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IDE DISCUSSION PAPER No. 929

**Do Chinese Judges Go Green?:
Quantitative Approach to Measure
Eco-Civilization Thoughts in
Judgements**
Kosei Yamada*

Abstract: The Communist Party of China requires judges in the People’s Court to apply “Eco-Civilization Thoughts” in adjudications. Notably, some Chinese judges cite ideology in their judgements; however, the entire picture is ambiguous owing to the lack of observation and analysis of the large collection of judgement texts. In this study, we aimed to empirically measure the ideological expressions of “Eco-Civilization Thoughts” in the reasoning of judgement using the Latent Semantic Scaling (LSS) method. The trained LSS model successfully captured the distinctive features of eco-civilization thought in reasoning. The result of our measurements suggests that eco-civilization has become an integrated part of reasoning; however, the sharp fluctuation of the polarity score indicates the inconsistency of the judges’ reference to the concept of eco-civilization. Further studies are required to identify the cause of fluctuation and the effect of ideological integration.

Keywords: Eco-Civilization, Quantitative Text Analysis, Judicial Documents, Ideology, Latent Semantic Scaling

JEL classification: K32, K41

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Do Chinese Judges Go Green?: Quantitative Approach to Measure Eco-Civilization Thoughts in Judgements

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Introduction: Intersection of Ideology and Judiciary in China

Owing to rapid economic growth since the late 20th century, the People's Republic of China has suffered from environmental degradation for decades. The performance of environmental governance remains controversial; nevertheless, prior neglect of the environment has now become an emphasis on environmental protection. Li and Shapiro (2020, pp. 5-8) described that the drastic shift of development strategies was justified by the new political philosophy called Eco-Civilization (“生态文明,” “shengtai wenming”). According to Hansen et al. (2018, p. 15), Eco-Civilization is the socio-technological imaginary that “of a utopian harmonious world in which production and consumption continue to grow, where technology and science have solved the basic problems of pollution and environmental degradation.”

As eco-civilization has transitioned from an idea to one of the state's purposes in China, it may serve as the ideological underpinning of every component of environmental governance in China. Eco-civilization first appeared in official documents in the form of Hu Jintao's speech at the 17th Communist Party Congress held in 2007. Xi Jinping declared this one of the major targets of the state development strategy in 2013. Eco-civilization was finally introduced as one of the state purposes of the Constitution of the People's Republic of China (PRC) in 2020. In the last decade, any official documents on environmental issues typically refer to eco-civilization at its start, representing every governmental work on environmental issues that must be planned and completed in

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accordance with this new thought.

In addition to legislative and executive branches, the judiciary is also expected to contribute to the realization of eco-civilization. Since the second year of Xi Jinping's governance, Supreme People's Court (SPC) has repeatedly issued opinions to guide judges toward "Eco-Civilization" (Table 1). Notably, eco-civilization and its slogans appear in a number of judgments for environmental cases. The emergence of bare ideological expressions in judicial documents indicates that judges and courts are morphing from legal professionals to followers of the Party. Additionally, lawyers interested in Chinese Law might be curious about whether these judgements are the consequence of legal minds or of political mobilization and intervention. Regardless of the interest, the emergence of eco-civilization in judicial documents reminds us of revisiting the relationship between politics and the judiciary in China.

Table 1. *Issue of Opinions of the SPC related to Eco-Civilization Thought¹*

No.	Date of Issue	Title in English
1	Jun. 23, 2014	Supreme People's Court Opinion on Comprehensive Strengthening of Environmental Resources Adjudication to Provide Strong Judicial Support for Promoting Ecological Civilization Construction.
2	May 26, 2016	Supreme People's Court Opinion on Fully Exercising Adjudicative Functions to Provide Judicial Services and Guarantee for Advancing Ecological Civilization Construction and Green Development.
3	Dec. 1, 2017	Supreme People's Court Opinion on Comprehensive Strengthening of Judicial Guarantee for Ecological Civilization Construction and Green Development in the Yangtze River Basin.
4	May 30, 2018	Supreme People's Court Opinion on In-depth Learning and Implementation of Xi Jinping's Ecological Civilization Thought to Provide Judicial Services and Guarantee for Ecological Environmental Protection in the New Era.

¹ These opinions contain more than one keyword or phrase of Eco-Civilization Thoughts in the title or the body of text.

5	Feb. 24, 2021	Supreme People's Court Opinion on Implementing the Yangtze River Protection Law.
<hr/>		
6	Oct. 8, 2021	Supreme People's Court Opinion on Strengthening and Innovating Environmental Resources Adjudication in the New Era to Provide Judicial Services and Guarantee for the Modernization of Building Harmony between Humans and Nature.

Since the publication of one of the earliest studies by Cohen (1969), the politics and judiciary in PRC, especially “judicial independence,” has been the topic of interest for several decades amongst scholars. Cohen aimed to describe the adaptation of “judicial independence” stated in the Constitution of 1954 through the analysis of related studies and careful comprehension of any available resources, including newspapers, textbooks for legal education, and records of interviews. The issue of “judicial independence” or “dependence” has been revisited by scholars every time a political shift occurs in China. Smeets (1992) found that the margin of judicial independence significantly widened under Deng Xiaoping’s leadership as a result of abolishing the examination and approval on adjudication by the Party; however, he reported some cases where Party intervention still remained in an informal manner.

As an example of a recent study, Wang (2021) examined the impact of the judicial centralization reform implemented by Xi Jinping, which aimed to detach the lower court from local parties and governments². Through an interview with judges and officials working in the local courts, he concluded that the local court was still “entangled in the all-encompassing web of the local party state’s political and economic power” (Wang, p. 87). Alongside the current judicial reform, politicization of the national judicial examination has progressed, encouraging judges to use political guidelines as an instrument to fine-tune the application of the law (Ahl, 2018). Being exposed to such entanglement with the Party and the politicization of judicial examination, judges may accept eco-civilization as one of the instruments to fine-tune the application of the law, even as a more general mindset for all types of work in court. However, the following questions remain: How do they apply eco-civilization thought in adjudication? To what extent is eco-civilization reflected in the collection of judgement texts?

² Such judicial reform attempts to transfer the management authority over local court’s finance and personnel from the local to the provincial levels.

In most literature, there is an option to employ an institutional approach to describe how the Party or the executive branch can affect courts and judges. Another major option is an empirical approach; however, statistical methods are rarely used to address this issue³. Institutional approaches provide a fundamental framework for understanding the interaction between politics and the judiciary. Undeniably, as indicated by He (2012), the extremely low accessibility to the process of judicial decisions deprives people of the opportunities to examine the theories raised by the literature. The same applies to the case of eco-civilization in judicial documents. In a few cases, the combination of institutional analysis and observation merely reveals a fraction of the entire picture.

One possible solution to this limitation is to observe judicial documents on a larger scale. Owing to the development of computational tools for the analysis of text, the measurement of concepts and behaviors has become technically possible for issues that interest social scientists (Grimmer et al., 2022, pp. 16-17). Quantitative text analysis and related tools may fill the gaps between the explanation of institutional approaches and the reality of the judiciary in China. In this study, we utilized the tools proposed in Quanteda (Benoit et al., 2018), which were developed to provide a comprehensive toolkit for natural language processing in social science.

In this study, we examined the capabilities and limitations of quantitative text analysis to measure eco-civilization thought in judgements. In the following sections, we explore the following issues: (1) the institutionalized routes for learning eco-civilization in court; (2) how the Latent Semantic Scaling (LSS) method works; (3) the dataset and feasibility of analysis; (4) the results of the LSS method; and (5) the insights, limitations of current analysis, and possible solutions for improvement.

³ Some of them partially look up the limited number of cases where the Party or government's power over the adjudication could be observed. Interviewing the judges and officials in court is employed as a supplemental method to understand their perception and behavior in the workplace.

Eco-Civilization Thought in People’s Court of China: Institutionalized Routes for Learning

The emphasis on the Party’s leadership of governance has dramatically escalated since Xi Jinping’s rise. The law and courts are no exception to this. The Central Committee of the Chinese Communist Party (CPC) has described the expected relationship between the Party and court by issuing the “Decision on Major Issues Pertaining to Comprehensively Promoting the Rule of Law” in October 2014⁴. In this decision, the party’s leadership was embedded in every piece of law-related work. All state organs, including courts, are required to implement the party’s theory and direction of policies. As indicated in the General Secretary’s speech, eco-civilization undoubtedly holds a position in the Party’s theory and the direction of policies.

Moreover, this decision states that the Political-Legal Work Committee of CPC has the authority to align the political direction of the judiciary. Use of such authority became institutionalized in the “Regulation on the CPC’s Political-Legal Work” enforced in January 2019⁵. This regulation aims to maintain and strengthen the Party’s leadership over Political-Legal Units, including courts, procuratorates, police, national security organs, and the administrative offices of the judiciary (Article 1). Implementation of the Party’s policies in Political-Legal Units is regularly monitored and supervised; any neglect and breach shall face sanction (Article 32-35). The aforementioned facts indicate that judges are encouraged to write sentences in favor of eco-civilization.

The next aspect is determining how judges learn about eco-civilization (see [Figure 1](#)). Any form of mass media, such as newspapers and broadcasting, can provide judges with the chance to learn about eco-civilization. In particular, within the court, two formalized routes are most likely to introduce this new thought to judges’ minds. The most prominent route is guiding opinions. The SPC has repeatedly issued official opinions to define eco-civilization as the guidance of the judiciary ([Table 1](#)). In general, the guiding opinion addresses every level of the People’s Court and its judges, which might lead them to read texts on eco-civilization thought.

⁴ 中共中央《关于全面推进依法治国若干重大问题的决定》，2014年10月23日发布、实施。

⁵ 中共中央《中国共产党政法工作条例》，2019年1月13日实施。

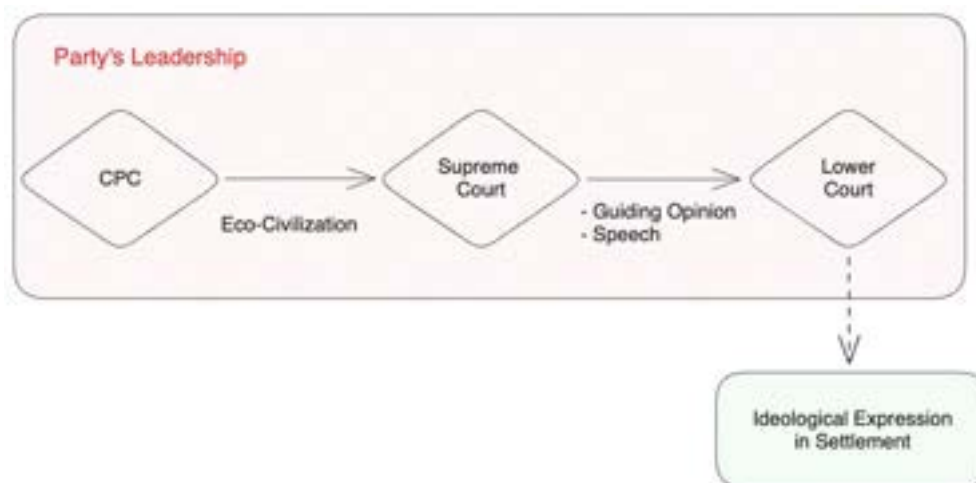


Figure 1. *Hypothetical Process of Learning and Expression of Eco-Civilization Thought*

The titles of these opinions and the body of text indicate that the SPC contributes to eco-civilization. For example, the opinion issued on June 23, 2014 stated that the People’s Court shall make efforts to ensure the promotion of eco-civilization construction through the judiciary (Table 1, No.1). This opinion also stated that every judge must learn the new thought, discourse, and unified perception of eco-civilization. The remainder of this opinion provides guidance to the environmental judiciary.

Apart from the guiding opinion, there is another route to broadcast eco-civilization thought in court: the speech of leaders. The leaders of the SPC repeatedly gave speeches on eco-civilization to the judges. The People’s Court Daily, namely, the newspaper aimed toward judges, has reported the series of speeches given by Zhou Qiang, the former president of the SPC. In the launch ceremony for the Research Center of Environmental and Natural Resource Judiciary, he aimed to transfer the agreement of the Party’s conference to the audience by stating that the People’s Court shall guarantee the promotion of eco-civilization (Luo, 2015). In another example of leaders’ speeches, Jiang Bixin, the vice president of the SPC, gave keynote speeches in the training course for the environmental and natural resource trial for the nationwide court (Sun, 2018). In his speech, he emphasized that judges should learn and implement Xi Jinping’s thoughts on eco-civilization. Considering the guiding opinions, they often refer to eco-civilization as the guidance of judges responsible for adjudicating environmental litigation.

In summary, the effect of these guiding opinions and speeches on the Chinese Judiciary is ambiguous. From the perspective of the legal effect, these opinions do not necessarily determine adjudication as they do not have a binding force in the legal sense. However, the absence of a binding force does not imply that a guiding opinion does

nothing for the judiciary. The Political-Legal Committee's authority might motivate judges to make decisions in favor of guiding opinions and speeches. Furthermore, the SPC explicitly allows judges to cite guiding opinions in the judgement⁶, indicating that guiding opinions are perceived as one of the reasons for adjudication. For instance, guiding opinions are cited in judgements' reasoning in environmental litigation. At the very least, guiding opinions virtually play the role of media that turns political will or ideology into the judgement of the judiciary. However, this hypothesis has not yet been tested.

Research Design for the Measurement of Ideology

Latent Semantic Scaling: Semi-supervised Machine Learning for Document Scaling

The application of quantitative text analysis to detect the discourse on partisanship or ideology within judicial documents is not new. However, few attempts have been made in the literature owing to technical difficulties and the lack of datasets. Marion (2019) employed quantitative text analysis to detect partisanship in judicial documents issued by the US Federal Supreme Court of United States⁷. Hausladen et al. (2020) attempted to capture the ideological direction of judges' votes in the Federal Supreme Court of the USA using a machine classifier. In these studies, the scholars applied the supervised machine learning to identify the completely unknown ideological expressions.

In the case of eco-civilization thought, the main task is the measurement and scaling of documents rather than classification or discovery, because the distinctive expressions of eco-civilization are known as keywords and slogans. Multiple options exist for the scaling tool; however, the LSS method is most suitable for measuring eco-civilization in the judgements for three reasons. First, the function of the LSS matches the interests of the research. The LSS is a document-scaling technique developed by Watanabe (2021). As indicated in his study, LSS "takes a small set of polarity words as 'seed words' to assign polarity scores to other words in the corpus [author: collection of text]." Accordingly, the researcher can statistically locate the document on a predefined scale, which represents the degree of the concept(s) of interest.

Second, LSS is a cost-efficient method. The LSS is designed as a semi-

⁶ See Articles 2 to 5, SPC's Provisions on Citation of Laws, Regulations, and Other Normative Legal Documents in Adjudicative Documents.

⁷ In Marion's study, the judicial documents are separated into two groups by the potential partisanship among the judges: the Democrats and Republicans. Marion used machine learning to detect the linguistic differences between these two groups of documents.

supervised machine learning model that does not require a manually coded corpus for training. The LSS model can be trained by assigning polarity words as seed-words or corpora. Watanabe (2021) suggested that the performance of LSS is comparable with that of supervised machine learning and human judgement as long as the data processing and parameter settings are appropriate.

Third, the LSS and Quanteda natively support non-European languages, including Chinese. Official translations of judicial documents issued in China are rarely available. Considering the difficulty and high cost of translating legal documents, the analysis should be conducted on original Chinese texts. In the previous studies, LSS was employed for efficiently achieving the scaling task on the media frame of newspaper articles written in Chinese (Yu, 2022).

Seed Words

As mentioned previously, LSS uses polarity words as seed words to weigh other features in the corpus. In this study, the keywords and phrases of eco-civilization were candidates for seed words. These identical keywords and phrases of eco-civilization were collected from the summaries of Xi Jinping's speeches. The summaries of speech are available at the official website for Communist Party of China (Organization Department of Central Committee, 2023). **Table 2** lists the keywords and phrases retrieved from the summary and their English translations.

Table 3 lists the seed words that were stemmed and trimmed for processing. Considering the scaling of documents, these seed words were given a positive polarity score of one.

Table 2. *Keywords and Phrases of Eco-Civilization Thoughts*

No.	Phrases in Chinese	English Translation
1	生态兴则文明兴	Ecological prosperity leads to the prosperity of civilization.
2	人与自然和谐共生	Harmony and symbiosis between humans and nature.
3	绿水青山就是金山银山	Green waters and lush mountains are invaluable assets.
4	良好生态环境是最普惠的民生福祉	A good ecological environment is the most universally beneficial well-being for the people.
5	山水林田湖草是生命共同体	Mountains, rivers, forests, fields, lakes, and grass are a community of life.

6	用最严格制度最严密法治保护生态环境	Protect the ecological environment with the strictest regulations and the most rigorous rule of law.
7	建设美丽中国全民行动	Building a beautiful China is a nationwide endeavor.
8	共谋全球生态文明建设	Collaborating for the global construction of ecological civilization.

Table 3. *Seed Words for Training*

Polarity Score	Seed Words
+1	生态兴则文明兴, 人与自然和谐*, 绿水青山, 金山银山, 最普惠*, 民生福祉, 山水林田湖草, 命运共同体, 最严格, 最严密, 生态文明

Text Data and Processing

The dataset covered judgement documents on environmental conflicts issued from 1999 to 2023 (n = 4281). These judicial documents for environmental conflicts were identified by the cause of action (“案由,” “anyou”). The cause of action is the classification of cases defined by the People’s Court, and is labeled for every judicial document. This classification is available as a label in the Wolters-Kluwer database. Among these labels, “Environmental Pollution” is the most suitable label for our study, wherein the sub-categories include every major kind of pollution. The judicial decision (“决定书,” “juedingshu”) is excluded as these documents solely refer to procedural matters.

The next step was to extract suitable components from the documents. The judgement documents for civil cases issued by the courts in China commonly comprise the process of the case, plaintiff’s action, defendant’s counter statement, facts proved by judges, adjudication on major conflicts and its reasoning, list of applied laws, and main text of the judgement. The entire document potentially reflects the perception of judges on the case as any component of the document is authored by judges, and the facts and litigants’ statements are also summarized by their hand. However, a component that solely contains the judges’ perceptions is required as we focused on exploring how they utilize eco-civilization thought. In this sense, adjudication and reasoning were most suitable for the analysis and exclusively represent the thoughts of judges, whereas other components contain the arguments of both parties. The following data processing and analyses were conducted on the text data for adjudication and reasoning.

Before analysis, the text data were cleaned and converted into a suitable form.

In this study, the dataset was cleaned as follows: first, documents missing reasoning were excluded. Second, the symbols for digital documentation were removed as they could be considered as noise in the analysis. Third, duplicate judicial documents were excluded ($n = 4009$). The cleaned text data were stored in a corpus used to store the text of reasoning, date of judgement, identification number of cases, and judges. The texts were segmented using jieba R (Qin & Wu, 2019) which is one of the most powerful Chinese-specific segmentation tools available in the R environment. Finally, the tokenized data were converted into a document feature matrix ready for statistical analysis and modeling.

The Result of Latent Semantic Scaling

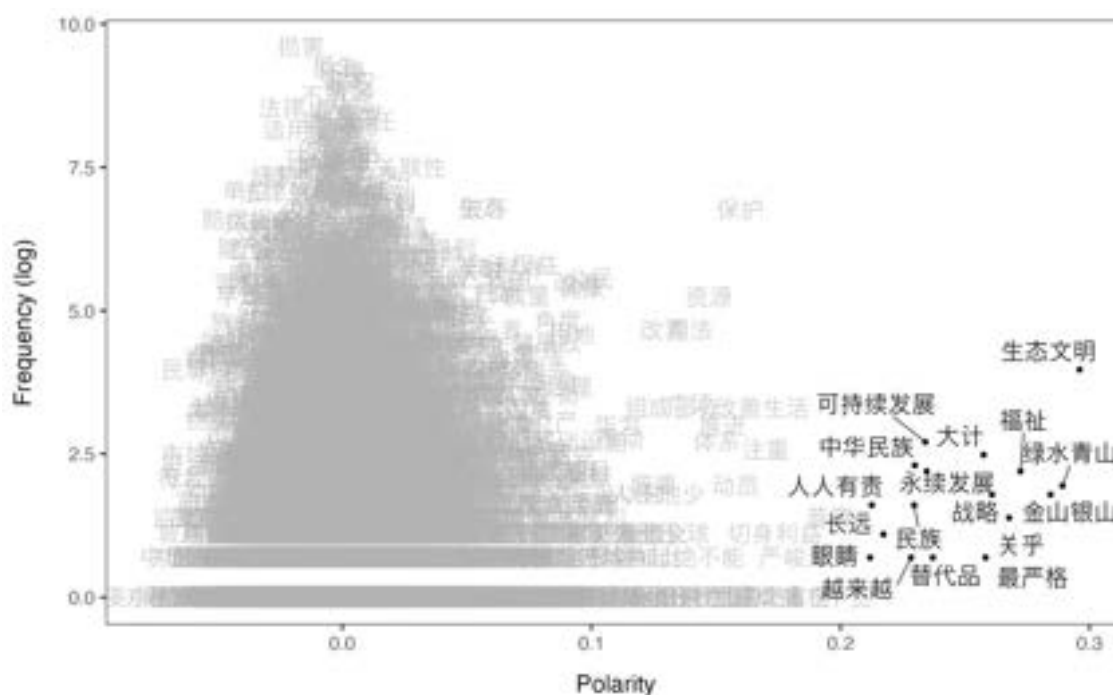


Figure 2. *The Polarity of Features Appearing in Reasoning*

Figure 2 shows the polarity of words in reasoning (horizontal scale) and the frequency of appearance (vertical scale). Words with higher polarity that are close to the right corner of the figure are evaluated as terms related to eco-civilization thoughts. Words appearing in the middle of the scale (polarity 0.0) were evaluated as neutral using the LSS model. The 20 top features with the highest polarity are highlighted at the rightmost position in the figure⁸. When using keywords and phrases as seed words for training, some features received high scores on the scale of eco-civilization thoughts. For example, “大计 (daji)” and “战略 (zhanlüe),” meaning “grand plan” and “strategy,”

⁸ Note that some features are not shown due to the overlapping.

respectively, were used as nouns to represent the eco-civilization. The context of the “grand plan” (with an underline annotated by the author) in reasoning is as follows:

保护环境是我国的基本国策，生态文明建设是关系中华民族永续发展的根本大计。任何个人或单位在生活、生产过程中均不能以牺牲环境来谋取利益(*Wang v. Chongming District Procuratorate*, 2019)。

English Translation: Environmental protection is a fundamental state policy. The construction of eco-civilization is the grand plan that is related to the continuous development of the Chinese Nation. No individual or organization is allowed to take advantage of the environment for their lives or industrial production.

Another example of the context of “strategy” (with an underline annotated by the author) is as follows:

本院认为，生态环境面临的严峻形势已经严重影响到人民群众的生命健康和经济社会的可持续发展，保护生态环境是全球面临的共同挑战和共同责任，我国已将建设生态文明确定为国家战略，并逐渐完善了保护生态环境的制度体系和法律体系(*Chongqing Green Volunteers' Union v. Chenzhou Travel Co., Ltd.*, 2018)。

English Translation: The Court believes that the severe situation facing the ecological environment has seriously affected people’s life, health, and sustainable development. Protecting the ecological environment is a common challenge and global responsibility. Our state has identified the construction of eco-civilization as a national strategy, and has gradually improved the institutional and legal systems for protecting the ecological environment.

More than ten similar usages of “grand plan” and “strategy” were found in the corpus of reasoning. Notably, the LSS model does not perceive the mean of these features, as in the case of humans. The model only conducts weight tasks on features in accordance with the given seed words.

Despite the existence of other nouns in the context, the LSS could successfully capture the distinctive features of eco-civilization. Some other highlighted features, “人人有责 (renrenyouze)” and “眼睛 (yanjing),” are the common slogans or their parts in China. “人人有责 (renrenyouze)” means “All of us are responsible for the environment.” “眼睛 (yanjing)” means “eye” in Chinese, and seems to be a general noun; however, this

feature is a component of another slogan, namely, “像眼睛一样保护环境 (xiang yanjing yiyang baohu huanjing).” This slogan can be translated as “We must protect the environment as if it is our own eyes.” Thus, feature weighting was successfully achieved using the LSS model.

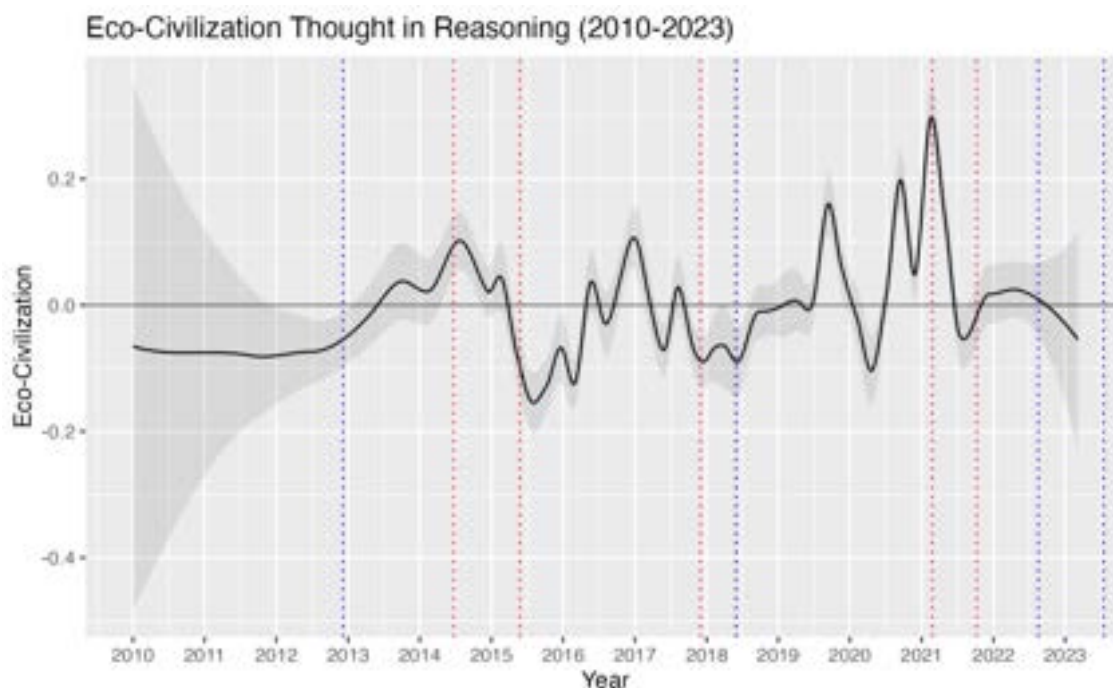


Figure 3. *The Polarity Score of Eco-Civilization Thought in Reasoning (2010-2023)*

The trained LSS model can predict and visualize changes in the polarity score over time. **Figure 3** shows a plot of the smoothed polarity score of eco-civilization from 2010 to 2023⁹. The higher the polarity score, the more eco-civilization-oriented are the features used in the reasoning of judgement. The blue vertical lines correspond to the date of Xi Jinping’s speech on eco-civilization. The red vertical lines represent the dates on which the guiding opinions were issued. Five peaks (reaching or exceeding 0.1) were observed in the plot. The most prominent peak occurred in early 2021, around the time of issuance of the guiding opinion. However, the polarity score continued to increase from 2012 to 2014, alongside the first speech by Xi Jinping and the first issuance of guiding opinions. However, the other peaks did not synchronize with the issuance of guiding opinions and the speech.

The error range widened at the beginning and end of the time series, particularly in the years before 2012 and after 2022. A wider error range indicated that the accuracy of the estimation was lower at these points. This may be attributed to the

⁹ As the number of judgements was extremely low before 2010, the prediction and smoothing do not cover the years from 1999 to 2009.

small sample size. Before the second decade of the 21st century, courts were rarely opened to environmental litigants in China as they might interrupt the production of enterprises and growth of the local economy. The decline in the sample size after 2021 is attributable to another cause. Without any official announcement, the disclosure rate of judicial documents suddenly declined in 2021 and has remained low (Pei, 2024). Judicial statistics show that the number of environmental cases has not declined, indicating that a number of judgements are unseen for the past three years.

Discussion: Implications and Space for Improvement

The results of our analysis provide significant clues for answering the two questions raised in the Introduction. First, how do judges utilize eco-civilization thoughts in adjudication? The first wave of increase occurred from 2013 to 2014 ([Figure 3](#)), suggesting that the judges reacted to the political shift over environmental issues, represented by both the first speech of Xi Jinping and the guiding opinion of the SPC. Since then, eco-civilization thought has comprised reasoning for adjudication alongside statutory laws. However, in terms of the proportion, statutory laws were not completely replaced by eco-civilization. Even in the judgement document with the highest polarity score, the reasoning for eco-civilization is only two to three sentences long. In particular, judges use eco-civilization as a supplemental source of justification rather than as an alternative to statutory laws.

Second, the extent to which eco-civilization is reflected in the collection of judgement texts varies over time. In this study, the perception of eco-civilization on judgement was inconsistent. The LSS reasoning model indicated some peaks of eco-civilization-oriented expressions. However, these peaks diminish immediately, indicating that the rise of eco-civilization thought is not sustainable among judges. In particular, judges seemed to be engaged in a cycle of learning and oblivion. However, the rise of ideological expression in the judiciary must be focused on because it may affect the judges' selection of cases to be processed and decision on the type of sentence.

Based on the consequences indicated by the analysis, the quantitative measurement of eco-civilization raises new questions. What factors cause fluctuations in polarity scores? Are there correlations between the polarity score and the attribution of cases. For example, the type of conflict, amount of litigation fees, and level of courts are variables that should be examined. Perhaps the rise of eco-civilization in courts has already caused this unseen effect. Thus, the polarity score may be an explanatory variable for such phenomena. Regardless of future research questions, the measurement of eco-civilization in this study can be a point of departure.

Three issues need to be addressed in future studies. The first is data coverage. Environmental lawsuits include civil, criminal, and administrative lawsuits. Currently, only judgements in civil cases are considered in the analysis for technical reasons. First, the number of criminal cases exceeded the maximum number of lists in the database; therefore, older documents were not accessible for collection. This is merely ascribed to technical barriers; however, the database provider must be asked to share the full data of criminal cases related to environmental issues.

Second, administrative cases were excluded for other reasons. Civil and criminal judgements are categorized according to issues that include environment-related issues. Conversely, the administrative cases are labeled by the types of administrative behavior. Decisions, punishments, and contracts were the major categories of administrative cases. These categories for administrative cases cannot help to identify the environmental cases as these documents, for example, labeled as “administrative punishment,” contain a large portion of judgements irrelevant to environmental issues.

A possible solution for these issues is the use of a machine classifier on the documents of administrative cases to identify environment-related cases ahead of the analysis. Seeded Latent Dirichlet Allocation is one of the best solutions in terms of the cost for coding and computation (Watanabe & Zhou, 2022). Criminal and administrative judgements may contain features related to eco-civilization. Widening coverage will allow us to gain more insight into how judges utilize eco-civilization thoughts for reasoning.

Conclusion

In conclusion, we employed a quantitative approach to gauge the incorporation of eco-civilization thoughts in Chinese judicial documents, especially focusing on the reasoning sections of judgements related to environmental pollution. The analysis, conducted through the LSS method, indicates the discernible presence of eco-civilization expressions in judicial reasoning, suggesting an intertwining of ideological considerations with legal justifications. However, the observed fluctuations in the prevalence of eco-civilization-oriented expressions over time raise questions regarding the sustained impact of these ideological concepts on judicial decision-making.

The empirical findings revealed that eco-civilization thought has become an integral part of judges' reasoning, coexisting with legal reasoning. Nevertheless, our results highlight the variable nature of this integration, with fluctuations in measured polarity scores indicating a potential cyclicity in judges' references to eco-civilization

concepts. The rise and fall of these expressions suggest a nuanced relationship between the ideology and judicial decision-making, prompting further inquiries into the factors influencing these fluctuations and the potential consequences for case selection and sentencing decisions.

Our study contributes to the ongoing discourse on the intersectionality of ideology and the judiciary in China. As eco-civilization continues to prominently feature in official discourse and policies, understanding its nuanced influence on the judicial process is imperative for comprehending environmental governance in China. This empirical approach, wherein computational tools were utilized for text analysis, provides a perspective that complements traditional institutional analysis. Despite acknowledging certain limitations, such as variations in the sample size, we laid the groundwork for future studies on the intricate dynamics of judicial decision-making in the evolving landscape of political ideologies.

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