuming such leadership entirely as expected by many countries (Chen et al., 2018). The difference reflects China's strategic position and further necessitates a better understanding of responses to the Trump administration on environmental issues from different policy communities in China. Moreover, as indicated previously, the escalating rivalry between the two countries since 2016 due to growing ideational differences and geopolitical conflicts might further complicate these responses.

One promising approach to further studying China's responses/reactions is to focus on the constructed role of, and China's relationship with, the US in Chinese environmental policy narratives. This is because roles and relationships are essential units of analysis in political and policy communications and are socially and politically distinguishing and consequential (Béland, 2017; Hornung et al., 2019). This is also because stakeholders' perceived roles of, and relationships with others, can help reveal their policy beliefs (Weible, 2005) and have been considered key to mobilization in political and policy processes (Hornung et al., 2019). Here, we broadly define roles as social categories or sets of socially distinguishing attributes that are assigned to or assumed by individuals or groups of individuals in a particular setting (Fearon, 1999). Along this line, relationships can be understood as ways in which individuals or groups of the same or different roles are connected to one another.

## The narrative policy framework

The Narrative Policy Framework (NPF) is a theoretical approach to understanding policy and political processes. It centers narratives and posits that policy narratives can be studied by using elements that are transferable, which facilitates comparison across contexts, especially across policy realms. Here, policy narratives can be defined as narratives that refer to the public policy of interest and have some combination of key elements defined by the NPF (Shanahan, Jones, & McBeth, 2018). The key elements of the NPF fall under form and content. Form includes setting, characters, plot, and moral of the story, while content includes belief systems and strategies. Setting entails the special location and time when the narrative occurred or other relevant information about the context of the narrative. Characters typically include heroes, villains, victims, and allies (Merry, 2016; Shanahan, Jones, McBeth, & Radaelli, 2018). Plot is the organizing action of the narrative; even though this may not be coded for, plot is a key criterion for making a communication a policy narrative. The last type of narrative form is the moral of the story. This is the policy solution constructed by the narrator. Regarding content, the belief system denotes the values that the narrator expresses, either explicitly or implicitly, in their narratives, while strategies include attempts by narrators to change or control the trajectory of the policy process. For instance, an angel shift means a group within a policy realm begins to emphasize the role of heroic characters, and de-emphasizes the role of villains (Shanahan et al., 2013).

Applying the NPF requires an understanding of its core assumptions, which include social construction, bounded relativity, generalizable structural elements, simultaneous operation at three levels (i.e., micro, meso, and macro), and the homo narrans model of the individual (Jones et al., 2014; McBeth et al., 2014). Social construction assumes the existence of multiple interpretations of the world, and the NPF focuses on social constructions to understand political and policy processes. Bounded relativity indicates that social constructions related to the policy and political processes are not random; rather, they are bounded by beliefs or norms. Generalizable structural elements in narratives refer to "specific generalizable structures such as plots and characters

that can be identified in multiple narrative contexts" (Jones et al., 2014, p. 10). This assumption rejects the idea that narratives are unique and cannot be classified through a coding process. The idea of simultaneous operation at three levels posits that narratives interact across the individual, group/coalition, and cultural/institutional levels. Finally, the homo narrans model of the individual assumes that narratives play a key role in how individuals operate in the world, especially how we understand the policy realm and communicate within it (M. D. Jones et al., 2014; Shanahan, Jones, & McBeth, 2018).

Lastly, about sources of narrative data, corresponding to the NPF's three levels of analysis (i.e., micro, meso, and macro), sources of narrative data can also be organized into three levels and take a range of variants. At the micro level, the NPF focuses on the relationship between policy narratives and individuals, and narrative data can come from opinion surveys and interviews. As the meso level, NPF research deals with policy actors' narrative construction and communication and policy narratives can take the form of "interest group websites and newsletters, editorials, media accounts, social media, speeches, legislative records, legislative testimonies, court opinions" (Shanahan, Jones, & McBeth, 2018, p. 340). At the macro level, the NPF studies institutional and cultural narratives that convey shared societal or cultural values and the data can come from narratives around historical events, historic debates, and cultural orientations (Shanahan, Jones, & McBeth, 2018). An important observation of narrative data sources and the NPF literature in general is that NPF research continues progressing by, and therefore remains open to, identifying new data sources. A key criterion for the identification of new sources of narrative data is the applicability of the NPF's definition of a policy narrative to the sampled texts/narratives, and a research-question-driven rationale for inclusion and exclusion is likewise necessary to further refine the sample.

In sum, a review of the literature on Chinese environmental policy communities' responses to the policy dynamics since the Trump administration and of the NPF suggests two promising areas. First, studying Chinese environmental policy communities' narratives has the potential to further delineate the Trump administration's policy influence on the transnational level. Second, the NPF offers a promising analytical approach. The current study applies an NPF approach to studying the Trump Administration's influence on how the US is constructed by an important Chinese environmental policy community, the scholarly community.

## THEORETICAL EXPECTATIONS AND HYPOTHESES

In this section, we elaborate several theoretical mechanisms through which the Trump administration might have affected the constructed role of, and China's relationship with, the US in Chinese policy narratives on the topic of global environmental governance. In general, we expect that the administration has affected both (i.e., role and relationship) and that this impact might vary across narrators' knowledge and professional backgrounds.

### Constructed/perceived role of the US in global environmental governance

Constructing roles in policy narratives serves two purposes: (1) to attach actors to a policy issue or a framing of a policy issue; and (2) to tie them to the interest groups that are in favor of or against a framing of an issue (van Hulst & Yanow, 2014). In other words, constructing

policy actors' roles works to situate them in a policy issue's causes and its proposed solutions. Construction of policy actors' roles also interacts with pertinent policy and political events, since actors presumably respond to such events (Birkland, 1998). Policy and political events thus can influence policy actors' constructed roles in related policy narratives. In the case of the Trump Administration, while the Chinese government has remained discreet, it is logical to expect its domestic policy actors, particularly environmental policy communities, to take advantage of this opportunity to promote their own agendas. For instance, emphasizing the negative consequences of the Trump administration and persuading the Chinese government to take more ambitious environmental policy actions. This is particularly the case considering the two countries' escalating rivalry, which is fueled by ideational differences and geopolitical conflicts, among other causes (Lippert et al., 2020; Zhao, 2021). Relating to the NPF's character element, we can likewise expect the US to be increasingly cast as a villain in Chinese policy narratives on the topic of global environmental governance due to the perceived or framed negative consequences of the Trump administration on global environmental actions. Here, a villain is defined as the entity causing the policy problem whereas a hero is a potential fixer of the policy problem, which, in the context of global environmental governance, is the lack of progress and coordination in global environmental actions. The above reasoning leads to the following hypothesis:

> **Role Hypothesis**: The Trump Administration has affected the constructed role of the US to be more villainous in Chinese policy narratives on the topic of global environmental governance.

## Constructed/perceived China-US relationship in global environmental governance

As noted, roles and relationships are two closely intertwined concepts in policy and political processes. Dynamics in the construction of policy actors' roles thus are likely to be mirrored in dynamics of policy actors' relationships. This is particularly true considering the prevalence of interconnectedness of policy actors within and across subsystems (Brandenberger et al., 2020). To this end, actors' constructed relationships in pertinent policy narratives can likewise be sensitive to policy and political events. The rationale lies in the constant search by the varied advocates for opportunities for policy change (Birkland, 1998; Kingdon, 2011), and facilitating such opportunities often involves reaffirming or reconstructing existing relationships (Leifeld, 2013). This has been well documented for different events in varied issue areas in Western contexts (see e.g., Baumgartner & Jones, 2010; Birkland, 1998; Boin et al., 2009).

Moving on to the Chinese context, although China's authoritarian political system might complicate the interplay between policy events and policy narratives, we still suspect there could be room for policy-related event-narrative interactions in Chinese policy and political processes, given policy narratives' universality across contexts (Smith-Walter & Jones, 2020) and sensitivity to high-profile issue areas such as climate change and public health (Hulme et al., 2020). Regarding the Trump administration, we argue that it would also affect the constructed China-US relationship in Chinese policy narratives on the topic of global environmental governance. This is because, while some evidence shows that the administration's environmental impact is more rhetorical than substantive (see Bomberg, 2017), it has nevertheless introduced a great deal of long-standing uncertainty for policymakers and stakeholders both in China and around the world

(e.g., the future of the global climate governance regime; Hultman & Gross, 2021). Not only has such uncertainty created opportunities for policy advocates, but also possible new directions for the China-US relationship in the global environmental governance regime (Ross et al., 2020). Based on the information presented, we hypothesize that:

> **Relationship Hypothesis**: The Trump Administration has affected the constructed China-US relationship to be more adversarial in Chinese policy narratives on the topic of global environmental governance.

## Background and portrayal of the US in China

Constructing policy narratives often entails an interactive and intersubjective process through which understandings/framings of policies and politics are created (van Hulst & Yanow, 2014). Such understandings/framings can thus be influenced by the knowledge and professional backgrounds of those who create them (i.e., policy narrators). These backgrounds include, for instance, educational attainment, occupation, and professional affiliation. Additionally, from a social constructionist perspective, assuming the existence of multiple realities (i.e., relativist ontology) and that knowledge is created interactively and interpretively (i.e., subjectivist epistemology; Weenink & Bridgman, 2017), it is reasonable to expect policy narratives to vary across narrators with different social experiences, which include their knowledge and professional backgrounds. Lastly, research on framing politics suggests that policy and political communication often represent a temporary equilibrium between one's beliefs, knowledge, positions, resources, and contexts (Jones & Song, 2014; Rhee, 2006). In other words, such communication might not be always homogeneous across communities and/or issue areas (Béland, 2017; Guo & Ba, 2020). While it seems obvious to assume heterogeneity across understandings/framings of policy narrators with varied knowledge and professional backgrounds, the authoritarian political system and less-developed civic culture in China may nevertheless make the assumed variation more difficult to observe (Shen et al., 2009). In this case, it is thus worthwhile to test if:

> **Background Hypothesis 1**: The constructed role of the US in Chinese policy narratives on the topic of global environmental governance varies across narrators' knowledge and professional backgrounds.

> **Background Hypothesis 2**: The constructed China-US relationship in Chinese policy narratives on the topic of global environmental governance varies across narrators' knowledge and professional backgrounds.

## EMPIRICAL CONTEXT & RESEARCH DESIGN

### Empirical context

We test our hypotheses by focusing on the Chinese scholarly community's portrayal of the US on the topic of global environmental governance. We do so for three reasons. First, the scholarly community represents an important group of actors in policy and political processes. This is well

documented in the literature as members of this community are thought to possess technical knowledge and expertise and can be enlightening in the long term (Cairney, 2019). Such qualities are particularly valuable in issue areas such as climate change and public health (Hulme et al., 2020). In some cases, scholars are even considered as "charismatic experts" to enhance the credibility and legitimacy of certain policy initiatives/movements (see Lawton & Rudd, 2014). The scholarly community's importance also stems from its influence on agenda setting and public opinion more generally (Kingdon, 2011). In the Chinese context, while early scholars may have questioned the policy influence, and indeed the autonomy, of the Chinese scholarly community (Bonnin & Chevrier, 1991), more recent studies suggest that scholars in China do participate in and influence the Chinese policy processes in a structured way via influencing decision-makers, social elites, and the general public and interacting with foreign scholarly communities (Glaser & Saunders, 2002; Xufeng, 2009).

Second, focusing on the Chinese scholarly community provides us with a relatively more accessible window into policy narratives in China (see the following section for a rationale for sampling scholarly articles as policy narratives). Most NPF studies analyze interest group narratives (e.g., interest group websites and newsletters, editorials, and media accounts; see McBeth et al., 2012; Merry, 2019; Shanahan et al., 2013; Shanahan, Jones, & McBeth, 2018). They do so to capture the contours of a policy debate, which is largely representative for policies within western contexts. Yet given China's authoritarian political system and less-developed civic culture (Shen et al., 2009), it is difficult to capture narratives of its interest groups and policy elites directly (Mochtak & Turcsanyi, 2021). The scholarly community, on the other hand, is more accessible with available narrative outputs such as articles written by scholars of various knowledge and disciplinary backgrounds on various issues. Here, not all scholarly articles can be included as policy narratives, a careful application of the NPF's definition of a policy narrative and a research-question-driven rationale for inclusion and exclusion is key to sampling scholarly articles as policy narratives.

Lastly, given our interest in detecting shifts in the constructed role of, and China's relationship with, the US in pertinent Chinese policy narratives, our focus on the Chinese scholarly community helps insulate our inferences from being biased by misconceptions about environmental challenges such as climate change that are relatively more common in other parts of society (Capstick & Pidgeon, 2014). Additionally, examining scholarly perspectives allows for a more consistent observation of variation in narratives, versus directly collecting from government actors, whose involvement in pertinent policy decisions and discourses may vary over time and/or be shaped by dynamics in policy attention (Jones & Baumgartner, 2005). This is particularly the case for long-term variation, which is the focus of our study. Along this line, the literature also acknowledges the difficulty of collecting historical narratives of Chinese policy processes (Zhang & Yang, 2020), making scholarly narratives a suitable alternative to interest group narratives.

Here, while the Chinese scholarly community can be an accessible and useful window into policy narratives in China, it is not without its limitations. First, despite the growing autonomy and policy influence of scholars in China, the degree to which scholars influence the policy process remains unknown and varies across individuals and/or issue areas. Second, given China's authoritarian political system, studies also suggest the possibility of self-censorship among scholars who conduct research on Chinese policy and political processes, particularly on sensitive political issues (see Greitens & Truex, 2020). Third and as noted previously, scholarly narratives represent only one segment in the broader spectrum of policy narratives in China, which encompass, among others, media and interest group narratives. Focusing solely on scholarly narratives

thus renders our analysis and inferences less representative. Yet, given China's nascent civil society (Yang & Cheong, 2019), the government's influence on and control of nongovernmental organizations (Hasmath et al., 2019) and media and online forums (Repnikova & Fang, 2018), collecting interest group and media narratives could be difficult and requires further validation (e.g., digital disinformation and misinformation; Woolley & Howard, 2018). We therefore chose to focus on scholarly narratives based on the aforementioned justifications.

## Rationale for an NPF approach

Smith-Walter and Jones (2020) posit that narratives are universal. It is thus expected that across contexts, the fundamental expectations regarding the role of policy narratives at the core of the NPF will still be applicable. For instance, Huda's, 2019 study extends applications of the NPF to a non-Western context, using the case of Indian agricultural biotechnology policy. It suggests the narrative elements are indeed transferrable across policy and cultural contexts. Likewise, Schlaufer, Khaynatskaya, et al. (2021) and Uldanov et al.'s (2021) application of the NPF to the Russian context show that narrative strategies as well as their connections with plots and characters are applicable in an authoritarian regime. Inspired by these studies, the current study focuses on Chinese policy narratives to analyze the impact of the Trump administration on how the US is portrayed by a Chinese environmental policy community, the scholarly community. This is, to our knowledge, the first application of the NPF to narratives in Chinese. Additionally, the extension of the NPF into a non-Western authoritarian context is valuable and important as it helps to better explicate the strategies utilized within narratives in different political systems and offers further empirical evidence on applicability of the NPF.

In particular, we focus on a new source of narrative data: scholarly articles. As noted previously, scholars in China possess a certain level of policy influence and their narrative output can be an accessible and useful window into policy dynamics in China (Glaser & Saunders, 2002; Xufeng, 2009). Along this line, the literature on rhetoric studies suggests that, apart from presenting scientific methods and evidence, scholarly articles can likewise engage in controversy and disagreements, produce arguments and judgments, mobilize beliefs and practices, and interact with contexts, convening varied social, political, and/or cultural messages (Fahnestock, 2009). In other words, by constructing scholarly articles, scholars also engage in discursive and/or argumentative practices that create institutionalized power with a broader societal influence (Blakeslee, 2000). This is particularly so in policy-related research in which scholarly articles are inevitably evaluative and interactive with dynamics in policy and political processes. Second and relatedly, to make scientific information relevant to different audiences while avoiding misleading them, scholarly articles often involve framing of such information, particularly in issue areas that are at the interaction of science and politics, such as climate change and embryonic stem cells research (Nisbet & Mooney, 2007). While framing scientific information might not necessarily adopt the strategic and/or political rationales for policy framing (see van Hulst & Yanow, 2014), the framing aspect of scholarly articles can nevertheless provide insights into the broader sociopolitical context on which these articles focus. In this case, the rhetorical and framing elements of scholarly articles make them a suitable narrative data source, although a careful application of the NPF's definition of a policy narrative is also required to ensure the validity of coding scholarly articles as policy narratives (for details please see our data collection and processing section). To help illustrate our use of scholarly articles as policy narratives, we also provide the following translated excerpts:

"... the US' withdrawal from the Paris Agreement indicates that Trump's chief strategist, Steve Bannon, and Environmental Protection Administrator Scott Pruitt, and others, have finally gained the upper hand and dominated the direction of the US climate policy. The reason for this decision is untenable, and it is not conducive to the US, nor is it conducive to global climate governance ... China is unable to fill the leadership deficit left by US' withdrawal, nor does it have the capacity to lead global climate governance alone, but it cannot be unresponsive to the expectations of the international community. Therefore, as a response to the international community's expectation of China to play a greater role at this critical moment, China can actively advocate the reconstruction of a collective leadership system for global climate governance. The specific plan is to replace the G2 leadership model with C5." (Zhang et al., 2017b)

"... the US has a wealth of experience in the operation of emissions trading. Its famous 'Acid Rain Program' provides an example for countries to set up carbon trading systems. Since the China-US joint statement on climate change was issued in November 2014, the US' attitude towards carbon emissions reduction has changed drastically, and it has begun to face the issue of climate change and carbon trading mechanisms. At the Paris Climate Summit, the US also promoted the adoption of the Paris Agreement. China should establish a national carbon trading market that can be in line with the international standards as soon as possible. This requires China to learn from the experience of the European Union, Japan, and the US." (Hao & Mao, 2016)

## Data collection and processing

As described previously, we focus on Chinese scholarly articles as policy narratives of interest. We therefore used the Chinese National Knowledge Infrastructure (CNKI) search engine to identify scholarly articles for analysis. The CNKI database is China's largest continuously updated academic literature database led by Tsinghua University and scholars have been using the CNKI database to supplement English-language databases such as Web of Science (WOS) and Scopus (see Zhang et al., 2020). Two search terms were used to search in subject: "Global Climate Governance" ("全球气候治理") and "Global Environmental Governance" ("全球环境治理"), with the first yielding 394 articles and the second 349 at the average length of 9333 Chinese characters. Here, while searching, we did not specify citation index programs such as the Chinese Social Sciences Citation Index (CSSCI). All articles are in the Chinese language and were screened for duplicates, topic relevance, and time frame (2010–2020). If an article referred to the policy of interest (i.e., global climate/environmental governance) and had at least one character (either hero, villain, victim, or ally), it was included as a policy narrative (Shanahan, Jones, & McBeth, 2018). Two coders whose first language is Chinese participated in the coding phase. The coding was done at the article level, reflecting the policy position intended by the authors (Merry, 2019). Specifically, NPF-related elements such as setting and characters were coded based on an NPF codebook (see online Appendix 1–3) and scholars' academic disciplines were coded based on their affiliations. Following Gottlieb et al. (2018), Gupta et al. (2018), and Merry (2019), we also checked the reliability of our coding scheme using the Cohen's Kappa scale (see online Appendix 4). Our intercoder reliability averaged

0.799, which suggests "substantial agreement" according to Landis and Koch (1977). The final sample consists of 493 articles (see online Appendix 5 for summary information). For a list of the sampled articles, please see the online supporting information (online Appendices 7 and 8).

## ANALYSIS AND FINDINGS

## Constructed/perceived role of the US in global environmental governance

In order to assess the Trump administration's influence of the constructed role of the US in Chinese policy narratives on the topic of global environmental governance (*Role Hypothesis*), we focus on two important types of NPF characters: hero and villain, which represent a potential fixer and cause of a policy issue, respectively (Shanahan, Jones, & McBeth, 2018). In doing so, following Merry (2019), we rely on percentages denoting how often the US is portrayed as hero and villain in each year's total numbers of identified heroes and villains (percentage hero and percentage villain). In other words, we assess shares of the US being perceived or constructed as a fixer or cause of global environmental governance-related policy issues in each year's total numbers of identified fixers and causes, as well as their variation over the sampled years in our sampled policy narratives (scholarly articles). We do so to detect the influence of the Trump administration on the perceived and/or constructed salience of the US as a potential fixer and cause of global environmental governance-related policy issues. While each policy narrative (article) might contain multiple heroes and villains, we focus on the US given our interest in assessing the Trump Administration's influence of the constructed role of the US in Chinese policy narratives.

Figure 1 presents the percentages of the US being portrayed as hero or villain from 2010 to 2020. In Figure 1, since 2016, both the percentages of the US as hero and as villain have risen, suggesting the widening polarization of the constructed roles of the US over time in our sampled scholarly articles. This result indicates the influence of the Trump Administration on the constructed roles of the US in the Chinese scholars' narratives on the topic of global environmental governance, and such dynamics are also suggested in their respective trend lines. A possible explanation is the Trump administration's vast policy changes in this area, rendering the US a more salient fixer or cause of global environmental governance-related policy issues. Here, the percentages of both heroes and villains have gone up because heroes and villains are coded independently, and the percentages are calculated by year, indicating the relative magnitudes of the US being constructed as heroes and villains in each year's sampled policy narratives (scholarly articles). To further assess the impact of the 2016 US presidential election, following Gupta et al. (2018), we conduct two Pearson's chi-square tests. The results indicate that there is a statistically significant difference between the proportions of the US being portrayed as hero and villain before and after (including) 2016 (see Table 1).

## Constructed/perceived China-US relationship in global environmental governance

Our second hypothesis (*Relationship Hypothesis*) concerns the influence of the Trump administration on the constructed China-US relationship in Chinese policy narratives on the
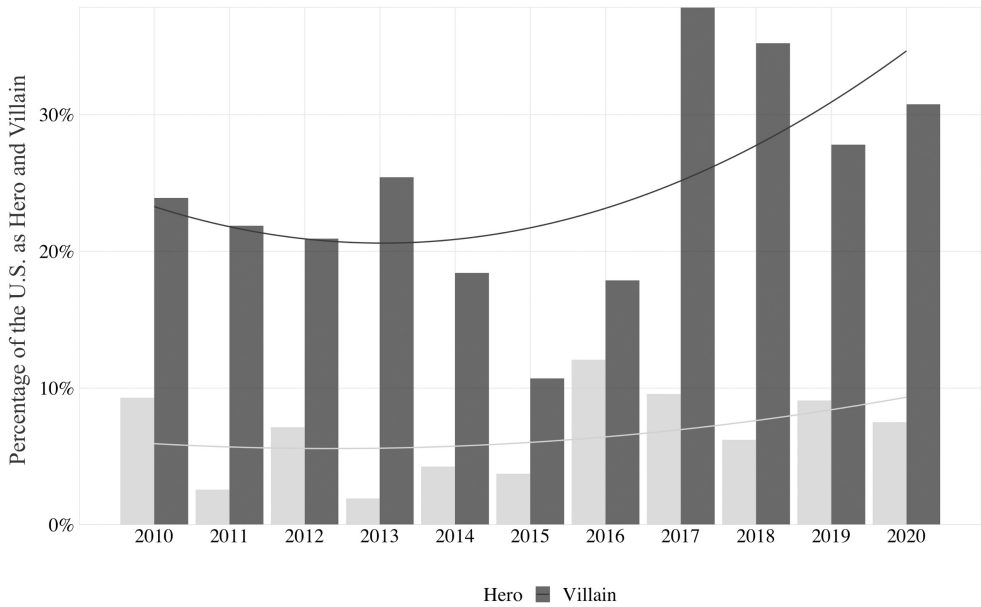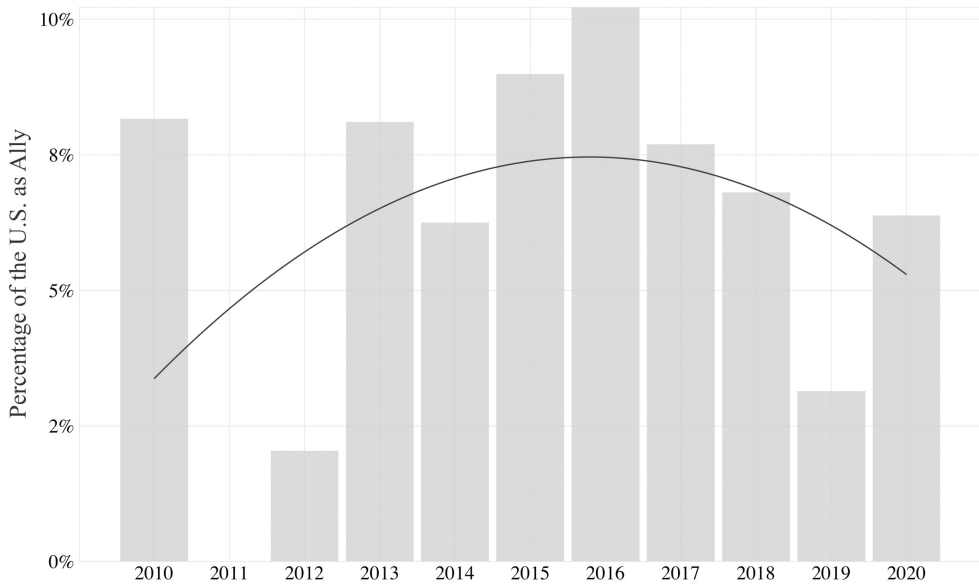
*Note*: Trend lines are fitted using a least squares method with a quadratic term.

**FIGURE 1** The US as hero and villain over time

**TABLE 1** Comparison of the US as hero, villain, and ally

| | Percentage of the US | | Chi-squared test | |
| --- | --- | --- | --- | --- |
| | Up to 2016 (%) | 2016 and beyond (%) | *X*-squared | *p*-value |
| Hero | 4.62 | 8.97 | 4.9825 | .0256 |
| Villain | 20.07 | 29.74 | 8.3884 | .0038 |
| Ally | 6.30 | 7.20 | 0.1861 | .6661 |

topic of global environmental governance. To test this hypothesis, we focus on a different type of character: ally. Our rationale is that identifying a policy actor as an ally in a policy narrative indicates alignment between the narrator's preferred policy solutions and the policy actor's policy position (Merry, 2016). In other words, allies are stakeholders thought to be aligned with heroes in a policy narrative (McBeth et al., 2005; Shanahan, Jones, McBeth, & Radaelli, 2018). Identifying a policy actor as an ally thus reflects the constructed relationships among policy-related actors. This is particularly the case in our study given that the scholars in our sample are situated in the Chinese policy context and their proposed policy solutions tend to be tailored to the Chinese government in addressing global environmental challenges. Figure 2 presents the percentages of the US being portrayed as an ally in each year's total number of identified allies from 2010 to 2020. In Figure 2, since 2016, a downward trend can be identified in the shares of the US as an ally in our sampled narratives, which largely mirrors the increasing hostility between the two countries since the Trump administration. This trend, however, is not supported by the Pearson's chi-square tests (see Table 1). In this case,

*Note*: Trend lines are fitted using a least squares method with a quadratic term.

**FIGURE 2**    The US as ally over time

we lack sufficient evidence supportive of the effect of the Trump administration on the constructed China-US relationship in global environmental governance-related Chinese policy narratives.

## Constructed/perceived role & relationship across backgrounds

Our last two hypotheses (*Background Hypotheses*) relate to the potential variation in how the US is portrayed across narrators' knowledge and professional backgrounds. To examine this, given our sample of scholarly articles, we first code the authors' academic disciplines based on their affiliations as a proxy for their knowledge and professional backgrounds. In total, seven disciplines have been identified (see Table 2). We then focus on the three types of characters in the first two hypotheses: hero, villain, and ally, and conduct three Pearson's chi-square tests to examine whether there is a difference in the identification of the US as these characters across the coded disciplines. The results show limited levels of statistical significance, with villain at the 0.9 confidence level, indicating that we do not have enough evidence to support the hypothesized variation. To further verify this result, we ran a series of logistic regressions with the identification of a character of interest as the dependent variable (e.g., *hero or not*) and time of identification (i.e., *year*) as the independent variable. In each regression, to examine the influence of academic disciplines, we introduce an interaction term between the independent variable and the coded discipline as a categorical variable (i.e., *year × discipline*). Figure 3 presents the estimated coefficients of the interaction terms (see online Appendix 6 for regression results). Here, the coefficients of the interaction terms remain largely statistically insignificant. Taken together, based on our data, we lack enough evidence to demonstrate the variation in how the US is portrayed across narrators' knowledge and professional backgrounds.

**TABLE 2** Comparison of the portrayal of the US across disciplines

| Discipline | Hero | Villain | Ally |
|---|---|---|---|
| Economics | 12.94% | 26.04% | 6.42% |
| Environmental studies | 4.88% | 23.36% | 6.96% |
| International relations/political science | 7.89% | 33.13% | 7.39% |
| Law | 7.38% | 29.37% | 6.67% |
| Management | 8.49% | 28.57% | 9.02% |
| Public policy | 4.92% | 21.93% | 9.30% |
| Other social sciences | 4.17% | 20.22% | 7.87% |
| $X$-squared | 7.9643 | 10.941 | 1.5494 |
| $p$-value | 0.2407 | 0.0902 | 0.9561 |

*Note*: Other social sciences include those whose author affiliations are academies of social sciences and those that are subjects in social sciences but with less than or equal to 10 observations such as communication, journalism, and history.
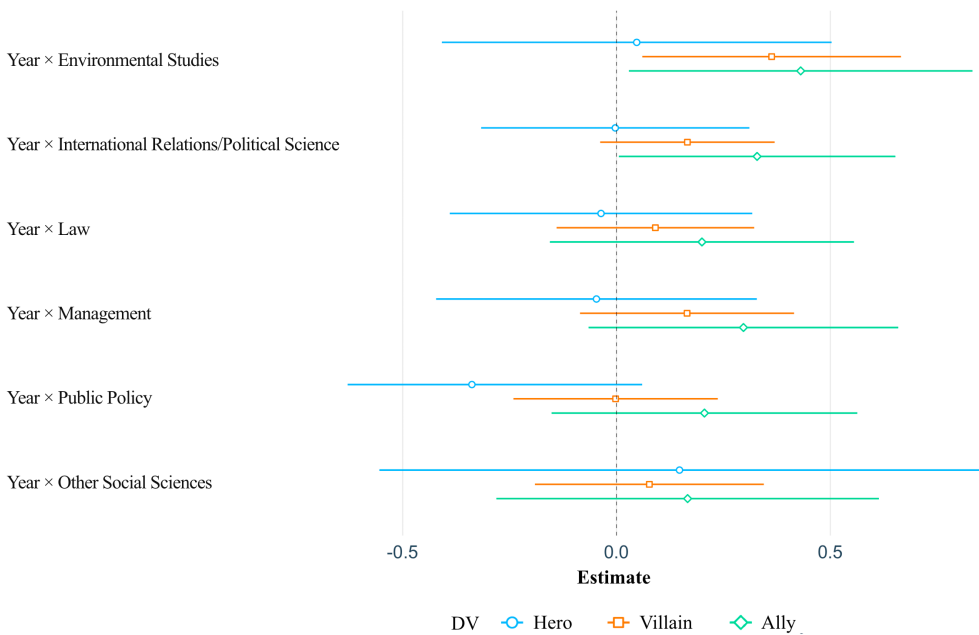


*Note*: Economics is the reference group. Only coefficients of interaction terms are reported. 95% confidence intervals.

**FIGURE 3** Estimated influence of knowledge and professional background.

# DISCUSSION AND CONCLUSION

Drawing on insights from studies of environmental politics, the policy process, and the NPF, this study examines the Trump administration's influence on how the US is characterized by Chinese environmental policy scholars. In doing so, relying on an NPF approach, this study focuses on the constructed role of, and China's relationship with, the US in policy narratives on the topic of global environmental governance. Additionally, this study investigates variation in how the US is portrayed across narrators' knowledge and professional backgrounds. Using a sample of Chinese

scholarly articles on the topic of global environmental governance from 2010 to 2020, our empirical results suggest that the Trump administration has affected the constructed role of the US but not China's relationship with the US in global environmental governance-related policy narratives. The portrayal of the US also does not vary across narrators' knowledge and professional backgrounds. Such findings echo previous arguments for the administration's impact being more rhetorical than substantive (see e.g., Bomberg, 2017) and indicate that, despite the escalating rivalry between the two countries, Chinese environmental policy scholars continue viewing the US as an ally in global environmental governance. This finding likewise provides insights for rebuilding international climate cooperation and global climate governance leadership.

The contribution of this study is threefold. First, it extends the current study of the Trump administration's impact on environmental policy and politics to the transnational level and represents one of the first attempts to examine dynamics in how the US is portrayed in other countries' environmental policy narratives. Along this line, the focus on China is valuable given that both China and the US are key players in global environmental governance and that the escalating rivalry between the two countries since the Trump administration has been complicating the global response to climate change. Second, our study paves the way for future efforts in studying inter-system interaction and engagement in environmental policy and politics such as transnational policy learning and narrative diffusion. This is particularly useful given the increasing interconnectedness across policy and political systems (see Jones & Jenkins-Smith, 2009). Third, this study is among the first applications of the NPF to Chinese policy narratives. This is notable because it helps extend the NPF's applicability to different political contexts and likewise expands the tools available to study China's policy communities and processes. This is useful especially considering the difficulty of collecting data in China due to its authoritarian political system and less-developed civic culture. To this end, the use of scholarly articles as narrative data is innovative and offers guidance for future studies aimed at measuring policy and political dynamics using varied types of documents. Relating to the NPF literature more broadly, our hypotheses on interactions between China and the US in issue areas such as global environmental governance speak to the NPF's meso-level application hypotheses, such as that variation in policy narrative elements helps explain policy dynamics (see Shanahan, Jones, McBeth, & Radaelli, 2018). More importantly, our hypotheses also further the connection between NPF characters (e.g., heroes, villains, and allies) and some essential units of analysis in political and policy communications such as roles and relationships. This helps enhance the operational definitions and applicability of NPF concepts.

Apart from the contributions, it is important to acknowledge several limitations. First, this study focuses on the Trump Administration and analyzes its impact on Chinese scholars' portrayal of the US. As the scholarly community is a somewhat specialized segment of a broader environmental policy system, generalizability of our findings, both within the Chinese environmental policy system and across systems, is limited. To this end, opinion surveys and experimental designs at the micro level across key stakeholder groups such as citizens, environmental activists, and government officials in different policy systems (see e.g., Chu, 2021; Fang et al., 2022) might help further delineate Trump administration's influence on China's environmental policy and politics. Second, about our data source, the use of the CNKI database is not without its limitations. While the CNKI database is China's largest academic literature database, it may nevertheless be unable to cover the full spectrum of the scientific enterprise in China. Relatedly, the database's inclusion and exclusion criteria, as well as whether and the extent to which the database itself engages in self-censorship (e.g., avoid including articles of politically sensitive topics),

seem less clear and warrant further scrutiny. These concerns may also apply to policy narratives/discourses drawn from other parts of the society, and call for finer-grained operational strategies such as in-depth interviews and social media analysis (see e.g., Ba, 2022; Merry, 2016; Pattison et al., 2022).

Along this line, our study likewise identifies several lessons for applying the NPF to Chinese policy and political processes. First, adjustments of the NPF are needed to fit the framework to the Chinese context given the differences in political institutions between China and other political systems on which the NPF literature has focused. Political institutions such as electoral rules and political regimes shape policymaking and outcomes (see Baumgartner et al., 2017; Persson, 2002). It is thus logical to expect policy narratives to evolve and function differently in different political institutions and contexts. For instance, according to Schlaufer et al. (2021a), in an authoritarian regime, policy debates tend to revolve around government-initiated policy reforms, and conflict containment tactics are commonly adopted in narratives that promote reform-oriented policy positions. Additionally, angel shifts and avoidance of causal mechanisms are also typical in pro-reform policy narratives in authoritarian regimes (see Schlaufer et al., 2021b; Uldanov et al., 2021). Nuances such as these need to be tested and incorporated in applications of the NPF to the Chinese context. Second and relatedly, China's policy supply is largely shaped by centralized goals such as those in the National Five-Year Plans (Xu, 2020). Within this goal-centered system, policies are goal-achieving instruments designed and implemented through a departmental-regional fragmented structure in which the regional dimension extends from central to jurisdictional-based local governments (i.e., provincial, municipal, and county) and the departmental dimension includes agencies in the central government and their sub-units in local governments (Jin et al., 2016). When applying the NPF to the Chinese policy narratives, particularly those that are around China's domestic affairs, it is important to account for the potential power asymmetries that could be induced by these hierarchies (e.g., central vs. local).

Broadly, we also reflect on the normative implications of this study. In other words, we discuss the potential influence of broader social norms on our data and findings as well as on the NPF more generally. Social norms, including values, customs, stereotypes, and conventions, are shared customary rules that govern behavior in groups and societies (Bicchieri et al., 2018). Within a given group or society, social norms impose uniformity of behavior on a wide range of behaviors such as market behavior, forms of communication, and political participation (Young, 2007). Among groups, however, social norms can vary substantially. In our study, while we acknowledge and reflect on the potential influence of China's formal political institutions on our data and findings, social norms may likewise play a role in shaping our data and results. For instance, studies show that norm tightness, "the degree to which a society is characterized by norms and the extent to which people are sanctioned when they deviate from these norms" (Chua et al., 2019, p. 6720), associates with individual level openness to experiences and self-monitoring tendency and varies across provinces in China. Such findings may help explain the lack of policy narratives in China and further challenge our assumption of individual-level homogeneity. Moving onto the NPF literature, while existing research acknowledges the prevalence of normative values in policy processes and conflict (Jones & McBeth, 2010) and encourages normative extensions of the NPF (Jones & Radaelli, 2015), it does not fully address the potential heterogeneity of social norms. That is, normative extensions of the NPF should also consider social norms in non-liberal-democratic societies.

Regarding the next step, this study suggests several potentially fruitful directions. First, continued attention should be paid to US-China relations in the global response to climate

change. For instance, questions worth exploring include how the new "competitive, collaborative, and adversarial" phase—as the two countries' relations were characterized by U.S. Secretary of State Antony Blinken (Wadhams, 2021) —will play out in their respective climate and environmental policies, and if this new phase will impact the global. This is particularly important given that international collaboration has sagged under the weight of the COVID-19 pandemic, the global response has plateaued in achieving deep decarbonization, and potential new paradigms are needed. Second, applying the NPF to Chinese policy processes, our study focused on characters such as heroes, villains, and allies. Future research is encouraged to explore other NPF elements such as plots and causal mechanisms to explore important topics such as power dynamics within and across policy subsystems as well as interactions between narrative evolution and institutional change. To this end, the NPF should also be applied to other policy domains such as social security and public health. Lastly, regarding using policy narratives in varying contexts, it is of great importance to take stock of existing data sources and operational strategies to build research infrastructures such as measurement banks and data repositories. This will enhance methodological development in the NPF literature and facilitate further empirical explorations.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.