# Enlightenment Under Autocracy: The Intellectual Origins of Liberalism in China

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**Abstract**

We study how ideas emphasizing individual moral agency shape political behavior under autocracy by tracing Wang Yangming's School of Mind in late imperial China. Using a broad corpus of over 24,000 historical texts from 1000 to 1900 and a separate, partially overlapping corpus of 12,434 digitized books, we measure regional exposure through core concepts, the authors using them, and textual similarity to Wang's writings. Public lectures were followed by a sharp and persistent increase in local textual similarity, consistent with lectures spreading Wang Yangming's ideas across prefectures. Officials connected to Wang's network were more likely to use ruler-constraining arguments in court memorials, and prefectures with greater historical exposure produced more reformers in the Donglin movement (1604–1627). The Donglin association persists across several measures and specifications. Chinese survey data from 2010 to 2015 associate historical author exposure with support for public criticism and government non-intervention in private affairs. The findings show that ideas of moral agency could shape political action under autocracy even though their institutional reach remained limited.

**Keywords:** Ideas, Autocracy, Political Development, China

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# I Introduction

Ideas can affect political development before they are translated into constitutions or formal political rights. An important strand of European Enlightenment thought began with a change in the basis of legitimate judgment: inherited authority, established doctrine, and political status were increasingly open to evaluation by individuals understood to possess their own capacity for judgment. In different parts of Europe, this intellectual shift subsequently supported arguments for natural rights, religious toleration, freedom of expression, government by consent, and institutional constraints on arbitrary power. These political implications were neither immediate nor uniform. Some Enlightenment thinkers remained sympathetic to monarchy, including forms of enlightened absolutism. What matters here is an earlier intellectual move: political and intellectual authority became less able to justify itself solely by reference to hierarchy, tradition, or status (Israel, 2001).

This paper studies that political dimension of Enlightenment rather than the "Industrial Enlightenment" emphasized in economic history. The latter concerns the production and diffusion of useful knowledge and its contribution to technological change and industrialization (Mokyr, 2010; Squicciarini and Voigtländer, 2015; Mokyr, 2016). The question here is different: whether individuals came to be understood as possessing a capacity for independent moral judgment, and whether that capacity could provide a basis for criticizing arbitrary power.

Late imperial China provides a distinct setting in which to study a related intellectual shift. Wang Yangming (1472–1529) argued that every person possesses *liangzhi*, an innate capacity to distinguish moral right from wrong. Moral knowledge therefore could not be monopolized by scholarly learning, official rank, or established interpretations of the classics. Wang further maintained that this capacity was shared broadly across individuals: the possibility of sagehood did not arise from social status. His doctrine of the unity of knowledge and action, *zhi xing he yi*, tied moral judgment to personal responsibility. To recognize a moral obligation without acting on it was, in Wang's formulation, evidence that one had not fully known it (De Bary, 1970; Ivanhoe, 2002; Zheng, 2021; Lederman, 2022, 2023; Lee, 2023). Together, these ideas supplied a language of moral agency from within the Confucian tradition: individuals possessed a capacity for moral judgment, cultivated that capacity through reflection and practice, and bore responsibility for acting on what they recognized as right.

These claims did not constitute a theory of liberal government. Wang accepted imperial rule and developed no counterpart to natural rights, the social contract, separation of powers, or popular sovereignty. The comparison with the political Enlightenment concerns the underlying basis of moral authority. Wang Yangming's ideas made moral judgment less

dependent on scholarly status or political hierarchy, treated the underlying moral capacity as widely shared, and required individuals to act on the judgments they reached. In this respect, Wang's philosophy resembles the strand of Enlightenment thought that associated human autonomy with the capacity to judge for oneself, even though the substantive foundations of that judgment were different. Wang grounded moral knowledge in the Confucian conception of *liangzhi*; European Enlightenment thinkers variously grounded independent judgment in reason, conscience, natural law, or theories of human nature (Bary, 1983; Israel, 2001; Zheng, 2021; Lee, 2023).

This distinction allows us to ask whether such a change in moral agency can affect politics even when it does not produce a new constitutional order. Under the Ming, an official operated inside a strongly hierarchical bureaucracy and ultimately served an emperor. Yet if moral judgment was available independently of political rank, obedience to superior authority could not by itself determine the official's obligations. And if genuine moral knowledge required action, recognizing misconduct by officials or rulers could create a duty to remonstrate despite the personal costs of doing so. These ideas therefore supplied an intellectual basis for criticism of arbitrary government without themselves providing a theory for replacing monarchy.

We study whether the spread of these ideas affected subsequent political behavior. The main political outcome is the Donglin movement of the early seventeenth century. Donglin reformers did not seek to abolish imperial government. They demanded greater scope for remonstrance and censorial criticism, opposed eunuch interference and arbitrary appointments, resisted irregular fiscal extraction, and sought to subject government conduct to publicly defensible moral and administrative standards. The movement therefore provides a setting in which to test whether greater exposure to ideas emphasizing individual moral judgment was followed by stronger efforts to constrain arbitrary power from within an autocratic political system.

The empirical challenge is to observe the diffusion of an abstract body of thought across regions and over several centuries. We combine three measures. The first counts mentions of three concepts closely associated with the School of Mind: innate moral knowledge, the unity of knowledge and action, and the mind as principle. The second counts distinct authors using these concepts. The third uses sentence embeddings to measure semantic similarity between historical texts and Wang Yangming's writings. The broader corpus is the full-text-searchable database hosted by Erudition and contains approximately 4,000 local gazetteers and more than 20,000 other publications. It supports the concept and author measures, but complete machine-readable text is not available for all works in a form suitable for constructing embeddings. A separate corpus of roughly 12,000 digitized books and treatises therefore supports the similarity analysis; the two collections overlap only partially.

The three measures capture different forms of intellectual uptake. Keyword counts identify explicit invocation. Author counts distinguish broad adoption from repeated use by a small number of writers. Semantic similarity captures conceptual proximity when authors use paraphrase, allusion, or different vocabulary. We also construct controls for writing style and similarity to Zhu Xi, whose work represented the dominant Neo-Confucian benchmark. We classify passages containing Yangming concepts by stance, allowing us to remove explicit opposition. We separately compare local texts with writings that directly criticized the School of Mind. The analysis then proceeds from diffusion to political behavior at two levels: individual officials' expressed political ideas in memorials and collective participation in the Donglin movement.

Public lectures provide the main setting for studying diffusion. Wang Yangming and later scholars associated with his school taught in academies and other local venues. These lectures were public events, not only private teacher-student exchanges. Their timing and location create a prefecture-level panel in which regions first become exposed in different periods. Cross-sectional estimates show that both the number of lectures and a distance-weighted lecture-influence measure predict keyword mentions, the number of authors using Yangming concepts, and semantic similarity. A difference-in-differences specification using 30-year periods shows a substantial increase in local similarity after first lecture exposure. A group-time event study shows no sustained pre-treatment rise and a sharp, persistent increase following first exposure, consistent with public lectures spreading Wang Yangming's ideas across prefectures.

We then ask whether intellectual exposure predicted political action. We begin with an individual-level bridge between intellectual networks and political arguments about imperial authority. Among 2,031 officials matched between the China Biographical Database and memorials in the *Ming Shilu*, connections to Wang Yangming predict greater use of ruler-constraining arguments: arguments that constrain the ruler's discretion or subject imperial action to moral and institutional limits. The relationship survives controls for examination degree and rank, historical province, and memorial timing.

The main political outcome is the geographic distribution of Donglin reformers. The Donglin movement grew out of the revival of academy-based teaching and the reopening of the Donglin Academy in Wuxi in 1604. It joined moral argument to a concrete political program: protecting remonstrance and censorial criticism, resisting eunuch interference, restoring merit in appointments, opposing arbitrary levies and extra-bureaucratic fiscal extraction, and placing public finance under regular administrative rules. The movement did not seek to abolish imperial government. It sought to constrain arbitrary power within it (Meskill, 1982; Elman, 1989; Dardess, 2002; Miller, 2009). Prefectures with more pre-1550 Yangming mentions

produced more Donglin reformers. The author-count measure is positive but imprecise, and semantic similarity to Wang Yangming's books and letters is strongly associated with Donglin formation. These relationships survive stance filtering, controls for anti-Yangming writing and writing style, and first-difference specifications.

The analysis contributes to three areas. First, it adds a Chinese case to research on ideas as drivers of long-run change. Work on the Industrial Enlightenment explains how useful knowledge and human capital contributed to technological change and industrialization (Mokyr, 2010; Squicciarini and Voigtländer, 2015; Mokyr, 2016). Research on the Reformation traces the diffusion of ideas through social networks and institutional competition (Becker et al., 2020), while recent work emphasizes the role of universities and academies as institutional networks for the spread of ideas in premodern Europe (Croix, Scebba, and Zanardello, 2025). Our setting similarly highlights local institutions and interpersonal networks, but studies the diffusion of ideas about moral judgment and political authority within an autocratic state. The late Ming case therefore shows how an intellectual movement could shape political behavior even when the surrounding political order remained autocratic. More broadly, the paper identifies an indigenous intellectual source of political development in China that predated the nineteenth-century encounter with Western liberal thought.

Second, the paper contributes to work on culture, ideology, and institutions. One strand of this literature studies individualism as a cultural dimension related to institutional organization and development (Greif, 1994; Tabellini, 2010; Alesina and Giuliano, 2015; Gorodnichenko and Roland, 2017). The connection here concerns a particular dimension of individualism: Wang Yangming's emphasis on individuals' capacity for moral judgment and action resembles the self-direction and self-determination emphasized in that literature. It does not recast Wang's philosophy as modern individualism. Research on modern China shows that state-designed curricula can shift political attitudes (Cantoni et al., 2017), while broader work treats culture and political institutions as jointly determined (Bisin and Verdier, 2024; Acemoglu and Robinson, 2025). In historical China, belief systems shaped state policy, while the centralized political order influenced which doctrines could circulate and which organizations could sustain them (Zhang, 2023; Greif, Mokyr, and Tabellini, 2025). Recent work emphasizes that knowledge capable of changing underlying worldviews may itself threaten political legitimacy, giving centralized rulers incentives to restrict its adoption (Ma, Rubin, and Yin, 2026). Our setting examines the other side of this relationship: how a new body of moral thought spread within an established autocratic system and whether its diffusion changed political behavior.

Third, the paper contributes methodologically to a growing literature that uses large-scale historical text to study changes in language, meanings, and beliefs over time. Dell et al. (2023) show how historical newspapers can be used to study semantic change and

political polarization, while Almelhem et al. (2026) trace the evolution of Enlightenment ideals and belief in progress before the Industrial Revolution. We are among the first to trace the evolution of a complex body of philosophical ideas across space and over long periods of time. Our analysis connects their initial formulations to diffusion across local intellectual communities and to later political behavior.[1] The combination of explicit concepts, author counts, semantic similarity, stance classification, style controls, and a doctrinal benchmark addresses several weaknesses of relying on a single textual measure and adapts the text-as-data approach to ideas that change vocabulary, circulate through multiple genres, and remain embedded in contested intellectual traditions (Gentzkow, Kelly, and Taddy, 2019; Michalopoulos and Xue, 2021; Yin, 2025). The long time span further allows us to distinguish the initial appearance of a vocabulary from its later incorporation into local intellectual production.

The evidence has a broader bearing on accounts of the divergence between Chinese and European political development. The evidence also bears on accounts of the divergence between Chinese and European political development. Wang Yangming's philosophy supplied a language of individual moral judgment, broadly shared moral capacity, and responsibility for action, but these ideas operated within a state that retained strong control over official careers, teaching institutions, and organized criticism. The results therefore distinguish the availability of ideas capable of supporting political criticism from the institutional capacity to convert those ideas into durable constraints on power. Wang was not a modern liberal, and his philosophy did not constitute a theory of liberal government. The point is that an indigenous intellectual tradition could alter how officials understood political authority and their own obligations centuries before the large-scale introduction of Western liberal thought, while leaving the imperial political order intact.

Section II describes the historical setting, and Section III explains how we measure Yangming ideas. Section IV studies diffusion through public lectures. Sections V and VI examine court memorials and Donglin formation, respectively. Section VII considers later political activity and contemporary attitudes. Sections VIII and IX discuss the implications and conclude.

[1]Related ongoing work by Daron Acemoglu, Leander Heldring, Steven Pincus, James Robinson, and Santiago Torres measures competing ideas about political authority in seventeenth-century England and studies their relationship to political behavior.

# II Historical Setting

## *II.A The Ming Political and Intellectual Order*

The political and intellectual order of the Ming rested on developments that predated the dynasty. Under the Song (960–1279), China developed dense commercial networks, large urban markets, extensive printing, and a broad examination-based scholarly elite. The Song was also the formative period of Neo-Confucian thought. Zhu Xi (1130–1200) systematized an influential account of moral cultivation, learning, and principle that would later become central to the examination curriculum and official intellectual life (Chan, 1963; De Bary, 1981; Greif, Mokyr, and Tabellini, 2025).

The Yuan dynasty (1271–1368), which immediately preceded the Ming, preserved and further institutionalized important parts of this intellectual inheritance. Zhu Xi's interpretations of the Confucian classics acquired an increasingly privileged position in official education and examinations, while scholars continued to teach and write through academies and other scholarly networks. The Ming therefore inherited both a well-developed examination culture and an established Neo-Confucian intellectual framework.

The Ming dynasty (1368–1644) was organized around a highly centralized imperial state. The emperor stood above a large civil bureaucracy recruited through examinations on the Confucian classics. The examination system offered a route into office for educated men beyond hereditary aristocratic families, but it also tied intellectual prestige and political advancement to a hierarchy centered on the throne. Confucian learning was therefore both a body of moral thought and the official language of government.

Ming China also possessed a highly commercialized economy, extensive interregional trade, widespread use of silver, a large printing sector, numerous academies, and dense networks of local scholarship and elite sociability. These institutions created a substantial audience for philosophical debate and allowed intellectual movements to circulate across regions (Brook, 1998, 2010).

Within this political order, the dominant intellectual synthesis was associated with Zhu Xi. It emphasized moral self-cultivation, disciplined study, and the investigation of principle (Chan, 1963; De Bary, 1981). Neo-Confucian ideas were transmitted through academies and other scholarly institutions, which played an important role in their local spread (Dong and Cheng, 2024). This intellectual order was reinforced by the examination system and by a broader culture of reverence for canonical sages and classical learning (Ma, 2024). Ming thinkers nevertheless debated the source of moral knowledge, the relation between learning and action, and the obligations of officials when rulers or powerful court actors violated accepted moral and administrative standards. Zhu Xi's intellectual authority also provides

an important benchmark for the empirical analysis: similarity to Wang Yangming's writings may reflect their common location within the broader Neo-Confucian tradition rather than distinct exposure to Wang's ideas.

### *II.B Wang Yangming and Individual Moral Agency*

Wang Yangming was a scholar-official, military commander, and teacher. He was trained within the orthodox curriculum but became dissatisfied with the view that moral knowledge depended on an extended external investigation of things. His punishment in 1506 and subsequent exile at Longchang are conventionally treated as a decisive stage in the development of his philosophy. In Wang's later account, this experience led him to locate moral principle within the mind and to emphasize that people possessed an innate capacity to recognize right and wrong (Wang, 1992; Ivanhoe, 2002).

Three claims became closely associated with Wang Yangming's thought. The first was innate moral knowledge, or *liangzhi*. Wang held that the capacity to distinguish right from wrong was already present in the human mind. Moral cultivation was therefore not principally a process of acquiring from an external authority a moral faculty that the individual otherwise lacked. It involved recognizing and extending a capacity already present within oneself. The second claim, that the mind itself is principle, or *xin ji li*, further reduced the distance between moral principle and individual judgment. The third was the unity of knowledge and action, or *zhi xing he yi*. Genuine moral knowledge, on this account, necessarily manifests itself in conduct; failure to act on a recognized moral obligation calls the purported knowledge itself into question (Ivanhoe, 2002; Lederman, 2022, 2023).

Together, these propositions shifted the basis on which moral authority could be claimed and strengthened the connection between judgment and action. Wang did not deny the importance of teachers, texts, or the Confucian tradition. But neither scholarly credentials nor political position gave their holders exclusive access to moral truth. *Liangzhi* was shared by ordinary people and sages alike. The later Yangming-school claim that "the streets are full of sages" expressed this universalization of moral capacity. It did not imply equality of office, wealth, or political rights. It did imply that differences in social rank did not correspond to differences in the underlying human capacity for moral judgment (De Bary, 1970; Bary, 1983; Zheng, 2021).

This emphasis on individual judgment also connects to historical writing on individualism. De Bary described late-Ming thought as bringing the individual sharply into view while distinguishing this development from modern atomistic individualism (De Bary, 1970). For this paper, the relevant connection concerns self-direction and self-determination in moral judgment and action. It does not imply weak kinship ties, economic self-reliance, or a general

willingness to depart from group norms.

After returning from exile, Wang disseminated his teachings through official service, writing, correspondence, students, and public lectures. By the 1510s and 1520s, his followers included officials, examination candidates, and local scholars. Direct disciples such as Wang Ji and Qian Dehong developed different aspects of his thought, while Wang Gen and the Taizhou current extended some of its implications to wider social audiences. Later thinkers, including Liu Zongzhou and Huang Zongxi, reworked this intellectual inheritance in response to the political crises of the late Ming and early Qing (Xue, 2025). Figure I summarizes these intellectual connections and the later reformist legacy considered in the paper.

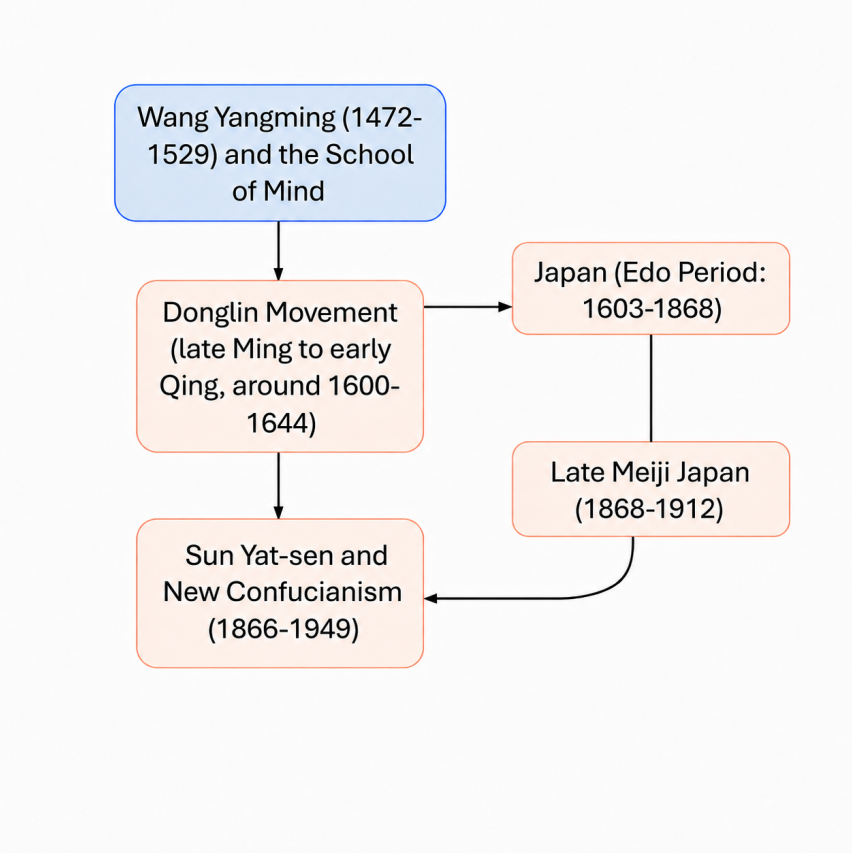



Figure I: Intellectual Lineage and Reformist Legacy of Wang Yangming's School of Mind

Notes: The figure summarizes the intellectual lineage relevant to the analysis. Arrows indicate channels of influence discussed in the historical literature; they do not imply exclusive or deterministic relationships.

Wang's account of moral agency also provides the basis for the comparison with the political Enlightenment developed in the Introduction. The comparison concerns the locus of valid judgment, not the substantive content of political institutions. European arguments about autonomy increasingly made inherited political and religious authority answerable to individual judgment and, in some strands, developed from this premise toward natural rights,

consent, toleration, and constitutional restraints. Wang did not make those subsequent moves. His moral order remained Confucian, relational, and compatible with monarchy. But his philosophy similarly denied that a person's capacity to judge right and wrong depended on occupying a superior position within an established hierarchy (Israel, 2001; Zheng, 2021; Lee, 2023).

The doctrine of *zhi xing he yi* gave this conception of moral agency a potential political implication. For an official, recognizing that an imperial policy, a powerful court actor, or another officeholder was acting wrongly could not be separated entirely from the question of whether to respond. Wang's philosophy did not prescribe rebellion against an immoral ruler. It did, however, strengthen a conception of the official as a moral agent whose obligations could conflict with prudence, career advancement, or obedience to immediate superiors. This provides the intellectual mechanism linking Wang Yangming's ideas to the later politics of remonstrance and reform (Bary, 1983; Angle, 2012).

## III Measuring Intellectual Exposure

### *III.A Historical Texts and Corpus Coverage*

The broader corpus contains approximately 4,000 local gazetteers and more than 20,000 other historical publications. Gazetteers are tied directly to localities and record institutions, people, events, and intellectual life. Their geographic specificity makes them especially useful for measuring local intellectual activity. Books and treatises are assigned geographically through author locations in biographical records, including birthplace, residence, and other documented affiliations. When an author is linked to more than one place, the text contributes to each documented location under the assignment rule used in the underlying data. The analysis aggregates texts and authors to historical prefectures.

The two source types capture different objects. Gazetteers preserve a locality's official and social memory, while books and collected writings reflect the production of identifiable authors. Neither source provides a complete census of intellectual life. Survival, digitization, and the availability of author biographies vary across place and time. The empirical specifications therefore control for the volume of observed books or authors, the number of gazetteers when relevant, genre composition, and period or province fixed effects. The panel designs also compare changes within prefectures.

The broader corpus comes from the full-text-searchable Erudition database. Although it supports keyword search, complete machine-readable text is not available for all works in a form suitable for segmentation and embedding construction. The similarity analysis therefore relies on a separate corpus of roughly 12,000 digitized books and treatises. This

corpus partially overlaps with the broader collection but is distinct from it. The books span the four traditional bibliographic categories: literary collections, philosophy, history, and classics. Literary collections account for 38.9 percent of the similarity corpus, philosophy for 23.5 percent, history for 22.1 percent, and classics for 15.5 percent. Specifications with genre controls address the possibility that differences in local textual composition generate spurious similarity.

The main cross-sectional measures use texts written by authors born before 1550. Here and below, "pre-1550" refers to the local historical texts used to construct the exposure measure, not to the Wang Yangming reference texts used for similarity analysis. The cross-sectional similarity score therefore measures how closely pre-1550 local intellectual production resembles Wang Yangming's writings or the hand-curated argument-focused reference collection. The cutoff places the measured exposure before the rise of the Donglin movement and corresponds roughly to books circulating by 1600. Count measures use the logarithmic construction described below, and similarity measures are aggregated to the prefecture or prefecture-period level.

### *III.B Concept Mentions and Author Counts*

The first measure counts references to three concepts: innate moral knowledge, the unity of knowledge and action, and the mind as principle. These phrases are strongly associated with Wang Yangming and later School of Mind writing. For prefecture $p$, the raw measure sums all occurrences in texts assigned to the prefecture. The regression measure is $\log(1 + Mentions_p)$. It captures the intensity of explicit invocation.

The second measure counts unique authors using the same concepts and is transformed as $\log(1 + Authors_p)$. This distinguishes repeated use by one writer from broader uptake by a larger local group. In specifications using concept mentions, we control for the number of observed books; in specifications using author counts, we control for the total number of observed authors.

We also classify short passages containing Yangming concepts by stance. The broad measure based on concept passages excluding opposition excludes passages classified as explicitly opposed to Wang Yangming. The strict measure additionally excludes passages classified as likely opposed. These measures distinguish the circulation of a vocabulary from its more favorable or affirmative use.

This distinction matters because controversy can itself increase mentions. A critic may repeat a phrase precisely in order to reject it. The raw phrase count is therefore best understood as an indicator of salience, while the measures based on concept passages excluding opposition are closer to indicators of uptake. Agreement across these measures reduces the concern that

the results are driven by hostile citation.

Figure II displays the geographic distribution of concept mentions in three periods. The concentration expands after the beginning of Wang Yangming's teaching career and becomes more geographically dispersed by the late sixteenth century.

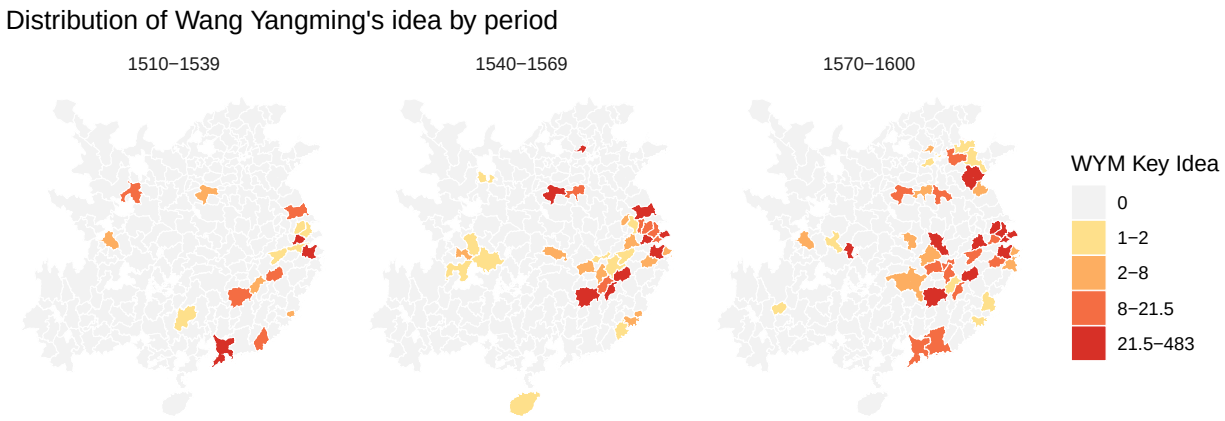



Figure II: Regional Presence of Wang Yangming's Core Ideas

Notes: The maps plot the frequency of Yangming-related concepts in historical books and local gazetteers for 1510–1539, 1540–1569, and 1570–1600.

### *III.C Semantic Similarity*

Keyword measures miss intellectual influence expressed through paraphrase, shared argument, and allusion. We therefore construct embedding-based similarity measures using the separate digitized-book corpus. We use GuwenBERT, a BERT model trained on classical Chinese, following its application to historical Chinese texts in Keller, Shiue, and Yan (2026). Historical texts are compared with two reference corpora. The first contains Wang Yangming's four collected works and more than 300 letters. The second consists of passages identified through a hand-curated review of Wang's *Instructions for Practical Living*, with each retained passage presenting an argument concerning one of the three core concepts. The first measure captures similarity to Wang's broader writings, while the second is argument-focused. Appendix C.3 describes the reference corpora and score construction, and Appendix D.1 provides details on preprocessing, segmentation, embeddings, and component weighting. Transformer-based embeddings allow comparison of contextual meaning beyond literal term overlap (Devlin et al., 2019; Reimers and Gurevych, 2019).

For each reference corpus, we also construct a substantive-similarity measure that removes the explicit style components of the composite score and retains the embedding and topic components. This reduces the direct contribution of diction, genre, and period-specific writing conventions. The resulting measure remains one of textual similarity, however, and does not by itself establish agreement with Wang's doctrines. The appendix reports the exact construction and weighting of the components.

The concept and similarity measures are complementary. Concept mentions provide a transparent measure of explicit invocation but miss paraphrase and allusion. Similarity captures proximity in meaning when vocabulary differs, but may also reflect features of genre, style, or broader intellectual context. We therefore use the different measures together rather than treating semantic similarity as a sufficient measure of exposure.

Appendix Figure V plots the nationwide trend in similarity to Wang Yangming's books and letters. Similarity rises around Wang's lifetime and remains elevated afterward. This descriptive pattern is consistent with the historical timing of the spread of his ideas; the regional analysis below uses the timing of public lectures to examine diffusion more systematically.

### *III.D Separating Similarity from Style and Broader Neo-Confucian Content*

Similarity to Wang Yangming may partly reflect writing style, genre, or intellectual features shared across the broader Neo-Confucian tradition. We address these possibilities in several ways. First, we construct a separate writing-style similarity measure using function words, modal particles, connective use, sentence length and its variance, lexical diversity, punctuation density, and respectful terms. Second, we calculate similarity to Zhu Xi's writings, which provides a benchmark for broader Neo-Confucian intellectual content. Third, we control for the genre composition of local books. Fourth, we include distance to major academies associated with Zhu Xi. Fifth, we compare local texts with works written explicitly against Wang Yangming's ideas, allowing us to distinguish proximity to Wang's writings from general engagement with controversies surrounding his school. Appendix Figure VI plots the style-similarity and Zhu Xi series.

Together with the substantive-similarity measures described above, these exercises help distinguish exposure to Wang Yangming's ideas from shared literary conventions, broader Neo-Confucian content, and engagement with opposition to his school. They do not require the different measures to isolate perfectly separable components of historical writing; instead, the empirical analysis examines whether the main relationships persist across these alternative ways of measuring and conditioning on intellectual exposure.

# IV Public Lectures and the Spread of the School of Mind

Wang Yangming's ideas circulated through books, correspondence, teacher-student ties, academies, personal networks, and public lectures. These channels often reinforced one another: lectures brought scholars into contact and could stimulate reading and correspondence, while texts and personal ties extended discussion beyond the original event. The empirical analysis focuses on public lectures because their locations and dates provide observable, place-specific exposure to the movement.

## *IV.A Public Lectures as a Diffusion Mechanism*

Public lectures, or *jiangxue*, were an important channel through which Wang Yangming's ideas reached local audiences. Wang lectured himself, and later scholars associated with his school continued the practice. Lectures were held at academies, temples, government schools, and other local venues and could draw officials, examination candidates, merchants, and educated residents beyond stable teacher-disciple relationships. Surviving accounts rarely provide exact audience sizes, although some describe attendance in the hundreds.

Lectures created visible occasions for scholars to gather, debate, and form continuing associations. They also linked ideas to teachers and interpersonal networks. A lecture could introduce Wang's writings and concepts to a prefecture, while repeated events could reinforce local circles of reading and discussion. Participants could subsequently circulate notes, organize additional lectures, or carry the teaching elsewhere.

These features also make lectures useful empirically. Their locations identify local exposure, and their dates permit comparisons before and after first recorded exposure. Most recorded lecture events occurred during the sixteenth century, when Wang Yangming's ideas were spreading across regions. Because lecturers may have selected intellectually active places, the empirical specifications account for pre-existing academies, examination success, textual production, population, geography, and province.

## *IV.B Measuring Lecture Exposure*

The lecture data record public teaching events associated with Wang Yangming and later scholars of his school. They include events taught by Wang and by figures linked to the subsequent lecture tradition. We use two cross-sectional measures. The first is the number of lectures held in a prefecture before 1600. The second is a distance-weighted influence measure.[2] For the panel design, treatment begins in the period containing a prefecture's first

[2]Formally, the measure is $\textit{LectureInfluence}_p = \sum_j \textit{Lectures}_j \exp\left(-\frac{d_{pj}}{25}\right)$, where $d_{pj}$ is the distance in kilometers between prefecture $p$ and lecture site $j$. The preferred specification uses a 25-kilometer decay

recorded lecture exposure.

The baseline controls include the log number of books or authors, population in 1600, academies established before 1500, *jinshi* before 1500, distance to Beijing, distance to the coast, rivers, and the Grand Canal, and Ming province fixed effects. Depending on the specification, we add genre shares, style similarity, similarity to Zhu Xi, distance to academies, distance to Wuxi, and Buddhist and Daoist temple density. These variables absorb differences in book production, human capital, accessibility, religious institutions, and broader intellectual life. Population and transport geography also help account for persistent cross-prefecture differences in economic development, which may themselves shape the local appeal of competing intellectual traditions (Luan and Zhai, 2026).

### *IV.C Cross-Sectional Evidence on Diffusion*

We first estimate

$$WYMIdeas_p = \beta LectureExposure_p + X_p'\Gamma + \delta_q + \varepsilon_p, \tag{1}$$

where $\delta_q$ denotes Ming province fixed effects. The outcomes are concept mentions, authors using the concepts, and semantic similarity. The exposure variable is either the distance-weighted lecture-influence measure or the number of lectures.

Table I reports the baseline estimates. Both lecture measures are positive and significant for all three outcomes. The baseline specifications control for the relevant volume of observed books, authors, or texts, as well as educational institutions, population, geography, and Ming province fixed effects. Appendix Table XIV examines the excluded doctrinal, religious, and corpus-composition controls separately.

The association is not confined to raw concept counts. Appendix Table XI uses the broad and strict measures based on concept passages excluding opposition as well as argument-focused similarity. Lecture exposure remains positively associated with all three alternative measures.

Because the outcomes use different transformations, coefficient magnitudes should not be compared directly across columns. The consistent positive associations across concept mentions, author counts, and semantic similarity show that the relationship is not specific to a single measure of intellectual exposure.

### *IV.D Difference-in-Differences Estimates*

The panel uses prefecture-period observations from 990 to 1920 in 30-year intervals. We first estimate a simple difference-in-differences model:

parameter.

Table I: Public Lectures and the Spread of Wang Yangming's Ideas

| | Concept mentions | | Authors using concepts | | Semantic similarity | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Lecture influence, 25 km | 0.739** | | 0.310*** | | 0.172*** | |
| | (0.305) | | (0.105) | | (0.055) | |
| Number of lectures | | 0.716*** | | 0.252*** | | 0.098*** |
| | | (0.146) | | (0.047) | | (0.033) |
| Books | ✓ | ✓ | | | | |
| Authors | | | ✓ | ✓ | | |
| Texts | | | | | ✓ | ✓ |
| Pre-1500 academies | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pre-1500 *jinshi* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Population in 1600 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Geographic controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ming province fixed effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Adjusted $R^2$ | 0.555 | 0.613 | 0.623 | 0.651 | 0.903 | 0.903 |
| Observations | 189 | 189 | 189 | 189 | 193 | 193 |

Notes: The outcomes and lecture variables use the pre-1600 construction. Count outcomes are expressed in logarithmic form. All columns include pre-1500 academies, pre-1500 *jinshi*, population in 1600, geographic controls, and Ming province fixed effects. Columns 1–2 additionally control for books, columns 3–4 for authors, and columns 5–6 for texts. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

$$Similarity_{pt} = \alpha + \beta(EverLecture_p \times Post1500_t) + \lambda_p + \delta_t + \varepsilon_{pt}. \tag{2}$$

Prefecture fixed effects absorb persistent regional differences, including economic differences with roots in the Song-era commercial revolution. Period fixed effects absorb common changes in language and the text corpus. The specifications with book counts address changes in the volume of observed local writing.

Table II reports results for similarity to Wang Yangming's books and letters and for the argument-focused measure. The estimates are positive across specifications, although they become smaller once book volume is included. This attenuation indicates that differences in the volume of surviving local writing account for part of the post-1500 relationship.

### *IV.E Dynamic Effects of Lecture Exposure*

A single post indicator obscures treatment timing. We therefore use a group-time difference-in-differences estimator for staggered adoption. Let $G_p$ denote the first period in which prefecture $p$ receives lecture exposure. For cohort $g$ and period $t$, the group-time effect is

$$ATT(g,t) = E[Y_t(1) - Y_t(0) \mid G_p = g], \tag{3}$$

Table II: Difference-in-Differences Estimates of Lecture Exposure and Textual Similarity

| | Complete works and letters | | Argument-focused similarity | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Ever lecture × Post-1500 | 0.259*** | 0.044* | 0.206** | 0.036 |
| | (0.094) | (0.023) | (0.085) | (0.035) |
| Number of books | | ✓ | | ✓ |
| Prefecture fixed effects | ✓ | ✓ | ✓ | ✓ |
| Period fixed effects | ✓ | ✓ | ✓ | ✓ |
| Adjusted $R^2$ | 0.085 | 0.850 | 0.048 | 0.536 |
| Observations | 1,716 | 1,716 | 1,716 | 1,716 |

Notes: The treatment variable interacts an indicator for prefectures that hosted a Yangming public lecture with a post-1500 indicator. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

with not-yet-treated and, when available, never-treated prefectures serving as controls. Event-time effects aggregate across cohorts using cohort-specific weights. This approach avoids the contamination that can arise in two-way fixed-effects event studies with heterogeneous treatment timing (Callaway and Sant'Anna, 2021; Goodman-Bacon, 2021).

Figure III reports the dynamic estimates in 50-year event-time bins. The estimates before exposure fluctuate around zero and show no sustained upward trend. Similarity rises following first lecture exposure and remains elevated in subsequent periods. The dynamic pattern therefore indicates a persistent change in local textual similarity following the introduction of public lectures.

### *IV.F Lecture Placement and Spatial Placebo Tests*

Lectures were more common in prefectures with books, gazetteers, academies, and examination success. These correlations are expected if lecturers selected places with active intellectual communities. They also make unconditional comparisons uninformative. The main regressions condition on these variables and on province fixed effects. Appendix Table XIII reports the pairwise correlations.

Lecture exposure is also spatially concentrated, raising the possibility that the estimated relationship reflects the particular geography of treated prefectures. As a placebo exercise, we reassign lecture locations 1,000 times and re-estimate the specifications under these counterfactual geographies. The estimates generated by the actual lecture locations lie at the extreme right tail of the resulting distributions. Appendix Figure X reports these exercises.

The placebo exercise does not make historical lecture placement random. It shows that the association generated by the actual lecture geography is unusually large relative to counterfactual reallocations of lecture locations. The event-time analysis provides a separate

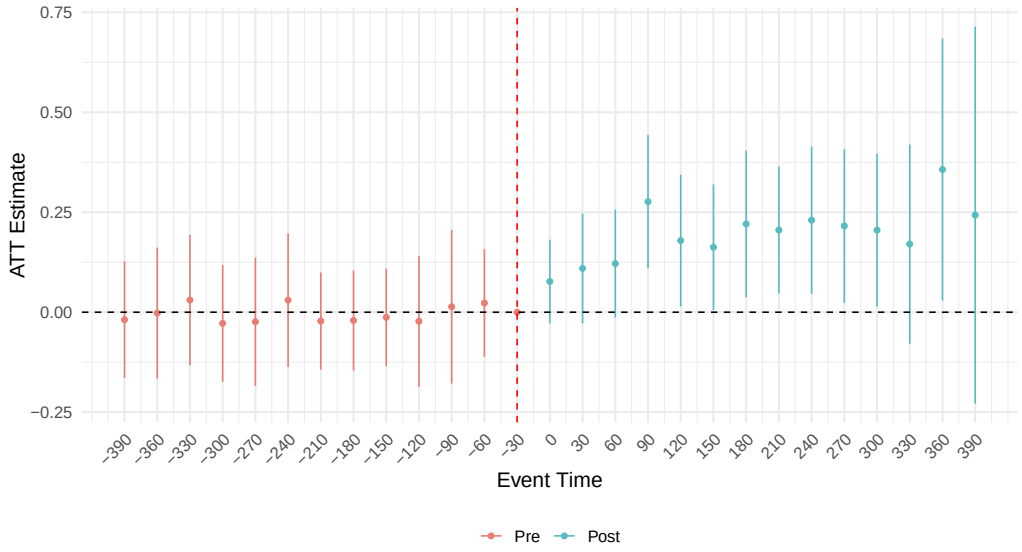



Figure III: Dynamic Effects of First Lecture Exposure on Similarity to Wang Yangming's Writings

Notes: Points are group-time event-study estimates, aggregated across treatment cohorts. The omitted period is the last pre-treatment period. Bars report 95 percent confidence intervals based on prefecture-clustered standard errors.

comparison based on changes within prefectures around first recorded exposure.

### *IV.G Network Ties and Nonlecture Diffusion*

Public lectures were only one channel through which Wang Yangming's ideas circulated. Books, correspondence, teacher-student ties, and personal networks could also transmit them across prefectures. To examine this complementary channel, we estimate a continuous-treatment difference-in-differences specification using the local density of Wang Yangming's social network. Specifically, we replace $EverLecture_p$ in equation (2) with the log number of Wang's cumulative network contacts per 100,000 inhabitants in 1600.

Appendix Table XII reports the estimates. Without controls for book volume, the interaction is positive and significant across network radii and for both similarity measures. The estimates attenuate substantially once book volume is included. The results provide complementary evidence that interpersonal networks were associated with the geographic spread of Wang Yangming's ideas beyond the public-lecture channel.

# V Political Ideas about Imperial Authority: Evidence from Official Memorials

Official memorials provide evidence on how officials articulated the permissible exercise of imperial authority. We focus on ruler-constraining arguments: claims that imperial action should be subject to moral, political, or institutional limits. Memorials record positions expressed before the throne rather than officials' complete private beliefs, but they provide a direct measure of political arguments made by serving officials. We ask whether these arguments are associated with two forms of exposure to Wang Yangming's ideas: local intellectual exposure during an official's formative years and network proximity to Wang. The Donglin analysis in the next section examines the corresponding relationship with later collective reformist politics.

## *V.A Inferring Political Views from Official Memorials*

We link memorial speakers in the *Ming Shilu* to biographical records and retain a matched identity only when the recorded birth year, or the biographical index year when birth year is unavailable, precedes that person's first observed memorial by at least twenty years. This screen removes implausible matches in which the biographical timing is inconsistent with observed memorial activity. The resulting network sample contains 4,308 memorials by 1,148 individuals with complete geographic and biographical controls.

The outcomes are memorial-level indicators of ruler-constraining arguments. Measure 1 is a keyword-based screen constructed from pre-specified phrase lists. Its limited variant identifies six domains: return, blocking, or formal contestation of an imperial order; objections to palace directives that bypass ordinary deliberation or required procedures; calls for collective recommendation or consultation in appointments; defenses of remonstrance and officials' ability to communicate criticism to the throne; criticism of memorials retained without response; and objections to predatory or arbitrary fiscal extraction. Its full variant adds three related domains: mining and commercial tax administration, manufacturing requisitions and official procurement, and appointments or promotions transmitted through palace channels. These indicators are based on phrase occurrence and do not themselves establish that an excerpt contains a substantive institutional argument.

Measure 2 is an independent recoding of all 26,196 stored excerpts. Its limited variant identifies substantive arguments that constrain imperial action, while its full variant also includes formulaic disaster or omen remonstrance. Appendix E describes the coding rules, validation, and examples.

The regressions include civil-service degree category, best examination rank, Ming-

boundary province fixed effects, fifty-year memorial-date fixed effects, prefecture controls, latitude, longitude, distance to Yuyao, and office-title fixed effects. Standard errors are clustered by individual.

### *V.B Intellectual Exposure and Political Ideas*

The first source of exposure is the local intellectual environment during an official's formative years. For each official, we measure formative exposure as the average substantive similarity of texts produced in his birthplace prefecture during ages ten through twenty-five. The measure uses observed birth year and falls back to the CBDB index year when birth year is unavailable. It is based on similarity to Wang Yangming's writings per local book, so it does not mechanically increase with the size of the surviving corpus. The formative-exposure sample contains 2,668 memorials by 770 individuals after adding the prefecture's pre-1550 composition measures.

The second source of exposure is network proximity to Wang Yangming. We define an official as connected when he appears within six degrees of Wang in the CBDB relation network. This broad measure includes direct ties, shared associates, and more distant connections and is best interpreted as proximity to the social and intellectual network surrounding Wang rather than evidence of personal contact.

Panel A shows that formative local exposure is positively associated with ruler-constraining arguments across all four measures. Three of the four estimates are statistically significant, and the estimates remain positive after controlling for local genre composition.

Panel B examines network proximity to Wang Yangming. In the full sample, network proximity is positively associated with all four measures of ruler-constraining arguments, with three of the four estimates statistically significant. We then divide the memorials by date to examine whether this relationship appears only once exposure to Wang Yangming's ideas became historically possible.[3] Among memorials dated before 1500, there is little evidence of a relationship: only one of the four estimates is statistically significant, and only at the 10 percent level. Among memorials dated 1500 or later, by contrast, all four estimates are positive and statistically significant. The timing therefore supports the interpretation of the full-sample association as reflecting exposure to the social and intellectual network through which Wang Yangming's ideas circulated.

Additional person-level specifications produce a similar pattern. Among officials born in 1450 or later, six-degree network proximity is positively associated with all four ruler-

[3]The 1500 cutoff is approximate. After the turn of the sixteenth century, Wang entered a period of expanding intellectual and social activity: he developed his mature philosophical views, moved across several regions, formed a widening network of associates and students, and later disseminated his ideas through teaching and public lectures.

Table III: Formative Exposure, Network Ties, and Ruler-Constraining Arguments

| | Dependent variable: ruler-constraining arguments | | | |
|---|---|---|---|---|
| | Measure 1 | | Measure 2 | |
| | Limited | Full | Limited | Full |
| | (1) | (2) | (3) | (4) |
| *Panel A. Formative prefecture exposure* | | | | |
| Similarity to Yangming writings per local book | 0.157 | 0.320** | 0.399*** | 0.374** |
| | (0.109) | (0.153) | (0.151) | (0.151) |
| Observations | 2,668 | 2,668 | 2,668 | 2,668 |
| Individuals | 770 | 770 | 770 | 770 |
| *Panel B. Six-degree ties to Wang Yangming* | | | | |
| Full sample | 0.026*** | 0.026** | 0.013 | 0.021** |
| | (0.008) | (0.010) | (0.008) | (0.009) |
| Memorials dated before 1500 | 0.015 | 0.015 | 0.006 | 0.027* |
| | (0.012) | (0.015) | (0.012) | (0.016) |
| Memorials dated 1500 or later | 0.033*** | 0.037*** | 0.021** | 0.027** |
| | (0.010) | (0.014) | (0.011) | (0.011) |
| Observations, full sample | 4,308 | 4,308 | 4,308 | 4,308 |
| Individuals, full sample | 1,148 | 1,148 | 1,148 | 1,148 |
| Ming province fixed effects | ✓ | ✓ | ✓ | ✓ |
| Fifty-year period fixed effects | ✓ | ✓ | ✓ | ✓ |
| Exam degree and rank | ✓ | ✓ | ✓ | ✓ |
| Prefecture and office controls | ✓ | ✓ | ✓ | ✓ |

Notes: All estimates are linear probability models with standard errors clustered by individual in the memorial-level panels. Columns (1)–(2) are the limited and full variants of Measure 1; columns (3)–(4) are the limited and full variants of Measure 2. Measure 2 is based on the independent recode of all 26,196 stored excerpts. All columns include Ming-boundary province and fifty-year memorial-date fixed effects, civil-service degree, examination rank, prefecture covariates, latitude, longitude, distance to Yuyao, and office-title fixed effects. Panel A uses formative exposure during ages 10–25 and controls for local shares of *zi*, *ji*, and *jing* texts. Panel B defines a tie as a CBDB connection within six degrees of Wang Yangming. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

constraining measures. The corresponding estimates are also positive when the outcome is the share of an official's memorials containing ruler-constraining arguments. Together, these results are consistent with officials closer to Wang's social and intellectual network being more likely to express arguments that placed limits on the exercise of imperial authority.

# VI Collective Reformist Politics: Evidence from the Donglin Movement

## *VI.A The Rise and Suppression of the Donglin Movement*

The Donglin movement was both an intellectual association centered on academy teaching and a political coalition among late-Ming scholar-officials. Its emergence grew out of the political conflicts surrounding Grand Secretary Zhang Juzheng in the 1570s and the reaction to his program after his death in 1582. Zhang's administration strengthened central direction,

disciplined the bureaucracy, and treated independent academy activity with suspicion. The reaction against his methods helped create new circles of officials who defended the standing of the regular bureaucracy and the right of scholar-officials to judge public affairs (Meskill, 1982; Miller, 2009).

A major organizational turning point came in 1604, when Gu Xiancheng and Gao Panlong reopened the Donglin Academy in Wuxi. The academy revived *jiangxue*, public lecturing and collective discussion, in a setting that connected moral cultivation to current political questions. Meetings drew scholars from beyond Wuxi, while correspondence, lecture associations, and affiliated academies extended the movement's reach. These forms of scholarly interaction resembled those through which Wang Yangming and his followers had earlier disseminated their ideas. The academy thus became a visible center for a wider community that discussed the obligations of rulers and officials, evaluated reputations, and intervened in court debates (Meskill, 1982; Elman, 1989).

The label "Donglin" soon referred to a broader and less sharply bounded political formation. Many people later classified as Donglin members had not studied at the Wuxi academy, and participants differed in doctrine, career, and degree of political involvement. What connected them was a shared reputation for moral criticism and a set of positions on personnel, remonstrance, fiscal extraction, and the political role of eunuchs. The movement's boundaries were also shaped by its opponents, who used factional lists to identify and punish an expanding circle of officials and associates (Dardess, 2002; Miller, 2009).

The movement became especially visible during the Wanli and Tianqi reigns. Donglin-associated officials criticized the emperor's withdrawal from regular government, defended officials who remonstrated, and opposed the expansion of eunuch influence outside normal bureaucratic channels. Under Wei Zhongxian, these conflicts culminated in the anti-Donglin purges of the 1620s. The academy was closed, leading figures were dismissed or prosecuted, and several died in prison or committed suicide (Dardess, 2002; Miller, 2009).

### *VI.B Donglin's Political and Fiscal Program*

Donglin's program can be characterized as an effort to constrain arbitrary power within the existing imperial order. Donglin members accepted the emperor's position within that order and did not advocate a modern system of individual rights or representative government. They argued, however, that imperial government should operate through regular offices, open remonstrance, merit-based appointments, and defensible fiscal rules. The emperor and his agents remained subject to moral and administrative standards, even though those standards were not enforced by a separate constitutional authority.

On the political side, Donglin reformers defended the right and duty of officials to criticize

policy, sought to protect censorial institutions, resisted eunuch domination, and attacked appointments made through personal access or factional maneuvering. Zhao Nanxing's 1589 memorial illustrates this agenda. He criticized careerist competition among senior officials, corrupt personnel evaluation, the displacement of public criteria by private influence, and the weakness of regular administration. Later, as Minister of Personnel, he tried to restore discipline to appointments and evaluations. His career also shows the risks of the program: efforts to police officeholding were themselves denounced as factional politics (Dardess, 2002; Miller, 2009).

Fiscal accountability formed a second part of the program. Donglin figures opposed levies collected outside the regular bureaucracy, eunuch involvement in mining and commercial taxation, privileges that diverted revenue to imperial relatives or court favorites, and the use of public office for private enrichment. Their position was not opposition to taxation itself. They sought predictable extraction through regular administrative channels and argued that public revenue should finance recognized obligations of government. In the 1620s, Zhou Zongjian linked opposition to eunuch power with objections to extra-bureaucratic fiscal extraction and interference in personnel decisions. The same argument joined political and economic accountability: arbitrary revenue collection was dangerous in part because it allowed court agents to escape normal review (Dardess, 2002).

These concerns also extended to the burdens imposed on ordinary subjects. Criticism of corrupt appointments and arbitrary levies was tied to their effects on counties and households. Gu Xiancheng, Gao Panlong, and their associates treated official self-cultivation as a condition for competent administration, lower exactions, and the protection of local livelihoods. Moral language was therefore not separate from policy. It supplied a standard for judging how appointments, taxes, and administrative procedures affected the governed (Elman, 1989; Dardess, 2002).

### *VI.C Intellectual Foundations of Donglin Politics*

Donglin's intellectual inheritance was mixed. Its thinkers drew from several Confucian traditions, including the Cheng-Zhu school, and some criticized later branches associated with Wang Yangming for subjectivism, moral spontaneity, or insufficient textual discipline. Gu Xiancheng and Gao Panlong therefore cannot be described simply as doctrinal followers of Wang. Treating Donglin as a direct continuation of a unified School of Mind would obscure disagreements that mattered to late-Ming scholars (Meskill, 1982; Elman, 1989).

The connection to Wang Yangming lies less in sectarian affiliation than in a set of arguments about moral judgment and action that had become prominent in sixteenth-century intellectual life. Wang held that individuals possessed an innate capacity to distinguish right

from wrong and that genuine knowledge required action. These propositions placed greater weight on the individual's responsibility to judge conduct for oneself and to act on that judgment. Applied to political life, they could support the view that an official who recognized corruption, arbitrary conduct, or abuse of authority had an obligation to remonstrate rather than remain silent.

This connection is visible in the political concerns of the Donglin movement. Donglin thinkers emphasized the moral responsibilities of officials, defended remonstrance, criticized the exercise of power through personal access and eunuch influence, and demanded that appointments and fiscal administration conform to publicly defensible standards. These positions did not amount to a modern theory of individual rights or constitutional government. They did, however, give political expression to a view in which moral judgment imposed obligations on officials that could conflict with deference to political superiors. Wang Yangming's ideas provided one important intellectual source for that view, even among thinkers who did not accept his philosophy as a whole.

### *VI.D Identifying Donglin Reformers*

The prefecture-level outcome is constructed from the Donglin partisan roster, or *Dangrenbang*. We assign listed reformers to historical prefectures using documented biographical locations and calculate the log number associated with each prefecture. The outcome therefore captures the geographic origins of reformist personnel, not the locations of Donglin meetings or political activity. This distinction matters because the Donglin Academy was located in Wuxi, while the officials and scholars associated with the movement came from a much wider set of regions.

Figure IV shows the geographic distribution of Donglin reformers. They were concentrated in the lower Yangtze, but the roster also includes members from other parts of the empire. The empirical specifications include Ming province fixed effects, so the estimates compare prefectures within historical provinces. The full control set also includes distance to Wuxi, separating proximity to the Donglin Academy from earlier local exposure to Wang Yangming's ideas.

The main exposure measures precede Donglin formation. They use authors born before 1550, several decades before the reopening of the Donglin Academy in 1604 and before the political coalition took shape. This timing reduces contamination from writings produced by Donglin participants themselves. The specifications therefore ask whether prefectures with greater prior exposure to Wang Yangming's ideas were more likely to produce members of the later movement.

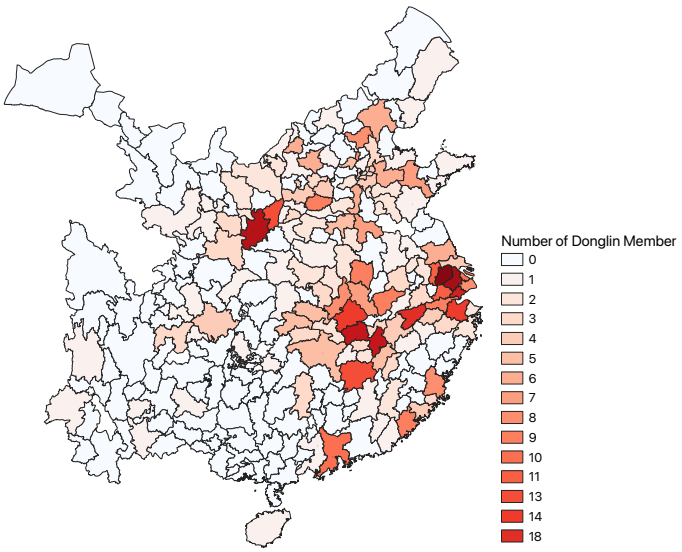



Figure IV: Distribution of Donglin Reformers by Prefecture

Notes: The map reports the number of individuals in the Donglin partisan roster assigned to each historical prefecture using biographical locations. The measure captures the geographic origins of reformist personnel, not the location of movement activity.

### *VI.E Baseline Estimates of Donglin Formation*

We estimate

$$\log(1 + DonglinReformers_p) = \beta\, WYMIdeas_p + X_p'\Gamma + \delta_q + \varepsilon_p. \tag{4}$$

The baseline specifications control for the relevant volume of books, authors, or texts. The fuller baseline additionally includes pre-existing academies, examination success, population, geography, and Ming province fixed effects. These controls address persistent regional differences in economic and social development, including differences with roots in the Song-era commercial revolution (Greif, Mokyr, and Tabellini, 2025). Population, text production, and transport geography capture local scale and connectivity.

Table IV reports the results. Concept mentions are positively associated with Donglin formation and are significant in both specifications. The number of authors using Yangming concepts is also positive in both specifications and is significant at the 10 percent level with the fuller set of controls. Similarity to Wang Yangming's books and letters is positive and significant in both specifications.

The contrast between author counts and semantic similarity is informative. Broad adoption by many authors is difficult to measure precisely when only a small number of

Table IV: Wang Yangming's Ideas and Donglin Reformers: Baseline OLS Estimates

| | Dependent variable: log Donglin reformers | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Concept mentions, pre-1550 | 0.113** | 0.128*** | | | | |
| | (0.050) | (0.048) | | | | |
| Authors using concepts, pre-1550 | | | 0.164 | 0.249* | | |
| | | | (0.139) | (0.133) | | |
| Similarity to books and letters, pre-1550 | | | | | 0.679*** | 0.800*** |
| | | | | | (0.194) | (0.210) |
| Books | ✓ | ✓ | | | | |
| Authors | | | ✓ | ✓ | | |
| Texts | | | | | ✓ | ✓ |
| Pre-existing academies | | ✓ | | ✓ | | ✓ |
| Pre-1500 *jinshi* | | ✓ | | ✓ | | ✓ |
| Population in 1600 | | ✓ | | ✓ | | ✓ |
| Geographic controls | | ✓ | | ✓ | | ✓ |
| Ming province fixed effects | | ✓ | | ✓ | | ✓ |
| Style similarity | | | | | | ✓ |
| Adjusted $R^2$ | 0.316 | 0.363 | 0.347 | 0.388 | 0.395 | 0.425 |
| Observations | 189 | 189 | 189 | 189 | 193 | 193 |

Notes: The dependent variable is the log number of Donglin reformers constructed from the *Dangrenbang* roster. Columns 1, 3, and 5 control only for the relevant volume of books, authors, or texts. Columns 2, 4, and 6 additionally include pre-1500 academies, pre-1500 *jinshi*, population in 1600, geographic controls, and Ming province fixed effects. Column 6 also controls for writing-style similarity. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

prefectures contain many identified writers. Semantic similarity uses information from the sampled text passages and may capture intellectual uptake that does not contain the canonical phrases.

### *VI.F Alternative Textual Measures and Opposition*

The baseline measures capture different dimensions of exposure to Wang Yangming's ideas, but each raises a distinct measurement concern. Explicit concept mentions may include hostile discussion, while similarity to Wang's broader writings may reflect aspects of his writing beyond the arguments most closely associated with the School of Mind. We therefore consider stance-filtered concept measures and an argument-focused similarity measure, and separately control for similarity to texts written against Wang's teachings.

Table V first reports the alternative exposure measures. The stance classification is based on sentences containing any of the three core Yangming concepts. The broad measure excludes sentences classified as explicitly opposed to Wang Yangming, while the strict measure also excludes sentences classified as likely opposed to him. Both measures are positive and significant with the fuller set of controls. Similarity to the argument-focused reference

collection is also positive and significant.

Table V: Alternative Measures of Wang Yangming's Ideas and Donglin Reformers

| | Dependent variable: log Donglin reformers | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Concept passages excluding opposition, broad | 0.153*** | 0.120** | | | | |
| | (0.048) | (0.049) | | | | |
| Concept passages excluding opposition, strict | | | 0.150*** | 0.114** | | |
| | | | (0.048) | (0.049) | | |
| Argument-focused similarity | | | | | 0.391*** | 0.392** |
| | | | | | (0.146) | (0.157) |
| Books or texts | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Baseline controls | | ✓ | | ✓ | | ✓ |
| Style similarity | | | | | | ✓ |
| Similarity to Zhu Xi | | | | | | ✓ |
| Book genres | | | | | | ✓ |
| Adjusted $R^2$ | 0.354 | 0.445 | 0.351 | 0.442 | 0.377 | 0.497 |
| Observations | 189 | 189 | 189 | 189 | 193 | 193 |

Notes: Baseline controls include pre-existing academies, pre-1500 *jinshi*, population in 1600, geography, province fixed effects, and the additional controls described in Section III. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

We next ask whether the results reflect engagement with criticism of Wang Yangming rather than exposure to his ideas. We compare local texts with two works written against the School of Mind: Chen Jian's *Xuebu Tongbian* and Zhang Lie's *Wangxue Zhiyi*. The former defended Cheng-Zhu orthodoxy against Wang Yangming's teachings, while the latter directly criticized Wang's philosophy and later traditions associated with his school. Table VI includes similarity to these texts alongside similarity to Wang Yangming's writings. Similarity to the anti-Yangming texts is small and insignificant across specifications, while the estimates for similarity to Wang's writings remain positive. The results therefore do not appear to be driven simply by local engagement with criticism of the School of Mind.

### *VI.G First-Difference Estimates*

The cross-sectional estimates may partly reflect persistent differences in local intellectual production. We therefore examine whether prefectures that experienced larger increases in textual similarity to Wang Yangming subsequently produced more Donglin reformers.

Because the corpus records authors' birth years rather than publication dates, we construct two author cohorts. The pre cohort includes authors born in 1360–1459 and the post cohort those born in 1460–1550. The 1460 boundary combines an approximate diffusion date of 1510 with an assumed maturity age of 50, while the 1550 cutoff keeps mature authorship before Donglin formation around 1600. For each prefecture, we calculate the change in average

Table VI: Controlling for Similarity to Anti-Yangming Texts

| | Dependent variable: log Donglin reformers | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Similarity to books and letters | 0.720** | 0.622** | | |
| | (0.280) | (0.287) | | |
| Argument-focused similarity | | | 0.364* | 0.382* |
| | | | (0.188) | (0.195) |
| Similarity to anti-Yangming texts | -0.315 | -0.009 | 0.014 | 0.067 |
| | (0.529) | (0.743) | (0.530) | (0.713) |
| Number of texts | ✓ | ✓ | ✓ | ✓ |
| Baseline controls | | ✓ | | ✓ |
| Style similarity | ✓ | ✓ | ✓ | ✓ |
| Similarity to Zhu Xi | | ✓ | ✓ | ✓ |
| Book genres | | ✓ | | ✓ |
| Adjusted $R^2$ | 0.390 | 0.497 | 0.377 | 0.493 |
| Observations | 193 | 193 | 193 | 193 |

Notes: Controls include pre-existing academies, pre-1500 *jinshi*, population in 1600, geography, Ming province fixed effects, distance to Zhu Xi's academies, distance to Wuxi, and Buddhist and Daoist temple density. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

similarity between the two cohorts:

$$\Delta Similarity_p = \overline{Similarity}_{p,1460\text{–}1550} - \overline{Similarity}_{p,1360\text{–}1459}. \tag{5}$$

We construct this measure separately for similarity to Wang's books and letters and for argument-focused similarity. The corresponding specification is

$$DonglinReformers_p = \beta \Delta Similarity_p + \gamma \Delta X_p + \mu_{r(p)} + \varepsilon_p, \tag{6}$$

where the controls are differenced across the same cohorts where possible and include text volume, examination success, population, and writing-style similarity. The fuller specifications also include Ming province fixed effects, $\mu_{r(p)}$. Because the Donglin movement did not yet exist in the earlier period, the political outcome is the later prefecture-level number of Donglin reformers.

Table VII reports positive and significant estimates for both similarity measures. The estimates are essentially unchanged when the differenced controls and Ming province fixed effects are added. Prefectures in which textual similarity to Wang Yangming increased more strongly across these cohorts were therefore also more likely to produce Donglin reformers.

Table VII: First-Difference Estimates

| | Dependent variable: change in Donglin reformers | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Change in similarity to books and letters | 0.111*** | 0.112*** | | |
| | (0.022) | (0.021) | | |
| Change in argument-focused similarity | | | 0.162*** | 0.170*** |
| | | | (0.036) | (0.039) |
| Ming province fixed effects | | ✓ | | ✓ |
| Change in books | | ✓ | | ✓ |
| Change in *jinshi* | | ✓ | | ✓ |
| Change in population | | ✓ | | ✓ |
| Change in style similarity | | ✓ | | ✓ |
| Adjusted $R^2$ | 0.317 | 0.352 | 0.212 | 0.208 |
| Observations | 193 | 193 | 193 | 193 |

Notes: The time windows refer to authors' birth cohorts, not text publication dates. Changes in the textual variables are calculated as the prefecture-level average among authors born in 1460–1550 minus the corresponding average among authors born in 1360–1459. The 1460 boundary follows from an approximate diffusion date of 1510 and an assumed maturity age of 50; the 1550 boundary similarly places mature authorship before Donglin formation around 1600. Because there were no Donglin reformers in the pre-period, the change in Donglin reformers equals the later prefecture-level number recorded in the *Dangrenbang* roster. Columns 2 and 4 include Ming province fixed effects and changes in the volume of texts, *jinshi*, population, and writing-style similarity. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

# VII Later Developments and Contemporary Attitudes

## *VII.A The Restoration Society*

The Restoration Society (*Fushe*), a late-Ming scholarly and political association that emerged after the Donglin movement, provides a later test of whether earlier local exposure to Wang Yangming's ideas predicts collective reformist organization. We match rostered Restoration Society members to their home prefectures, aggregate the number of members in each prefecture, and use the log number of members as the outcome. The specifications parallel the baseline Donglin analysis and compare prefectures within Ming provinces after accounting for pre-existing educational institutions, examination success, geography, and the relevant volume of surviving texts.

Table VIII shows a positive association between earlier local exposure to Wang Yangming's ideas and later Restoration Society membership across the different measures. The estimates for the number of authors using Yangming concepts and similarity to Wang Yangming's books and letters are positive and significant at the 1 percent level, and argument-focused similarity is also positive and significant. The estimates for raw concept mentions and for the broad and strict measures based on concept passages excluding opposition are positive but imprecisely

estimated. Taken together, the results indicate an overall positive relationship between earlier exposure to Wang Yangming's ideas and the later geographic distribution of Restoration Society members, with the strength and precision of the association varying across measures.

Table VIII: Wang Yangming Exposure and Restoration Society Membership

| | Concept mentions | Authors using concepts | Books and letters similarity | Concept passages excluding opposition, broad | Concept passages excluding opposition, strict | Argument-focused similarity |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Concept mentions, pre-1550 | 0.133 | | | | | |
| | (0.111) | | | | | |
| Authors using concepts, pre-1550 | | 0.687*** | | | | |
| | | (0.233) | | | | |
| Similarity to books and letters, pre-1550 | | | 1.391*** | | | |
| | | | (0.433) | | | |
| Concept passages excluding opposition, broad | | | | 0.114 | | |
| | | | | (0.122) | | |
| Concept passages excluding opposition, strict | | | | | 0.086 | |
| | | | | | (0.125) | |
| Argument-focused similarity | | | | | | 0.786** |
| | | | | | | (0.313) |
| Number of books | ✓ | | | ✓ | ✓ | |
| Number of authors | | ✓ | | | | |
| Number of texts | | | ✓ | | | ✓ |
| Writing-style similarity | | | | | | ✓ |
| Baseline controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Adjusted $R^2$ | 0.531 | 0.555 | 0.568 | 0.529 | 0.526 | 0.562 |
| Observations | 214 | 214 | 193 | 214 | 214 | 193 |

Notes: The dependent variable is the log number of matched Restoration Society members from a prefecture. Each column reports a separate prefecture-level OLS regression. All specifications include pre-1500 academies, pre-1500 *jinshi*, Ming province fixed effects, and distances to rivers, the Grand Canal, Beijing, and the coast. Columns 1, 4, and 5 control for the number of pre-1550 books; column 2 controls for the number of pre-1550 authors; and columns 3 and 6 control for the number of pre-1550 texts. Column 6 also controls for writing-style similarity to the argument-focused reference collection. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

### *VII.B Beyond the Ming*

The political setting changed sharply after the Qing conquest. The Qing state promoted Zhu Xi orthodoxy and restricted heterodox teaching. Public intellectual organization became more dangerous, and the literary inquisition raised the costs of politically sensitive writing and criticism of imperial authority (Goodrich, 1935; Koyama and Xue, 2015; Xue, 2021). Under Qianlong, these pressures overlapped with the *Siku Quanshu* project, in which book collection and compilation became intertwined with proscription and censorship (Guy, 1987; Bai, Jia, and Yang, 2024).

Under the Qing, Wang Yangming's ideas survived largely through private and informal

channels, including personal study, correspondence, family and scholarly lineages, informal teaching, and later historical writing. Late Qing reformers revisited this language of moral agency, and early Republican writers and political actors, including Sun Yat-sen, drew selectively on the unity of knowledge and action and on Wang's image as an official who joined conviction to conduct (Brière, 1956; Gregor and Chang, 1980). This later reception shows that the ideas remained available despite the contraction of the more public channels through which they had circulated in the late Ming.

Wang Yangming's ideas also circulated elsewhere in East Asia. Japanese Yomeigaku was taken up in educational, ethical, and political debates, while Korean scholars interpreted Wang's thought through their own intellectual and institutional controversies (Benesch, 2009; Ivanhoe, 2016). These receptions place Wang's thought within a wider East Asian intellectual history and show that its political uses were not confined to the institutional setting in which it first developed.

The longer history raises the question of whether places with deeper exposure to Wang Yangming's ideas also exhibit different contemporary attitudes toward public criticism and government intervention.

### *VII.C Contemporary Political Attitudes*

We use pooled waves of the Chinese General Social Survey from 2010 to 2015 that ask whether the government should intervene in public criticism, family planning, and individual choices over jobs and residence. We code a binary outcome equal to one when a respondent supports government non-intervention and exclude neutral responses. The three historical exposure measures mirror the main analysis: concept mentions, the number of authors using Yangming concepts, and cumulative textual similarity to Wang Yangming's writings.

Table IX reports the results. The regressions control for the pre-existing intellectual, demographic, and geographic environment using the numbers of books and authors before 1550, academies before 1500, *jinshi* and gazetteers before 1600, population in 1600, and distances to a river, Beijing, and the coast. Contemporary local conditions are captured by GDP per capita and average schooling in 2010, while respondent-level controls include gender, education, and harmonized log income. All specifications include survey-year and Ming-province fixed effects, and standard errors are clustered by modern province.

Because the historical exposures are continuous, we additionally use stabilized continuous generalized-propensity-score weights estimated at the county level. The weighting is intended to reduce systematic differences in observed covariates across counties with different levels of historical exposure. The final estimation weight combines the CGSS survey weight with the county-level GPS weight. Appendix I describes the construction of the GPS weights and

reports the associated balance diagnostics.

Table IX: Historical Wang Yangming Exposure and Contemporary Attitudes

| | Public criticism (A46) | Family planning (A47) | Job/residence choice (A48) |
|---|---|---|---|
| Concept mentions, pre-1550 | 0.012 | 0.034 | 0.010 |
| | (0.026) | (0.026) | (0.023) |
| Authors using concepts, pre-1550 | 0.200*** | 0.206*** | 0.131*** |
| | (0.062) | (0.060) | (0.032) |
| Similarity to books and letters, pre-1550 | 0.025 | 0.170*** | 0.077*** |
| | (0.037) | (0.032) | (0.029) |
| Survey-year fixed effects | ✓ | ✓ | ✓ |
| Ming-province fixed effects | ✓ | ✓ | ✓ |
| Historical and modern controls | ✓ | ✓ | ✓ |
| Individual controls | ✓ | ✓ | ✓ |
| Observations | 26,238 | 30,258 | 29,946 |

Notes: Outcomes are binary indicators equal to one when respondents support government non-intervention; neutral responses are excluded. Each estimate comes from a separate regression. The three historical exposures enter as $\log(1+x)$. Individual controls include gender, education, and harmonized log income. Historical and modern controls include books before 1550, authors before 1550, academies before 1500, *jinshi* before 1600, population in 1600, gazetteers before 1600, geographic distances, 2010 GDP per capita, and average schooling. All specifications include survey-year fixed effects and Ming-province fixed effects. The estimation weights combine the CGSS survey weights with county-level stabilized continuous generalized-propensity-score weights, winsorized at the 1st and 99th percentiles. Standard errors are clustered by modern province. GPS balance meets the 0.10 criterion for author exposure, is close but incomplete for concept exposure, and fails for text similarity. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Historical author exposure is positively associated with support for government non-intervention across all three outcomes. Text similarity is positively associated with support for non-intervention in family planning and in job and residence choice, but not with attitudes toward public criticism. Concept-mention exposure is not significantly associated with any of the three outcomes.

These outcomes also connect to research on individualism in economics and political economy. Pitlik and Rode distinguish self-direction and self-determination as two components of individualistic values and find that both are associated with lower support for government intervention (Pitlik and Rode, 2017). The CGSS outcomes are not measures of individualism itself. They capture attitudes toward the scope of government intervention that are closely related to the dimensions of self-direction and self-determination most relevant here.

The GPS weighting achieves satisfactory covariate balance for author exposure, is close but incomplete for concept exposure, and does not achieve satisfactory balance for text similarity. We therefore place greater weight on the author-exposure results and interpret the text-similarity estimates more cautiously.

# VIII Discussion

The evidence points to a progression from ideas to political action. Wang Yangming's philosophy supplied a language of moral agency that joined individual judgment to a responsibility to act. Public lectures were followed by substantial increases in local exposure to these ideas. At the individual level, connections to Wang predict greater use of ruler-constraining arguments in court memorials. At the collective level, prefectures with greater historical exposure later produced more Donglin reformers. These results show that ideas could shape elite political action even under imperial autocracy.

One possible mechanism combines moral obligation with coordination. Wang Yangming's ideas linked judgment to action, while lectures and scholarly networks gave officials and scholars opportunities to discuss their obligations and identify others willing to criticize authority. Shared teaching could therefore strengthen the perceived duty to act while also making collective criticism easier to organize. The data do not separately identify these channels: the transmission of ideas and the formation of networks occurred together. The memorial and prefecture-level results are consistent with both processes.

Research on individualism in economics and political economy also helps place these findings in a broader context. Existing work studies the historical and institutional determinants of individualistic values and their relationship to economic and political outcomes (Greif, 1994; Tabellini, 2010; Alesina and Giuliano, 2015; Gorodnichenko and Roland, 2017; Pitlik and Rode, 2017). The results here point to intellectual movements as another potential source of variation in values related to self-direction and self-determination. Wang Yangming's ideas emphasized individuals' capacity for moral judgment and their responsibility to act on that judgment, and greater exposure to these ideas is associated with ruler-constraining arguments, reformist mobilization, and, in the contemporary data, lower support for government intervention in private affairs.

The political limits of this process are central to the interpretation. The Donglin movement sought remonstrance, regular administration, and restraints on arbitrary intervention within imperial government. It left the basic distribution of political authority intact: political power remained concentrated in the imperial state, without popular sovereignty, equal political rights, or an institutionalized basis for citizens to hold rulers accountable. The examination system and bureaucracy could accommodate some moral criticism while retaining control over careers, association, and political action. In the Qing, restrictions on heterodox teaching and the policing of expression increased the cost of turning intellectual disagreement into organized activity (Koyama and Xue, 2015; Xue, 2021). Ideas could therefore affect elite conduct without altering the formal distribution of political authority.

The scope of the historical evidence is primarily elite. The corpus records literati production much more clearly than popular reception, and Donglin reformers belonged to the educated elite. Contemporary survey associations extend the outcomes beyond this group, but they do not identify a continuous channel of transmission across centuries. More generally, the textual measures capture different dimensions of intellectual exposure, so the results should be interpreted as evidence about the broader influence of Wang Yangming's thought rather than as a clean decomposition of the effects of individual doctrines.

Taken together, the findings speak to a broader question in political economy: how ideas become politically consequential when the surrounding institutional order remains autocratic. In late Ming China, ideas spread through local teaching and networks, supplied standards for judging political authority, and were associated with both individual criticism and collective reformist activity. Yet these developments did not produce a durable redistribution of political power. Their longer-run consequences depended on whether teaching, association, and criticism could be converted into organizations and political coalitions capable of imposing lasting constraints on authority. The Chinese case therefore shows both the political force of ideas and the institutional limits on what they could accomplish.

# IX Conclusion

We measure Wang Yangming's ideas in a broad corpus of more than 24,000 historical texts and a separate, partially overlapping corpus of 12,434 digitized books, and trace their spread through public lectures and scholarly networks. Public lectures were followed by substantial increases in local exposure to these ideas. At the individual level, connections to Wang predict greater use of ruler-constraining arguments in official memorials. At the collective level, prefectures with greater pre-1550 exposure later produced more Donglin reformers. Contemporary survey evidence also shows that historical author exposure is associated with greater support for government non-intervention in several areas of private life.

Taken together, the findings show that ideas of moral agency could matter politically even under autocracy. Wang Yangming's philosophy supplied a language of individual judgment, self-cultivation, and responsibility for action from within the Confucian tradition. Greater exposure to these ideas was associated with both individual criticism of political authority and collective reformist mobilization. Ideas could therefore shape political action even though the formal distribution of political power remained unchanged.

Their institutional reach remained limited. The Donglin movement did not overturn the autocratic order, and the Qing state later restricted important channels of teaching, association, and organized criticism. The broader implication is that political ideas can become

consequential even where institutions sharply constrain the ways they can be expressed and organized. Whether they produce durable institutional change depends on whether teaching, association, and criticism can be converted into collective power. In this sense, the results identify an indigenous intellectual source of political reform in China that emerged centuries before the large-scale introduction of Western political thought.

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# Supplementary Online Appendices

## A Summary Statistics

Table X: Summary Statistics

| Variable | *N* | Mean | Std. dev. | Min. | Max. |
|---|---|---|---|---|---|
| Concept mentions, pre-1550 | 191 | 13.16 | 62.57 | 0 | 768 |
| Authors using concepts, pre-1550 | 191 | 0.90 | 1.92 | 0 | 13 |
| Similarity to books and letters, pre-1550 | 141 | 1.74 | 3.28 | -0.02 | 27.84 |
| Substantive similarity, pre-1550 | 141 | 1.09 | 2.09 | -0.11 | 17.28 |
| Concept passages excluding opposition, pre-1550 | 230 | 9.70 | 53.85 | 0 | 730 |
| First-degree Yangming connections | 230 | 0.46 | 1.53 | 0 | 15 |
| Second-degree Yangming connections | 230 | 10.46 | 23.35 | 0 | 182 |
| Donglin members | 230 | 2.60 | 6.05 | 0 | 64 |
| Public lectures before 1600 | 230 | 1.37 | 7.56 | 0 | 96 |
| Lecture influence within 25 km | 216 | 1.82 | 8.06 | 0 | 96 |
| Books, pre-1550 | 230 | 21.73 | 80.25 | 0 | 802 |
| Authors, pre-1550 | 230 | 8.98 | 38.52 | 0 | 402 |
| Pre-1500 *jinshi* | 230 | 6.80 | 11.53 | 0 | 73 |
| Pre-existing academies | 230 | 5.74 | 10.51 | 0 | 70 |
| Population in 1600 | 217 | 361,241.29 | 275,558.04 | 38,040.41 | 1,545,778.56 |
| Buddhist temple density | 217 | 0.81 | 0.76 | 0.05 | 9.13 |
| Daoist temple density | 206 | 2.10 | 3.90 | 0 | 39.90 |
| Distance to Beijing | 228 | 1,042.28 | 520.39 | 0 | 2,259.20 |
| Distance to river | 228 | 328.85 | 253.08 | 0 | 967.13 |
| Distance to canal | 228 | 540.95 | 447.56 | 0 | 1,519.15 |
| Distance to coast | 228 | 391.78 | 338.89 | 0 | 1,502.56 |
| Distance to Wuxi | 228 | 847.11 | 441.02 | 0 | 2,081.82 |

## B Illustrative Followers and Intellectual Heirs

Wang Yangming's immediate followers and later intellectual heirs illustrate how his ideas developed beyond his own writings. The School of Mind did not form a single organized party, and later figures often accepted only parts of Wang's thought.

### *B.1 Immediate Disciples and Early Followers*

Among Wang's immediate circle, Wang Ji (1498–1583) and Qian Dehong (1496–1574) were prominent disciples who helped develop, record, and transmit his teaching. Wang Gen

(1483–1541) founded the Taizhou current, which brought some of the tradition's claims about widely shared moral capacity to broader social audiences. Their roles show that the diffusion of Wang's ideas depended on teaching, writing, and personal connections as well as on later printed texts (De Bary, 1970; Wang, 1992; Ivanhoe, 2002).

### *B.2 Later Intellectual Heirs*

In the late Ming and early Qing, Liu Zongzhou (1578–1645), Huang Zongxi (1610–1695), and Gu Yanwu (1613–1682) engaged with and reworked parts of the Lu–Wang tradition amid political crisis. Their relationship to Wang was critical and selective; they should not be treated as members of a single continuous school. Their writings show how the tradition was reinterpreted across generations (De Bary, 1970; Bary, 1983; Xue, 2025).

## C Additional Measurement Evidence

### *C.1 Nationwide Similarity Trend*

Figure V plots the nationwide trend in similarity to Wang Yangming's books and letters. Similarity begins to rise around his lifetime and remains elevated afterward. This descriptive pattern is consistent with the historical timing of the diffusion of Wang Yangming's ideas, while the regional panel permits stronger tests using lecture timing.

### *C.2 Alternative Similarity Trends*

Figure VI compares the argument-focused similarity series with the style and Zhu Xi benchmarks. The argument-focused measure rises after Wang Yangming's lifetime. The style series is comparatively flat, and similarity to Zhu Xi falls in the same period. These differences support the interpretation that the main trend is not a generic change in writing style or Neo-Confucian language.

### *C.3 Similarity Construction*

The broader corpus is the full-text-searchable database hosted by Erudition, but complete machine-readable text is not available for all of its works in a form suitable for constructing embeddings. The similarity analysis therefore uses a separate corpus of 12,434 digitized books. This corpus overlaps only partially with the broader historical corpus used for the count measures. We normalize each text and apply a common sampling rule: retain its leading 1,000 Chinese characters and at most the first 20 valid segments. We drop segments shorter than two characters or with fewer than 70 percent Chinese characters. The corpus is segmented with a sentence-boundary model for classical Chinese. The reference texts use the same

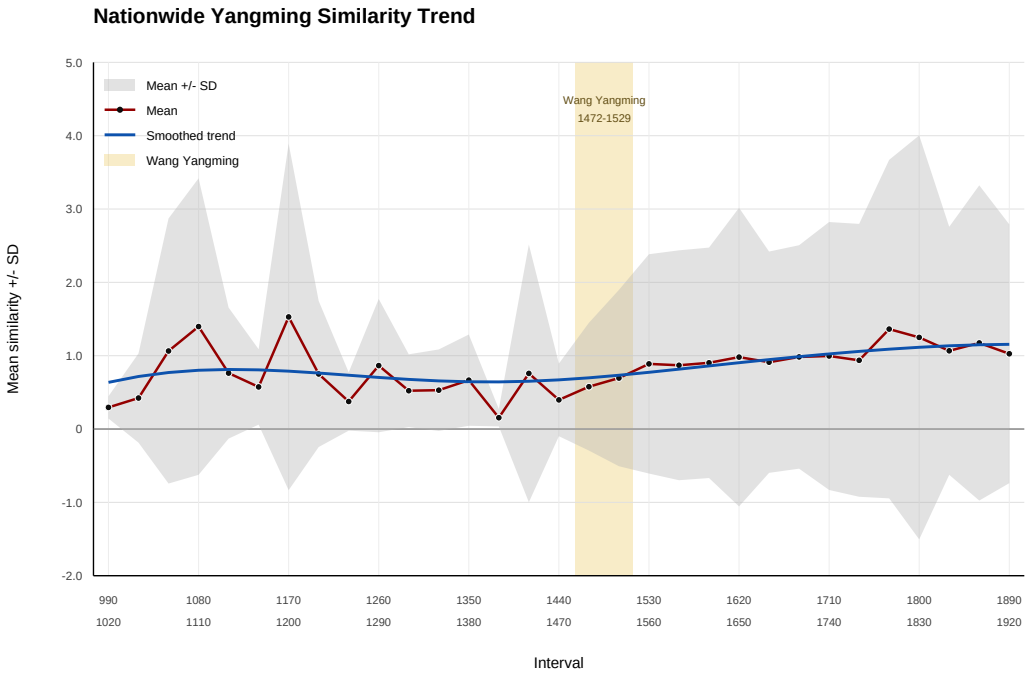


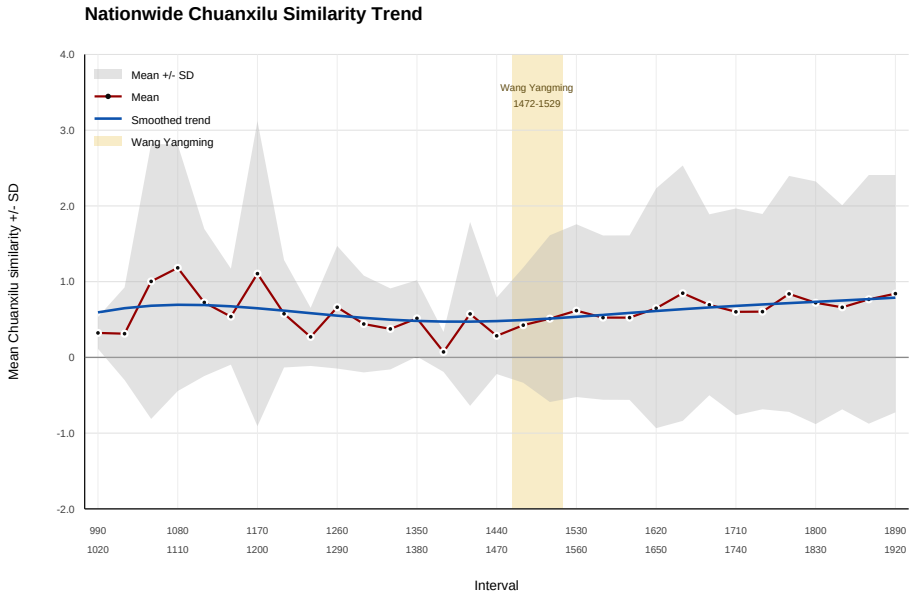

Figure V: Nationwide Similarity to Wang Yangming's Books and Letters

Notes: The figure plots the nationwide mean similarity, a smoothed trend, and the cross-text dispersion by period. The shaded vertical band marks Wang Yangming's lifetime.

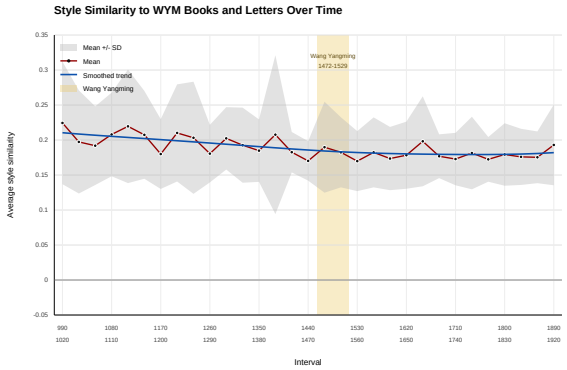
character cap and segment limit. A text with no valid segment is not scored. Because the measure uses opening passages, it may miss ideas developed later in a book.

GuwenBERT produces a 768-dimensional representation for each retained segment. The character-level tokenizer truncates inputs at 128 tokens without special tokens. We take the attention-mask-weighted mean of the final-layer token representations, mean-center all corpus and reference embeddings using their joint mean, and L2-normalize the centered vectors. The analysis compares historical text segments to two reference corpora. The broad corpus contains Wang Yangming's collected works and letters. The argument-focused collection consists of all passages containing arguments we identified through a hand-curated review of the source text; each retained passage presents an argument concerning one of the three core concepts. Book-level scores are summed within prefecture-period cells, and the regressions control for the number of books in each cell.

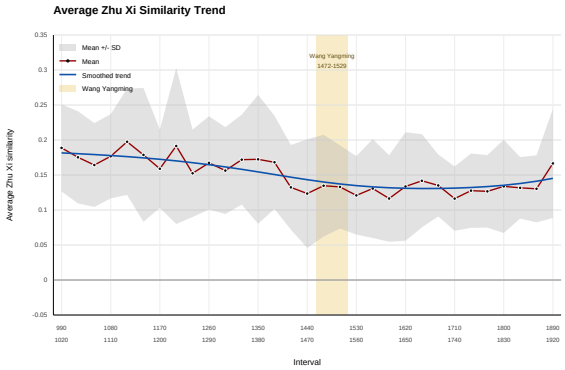
The style control uses eight features: modal particles, connectives, function words, respectful terms, average sentence length, sentence-length variance, lexical diversity, and punctuation density. The main regressions enter average local style similarity as a control. This regression control is distinct from the three-component style score used in the raw composite similarity measure.




(a) Argument-Focused Similarity




(b) Style Similarity




(c) Similarity to Zhu Xi

Figure VI: Argument-Focused Similarity and Benchmark Trends

# D Further Details on Text Construction and Validation

## *D.1 Preprocessing and Segmentation*

The corpus is normalized by removing line breaks, excess whitespace, and decorative quotation marks. Sentence boundaries in unpunctuated corpus texts are supplied by a model trained on punctuated classical texts after sentence-ending punctuation has been removed from its inputs. The model is based on a GuwenBERT encoder with a bidirectional LSTM classification layer and focal loss for the sparse boundary labels. This procedure allows the

same segmentation rule to be applied to texts that originally lack punctuation.

For each reference text and historical book, we construct three content components. The global component is the cosine similarity between the normalized mean embedding of the reference segments and the normalized mean embedding of the book's segments. The local component takes, for each reference segment, its maximum cosine similarity to any segment in the historical book and averages the three largest such values. The topic component is one minus the Jensen–Shannon divergence between their topic distributions. We estimate an eight-topic LDA model with three passes and random seed 42 on character bigrams from the retained corpus segments, excluding selected multi-character function words and terms that occur in fewer than two or more than 80 percent of books.

The content score is a weighted average of the global, local, and topic components, with weights 0.25, 0.25, and 0.15, respectively, rescaled to sum to one. The baseline composite additionally includes a style score with total weight 0.35. That score combines sentence-length-distribution similarity (weight 0.12), sentence-final-character similarity (0.13), and function-word-profile similarity (0.10). The sentence-length component is one minus Jensen–Shannon divergence; the other two components are cosine similarities. We also report the content score without these style components as the substance-only measure.

The broad reference corpus contains Wang Yangming's collected works and letters. The argument-focused reference consists of all passages containing arguments we identified through a hand-curated review of the source text. Each retained passage presents an argument concerning innate knowledge, the unity of knowledge and action, or the mind as principle. The two references answer different questions. For the global embedding component, the argument-passage embeddings are pooled by taking their mean, so this component compares each historical book with one pooled representation of the argument-focused collection. The local component retains the individual argument-passage embeddings and compares them with book segments using the top-three matching rule. At the final stage, book-level scores are summed within prefecture-period cells. The regressions include the number of observed books, so the similarity measure is not interpreted as book volume alone.

### *D.2 Style and Doctrinal Benchmarks*

The style control is based on eight features measured in the beginning of each document: modal particles, connectives, function words, respectful terms, average sentence length, sentence-length variance, lexical diversity, and punctuation density. For feature $k$, similarity between documents $d_1$ and $d_2$ is based on the ratio of the smaller feature value to the larger one. The aggregate style measure is

$$S_{\text{style}}(d_1, d_2) = \sum_k w_k \frac{\min\{f_k(d_1), f_k(d_2)\}}{\max\{f_k(d_1), f_k(d_2)\}}, \tag{7}$$

where the weights sum to one. The measure captures similarities in form that may be unrelated to philosophical content. The main regressions also control for genre shares and similarity to Zhu Xi. Together, these controls address the possibility that Yangming similarity is a proxy for classical prose style or general Neo-Confucian language.

### *D.3 Stance and Validation*

Passages containing one of the three core concepts are classified according to whether they support, neutrally discuss, or oppose the School of Mind. The broad measure based on concept passages excluding opposition removes explicit opposition. The strict measure applies a more restrictive inclusion rule. These passage-level filters are distinct from the anti-Yangming similarity control, which captures proximity to works that criticize Wang's teachings.

The anti-Yangming reference corpus consists of two polemical works: Chen Jian's *Xuebu Tongbian* and Zhang Lie's *Wangxue Zhiyi*. The former defends Cheng-Zhu orthodoxy and challenges the spread of Wang Yangming's teachings; the latter directly questions Wang's philosophy and later traditions associated with his school. The two works were written in different periods, but both provide explicit critical reference material. We apply the same preprocessing, embedding, and aggregation procedure described above, use the substantive components of the similarity score, and include the resulting prefecture-level measure directly in the political regressions. If the results were driven by general late-imperial intellectual style or by regions especially engaged in controversy over Wang's school, similarity to these critical works should show comparable associations with the political outcomes. The estimates do not show such a pattern, which reduces that concern without establishing that the Wang Yangming measure captures endorsement.

The validation strategy uses agreement across measures. Texts containing the canonical phrases are more similar to Wang's writings than texts without them, while the national similarity trend rises around and after Wang's lifetime. The argument-focused trend differs from the style and Zhu Xi trends shown in Figure VI. No single exercise proves endorsement, but the combined evidence indicates that the measures capture more than generic period language.

### *D.4 Corpus Coverage*

The two historical corpora are selective and overlap only partially. Gazetteers were produced unevenly, surviving books reflect preservation and digitization, and author biographies

are more complete for prominent men. This selection affects levels and may also vary over time. The main analysis addresses observable differences by controlling for book or author totals, genre, gazetteer availability, educational institutions, and population. Province fixed effects absorb broad regional differences, while the panel specifications use prefecture and period fixed effects. The remaining limitation is that the data measure the recorded intellectual world, especially elite writing, more accurately than oral or popular reception.

# E Coding Constraints on Imperial Power in Court Memorials

The memorial-level outcome used in Section V is a phrase-based screen for ruler-constraining arguments: arguments that place procedural, institutional, or fiscal constraints on the exercise of imperial power. It is not a measure of general moral criticism, loyalty, or praise of the sovereign's character. The unit of observation is a memorial in the *Ming Shilu*. A memorial receives a value of one when its preserved excerpt contains a phrase from a pre-specified coding domain. The coding file also retains the triggered domain, the source excerpt, and the memorial's reign and speaker information.

## *E.1 Core and Expanded Indicators*

The core and expanded indicators are the limited and full variants of Measure 1, respectively. The core indicator equals one if a memorial contains language in any of six domains. First, it captures the return, blocking, or formal contestation of an imperial order. Second, it captures objections to directives originating in the palace that bypassed ordinary deliberation or required procedures. Third, it captures calls for collective recommendation or consultation in appointments. Fourth, it captures defenses of remonstrance and of officials' ability to communicate criticism to the throne. Fifth, it captures criticism of memorials being retained without response. Sixth, it captures objections to predatory or arbitrary fiscal extraction by the state.

The expanded indicator includes the six core domains and three additional categories: disputes over mining and commercial tax administration; objections to manufacturing requisitions and official procurement; and appointments or promotions transmitted directly through palace channels. These additional categories are substantively related to constraints on imperial agents, but they are kept separate in the coding because their vocabulary is concentrated in particular reigns and political crises. The core measure is therefore the preferred outcome for comparisons across the full dynasty. The expanded measure is useful for testing whether the findings extend to a broader institutional vocabulary.

The phrase lists were designed to prioritize institutional context. They include terms

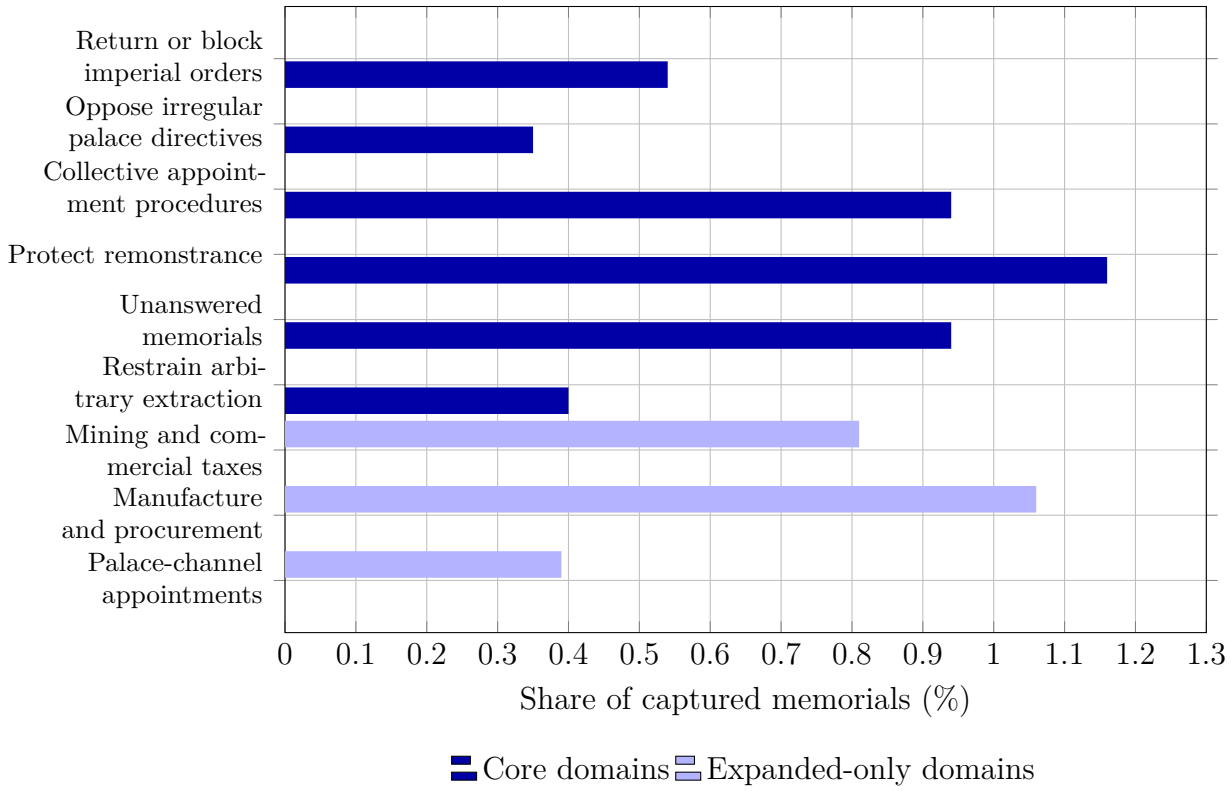



Figure VII: Domains in the Memorial-Level Constraint-Language Screen

for blocked edicts, palace directives, collective appointment procedures, suppressed criticism, unanswered memorials, and extraordinary extraction. The screen excludes expressions that explicitly celebrate unilateral imperial discretion. A word-boundary safeguard also distinguishes a relevant phrase for returning an edict from homophonous administrative language that would otherwise create false positives.

### *E.2 Validation of Measure 1*

The Measure 1 indicators are screening measures, not hand-coded determinations of substantive political argument. Keyword matching widens recall but produces false positives, including formulaic disaster remonstrance and passages in which a phrase appears without an argument for a durable institutional check. For this reason, the coding exercise includes a deterministic sample of flagged memorials from seven reigns. Each sampled memorial is classified as a substantive constraint argument, formulaic remonstrance, or false positive, with a short rationale retained in the validation file.

The validation exercise indicates that the raw core flag overstates the literal prevalence of substantive constraint arguments. The corrected dynasty series therefore multiplies the raw core rate in each validated reign by the observed share of sampled flags classified as

substantive. The analysis uses the memorial-level binary indicators to study differences across officials, not to estimate an exact dynasty-wide prevalence. The evidence should be read with this measurement error in mind. The validation remains limited: the samples are small, some reigns are not yet validated, and the coding has not been independently double-coded by a human reader.

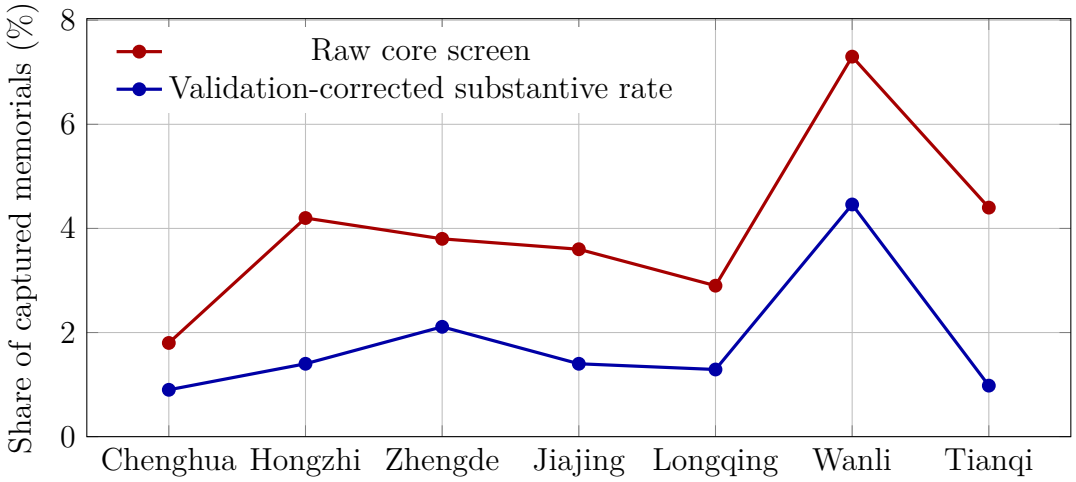



Figure VIII: Validation Correction of the Core Constraint-Language Screen

The coding has a second timing limitation. The reign assignment is reliable, but the converted Gregorian year field is mis-parsed for a subset of memorials in several reigns. The analysis consequently uses broad fifty-year memorial-date fixed effects and does not interpret the outcome as a precisely dated within-reign series. The dating problem does not affect the reign-level validation because the underlying reign and source-volume fields are retained.

### *E.3 Coding the Two Measures*

Measure 1 is the earlier coding of the memorial excerpts, produced with Claude Opus 4.8-max. Measure 2 is an independent recode of all 26,196 stored excerpts, produced with GPT-5.6 Sol using high reasoning effort. The model was instructed to distinguish substantive attempts to constrain a specific exercise of imperial power from formulaic disaster remonstrance and passages without qualifying limiting content. Each excerpt receives one of three mutually exclusive codes: 'S' for a substantive constraint, 'F' for formulaic disaster or omen remonstrance, and 'FP' for false positive or no limiting content.

Measure 2's limited outcome equals one for 'S'. Its full outcome equals one for 'S' or 'F'. The full measure preserves formulaic remonstrance as a separate category, so it should not be read as a pure measure of institutional opposition. The recode uses the stored excerpt only. Some excerpts are truncated, and the classifications have not been independently double-coded

by a human reader. These limitations motivate showing Measure 2 alongside the earlier limited and full variants of Measure 1.

The two measure families agree on 95.5 percent of memorials for the limited outcome and 95.6 percent for the full outcome in the regression sample. Since positive classifications are uncommon, positive-set overlap is more informative: the Jaccard index is 0.232 for the limited outcomes and 0.380 for the full outcomes, with corresponding Cohen's kappa statistics of 0.354 and 0.529. The measures therefore capture a common signal, especially in their broader variants, but should not be treated as interchangeable.

To assess coding consistency, we also ran a restricted API recoding of the 1,038 memorials in the core keyword pool. This pass used GPT-5.6 Sol through the Responses Batch API with high reasoning effort and the same three-way substantive/formulaic/false-positive schema.

For the cross-model check, we compare the restricted API pass with the 90 memorials that received a prior Claude classification. GPT-5.6 Sol reproduces 80 of the 90 three-way classifications, an agreement rate of 88.9 percent and a Cohen's kappa of 0.796. It agrees with the prior coding on 30 of 38 substantive cases, all 5 formulaic-remonstrance cases, and 45 of 47 false positives. Eight of the ten disagreements are substantive-versus-false-positive cases, with one substantive-versus-formulaic disagreement and one false-positive-versus-substantive disagreement. The comparison suggests substantial agreement, with the main uncertainty concentrated in borderline substantive cases. Since the reference labels were produced in the earlier model pass and were not independently double-coded by human readers, this exercise is a cross-model consistency check rather than definitive validation.

# F Donglin Political Positions and Historical Examples

The Donglin label covered an academy, a network of discussion groups, a coalition in court politics, and eventually a partisan category used by opponents. It should not be read as a modern party with a formal platform. The coherence of the movement came from recurring positions on remonstrance, officeholding, fiscal extraction, and the relationship between moral authority and imperial command (Meskill, 1982; Elman, 1989; Dardess, 2002; Miller, 2009).

## *F.1 Political Accountability*

Donglin reformers defended speaking officials and censorial institutions because criticism was one of the few internal checks on the emperor and his agents. They objected when eunuchs or court favorites bypassed regular ministries, when officials gained promotion through personal access, and when political retaliation silenced remonstrance. Their demand for "open criticism" did not imply an unrestricted public sphere. It referred principally to the recognized obligation

of officials to report wrongdoing and to the institutional channels through which such criticism reached the throne.

Zhao Nanxing's 1589 memorial provides a concrete example. The memorial identified four harms in the administration. Its central concerns were careerist maneuvering among senior officials, attacks on upright officeholders, corrupt evaluation and appointment at the local level, and the ability of entrenched local interests to frustrate appointed magistrates. Zhao's later work in personnel administration continued the same agenda. He sought stricter evaluation, opposed recommendations based on patronage, and treated the Ministry of Personnel as an institution that should protect public criteria from private influence. His opponents, in turn, accused him of using personnel review to construct a faction. The episode illustrates the basic political problem: institutional discipline and factional conflict were difficult to separate in a system without an external mechanism for adjudicating between them (Dardess, 2002; Miller, 2009).

Donglin opposition to eunuch power followed the same logic. Eunuchs possessed direct access to the emperor and could exercise political or fiscal authority outside the regular civil bureaucracy. Donglin officials did not object only to the personal morality of particular eunuchs. They objected to a mode of rule in which agents without ordinary bureaucratic accountability could supervise officials, collect revenue, and influence appointments. The confrontation with Wei Zhongxian in the 1620s brought this conflict to its most violent point. Impeachments and counter-impeachments were followed by dismissals, arrests, torture, and deaths, while the Donglin Academy itself was closed (Dardess, 2002; Miller, 2009).

### *F.2 Fiscal Accountability*

The fiscal component of the movement receives less attention than its moral rhetoric, but it was part of the same program. Donglin figures criticized mining and commercial taxes administered by eunuch agents, arbitrary levies outside the regular bureaucracy, and fiscal privileges that diverted revenue to princely households or court favorites. They also connected corrupt personnel decisions to local extraction: officials who purchased or maneuvered for office had stronger incentives to recover their costs from the population.

Zhou Zongjian's 1623 memorial illustrates this position. Zhou opposed eunuch interference in fiscal and personnel matters, called for the restoration of regular administrative procedures, and defended officials who had been excluded for political reasons. His argument joined predictable taxation, meritocratic governance, and political accountability. The issue was not whether the state could collect revenue. It was whether revenue collection remained subject to recognized offices, review, and public responsibilities (Dardess, 2002).

The political and fiscal positions were therefore connected. Protecting remonstrance made

it possible to expose abuses. Merit-based appointments reduced the role of patronage in officeholding. Regular fiscal institutions limited the opportunities for court agents to collect revenue without review. Together, these claims placed moral and procedural constraints on imperial government without proposing a transfer of sovereignty outside the imperial order.

### *F.3 Intellectual Foundations of Donglin Politics*

Donglin's intellectual inheritance was mixed. The academy's teaching drew heavily on the broader Confucian tradition, and leading members criticized parts of the School of Mind. The relevant link to Wang Yangming is therefore not sectarian identity. It is the prior circulation of a vocabulary in which moral judgment was internal, moral capacity was widely shared, and knowledge required action. That vocabulary could support the claim that an official had to remonstrate even when silence was safer.

The shared organizational forms strengthen this interpretation. Yangming teachers had spread their ideas through public lectures, academies, correspondence, and personal networks. Donglin used academies and *jiangxue* to connect self-cultivation with discussion of current affairs. This institutional inheritance made philosophical debate visible and collective. It also exposed participants to political repression once moral discussion became linked to organized criticism.

The empirical specifications are designed around this mixed inheritance. Exposure is measured before Donglin formation, so the estimates do not rely on classifying Donglin texts as Yangming texts. The opposition-exclusion coding removes concept passages classified as explicitly hostile, similarity to anti-Yangming writings is entered directly, and controls for Zhu Xi capture a major alternative doctrinal source. The estimated relationship should therefore be read as evidence that prior diffusion of Yangming-associated ideas predicted the later production of Donglin reformers, not as evidence that every reformer endorsed Wang's full philosophical system.

## G Supplementary Diffusion Results

### *G.1 Lecture Influence*

Figure IX maps the raw distance-weighted measure that underlies the logged regressor. For prefecture $i$, the measure sums $\exp(-d_{i\ell}/25)$ over all recorded lecture events $\ell$ before 1600, where $d_{i\ell}$ is the distance in kilometers from the prefecture to the lecture site. A lecture at the prefecture or very nearby receives a weight close to one; the weight falls to approximately 0.37 at 25 kilometers and 0.14 at 50 kilometers. Unlike a count restricted by administrative boundaries, this measure allows a lecture to influence nearby prefectures,

with its contribution declining smoothly with distance. Darker shading in the figure therefore indicates a larger number of nearby lectures, shorter distances to those lectures, or both. Exposure is concentrated in clusters of eastern and central-southern prefectures, while many other prefectures have zero or negligible exposure. This spatial concentration motivates the difference-in-differences and spatial placebo exercises in Section IV; the cross-sectional associations in Table XI do not by themselves make lecture placement exogenous.

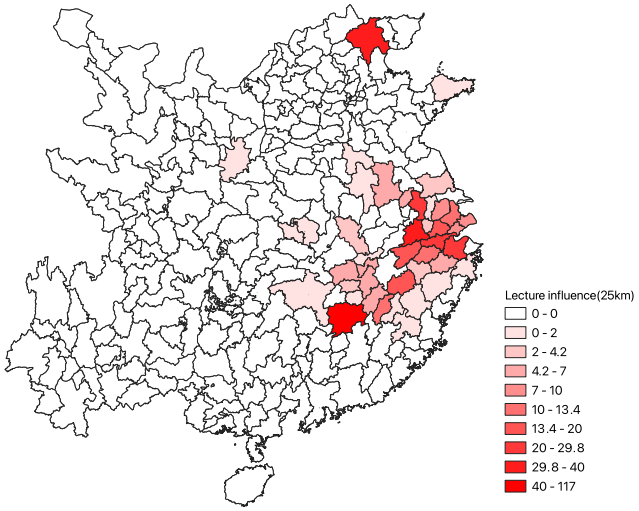



Figure IX: Distance-Weighted Influence from Public Lectures

Notes: The measure sums lecture counts at all sites, discounted exponentially by distance with a 25-kilometer decay parameter.

Table XI repeats the lecture-diffusion analysis using three alternative measures of Wang Yangming's ideas. Columns 1–2 use the broad measure based on concept passages excluding opposition, which removes sentences containing one of the three concept keywords when the sentence is classified as explicitly opposing Wang Yangming. Columns 3–4 use the strict measure, which additionally removes sentences classified as likely opposing him. Columns 5–6 instead measure argument-focused similarity. Within each pair, the first specification uses distance-weighted lecture influence with the preferred 25-kilometer decay parameter, while the second uses the number of lectures.

Both lecture measures are positively and significantly associated with all three alternative outcomes. For the broad and strict passage counts, the lecture-influence coefficients are 0.751 and 0.752, while the corresponding coefficients on the number of lectures are 0.642 and 0.643. The near-identical estimates indicate that excluding passages likely to oppose Wang Yangming's ideas does not change the result. Lecture influence and lecture counts also predict

argument-focused similarity, with coefficients of 0.184 and 0.098. Thus, the lecture result extends beyond the frequency of the three explicit concepts to the broader semantic content of texts.

Table XI: Public Lectures and Alternative Measures of Wang Yangming's Ideas

| | Concept passages excluding opposition, broad | | Concept passages excluding opposition, strict | | Argument-focused similarity | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Lecture influence, 25 km | 0.751** | | 0.752** | | 0.184*** | |
| | (0.309) | | (0.300) | | (0.070) | |
| Number of lectures | | 0.642*** | | 0.643*** | | 0.098** |
| | | (0.160) | | (0.154) | | (0.045) |
| Texts or books | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Style similarity | ✓ | ✓ | ✓ | ✓ | | |
| Similarity to Zhu Xi | ✓ | ✓ | ✓ | ✓ | | |
| Book genres | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Distance to Zhu Xi's academy | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pre-1500 academies | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pre-1500 *jinshi* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Population in 1600 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Geographic controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ming province fixed effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Adjusted $R^2$ | 0.543 | 0.586 | 0.518 | 0.565 | 0.782 | 0.790 |
| Observations | 189 | 189 | 189 | 189 | 193 | 193 |

Notes: Columns 1–2 use the broad measure based on concept passages excluding opposition. Columns 3–4 use the strict measure. Columns 5–6 use argument-focused semantic similarity. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

### *G.2 Network Ties and Textual Similarity*

Public lectures were one channel through which Yangming ideas spread, but books, correspondence, teacher-student ties, and personal networks could also transmit Wang Yangming's ideas across prefectures. This subsection estimates a continuous-treatment difference-in-differences specification using the local density of Wang's social network. The treatment is the log number of cumulative network contacts per 100,000 inhabitants in 1600, and the identifying comparison asks whether prefectures with denser links to Wang's network experienced a larger increase in textual similarity after 1500. Unlike the lecture indicator, network density varies in intensity across prefectures.

Table XII reports estimates using successively broader definitions of the network, from direct contacts to contacts within six degrees. The estimates decline as more distant contacts enter the network. Once book counts are included, the coefficients become much smaller. For similarity to Wang's complete works and letters, the first-plus-second-degree measure remains

significant at the 10 percent level, while the other book-controlled estimates are not significant; none of the book-controlled estimates for the argument-focused measure is significant. These estimates are complementary evidence about diffusion rather than an independent causal effect of social connections.

Table XII: Difference-in-Differences Estimates of Network Density and Textual Similarity

| | Complete works and letters | | Argument-focused similarity | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| First degree | 0.255** | 0.032 | 0.207** | 0.031 |
| | (0.107) | (0.029) | (0.095) | (0.039) |
| First + second | 0.167*** | 0.025* | 0.135*** | 0.023 |
| | (0.053) | (0.014) | (0.047) | (0.020) |
| Up to third | 0.119** | 0.020 | 0.090** | 0.011 |
| | (0.047) | (0.012) | (0.041) | (0.018) |
| Up to fourth | 0.108** | 0.019 | 0.080** | 0.009 |
| | (0.046) | (0.012) | (0.041) | (0.018) |
| Up to fifth | 0.110** | 0.020 | 0.082** | 0.010 |
| | (0.046) | (0.013) | (0.041) | (0.018) |
| Up to sixth | 0.113** | 0.020 | 0.084** | 0.010 |
| | (0.046) | (0.013) | (0.041) | (0.018) |
| Number of books | | ✓ | | ✓ |
| Prefecture fixed effects | ✓ | ✓ | ✓ | ✓ |
| Period fixed effects | ✓ | ✓ | ✓ | ✓ |
| Adjusted $R^2$ | 0.025 | 0.838 | 0.016 | 0.517 |
| Observations | 1,695 | 1,695 | 1,695 | 1,695 |

Notes: Each row reports a separate regression. The treatment variable interacts the log density of Wang Yangming's cumulative network contacts per 100,000 inhabitants in 1600 with a post-1500 indicator. Standard errors clustered by prefecture are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

### *G.3 Correlates of Lecture Placement*

Table XIII documents how the geographic placement of public lectures covaries with local characteristics that predate or proxy for scholarly development. The log number of lectures is strongly correlated with the number of books produced before 1550 (0.469), academies established before 1500 (0.412), pre-1500 *jinshi* (0.318), and gazetteers produced before 1600 (0.301); all four correlations are significant at the 1 percent level. By contrast, its correlation with population is only 0.100 and is statistically insignificant. Lecture activity was therefore more concentrated in places with an established intellectual infrastructure, rather than simply in more populous prefectures.

The measures of local intellectual development are also correlated with one another. For example, books have correlations of 0.596 with pre-1500 academies and 0.644 with pre-1500 *jinshi*. These patterns make Table XIII a diagnostic of selection into lecture exposure, not

a causal model of lecture placement: teachers and hosts may have chosen prefectures that already had stronger scholarly networks and greater demand for new ideas. The cross-sectional regressions therefore control for the observed correlates in the table, while the within-prefecture difference-in-differences and spatial placebo exercises provide complementary checks. Even with these adjustments, unobserved local intellectual demand may remain, so the cross-sectional lecture estimates should be interpreted cautiously.

Table XIII: Selected Correlates of Public Lectures

| | Lectures | Population | Books | Gazetteers | Academies | *Jinshi* |
|---|---|---|---|---|---|---|
| Lectures | 1.000 | | | | | |
| Population | 0.100 | 1.000 | | | | |
| Books | 0.469*** | 0.259*** | 1.000 | | | |
| Gazetteers | 0.301*** | 0.394*** | 0.453*** | 1.000 | | |
| Pre-1500 academies | 0.412*** | 0.321*** | 0.596*** | 0.362*** | 1.000 | |
| Pre-1500 *jinshi* | 0.318*** | 0.531*** | 0.644*** | 0.497*** | 0.549*** | 1.000 |

Notes: Pairwise Pearson correlations calculated from the regression sample. Lectures and gazetteers are measured before 1600; books are measured before 1550; academies and *jinshi* are measured before 1500. All variables enter as $\ln(x+1)$. Pairwise sample sizes range from 189 to 214. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

### *G.4 Spatial Placebo Tests*

We considered spatial standard errors following Conley (1999) and coarser functional forms of lecture exposure, including indicators for above-median exposure. These approaches are not especially informative in our setting because lecture exposure is extremely sparse and spatially concentrated. More than 75 percent of prefectures have no observed lecture exposure, while most positive exposure is concentrated in a small number of neighboring locations. Consequently, the effective spatial variation comes from only a few treated areas. Distance-based covariance corrections can then yield very large standard errors and low power even when the point estimates remain stable. Transforming the treatment into indicators does not create additional independent spatial variation, because the same lecture locations remain geographically clustered.

This diagnostic concerns sampling uncertainty and is separate from the placebo exercise below. Spatial standard errors address possible dependence in regression residuals, while the placebo exercise compares the observed lecture geography with arbitrary reallocations.

We therefore report a placebo exercise based on the spatial assignment of lecture events. This is not experimental randomization: historical lecture locations were chosen rather than randomly assigned. Holding the outcomes, controls, and estimation samples fixed, we reassign the 317 lecture events observed before 1600 across prefectures. For each of 1,000 assignments, we reconstruct two measures of exposure: the number of lectures assigned to each prefecture

and the distance-weighted lecture-influence measure using the preferred 25-kilometer decay parameter. We then re-estimate the corresponding baseline specification from Table I for concept mentions, the number of authors using Yangming concepts, and semantic similarity.

Figure X compares the observed estimates with the resulting placebo distributions. The red dashed lines indicate the estimates obtained from the actual lecture geography. In all six cases, the observed estimate lies beyond the placebo distribution and is significant at the 1 percent level. The exercise shows that the observed relationships are difficult to reproduce under arbitrary spatial reassignment of lecture locations. It does not make historical lecture placement exogenous or eliminate the possibility that lecturers selected intellectually active areas.

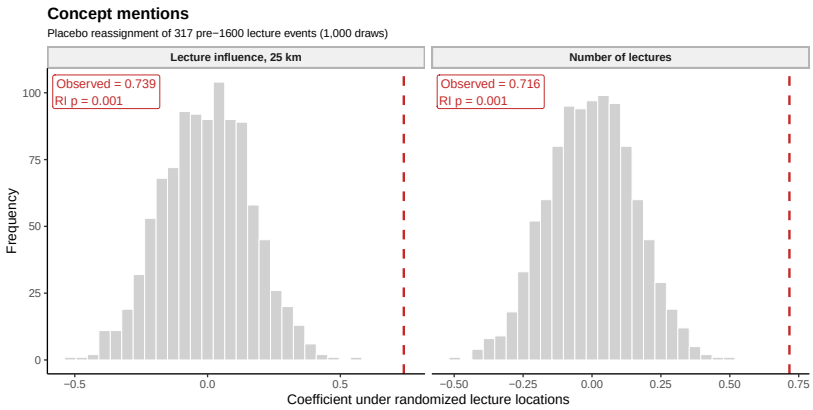
# H Robustness Checks

## *H.1 Additional Controls for Lecture Diffusion*

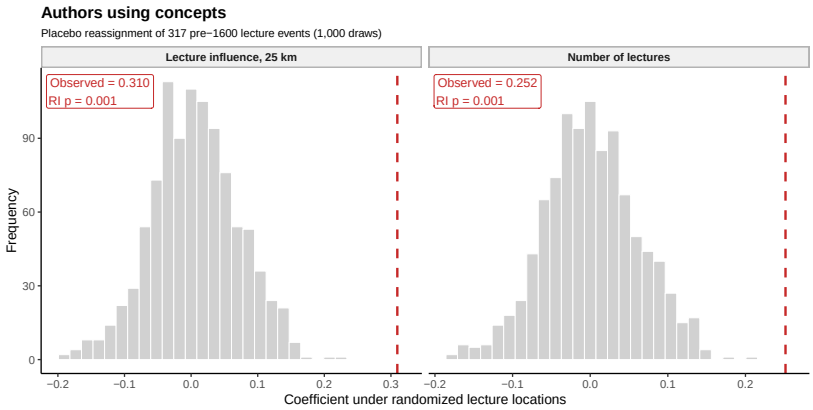
Table XIV examines whether the baseline relationship between public lectures and Wang Yangming's ideas is sensitive to controls intentionally excluded from the main specification. Panel A uses distance-weighted lecture influence, while Panel B uses the number of lectures. Within each outcome group, the first column reproduces the baseline specification. The second adds distances to Wuxi and the three academies associated with the Zhu Xi tradition, similarity to Zhu Xi, and local book-genre shares. For the semantic-similarity outcome, it also adds writing-style similarity. The third column adds Buddhist and Daoist temple density.

These variables address distinct concerns. Academy distances separate lecture exposure from proximity to established Confucian institutions. Similarity to Zhu Xi distinguishes Yangming-specific content from broader Neo-Confucian language. Genre shares account for differences in the composition of surviving local texts, while style similarity separates conceptual proximity from common literary form. Buddhist and Daoist density captures alternative religious and intellectual environments that may have shaped receptiveness to ideas about mind and self-cultivation.

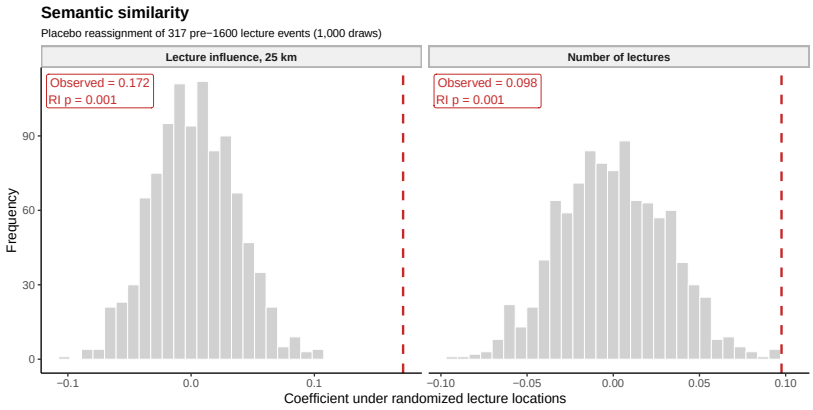
The estimates remain positive and significant under both lecture measures. The similarity estimates become smaller after the additional textual controls are introduced.




(a) Concept Mentions




(b) Authors Using Concepts




(c) Semantic Similarity

Figure X: Spatial Placebo Tests from Reassignment of Lecture Locations

Notes: The 317 lecture events observed before 1600 are reassigned across prefectures 1,000 times. For each assignment, the left panel recomputes distance-weighted lecture influence using a 25-kilometer decay parameter, while the right panel uses the number of lectures assigned to each prefecture. Each placebo estimate comes from the corresponding baseline specification in Table I. Red dashed lines mark the estimates obtained from the observed lecture allocation. Reported placebo $p$-values are two-sided and use the finite-simulation correction.

Table XIV: Public Lectures and Wang Yangming's Ideas: Sensitivity to Additional Controls

| | Concept mentions | | | Authors using concepts | | | Semantic similarity | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| *Panel A: Lecture influence, 25 km* | | | | | | | | | |
| Lecture influence, 25 km | 0.739** | 0.750** | 0.866*** | 0.310*** | 0.320*** | 0.316*** | 0.172*** | 0.150*** | 0.142*** |
| | (0.305) | (0.311) | (0.265) | (0.105) | (0.108) | (0.115) | (0.055) | (0.048) | (0.051) |
| Adjusted $R^2$ | 0.555 | 0.558 | 0.566 | 0.623 | 0.623 | 0.618 | 0.903 | 0.930 | 0.930 |
| Observations | 189 | 182 | 182 | 189 | 182 | 182 | 193 | 193 | 193 |
| *Panel B: Number of lectures* | | | | | | | | | |
| Number of lectures | 0.716*** | 0.692*** | 0.761*** | 0.252*** | 0.245*** | 0.244*** | 0.098*** | 0.072** | 0.067** |
| | (0.146) | (0.152) | (0.117) | (0.047) | (0.050) | (0.052) | (0.033) | (0.031) | (0.032) |
| Adjusted $R^2$ | 0.613 | 0.612 | 0.625 | 0.651 | 0.647 | 0.643 | 0.903 | 0.928 | 0.928 |
| Observations | 189 | 182 | 182 | 189 | 182 | 182 | 193 | 193 | 193 |
| Baseline controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Distance to Wuxi and Zhu Xi academies | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Similarity to Zhu Xi | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Book genres | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Style similarity | | | | | | | | ✓ | ✓ |
| Buddhist and Daoist density | | | ✓ | | | ✓ | | | ✓ |

Notes: The baseline controls are the relevant volume of books, authors, or texts; pre-1500 academies; pre-1500 *jinshi*; population in 1600; geographic controls; and Ming province fixed effects. Columns 2, 5, and 8 add distance to Wuxi, distances to Yuelu, White Deer Grotto, and Hanquan academies, similarity to Zhu Xi's writings, and the *jing*, *zi*, and *ji* genre shares. Column 8 also adds writing-style similarity. Columns 3, 6, and 9 additionally control for Buddhist and Daoist temple density. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

### *H.2 Additional Controls for Donglin Formation*

Table XV examines the sensitivity of the baseline Donglin OLS estimates to three sets of additional controls, each motivated by a distinct identification concern. The baseline specification already includes log books or authors, log population, pre-1500 academies, pre-1500 *jinshi*, geographic distance controls, and Ming province fixed effects. Each set of three columns uses a different measure of Wang Yangming idea exposure as the main explanatory variable: concept mentions (columns 1–3), distinct authors using the concepts (columns 4–6), and semantic similarity to Wang Yangming's books and letters (columns 7–9).

The first set adds distance to Wuxi and distances to three major Confucian academies associated with the Zhu Xi tradition: Yuelu Academy, White Deer Grotto (Bailu) Academy, and Hanquan Academy. A prefecture's proximity to these established institutional centers may independently predict both intellectual output and political alignment, independent of Wang Yangming exposure. Without controlling for this proximity, the estimated Yangming effect could partly capture the influence of the broader Neo-Confucian academic network rather than Yangming ideas specifically.

The second set adds book genre shares: the fractions of local texts classified as classics (*jing*), philosophy (*zi*), and literary collections (*ji*). These controls address two related concerns. First, different genres cover fundamentally different subject matter: philosophical texts are far more likely to invoke the concepts we track than classical or historical writing. A prefecture whose corpus contains a higher share of philosophical works may therefore show elevated measured Yangming exposure not because of genuine intellectual influence, but simply because of the composition of surviving texts. Second, genre composition may reflect underlying intellectual orientations that independently predict both Yangming exposure and the propensity to produce reformers. The classics share (*jing*) is consistently negative and significant: prefectures where local writing leaned toward orthodox textual study were less likely to produce Donglin reformers, even conditional on Yangming idea exposure, suggesting that genre captures a genuine dimension of local intellectual culture rather than mere sample composition.

The semantic-similarity specifications additionally control throughout for writing-style similarity and similarity to Zhu Xi's writings. Writing style may create semantic proximity even when substantive arguments differ, while Zhu Xi provides the central benchmark for general Neo-Confucian language. Including both controls makes the Yangming similarity measure more specific to conceptual proximity to Wang's writings rather than shared literary conventions or the broader Confucian tradition.

Table XV: Donglin OLS Estimates: Sensitivity to Additional Controls

| | *Dependent variable: Donglin Reformers* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Concept mentions | | | Authors using concepts | | | Semantic similarity | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Concept mentions, pre-1550 | 0.094* | 0.102** | 0.106** | | | | | | |
| | (0.050) | (0.050) | (0.050) | | | | | | |
| Authors using concepts, pre-1550 | | | | 0.156 | 0.165 | 0.151 | | | |
| | | | | (0.132) | (0.130) | (0.128) | | | |
| Similarity to books and letters, pre-1550 | | | | | | | 0.798*** | 0.670*** | 0.620*** |
| | | | | | | | (0.213) | (0.227) | (0.228) |
| *Selected additional controls* | | | | | | | | | |
| Classics genre share$^{1550}$ (*jing*) | | −0.713*** | −0.737*** | | −0.760*** | −0.804*** | | −0.694*** | −0.764*** |
| | | (0.217) | (0.201) | | (0.212) | (0.204) | | (0.213) | (0.209) |
| Philosophy genre share$^{1550}$ (*zi*) | | −0.171 | −0.207 | | −0.183 | −0.223 | | −0.466** | −0.532** |
| | | (0.178) | (0.182) | | (0.185) | (0.187) | | (0.217) | (0.229) |
| Buddhist temple density | | | 0.237 | | | 0.183 | | | 0.037 |
| | | | (0.176) | | | (0.178) | | | (0.209) |
| Daoist temple density | | | −0.118 | | | −0.159** | | | −0.124* |
| | | | (0.077) | | | (0.078) | | | (0.070) |
| Style similarity$^{1550}$ | | | | | | | 0.093 | 0.158 | 0.260 |
| | | | | | | | (1.368) | (1.275) | (1.251) |
| Similarity to Zhu Xi$^{1550}$ | | | | | | | −0.643 | 0.211 | 0.225 |
| | | | | | | | (1.504) | (1.496) | (1.460) |
| *Controls included in all specifications* | | | | | | | | | |
| Books / Authors / Texts$^{1550}$ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pre-1500 academies | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pre-1500 *jinshi* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Population$^{1600}$ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Geographic controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Distance to Wuxi | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Distance to Zhu Xi's academies | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ming province fixed effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Adjusted $R^2$ | 0.432 | 0.437 | 0.443 | 0.454 | 0.462 | 0.472 | 0.482 | 0.498 | 0.500 |
| Observations | 189 | 182 | 182 | 189 | 182 | 182 | 193 | 193 | 193 |

Notes: The dependent variable is the log number of Donglin reformers in a prefecture (from the *Dangrenbang* roster). Each group of three columns uses a different measure of local Wang Yangming idea exposure as the main explanatory variable. All specifications include the baseline controls from Table IV (log books or authors or texts, log pre-existing academies, log pre-1500 *jinshi*, log population in 1600, geographic controls, and Ming province fixed effects). Controls are then added progressively. **Step 1** (cols. 1, 4, 7): additionally controls for distance to Wuxi (Donglin Academy) and distances to three Zhu Xi–tradition academies (Yuelu, White Deer Grotto, Hanquan). The semantic-similarity specifications (cols. 7–9) also include writing-style similarity and similarity to Zhu Xi's writings throughout. **Step 2** (cols. 2, 5, 8): adds book genre shares (*jing*, *zi*, *ji*). **Step 3** (cols. 3, 6, 9): additionally adds Buddhist and Daoist temple density. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The third set adds Buddhist and Daoist temple density. Wang Yangming's philosophy engaged substantively with Buddhist notions of mind and Daoist cultivation, and some scholars trace elements of his thought to Chan Buddhist influences. Regions with a dense non-Confucian religious presence may have had an intellectual ecology more receptive to inner-cultivation philosophies independently of the Yangming tradition, or conversely, strong religious competition may have displaced the kind of Confucian moral debate from which the Donglin drew its energy.

The results are robust to these additions. The concept-mention estimate remains positive and significant, while the author-count estimate remains positive but imprecisely estimated. The semantic- similarity estimate remains positive and significant at the 1 percent level in every specification, although it becomes smaller as genre and religious controls are added. The association between prior Yangming exposure and Donglin formation therefore does not appear to be explained by proximity to competing academic centers, corpus composition, shared style, general Zhu Xi language, or the local religious environment.

### *H.3 Alternative Measurements of Donglin Reformers*

The *Dangrenbang* outcome used in the main analysis is one historical definition of Donglin membership. We therefore repeat the baseline and additional-control specifications using three alternative rosters of increasing breadth: core members, core plus intermediate members, and a broader measure that also includes peripheral associates. Table XVI defines these categories.

Table XVI: Classification of Alternative Donglin Membership Measures

| Category | Classification standard | Number of individuals |
|---|---|---|
| Edge Donglin members | Appearing in 1–3 Donglin-related lists | 463 |
| Intermediate Donglin members | Appearing in 4–5 Donglin-related lists | 87 |
| Core Donglin members | Appearing in 6–8 Donglin-related lists | 55 |
| **Total classified Donglin members** | | **605** |

Notes: Classification is based on the number of Donglin-related rosters in which each individual appears. The eight list indicators are *Dangrenbang*, *Dianjianglu*, *Tongzhilu*, *Pengdanglu*, *Xiecong*, *Jiguan*, *Daobinglu*, and *Fengjianglu*. Individuals appearing in 1–3 lists are classified as edge members, those appearing in 4–5 lists as intermediate members, and those appearing in 6–8 lists as core members. The master file contains an additional 104 individuals coded as "listed only (0)," who are not included in the threefold classification.

We aggregate these categories to the prefecture level to construct three increasingly inclusive outcomes: core members; core and intermediate members; and edge, intermediate, and core members. Table XVII reports the corresponding baseline and additional-control

estimates.

The estimates become stronger as the definition expands beyond the narrowest core. For core members, all three Yangming measures are positive in the baseline specification, but only semantic similarity is marginally significant and it becomes imprecise after the additional controls are included. For the core-plus-intermediate roster, semantic similarity is positive and significant in both specifications. Under the broadest edge–mid–core definition, concept mentions and semantic similarity are positive and significant, while the author-count estimate is positive but becomes imprecise with the additional controls. The pattern indicates that prior Yangming exposure is associated more strongly with the movement's broader reformist coalition than with only its most narrowly defined core.

Table XVIII further examines whether these results reflect general opposition to Wang Yangming rather than exposure to his ideas. Following Table VI, we control directly for substantive similarity to anti-Yangming texts. The anti-Yangming measure is not systematically associated with any of the three alternative Donglin outcomes. The positive association with similarity to the broader corpus remains significant for the two broader definitions of Donglin membership. The argument-focused measure is also positive and significant for the broadest definition after the additional controls are included.

### *H.4 Similarity Based on Zi and Ji Texts*

As an alternative construction of the semantic measures, we restrict the comparison corpus to works classified in the *zi* (masters and philosophers) and *ji* (literary collections) genres. This restriction focuses the comparison on the types of texts in which philosophical discussion and authors' collected writings are most likely to appear. Table XIX repeats the Donglin specifications using these restricted-corpus measures.

The similarity estimates for Wang Yangming's books and letters and for the argument-focused measure are positive in every specification, both with and without the anti-Yangming similarity control. They are, however, estimated less precisely than the measures constructed from the broader corpus and are not significant at conventional levels. Similarity to anti-Yangming texts is also insignificant. Thus, the restricted-corpus results preserve the positive direction of the main estimates, while providing weaker statistical evidence.

## I Propensity-Score Matching

Because the three historical exposures are continuous, we construct a separate generalized propensity score for each one at the modern-county level. Let $T_c$ denote a county's historical exposure and $X_c$ the covariates in its treatment model. The latter comprise the numbers of

Table XVII: Alternative Measurements of Donglin Reformers

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | *Panel A: Core Donglin members* | | | | | |
| Concept mentions, pre-1550 | 0.039 | 0.025 | | | | |
| | (0.036) | (0.038) | | | | |
| Authors using concepts, pre-1550 | | | 0.104 | 0.043 | | |
| | | | (0.097) | (0.099) | | |
| Similarity to books and letters, pre-1550 | | | | | 0.318* | 0.202 |
| | | | | | (0.165) | (0.178) |
| Adjusted $R^2$ | 0.150 | 0.255 | 0.188 | 0.288 | 0.205 | 0.293 |
| Observations | 189 | 182 | 189 | 182 | 193 | 193 |
| | *Panel B: Core and intermediate Donglin members* | | | | | |
| Concept mentions, pre-1550 | 0.051 | 0.033 | | | | |
| | (0.044) | (0.047) | | | | |
| Authors using concepts, pre-1550 | | | 0.188 | 0.108 | | |
| | | | (0.122) | (0.121) | | |
| Similarity to books and letters, pre-1550 | | | | | 0.608*** | 0.445** |
| | | | | | (0.171) | (0.194) |
| Adjusted $R^2$ | 0.234 | 0.315 | 0.282 | 0.361 | 0.326 | 0.392 |
| Observations | 189 | 182 | 189 | 182 | 193 | 193 |
| | *Panel C: Edge, intermediate, and core Donglin members* | | | | | |
| Concept mentions, pre-1550 | 0.138** | 0.113* | | | | |
| | (0.057) | (0.059) | | | | |
| Authors using concepts, pre-1550 | | | 0.253* | 0.156 | | |
| | | | (0.145) | (0.140) | | |
| Similarity to books and letters, pre-1550 | | | | | 0.781*** | 0.705*** |
| | | | | | (0.245) | (0.256) |
| Adjusted $R^2$ | 0.450 | 0.506 | 0.468 | 0.528 | 0.490 | 0.550 |
| Observations | 189 | 182 | 189 | 182 | 193 | 193 |
| Baseline controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Additional controls | | ✓ | | ✓ | | ✓ |

Notes: Each panel uses a different definition of the log number of Donglin reformers. Baseline controls include the relevant volume of books, authors, or texts; pre-1500 academies; pre-1500 *jinshi*; population in 1600; geography; and Ming province fixed effects. The semantic-similarity baseline also controls for writing style. Additional controls include distances to Wuxi and academies in the Zhu Xi tradition, book-genre shares, and Buddhist and Daoist temple density. Column 6 also controls for similarity to Zhu Xi's writings. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

books before 1550, academies before 1500, *jinshi* before 1600, and gazetteers before 1600. We estimate the conditional mean of each exposure as a linear function of $X_c$ and use a Gaussian treatment model to evaluate both the conditional density $f(T_c \mid X_c)$ and the marginal density $f(T_c)$. The stabilized county weight is their density ratio, $w_c = f(T_c)/f(T_c \mid X_c)$.

To limit the influence of extreme density ratios, we winsorize $w_c$ at the 1st and 99th percentiles and normalize it to have mean one. We then assign the resulting county weight to respondents and multiply it by the original CGSS survey weight. The GPS-weighted outcome

Table XVIII: Alternative Donglin Measurements and Similarity to Anti-Yangming Texts

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | *Panel A: Core Donglin members* | | | |
| Similarity to books and letters | 0.480** | 0.246 | | |
| | (0.209) | (0.213) | | |
| Argument-focused similarity | | | 0.192 | 0.084 |
| | | | (0.149) | (0.152) |
| Substantive similarity to anti-Yangming texts | -0.540* | -0.214 | -0.199 | -0.042 |
| | (0.306) | (0.395) | (0.311) | (0.395) |
| Adjusted $R^2$ | 0.237 | 0.289 | 0.211 | 0.284 |
| Observations | 193 | 193 | 193 | 193 |
| | *Panel B: Core and intermediate Donglin members* | | | |
| Similarity to books and letters | 0.703*** | 0.429* | | |
| | (0.225) | (0.240) | | |
| Argument-focused similarity | | | 0.348** | 0.244 |
| | | | (0.158) | (0.169) |
| Substantive similarity to anti-Yangming texts | -0.549 | 0.077 | -0.233 | 0.124 |
| | (0.440) | (0.616) | (0.446) | (0.607) |
| Adjusted $R^2$ | 0.282 | 0.388 | 0.263 | 0.383 |
| Observations | 193 | 193 | 193 | 193 |
| | *Panel C: Edge, intermediate, and core Donglin members* | | | |
| Similarity to books and letters | 0.763** | 0.764** | | |
| | (0.334) | (0.318) | | |
| Argument-focused similarity | | | 0.329 | 0.448** |
| | | | (0.218) | (0.212) |
| Substantive similarity to anti-Yangming texts | -0.627 | -0.286 | -0.165 | -0.187 |
| | (0.673) | (0.875) | (0.692) | (0.847) |
| Adjusted $R^2$ | 0.391 | 0.547 | 0.381 | 0.543 |
| Observations | 193 | 193 | 193 | 193 |
| Number of texts | ✓ | ✓ | ✓ | ✓ |
| Baseline controls | | ✓ | | ✓ |
| Writing-style similarity | ✓ | ✓ | ✓ | ✓ |
| Zhu Xi and additional controls | | ✓ | | ✓ |

Notes: Each panel uses a different definition of the log number of Donglin reformers. All specifications control for substantive similarity to anti-Yangming texts, the number of pre-1550 texts, and the writing-style measure corresponding to the Yangming similarity measure. Columns 2 and 4 additionally include the baseline controls, distances to Wuxi and academies in the Zhu Xi tradition, book-genre shares, Buddhist and Daoist temple density, and similarity to Zhu Xi's writings. The anti-Yangming similarity variable is retained in levels because it can take negative values. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

regressions retain the full set of historical, contemporary, and individual controls used in Table IX, together with survey-year and Ming-province fixed effects; standard errors are clustered by modern province.

For a continuous treatment, we assess balance using the correlation between each exposure

Table XIX: Donglin Reformers and Similarity Based on *Zi* and *Ji* Texts

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | *Panel A: Dependent variable: Donglin Reformers* | | | |
| Similarity to books and letters | 0.351 | 0.604 | | |
| | (0.249) | (0.366) | | |
| Argument-focused similarity | | | 0.149 | 0.264 |
| | | | (0.159) | (0.226) |
| Adjusted $R^2$ | 0.379 | 0.469 | 0.376 | 0.463 |
| Observations | 193 | 193 | 193 | 193 |
| | *Panel B: Dependent variable: Donglin Reformers* | | | |
| Similarity to books and letters | 0.395 | 0.513 | | |
| | (0.330) | (0.363) | | |
| Argument-focused similarity | | | 0.046 | 0.181 |
| | | | (0.211) | (0.224) |
| Substantive similarity to anti-Yangming texts | -0.133 | 0.995 | 0.487 | 1.146 |
| | (0.540) | (1.137) | (0.579) | (1.157) |
| Adjusted $R^2$ | 0.376 | 0.470 | 0.375 | 0.466 |
| Observations | 193 | 193 | 193 | 193 |
| Number of texts | ✓ | ✓ | ✓ | ✓ |
| Writing-style similarity | ✓ | ✓ | ✓ | ✓ |
| Baseline and additional controls | | ✓ | | ✓ |

Notes: The dependent variable is the log number of Donglin reformers in a prefecture from the *Dangrenbang* roster. Similarity and the associated number-of-texts, writing-style, genre-share, Zhu Xi, and anti-Yangming measures are calculated using only texts in the *zi* and *ji* genres. All columns control for the number of pre-1550 texts and the corresponding writing-style similarity. Columns 2 and 4 additionally include the baseline controls, distances to Wuxi and academies in the Zhu Xi tradition, *zi* and *ji* genre shares, Buddhist and Daoist temple density, and similarity to Zhu Xi's writings. Panel B also controls for substantive similarity to anti-Yangming texts. Robust standard errors are in parentheses. $^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$.

and each treatment-model covariate rather than a treated–control mean difference. Figure XI reports these correlations before and after weighting, with absolute correlations below 0.10 used as the balance benchmark. Weighting achieves this criterion for author exposure and brings concept exposure close to, but not fully within, the benchmark. It does not achieve balance for text similarity. The GPS exercise should therefore be viewed as a transparent reweighting and balance diagnostic, not as evidence that historical exposure was randomly assigned; in particular, the weighted text-similarity estimates remain associational.

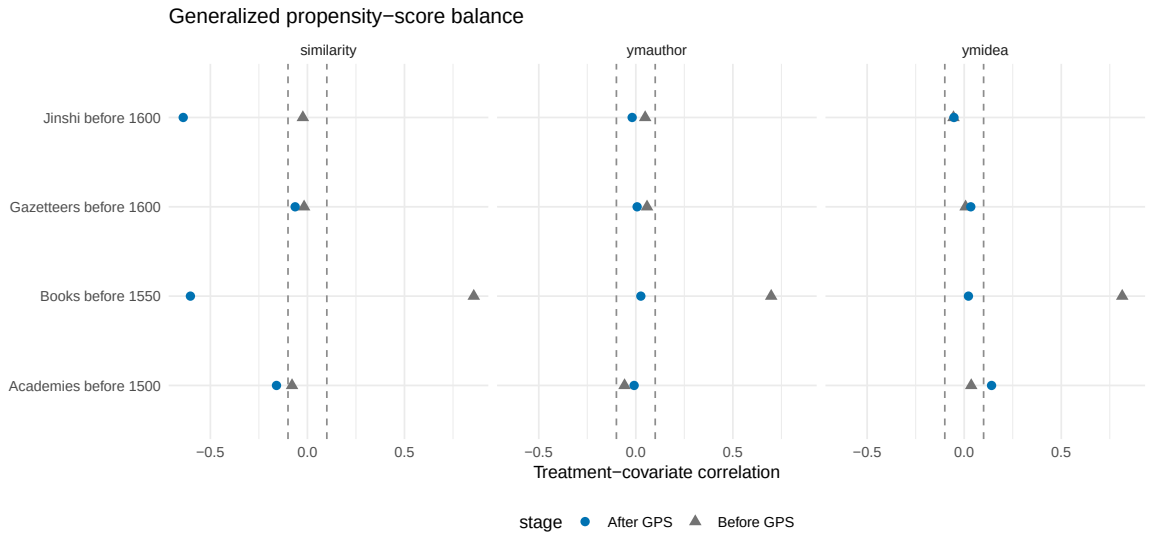



Figure XI: Covariate Balance Under Continuous Generalized-Propensity-Score Weighting

Notes: The figure reports correlations between each historical exposure and the covariates used in the county-level continuous generalized-propensity-score model. Gray triangles show correlations before weighting and blue circles show correlations after weighting. Dashed lines mark the $\pm 0.10$ balance criterion. The three panels correspond to text similarity, YM author exposure, and YM idea exposure.