

Mirrors for Princes and Sultans: Advice on the Art of Governance in the Medieval Christian and Islamic Worlds

Lisa Blaydes, Stanford University
Justin Grimmer, Stanford University
Alison McQueen, Stanford University

When did European modes of political thought diverge from those that existed in other world regions? We compare Muslim and Christian political advice texts from the medieval period using automated text analysis to identify four major and 60 granular themes common to Muslim and Christian polities, and examine how emphasis on these topics evolves over time. For Muslim texts, we identify an inflection point in political discourse between the eleventh to thirteenth centuries, a juncture that historians suggest is an ideational watershed brought about by the Turkic and Mongol invaders. For Christian texts, we identify a decline in the relevance of religious appeals from the Middle Ages to the Renaissance. Our findings also suggest that Machiavelli's *Prince* was less a turn away from religious discourse on statecraft than the culmination of centuries-long developments in European advice literature.

An influential literature in political economy seeks to explain the historical roots of economic and institutional divergence within and across world regions (e.g., Acemoglu and Robinson 2012; Blaydes and Chaney 2013; Kuran 2010; Morris 2010; North, Wallis, and Weingast 2009). There remains little consensus, however, as to why some parts of the world came to develop impersonal political institutions earlier than others or as to when Europe first began to enjoy the institutional advantages that facilitated later economic growth. However, recent work has pointed to the Middle Ages as the period when Europe began to diverge from other regions. For example, Blaydes and Chaney (2013) document differences in the stability of monarchical rule in Chris-

tian Europe and the Islamic world beginning in the Middle Ages.¹ If Muslim and Christian political institutions were changing in meaningful ways during this era, we would expect that such changes would be apparent in political works focused on modes of rulership.

Advice books to rulers were among the most important genres of political writing in the medieval period.² Termed “mirrors for princes” in the European tradition, these texts advise rulers on subjects as diverse as military strategy, choice of advisors, management of the royal household, and spiritual practice. Advice books vary considerably in their content and form. However, scholars agree that these texts reflect the political ideas, beliefs, and practices of their day.

Lisa Blaydes (blaydes@stanford.edu) is professor in the Department of Political Science, Stanford University, Stanford, CA 94305. Justin Grimmer (jgrimmer@stanford.edu) is professor in the Department of Political Science, Stanford University, Stanford, CA 94305. Alison McQueen (amcqueen@stanford.edu) is assistant professor in the Department of Political Science, Stanford University, Stanford, CA 94305.

Data and supporting materials necessary to reproduce the numerical results in the paper are available in the JOP Dataverse (<https://dataverse.harvard.edu/dataverse/jop>). An online appendix with supplementary material is available at <http://dx.doi.org/10.1086/699246>.

1. We use the terms “Christian,” or “Latin,” Europe and “Muslim,” or “Islamic,” world as regional designations and do not presume that there exists a shared “nation” or community across the heterogeneous populations within the two geographic regions. Indeed, there is tremendous variation within the designated regions in terms of political thought (e.g., Boroujerdi 2013). Alternative geographic designations, like “Western” Europe for example, would have the advantage of making the location of production clear but could create a problem for categorizing texts emanating from Muslim Spain and Sicily that were produced for Muslim kings.

2. Political organization during the medieval period was dominated by monarchs—in particular, kings and their equivalents—who were decisive holders of political power (Wormald 2005).

The Journal of Politics, volume 80, number 4. Published online August 24, 2018. <http://dx.doi.org/10.1086/699246>
© 2018 by the Southern Political Science Association. All rights reserved. 0022-3816/2018/8004-00XX\$10.00

ooo

Long considered valuable literary contributions, “mirrors” texts also provide a window into the inner political life of otherwise opaque polities.

While European mirrors are well known and widely studied, there has been relatively less scholarly work comparing such texts to a parallel advice literature written in the Islamic world.³ We make the first major attempt to use text-as-data methods to examine the comparative discourse on kingship and governance in the Christian and Muslim worlds during the medieval and early modern periods. We identify four broad, conceptually distinct areas of discussion common to both regions as well as 60 subtopics nested within these broad topics (or themes). We find that while Muslim and Christian texts pay roughly similar levels of attention to the four broad topics we identify, Christian texts display a decrease in the relevance of religious discourse over time. While there is no point at which we observe a sharp differentiation in the downward trend, the decline in the relevance of religious discourse becomes more stable and pronounced in the years following the resolution of the Investiture Controversy in 1122 CE. Our findings suggest that European political thought was moving away from the use of religious appeals in a fairly steady, likely endogenous, manner alongside the growing institutionalization of European polities in the early medieval period (e.g., Blaydes and Chaney 2013; Blaydes and Paik 2016; Stasavage 2010, 2016; Van Zanden, Buringh, and Bosker 2012).

These findings also have implications for our understanding of the history of political thought. While Machiavelli’s *Prince* has typically been viewed as a radical break with the discourse of medieval religious statecraft toward a more distinctively political theory, our findings suggest that it may instead represent the culmination of a centuries-long decline in religious discourse in European advice books.

While Muslim and Christian texts in the “mirrors for princes” genre display important similarities in our empirical analysis, the nested subtopics, or specific themes, we identify allow us to explore more fine-grained trends in political thought. In particular, for the Muslim texts, the four largest subtopics display an inflection point in discourse on monarchy during the High Middle Ages, a period of time when Middle Eastern societies witnessed a massive influx of steppe and nomadic peoples, particularly Turks and Mongols from Central Asia. We find that texts produced between the eleventh and thirteenth centuries, while diverse, tended to focus on the traits, qualities, and best practices of sovereigns—rather than other aspects of political rule—to a greater extent

than either the early Islamic period or the centuries to follow. This finding is consistent with that of scholars who have argued that Turkic—and later Mongol—princes increasingly consolidated social responsibilities in the monarchy (Black 2008) while simultaneously appealing to pre-Islamic ideas of kingship that “elevated the sovereign to a high position above his subjects” (Bosworth 2010, 22).

The remainder of the paper is organized as follows. The next section describes the “mirrors for princes” genre in political theory and considers the opportunities automated text analysis offers for exploring works of this sort. The section Empirical Analysis discusses our empirical approach, including how texts were selected as well as details on the empirical models employed. In this section, we also describe the four broad topic areas uncovered by the automated text analysis, offer our interpretation of these themes, and identify the more granular themes. In the following section, we present our interpretation of the observed empirical trends. The final section concludes and offers some suggestions on the promise of text-as-data methods for future work in political theory.

“MIRRORS FOR PRINCES” IN POLITICAL THEORY

The term “mirrors from princes” designates a genre of political writing offering counsel to rulers, and frequently also to their delegates and courtiers. In this section, we characterize the scope, features, and thematic content of this genre at a high level of generality. We then explain how automated text analysis might be applied to works of political thought in general and to the mirrors genre in particular.

Advice on governance

Advice literature flourished in Christian Europe and the Islamic world in the Middle Ages. In both traditions, the genre emerged in the eighth and ninth centuries from both classical and scriptural roots and exploded in the eleventh through thirteenth centuries. Advice literature persisted in Europe through the Renaissance and lasted into the nineteenth century in the Islamic world.⁴ While European mirrors, and Machiavelli’s

3. See Darling (2013b) for more on this perspective.

4. How representative are these works of the political thinking of their times and places? We offer two observations. First, on the whole, advice books tend to be closely tied to the politics of their time and place. They often (though, not always) aim to offer counsel to specific rulers in specific circumstances. While this advice may be motivated by an abstract and universal theory of politics, the specific aim of these works is rarely to articulate such a theory. Second, many (though, not all) writers of advice books were closely connected by employment or lineage to the rulers they were advising. As we discuss, this poses a familiar set of rhetorical, moral, and political challenges associated with “speaking truth to power.” These constraints tended to be somewhat less pronounced for political thinkers

Prince in particular, have been extensively studied, there has been less scholarly examination of Islamic advice literature. This is despite the fact that such works have been described as among the most “influential reading material in the medieval Islamic world” (Yavari 2014, 43).⁵

Often called “mirrors for princes” in the European tradition, these works’ intention was to provoke self-examination on the part of the ruler by providing him or her with standards of conduct and examples of virtuous leaders to imitate (Forhan 2002).⁶ Defining the scope of the genre is difficult. In the European case, a broad definition might include any works that, either in whole or in part, convey ideals of rulership. A stricter definition might be “limited to independent works explicitly aiming at instructing kings and lesser rulers about the virtues they should cultivate, their lifestyle, their duties, the philosophical and theological meaning of their office” (Lambertini 2011, 792). In the Islamic case, a broad definition might include wisdom literature, works of moral exhortation, ethical treatises, and testaments, as long as they “serve an advisory purpose and address a royal recipient” (Marlow 2013b, 349). A stricter definition might be limited to works entirely focused on the manners, conduct, and counsel of kings and their immediate delegates (Marlow 2009, 2013b). Many of the works in our analysis meet the standards of these narrower definitions. However, we have selected a few from each tradition that may not meet these stricter requirements (e.g., *Utopia*, *Kalila wa Dimna*, *Aphorisms of the Statesman*) in order to capture a diversity of approaches to political counsel and broader ideas about the nature of kingship.

more generally. However, the very features that give us reason to think that advice books are not representative of the political thought of their time and place are the features that make them worthy of study. It is precisely because writers of advice books had goals that were so closely tied to the politics of their time and place, on the one hand, and were often closely connected to those they were advising, on the other, that this genre offers a unique and important window into the comparative institutional development of the European and Islamic worlds.

5. Black (2008) argues that advice literature for kings—along with religious jurisprudence and Islamic philosophy (*falsafa*)—represented the three most important forms of political thought in historical Muslim societies. Khalidi (2005) situates Islamic mirrors texts in a broader succession of historical writing that includes writing on ethical living and etiquette, wisdom literature, and literature on governance. Davis (2010) contends that mirrors for princes were one of four main literary genres for Persian societies, alongside histories, works of ethical and religious edification, and popular prose romances.

6. While several European works self-identify as “mirrors,” the term was not used by any Islamic author. However, the imagery and concept of a “mirror for princes” was not entirely foreign to the Islamic tradition. Yusuf Khass Hajib’s eleventh-century *Wisdom of Royal Glory*, for instance, notes that “a loyal man may serve one as a mirror: by regarding him one may straighten one’s habits and character” (Crone 2004, 149).

In both the Christian European and Islamic traditions, advice literature focuses on wisdom for improving monarchical government.⁷ If kings were, as was widely believed, chosen by God and essential for social order, then the personal attributes and virtues of one’s ruler became central concerns. For writers in both traditions, the moral virtues of the ruler were directly correlated to the material prosperity and moral health of the political community (Born 1928; Crone 2004; Marlow 2013a). The hope behind much of the advice literature was that it might be used to educate a ruler and to shape his character for the good of his subjects.

Authors of advice books were almost exclusively members of the educated elite and, in both the European and Islamic traditions, included rulers (often writing for their sons), courtiers, administrators, jurists, men and women of letters, and religious scholars. The works were frequently written as gifts and dedicated to specific recipients (e.g., to a particular king, courtier, or vizier), but often with the expectation that they would be read by a wider audience.⁸ In the Islamic tradition in particular, advice books often presented an image of a ruler that enhanced his legitimacy and sovereign power (Marlow 2013a). Beyond the intention of shaping a ruler’s character and legitimizing his reign, authors wrote advice texts in order to enhance or consolidate their ties to the royal family, for reasons of professional advancement (a motive commonly attributed to Machiavelli), and to delight and please their royal audiences (e.g., by including stories and poetry).

Advice literature in both traditions tends to adhere to a set of generic conventions in its framing, source materials, and thematic content. Many works begin, for instance, with a profession of humility, an insistence on the author’s lack of relevant qualifications, or a disclaimer to the effect that the recipient already embodies the relevant virtues and, therefore, does not require the proffered advice (Forhan 2002; Marlow 2013a). Prescriptions are often offered to rulers indirectly through the use of classical and scriptural authorities and examples.⁹ Authors are frequently at pains to balance praise with counsel, conveying more subtle critiques through their choice of quotations and their presentation of examples.¹⁰

7. Some works, of course, have a more critical edge than others (e.g., *Sea of Precious Virtues* and John of Salisbury’s *Policraticus* and, on some interpretations, Machiavelli’s *Prince*).

8. While the advice in mirrors is often directed at rulers, the audience of these works was often broader and included fellow secretaries (in the case of Ibn al-Muqaffa), ministers, and court officials and other learned elites. We thank an anonymous reviewer for this point.

9. See London (2008) for a discussion of indirect, but frank, political speech through fables in the medieval Islamic context.

10. Because both Christian European and Islamic advice texts seem to adhere so closely to these conventions of framing, source material, and the-

These generic conventions extended to the issues and themes that dominated advice works. European texts tend to offer a vision of a just ruler who “treated equals equally” by maintaining a balance between the various social orders (Forhan 2002, 35). While many European advice books take the ruler to be above the law, they nonetheless tend to insist that good rulers conform with the law as a matter of virtue and faith (Born 1928; Nederman 1998). Beyond this, most European texts emphasize the importance of the cardinal virtues (prudence, justice, temperance/restraint, and courage/fortitude), devotion to popular welfare, commitment to public works and economic development, judicious selection of advisors and a willingness to take their advice, and personal faith and promotion of Christianity (Born 1928). We see a similar set of themes in many Islamic advice texts, which also offer an ideal of a just ruler as one who maintains a harmonious social order (the trope of the “circle of justice” recurs throughout the Islamic texts), practices the cardinal virtues, consults with advisors and heeds good advice, avoids ostentation, and attends to the material and spiritual well-being of his subjects (Lambton 1971; Marlow 2013b).¹¹

A common stock of source material for Christian European advice texts includes classical authors like Seneca, Plutarch, Cicero, and particularly after the thirteenth-century recovery of his practical philosophy, Aristotle; scriptural passages and exemplary biblical figures (particularly Hebraic models of kingship like Solomon and David); and patristic literature (especially Ambrose and Augustine, and particularly the twenty-fourth chapter of the latter’s *City of God*) (Forhan 2002; Lambertini 2011). Islamic advice books similarly draw from classical sources, particularly Plato and Aristotle’s ethical and political works and a pseudo-Aristotelian work, the *Sirr al-Asrar*, which purported to be a letter of advice from Aristotle to Alexander the Great; Sassanian theories of kingship; Arabian oral literature; and testamentary advice from royal and caliphal descendants to their heirs (Lambton 1971; Marlow 2013a). Overlaps in their periods of production, the aims of their authors, and their generic conventions make the Christian European and Islamic texts ripe for comparative analysis.¹²

matic content, an older generation of scholars tended to miss the ways in which authors tailored their guidance to the exigencies of their times, often with a subtle and sometimes even an overt critical edge (Marlow 2009; Nederman 1998). Scholarship on “mirrors” texts has increasingly come to attend to contextual specificity and critical edge in a body of advice literature that, at least on its surface, can easily seem entirely conventional.

11. See London (2011) for a more complete discussion of Islamic conceptions of the “circle of justice.”

12. Like the advice literature emanating from Europe at this time, there existed no clear dividing line between administrative manuals, works

Text analysis for political theory

This kind of comparative analysis presents an ideal opportunity for the use of text-as-data methods. While automated text analysis has been used in biblical studies, classics, literary studies, and law for several decades (Schreibman, Siemens, and Unsworth 2004), it has made very few inroads in political theory and comparative political thought.

Its primary use in political theory has been to settle debates about authorship. Scholars have used statistical wordprint analyses, which detect idiosyncratic but consistent patterns in the use of noncontextual terms or function words (e.g., articles, pronouns, prepositions, and conjunctions), to evaluate competing hypotheses about the authorship of texts. In an early and groundbreaking study, Mosteller and Wallace (1964) used wordprinting to show that James Madison was very likely the author of 12 disputed papers in the *Federalist*. More recently, wordprint analysis has been used to argue that Thomas Hobbes was very likely the author of three discourses in the *Horae subsecivae* (1620) that were originally published anonymously and whose authorship had been the subject of ongoing debate (Reynolds and Saxonhouse 1995). However, to our knowledge, text-as-data methods have not been used to discover and analyze themes in political theory or comparative political thought.

To characterize the themes in Muslim and Christian political advice literature, we introduce a new statistical topic model for texts. In so doing we contribute to the growing use of text-as-data methods. These methods have been used in a variety of contexts in political science (Grimmer and Stewart 2013) and applied across the humanities and in the literary analysis of poetry and novels (Jockers 2013; Rhody 2012), the historical analysis of newspaper articles (Newman and Block 2006; Yang, Torget, and Mihalcea 2011), and textual analysis of disciplinary history (Goldstone and Underwood 2012; Mimno 2012). Our use of statistical models is not intended to replace the close reading required to interpret and understand works of political thought. By their very nature, statistical models cannot accomplish these tasks. At best, they can provide information at a “scale that is different from that derived by close reading.” More specifically, sta-

of religious theory and guidance on royal manners in Muslim polities. Muslim writers had a “floating repertoire” of Indo-European ideas, institutions, and metaphors to draw upon where the vocabularies used to describe kingship in the Muslim and Christian worlds were, to a large extent, interchangeable (Al-Azmeh 1997). As a result, it would be wrong to assume that Islam imposed a particular form of Muslim kingship, ex nihilo; rather, Muslim forms of government were the product of existing historical paradigms (Al-Azmeh 1997). Although Muslim monarchs were supposed to abide by interpretations of Islamic law, such expectations could not be enforced (Lambton 1974, 423).

tistical models applied to larger corpora can identify “general trends that we must explore in detail and account for with new theories” (Jockers 2013, 27, 29).

Text-as-data methods are particularly useful for political theorists whose questions demand that they examine large collections of texts. There are at least two groups of theorists who do this kind of work. First, historians of political thought often want to understand the historical, intellectual, and linguistic contexts in which canonical texts were produced. In order to do this, they consider not only non-canonical works of political thought but also less formal texts like political pamphlets, newspaper articles, sermons, correspondence, and diary entries (Skinner 2002). Second, scholars of comparative political thought who are interested in charting cross-cultural themes or variations in conceptual vocabulary through time are also confronted with large sets of texts.

In both cases, a theorist’s familiarity with particular authors and modes of argument will inevitably vary. This varying level of expertise can make it harder for interpreters to identify general trends and broad patterns or to engage in a thorough comparison of the content of texts. Without additional guidance, interpreters may tend to focus on the texts that are more familiar and might struggle to identify themes and patterns in less familiar texts. Certainly, for a small set of books or thinkers, it is possible for scholars to expand their expertise. But this is not possible when considering the large numbers of texts required to address more macroscopic questions about the history of political thought and comparative political thought.

Text-as-data methods, then, are particularly useful for our comparison of the “mirrors for princes” genre across Christian and Muslim polities. While we examine a relatively small set of books, they incorporate a wide array of historical thinkers in distinct time periods. And each of the books engage multiple themes. To better understand the common—and contrasting—themes across the texts we use a statistical model as a conceptual guide.

EMPIRICAL ANALYSIS

By focusing on the two medieval civilizations within what has been called the “Western core” (Morris 2010), we seek to understand the relationship between political advice literature and institutional development in a comparative context. Why select texts from these two world regions? Historians have long argued that the two areas share both a common political experience and a core set of philosophical ideas (Lambton 1974). For instance, Lapidus (1984, 2–3) describes the Mediterranean region as sharing an “essentially uniform ecological situation” with the “common his-

torical and political experience of the Roman Empire” and roots in Greek urban society. Al-Azmeh (1997, 8) furthers the argument that cultural and civilizational boundaries in late Antiquity were fluid. Iranian polities, for example, had “vigorous relations with the realms of Hellenism and Romanity” (1997, 7), and wars between Persians and Greeks or Byzantines were “integrative and universalizing” moments. As a result, there is a high level of consistency in terms of how kingship is imagined and represented in the two world regions over both time and space (Al-Azmeh 1997, 18).

In this section, we first discuss the texts selected from the medieval Muslim and Christian worlds for use in our analysis. Next, we describe the estimation strategies that we employ. A final section focuses on the results of that estimation approach and lays out categories of discourse identified in the texts. Each category is discussed in turn.

Selection of texts

Our empirical analysis is focused on 21 texts in the Islamic tradition and 25 texts from Christian Europe.¹³ To facilitate the kind of computer-assisted textual analysis used in this project, we have only selected texts that have been translated into English. The texts selected from the Islamic tradition draw on Arabic, Turkish, and Persian sources; the texts from Christian Europe were written in Latin, Italian, French, English, and Old Norse. The texts selected from the Islamic world represent works from the eighth century through the seventeenth century, with most drawn from the eleventh and twelfth centuries. The Christian texts span the period from the sixth to the seventeenth centuries. The advice offered in the texts ranges from religiously derived rules and admonitions to more “secular” prescriptions for effective statecraft, war fighting, and bureaucratic management. Not all of these advice books meet the strict definition of the mirror genre described above. However, each text has been selected with an eye to capturing a range of both approaches to advice giving and conceptions of rulership. Tables 1 and 2 of the appendix (apps. A–D are available online) list all of the texts used in our empirical analysis.¹⁴

13. Texts from the Islamic tradition include *Aphorisms of a Statesman* (Al-Farabi, mid-tenth century), *Book of Government* (Nizam al-Mulk, late eleventh century), *Counsel for Kings* (Al-Ghazali, early twelfth century), and *Treatise on Advice to Kings* (Sa’di, mid-thirteenth century). Christian European texts include *On the Education of the Christian Prince* (Sedulius Scottus, mid-ninth century), *On the Instruction of Princes* (Gerald of Wales, early thirteenth century), *Education of a Christian Prince* (Erasmus, early sixteenth century) and *Basilikon Doron* (James I, late sixteenth century). We provide a full list of texts in the online appendix.

14. We acknowledge the challenges raised by working with texts in translation. As Gadamer (2004, 402) (and numerous others) have argued, “translation is at the same time an interpretation.” This is a particular

Estimating broad and specific themes

To examine the themes across the Christian and Islamic mirrors literature we introduce a new statistical model for texts. Our model is built around two different hierarchies in our data set. The first hierarchy is thematic, building on other topic models that estimate a hierarchy of topics (Li and McCallum 2006). At the top of the thematic hierarchy are broad themes that provide coarse summaries of the issues that the texts engage. We assume that there are four such themes. Below the coarse themes in the hierarchy are more granular themes. We assume that there are 60 granular themes. Our model presumes that the granular topics are nested within the broader themes so that the granular topics refine and clarify distinctions within each broad theme. We determine the number of broad and narrow topics following extensive testing that uses both quantitative and qualitative measures. Following Roberts et al. (2014) and Mimno et al. (2011), we use quantitative indicators to measure the cohesiveness and exclusivity of the topics across modeling assumptions. Our research team also evaluated the model qualitatively (blind to the quantitative evaluation), selecting the specification and final model that provided the most substantive clarity (Chang et al. 2009; Grimmer and Stewart 2013; Quinn et al. 2010). Both our quantitative and qualitative analysis agreed on the number of broad and granular topics.

A second hierarchy measures how the texts divide their attention across themes. At the top of this hierarchy are the advice books. We suppose that each of the books are a mixture of the underlying themes—and to identify this mixture of themes we break each book into a set of shorter sections.¹⁵

problem for work in comparative political theory, which endeavors to understand non-Western texts within contexts, practices, and methods of inquiry that are culturally specific (e.g., Dallmayr 2004; Euben 1999; Jenco 2007). In working only with translations, we risk that our sample and interpretation might be biased by the interpretive concerns of translators. While we acknowledge the force of these concerns, we are limited by the unique challenges of conducting text analysis using non-Western script, as well as the difficulties of navigating material in multiple languages. That said, our interpretations in this paper may be less vulnerable to these worries than it might initially appear. First, examining a sample of translated and untranslated texts, we find no evidence of biased or idiosyncratic temporal selection of texts for either Muslim or Christian advice books (see app. A). Second, we might worry that particular translations affect the analysis. To be sure, translators have the discretion to alter the substantive interpretation of texts. But because our analysis focuses on the broad topics of texts, our results would be very difficult for a translator to affect. And because our analysis incorporates more distinct texts than any previous analysis of advice literature, we believe our results to be less vulnerable to selection bias than previous scholarship, which has tended to draw inferences from a relatively small number of manuscripts in any particular analysis.

15. To make this division we used natural breaks in the texts. In instances where the natural breaks were very short, we combined the breaks until they comprised at least 150 total words.

All together, our 46 books are composed of 9,838 shorter sections. At the bottom of this hierarchy are the shorter segments for each book, which we assign to a single granular theme. By assigning each of the shorter segments a single theme, we simultaneously assign each of the segments to a single broad theme at the top of the hierarchy as our granular themes are nested within the broad themes (Grimmer 2010; Wallach 2008).

To apply the statistical model to the texts we perform a series of steps that simplify the texts and represent them quantitatively; these steps are commonly called “preprocessing” in the text-as-data literature (Grimmer and Stewart 2013). The assumptions that we impose are not intended to capture the realistic ways texts are constructed (Grimmer and Stewart 2013). Rather, the assumptions are intended to simplify language to aid in the identification of broad and specific themes in the texts. Our preprocessing steps are similar to numerous other applications of text as data in political science (Hopkins and King 2010; Quinn et al. 2010); we discard word order, instead focusing on counts of how often particular terms occur. We also remove common placeholding or stop words (such as *if*, *but*, and *of*), because those terms rarely provide systematic information about the topics of discussion. In addition, we discard punctuation and capitalization. And finally we map variants of a word to a common term, a process known as stemming.¹⁶

The content of our texts also leads us to do additional preprocessing. It is common for words that are clearly synonyms to be used in distinct texts. Without further guidance, our method may confuse the synonyms for distinct words about different themes. To avoid this confusion, we identified synonyms and collected the words under a single term. And because our texts are translations that often leave some words in the original language, we imposed additional translation. For example, we combined *God* and *Allah*, ensuring that our model did not arbitrarily separate religious appeals based on differences in translation.¹⁷ The result of this procedure is that

16. This kind of preprocessing may strike some specialists in the history of political thought and comparative political theory as controversial. The methods typically used in these fields involve close textual reading, where word order, place-holding words, and punctuation are important markers of meaning. Within literary studies, however, such methods have been used as a complement to close reading of texts by assisting specialists in the discovery of themes, identification of patterns across large corpora of texts, and assistance in uncovering underlying plot structures (e.g., Moretti 2013; see also Jockers 2013).

17. To identify words that operated like synonyms we engaged an initial and extensive exploration on a subset of our data. We fit several exploratory versions of our model in order to better understand how the feature representation would manifest into topics. This initial exploration

each document is represented as a 2,124 element-long vector, where each term represents the number of times a word is used in a document.

Using the hierarchy, the statistical model simultaneously estimates five quantities of interest. The model (1) estimates a set of specific themes, (2) estimates a set of broad themes, and (3) classifies each specific theme into a single broad theme. For each of the 46 books in our collection ($i = 1, \dots, 46$) the model (4) estimates how each book divides its attention over the 60 specific themes. For book i , define **theme_{*i*}** as

$$\mathbf{theme}_i = (\text{theme}_{i,1}, \text{theme}_{i,2}, \dots, \text{theme}_{i,60}),$$

where $\text{theme}_{i,k}$ is the proportion of space in book i dedicated to specific topic k . Our procedure is analogous to estimating the weights each book attaches to each theme—we suppose that each entry in **theme_{*i*}** is greater than zero ($\text{theme}_{i,k} > 0$) and that the **theme_{*i*}** sums to 1 ($\sum_{k=1}^{60} \text{theme}_{i,k} = 1$). Because each of the specific themes are nested in the more broad themes, we can easily aggregate **theme_{*i*}** to obtain the attention each book allocates to the more general by summing. Our final quantity of interest (5) assigns each short section to a specific topic. To estimate the statistical model we use a variational approximation, a deterministic method for estimating complex posteriors (Grimmer 2011; Jordan et al. 1999). To select the final model, we ran the model several times from different starting values and selected the fit using both quantitative and qualitative evaluations (Roberts et al. 2014).¹⁸

Themes

We estimate four broad themes and 60 specific themes with our model. We summarize our broad and specific themes in table 1. Column 2 contains key words that distinguish the themes. In column 3, we present the average proportion of the books allocated to the broad and specific themes. Our model discovers the topics, so the key words merely reflect what our model estimates—we did not fix the key words beforehand.¹⁹

Figure 1 provides information on how the texts analyzed deal with each of the four themes discussed. This figure

presented a clear set of words that were effectively synonyms but treated as having distinctive meanings in the text. Of course, other words might, on their face, appear to be synonymous but have distinct meanings. To avoid overgrouping, we took a limited approach to the grouping, relying on the correlation of words to identify other words that refer to the same topic.

18. In app. B, we provide full model details and derive the estimation algorithm.

19. In app. C, we provide descriptions of the 60 specific themes (or subtopics). We arrived at these descriptions by individually reading the text segments associated with each subtopic, comparing our individual descriptions, and jointly producing final descriptions.

shows the proportion of Christian and Muslim books, respectively, that focus on each of the four themes we describe below. Both the absolute levels of attention to different themes and the difference between Christian and Muslim texts in terms of emphasis are noteworthy.²⁰ Figure 2 shows the changing emphasis on each of the four themes over time.

Theme 1: The art of rulership. This broad theme focuses on the practical virtues and political practices of good rulers. The single most prominent subtopic within this theme concerns the duties and characteristics of exemplary kings (1.1 in table 1). These ideas are conveyed through both abstract discussion of the ideals of kingship and historical accounts of exemplary rulers. Other subtopics address connected moral concerns like the ruler's obligations to his people and to the maintenance of the public good (1.3), his moral education (1.4) and moral character (1.5), and his responsibility and reputation for justice (1.8). However, most of the discussions in this theme are more overtly practical. They touch on the ruler's relationships to particular peoples, groups, and factions (1.2), his legislative and executive roles (1.6), the acquisition and exercise of power (1.11), the practice of foreign relations (1.17), the waging of war and the prospects for peace (1.12), tax collection (1.14), and public administration and delegated authority (1.20).

This is the largest area of discussion among Christian and Muslim authors. We see comparatively more emphasis on this theme in the Christian texts, though the difference here is not large. While attention to this theme remains fairly stable over time among Muslim texts, it shows a slight increase among Christian ones. An analysis of the subtopic results reveals a distinct temporal pattern, particularly for the Muslim texts. Subtopics 1.1 and 1.2—which account for almost 10% of all text blocs—show increasing and decreasing trends, respectively, between the eighth and thirteenth centuries. The vast majority of the Muslim texts in our sample (17 of 21) were produced during this interval. We provide a tentative interpretation of these trends in the Interpretation section below.

Theme 2: Personal virtues, habits, and relationships. This broad theme addresses the ruler's personal virtues and relationships. The most prominent subtopic focuses on knowledge, advice, and practical wisdom (2.1). It advises rulers on

20. Figure 1 of the appendix suggest that there exists a great deal of variation in terms of the relative topic emphasis across specific texts.

Table 1. Broad and Specific Themes in the Mirrors Genre

1	king, princ, good, peopl, rule, law, power, govern, war, honour	.37
1	king, royal, court, servic, father, moon, seat, presenc, minist, majesti	.06
2	peopl, lineag, religion, fear, ruler, tribe, countri, famili, leader, common	.035
3	princ, peopl, good, state, mind, public, christian, realm, tyranni, ought	.033
4	good, evil, bad, courtier, fortun, instruct, wise, master, care, ought	.031
5	virtu, vice, good, generos, true, knowledg, wisdom, human, nobl, virtuou	.024
6	law, unlaw, allow, punish, princ, public, wine, accord, author, judg	.02
7	good, peopl, bad, lord, princ, king, evil, countri, ought, love	.018
8	justic, judg, right, equiti, court, world, law, judgment, king, injustic	.015
9	son, father, mentor, dear, death, thee, arm, glori, perish, daughter	.015
10	kingdom, king, reign, great, son, father, tyranni, place, possess, realm	.014
11	power, alexand, pope, abl, reason, roman, duke, tyranni, consid, emperor	.013
12	war, fight, arm, wage, peac, engag, neighbor, nation, christian, chief	.013
13	honour, great, gift, lord, nobl, money, desir, hous, rich, servant	.012
14	tax, land, pay, muslim, collector, treasuri, collect, payment, crop, paid	.012
15	princ, great, roman, good, ought, nobl, valeriu, honour, knight, rome	.011
16	rule, govern, kind, art, best, pillar, excel, power, affair, peopl	.011
17	peac, war, emperor, desir, arm, preserv, neighbor, nation, enem, roman	.011
18	govern, politi, tyranni, aristotl, lordship, king, citi, multitud, ruler, human	.009
19	prais, highli, king, heart, brother, awak, wide, face, tell, man	.006
20	appoint, judg, offic, deleg, right, author, sovereign, jurisdict, valid, evid	.006
2	man, woman, know, love, ladi, wish, old, natur, ruler, great	.238
1	man, wise, wisdom, poor, fool, speech, learn, eat, generos, food	.047
2	know, knowledg, learn, man, tell, truth, excel, courtier, ignor, abl	.023
3	man, good, bad, evil, wick, deed, better, wise, fortun, heart	.021
4	great, art, courtier, place, caus, count, esteem, hors, laugh, mean	.019
5	man, peopl, place, kill, money, tell, priest, busi, need, properti	.016
6	ruler, power, new, consid, peopl, princip, qualiti, help, individu, state	.016
7	natur, human, art, reason, imit, perfect, anim, scienc, bodi, virtu	.014
8	command, letter, man, faith, governor, armi, believ, order, present, servant	.014
9	love, woman, lover, passion, ladi, heart, young, beauti, mentor, desir	.013
10	woman, wife, husband, old, beauti, hous, magnifico, know, ladi, children	.013
11	woman, man, wife, beauti, marri, laugh, young, unlaw, ladi, perfect	.01
12	old, man, young, youth, tell, older, wife, boy, vigor, sheep	.009
13	wish, man, desir, know, speech, question, talk, stupid, avoid, courtier	.009
14	intellig, caus, substanc, perfect, essenc, intellect, mean, contrari, follow, necessarili	.008
15	ladi, mistress, woman, court, love, princess, courtier, good, young, wise	.007
3	almighti, prophet, world, prayer, sin, death, book, bless, life, pray	.221
1	almighti, holi, world, command, spirit, faith, priest, christ, peopl, glori	.043
2	almighti, bless, grant, messeng, prophet, peac, muslim, merci, kill, qur	.035
3	almighti, king, peopl, divin, end, glori, understand, royal, solomon, minist	.029
4	almighti, man, david, know, wealth, saul, tale, high, poor, creat	.028
5	almighti, good, evil, work, fear, grant, merci, counsel, bless, wisdom	.021
6	world, life, almighti, desir, perish, wealth, seek, soul, heart, earth	.016
7	book, read, work, studi, mind, knowledg, learn, philosoph, scienc, pray	.012
8	death, life, perish, world, end, soul, hope, left, today, heart	.012
9	prophet, almighti, muslim, kill, islam, perish, bless, relat, priest, companion	.01

Table 1 (Continued)

10	sin,almighti,repent,commit,merci,punish,forgiv,transgress,evil,believ	.009
11	prayer,almighti,lead,pray,leader,friday,prophet,pilgrimag,servic,priest	.005
4	bodi,water,enemi,land,eye,faculti,order,friend,citi,lion	.171
1	citi,countri,citizen,peopl,place,emperor,nation,hous,roman,inhabit	.024
2	state,reason,necessari,majesti,public,affair,mind,princ,realm,punish	.016
3	enemi,fight,battl,arm,victori,armi,attack,forc,defeat,war	.016
4	order,place,hous,imperi,servant,offic,accord,presenc,stay,given	.015
5	friend,friendship,rat,crow,don,tell,tale,hole,heart,eye	.013
6	land,water,muslim,countri,cultiv,sea,owner,grant,properti,lie	.013
7	bodi,soul,beauti,form,mind,contrari,aris,relat,celesti,sens	.013
8	eye,mentor,head,heart,hair,hors,beauti,face,black,blood	.011
9	armi,troop,camp,battl,enemi,forc,soldier,fight,order,kill	.01
10	pleasur,life,beauti,delight,enjoy,mentor,felt,happi,natur,mind	.01
11	water,spring,river,stone,drink,mountain,sea,flow,place,eat	.009
12	sun,light,night,earth,cours,tree,beauti,bear,winter,fruit	.008
13	lion,majesti,bull,jackal,head,tree,camel,crow,king,don	.006
14	faculti,sens,bodi,organ,imit,receiv,sensibl,intellect,form,appetit	.006

how to acquire knowledge, cultivate personal and moral judgment, and make use of trusted advisors. The crucial point here is that the personal traits, habits, and practices of the ruler will tend to determine his or her degree of political success. Other related subtopics concern good and evil (2.3), virtue and vice (2.5), and the requirements of living a morally good life (2.4); truth, knowledge, and philosophy (2.2, 2.14); the personal attributes and habits required for maintaining political power (2.6); the ruler’s personal relationships (2.9, 2.11, 2.12); and the roles and behavior of women at home and in court life (2.10, 2.15). A common thread running through many of these subtopics concerns the importance of establishing certain habits or practices in the service of virtue, political power, and human relationships.

This is the second largest area of discussion among both Christian and Muslim authors, and there is close to equal emphasis on this theme in both traditions. Once again, attention to this theme remains fairly stable over time across Muslim texts but shows a slight increase over time among Christian ones. A closer look at the subtopics reveals a strong temporal inflection point in the over-time trend for the Muslim texts in subtopic 2.1. Attention to the questions of knowledge, advice, and practical wisdom peaks in the Muslim texts around 1100 CE.

Theme 3: Religion. This broad theme concerns religious beliefs and practices and the relationship between religious and political authority. The most prominent subtopic is centered on the relationship between divine will and political rule (3.1). It includes advice about the religious virtues and habits that

political rulers ought to cultivate, the relationship between divine favor and political success, the subjection of political rulers to God’s will, and the divine sources of political authority. Related subtopics address the obligations of political rulers to God (3.3), the actions and beliefs through which a ruler may secure God’s blessings and favor (3.2) as well as his mercy and rewards (3.4), and religious virtues and vices (3.5).

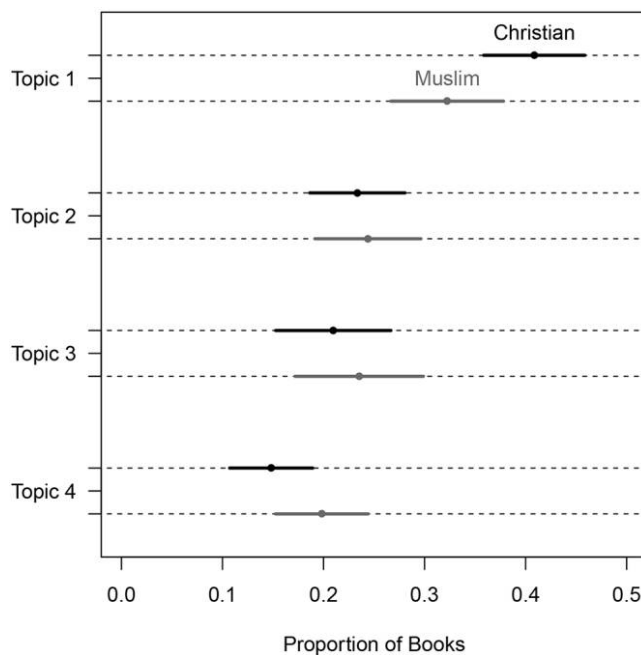


Figure 1. Difference between Muslim and Christian texts across major themes (or topics). Topic 1 focuses on the art of rulership; topic 2 focuses on the private life and personal virtues of rulers; topic 3 focuses on religion; topic 4 focuses on political geography and the natural world.

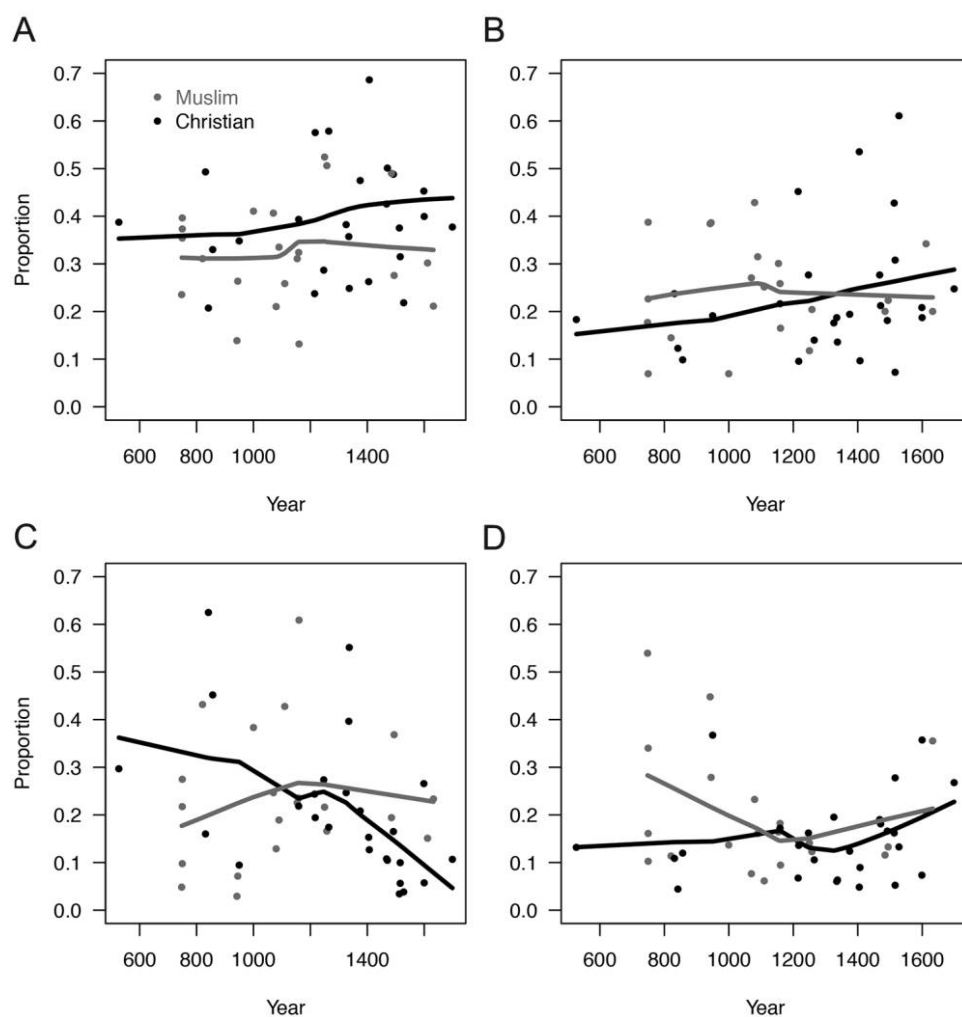


Figure 2. Emphasis for each of four major themes (or topics) over time. Topic 1 (A) focuses on the art of rulership; topic 2 (B) focuses on the private life and personal virtues of rulers; topic 3 (C) focuses on religion; topic 4 (D) focuses on political geography and the natural world.

Other subtopics deal with specific religious beliefs, such as those relating to sin (3.10) and the ultimate fate of the soul (3.8), and practices, such as prayer (3.11) and religious study (3.7).

This is the third largest area of discussion among both Christian and Muslim texts. Muslim authors tend to focus slightly more on this theme than their Christian counterparts. Attention to this broad theme within the Muslim texts remains fairly stable over time, with a slight increase between the eighth and twelfth centuries and a leveling off thereafter. By contrast, attention to this broad theme in the Christian European texts declines steadily from the sixth through the seventeenth centuries. This decline is particularly evident in those subtopics dealing with the relationship between divine will and political authority (3.1), religious virtues and vices (3.5), and sins (3.10). A more abrupt decline beginning roughly around 1200 CE is observable in those subtopics that address a ruler's obligation to God (3.3) and divine mercy and rewards (3.4).

Theme 4: Political geography and the natural world. This broad theme is centered on discussions of the spaces of politics and the natural world. The most prominent subtopic concerns the spaces and places of political rule—the cities and regions over which a ruler exercises authority and the peoples and ethnic groups that occupy these territories (4.1). Related subtopics address military matters, with a particular (though not exclusive) emphasis on the spaces of battle (4.3) and the role of landscape and topography for military strategy (4.9). Other subtopics included here address the advice associated with the reason of state tradition (4.2) and questions of social order (4.4). While these discussions may initially seem unrelated to political geography and landscapes, the use of spatial language and metaphors (e.g., the state or empire as a space of political action, the public and private realms, territorial governors) are common to both. Other subtopics address nature and the natural world as such, touching on the discovery and cultivation of land (4.6), water and watery

landscapes (4.11), the cycles of the natural world (4.12), the body and the soul (4.7), and the senses and faculties (4.14).

This is the least discussed theme among both Christian and Muslim texts. It receives slightly more attention from Muslim authors. Within the Christian tradition, attention to this broad theme remains largely stable until roughly 1300 CE, after which it begins to increase somewhat. Within the Muslim tradition, there is a decline in attention to this theme between the eighth and twelfth centuries and then a slight increase thereafter.

INTERPRETATION

It is important to note the broad similarities between the European and Islamic advice texts. We find that there are not large differences in aggregate (i.e., time-period average) emphasis on the four major themes (fig. 1). For themes 2 (personal virtues, habits, and relationships) and 4 (political geography and the natural world), European and Islamic texts track very closely over the historical interval. We see somewhat greater emphasis on theme 1 (the art of rulership) among the European texts, though this difference is not substantial. We find the existence of similar emphases across European and Islamic texts, in the aggregate, to be reassuring, as this suggests the broad comparability of the cases. This is consistent with arguments offered by Darling (2013b), who finds that although there is no evidence that the two literatures strongly influenced one another, there do appear to be important similarities in their content and development.

Nevertheless, there are two pronounced differences in over-time trends across Muslim and Christian texts. The first is an inflection point in the over-time trends for Muslim texts for the model's four largest subtopics. These four subtopics account for more than 18% of all text blocs in the sample. While this inflection point is also present in some of the over-time trends for the Christian texts, it is substantially less pronounced. The second differential trend is a decline in the emphasis on theme 3 (religion) over time in the Christian texts that is not mirrored in the Muslim texts. This trend is also observed for a number of the subtopics within this theme.²¹

Thus far, our contributions have been primarily methodological and descriptive. In this section, we seek to

21. With the relatively small sample size of Muslim and Christian texts, respectively, we recognize that we are not able to estimate the empirical trends with precision. In a bid to alleviate potential concerns about the robustness of the patterns we observe, we use a bootstrapped regression of the proportion of books allocated to particular subtopics of interest and then create a 95% confidence interval by sampling with replacement 1,000 times and rerunning the regression. While the confidence intervals that this yields are large, the general patterns observed are highly consistent with the results we report. See app. D for details on this procedure.

connect our findings to a large literature on historical and institutional development. One limitation of our approach is that there are a relatively small number of texts being examined for any particularly time period, making it difficult for us to estimate these trends with precision.²² We therefore proceed tentatively here with an eye to opening avenues for future research rather than making causal arguments.

Changing trends in Muslim political discourse

For the Islamic texts, there is a change in the over-time trends for the four largest subtopics. Subtopic 1.1, the single largest granular topic identified by the model, addresses the obligations, responsibilities, attributes, and comportment of the ideal king. It includes both abstract discussions of the characteristics of ideal kings and historical discussions of past kings who are exemplary in various ways. The salience of subtopic 1.1 increases for Muslim texts on the interval from the eighth to the mid-thirteenth century (see fig. 3). The trend becomes especially pronounced in the period between the eleventh and thirteenth centuries.²³ Subtopic 2.1, the largest within a theme focused on the ruler's personal habits, virtues, and relationships, centers on the connections between wisdom, virtue, and advice as they pertain to politics and other domains. Among the Islamic texts grouped in this subtopic, special attention is given to practical wisdom—learning from experience, cultivating good personal judgment, and developing the practices and habits associated with political success. The trend line here looks much like it does for subtopic 1.1. The salience of the topic increases for Islamic texts until the thirteenth century and is particularly pronounced from the eleventh to the thirteenth century. Therefore, emphasis on the duties and exemplary behavior of kings (subtopic 1.1) as well as a focus on the king's particular behaviors and practical best practices (subtopic 2.1) increase until the High Middle

22. At the same time, since we are restricting our analysis exclusively to this population of books, our analyses do not suffer from obvious forms of sampling error.

23. It is difficult to know how our results would change if we included a different set of texts. For example, would our empirical results have been sensitive to the inclusion of early Islamic works, like those written by Abd al-Hamid ibn Yahya—court secretary to the last Umayyad caliph whose writings helped define royal bureaucrats as a social class (Kadi 2014)? Abd al-Hamid authored the still untranslated “Epistle of Advice to the Heir Apparent” (ca. 747 CE), which was to be read as advice from his patron—the Umayyad caliph—to his son (Brinner 1985). Abd al-Hamid described the qualities of an effective ruler as well as how to achieve those qualities through education. Abd al-Hamid also warned against the enormous powers enjoyed by the monarch, which could have an intoxicating, corrupting effect. One might have expected that a text of this sort would have scored relatively high for subtopic 1.1, potentially confounding the existing empirical relationship that we identify. It is impossible to know for certain, however, without the inclusion of the particular manuscript in our text analysis.

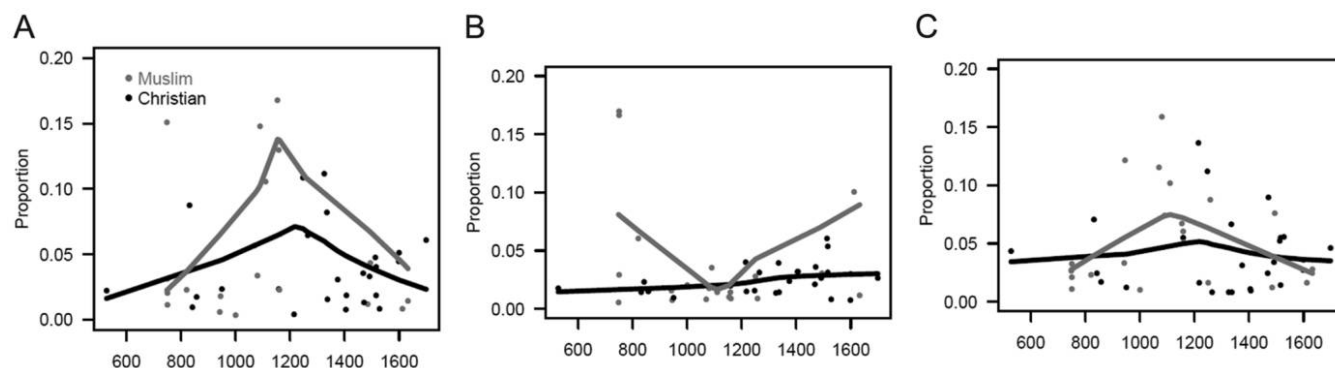


Figure 3. Emphasis for subtopics 1.1 (A), 1.2 (B), and 2.1 (C) over time

Ages, with a particular focus on the sovereign during the period between the eleventh and thirteenth centuries.

Subtopic 1.2, also an area of substantial attention within the corpus, is centered on the relationships between rulers and other groups or classes of people. The Islamic texts in this category emphasize the connection between social hierarchies and political stability. They also include attempts to catalog, classify, and characterize peoples of different ethnic groups (e.g., tribal bedouin, Armenians). The focus on this subtopic is almost the reverse image of the trend for subtopics 1.1 and 2.1. After initial high levels of focus on this subtopic in the early years of Islam, emphasis declines until the thirteenth century. A similar inflection point can be seen in the over-time trend for subtopic 3.1, which deals with the relationship between divine will and political rule (see fig. 4). This suggests that until the mid-thirteenth century, Muslim mirrors texts were increasing in their focus on kings and decreasing in their emphasis on social differentiation and religious discourse.

Empirical trends after the thirteenth century are difficult to identify given the relative paucity of Muslim mirrors texts after that date. Emphasis on the obligations, responsibilities, attributes, and comportment of ideal or exemplary kings (subtopic 1.1) as well as practical wisdom for kings related to their personal habits and relationships (subtopic 2.1) receive

very little emphasis after the thirteenth century. On the other hand, discourse related to forms of social differentiation (subtopic 1.2) as well as religious discourse (subtopic 3.1) increase in the period after the thirteenth century. Again, given the relatively small number of observations for this later period, we place most of our emphasis on the trends where the data are most dense.

These empirical trends raise two sets of questions. First, why did the period between the eleventh and thirteenth centuries witness an increased focus on the ruler? Second, why did existing trends in the advice literature appear to reverse after the thirteenth century? We take each question in turn and consider broad trends in the historical development of Muslim societies.

First, the increased focus on the ruler that is particularly strong between the eleventh and thirteenth centuries may be connected to the influx of Turkic peoples into the Muslim world. Until the eleventh century, the eastern frontier of the Muslim world had been quite stable (Bosworth 2010, 21). After that point, however, ethnic Turkic elements drawing from the steppe and forest hinterlands were “injected” into the eastern Islamic world, acting as a major shock to the preexisting Perso-Arab political and intellectual equilibrium (Bosworth 2010, 21).

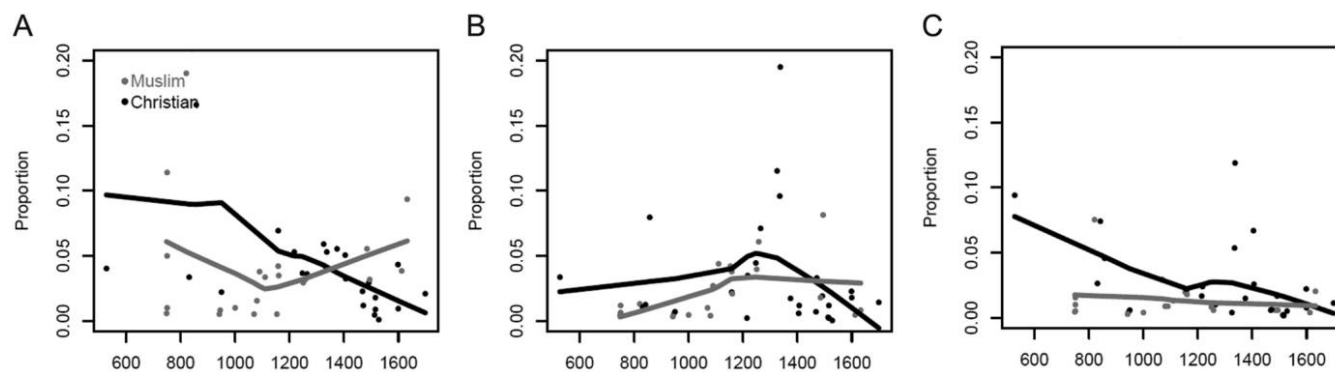


Figure 4. Emphasis for subtopics 3.1 (A), 3.3 (B), and 3.5 (C) over time

These changes had a number of potential effects. Islamic political thought had long been concerned with questions of rulership. In some cases, this development involved working out a theory of the caliphate. In other cases, it involved attempts to develop theories of kingship (Faksh 1983). This became especially important from the eleventh through the thirteenth century. Turkic peoples brought with them their own ideas of kingship—which tended to view sovereignty as “a divine gift to the founder of the state” (Arjomand 2010, 237). The idea of a “divine mandate” was reinforced by the ease with which Eastern, steppe peoples were able to overrun settled areas of the Islamic world.²⁴

At the same time, Turkic rulers like the Seljuks sought to legitimize their political authority by drawing on existing Persian and Islamic ideas of kingship (Manz 2010, 167). The appeal of these ideas is understandable—they tended to elevate “the sovereign to a high position above his subjects” (Bosworth 2010, 22). Advice books also reflected these changes. Monarchy became the assumed form of government and writers of advice books came to increasingly focus on the consolidation of power in the hands of the king (Darling 2013b). For example, famed Seljuk vizier and author of the *Book of Government* (1110 CE)—Nizam al-Mulk—treated kingship as a “focal point of the Muslim community,” assigning functions that previously belonged to the caliph or other societal actors increasingly to the sultan (Black 2008, 26).

Second, the inflection point in Muslim political discourse may be connected to the Mongol invasions. Beginning in the thirteenth century a progression of Mongol invasions and conquests ushered in what some Middle Eastern historians have described as the start of a “totally new phase of Islamic history” (Bosworth 2010, 75). Black (2001, 137) goes so far as to say that “between 1219 and 1405, the Islamic world was torn apart.” According to one account, Hulagu Khan—a grandson of Ghengis Khan—led 20% of the steppe Mongol and Turkic population into the Middle East, an estimated 850,000 people (Darling 2013a). Manz (2010, 167–68) argues that Mongol rule marked the end of Islam’s “classical age” and that the Islamic societies that emerged from it were “more diverse and more expansive” than those that preceded it.

We are not well positioned to firmly connect these historical developments to the textual trends because our sample does not include advice books from the period between the sacking of Baghdad (1258 CE) to the death of Tamerlane (1405 CE), the bookends of what historians describe as the high point of Mongol rule. That said, there is a debate within the literature on Muslim mirrors about whether the Mongol invasions mark a period of continuity (Black 2001; Lamb-

ton 1962) or change (Darling 2013a; Tabatabai 2013). Our results point to an ideational shift.²⁵ More specifically, Broadbridge (2008) suggests one reason why discourse on kingship might have declined after the Mongol invasions. She argues that ideas about kingship and rule became far less consolidated. From 1260 to 1405 CE, there existed few models of sovereignty and those that did exist were largely in conflict with one another. While our results suggest a decline in discourse on kings and kingship consistent with this argument, a more convincing empirical test would require close examination of texts from the mid-thirteenth century through the fifteenth century.

Declining emphasis on religion in Christian mirrors texts

A second important differential trend concerns the emphasis on religious themes. Within the Christian texts there is an overall decline in this emphasis over time—a decline that becomes more stable and pronounced after the twelfth century. In contrast, focus on religious themes in the Muslim texts remains fairly constant overall (see fig. 2). Thus, while in the aggregate Christian and Muslim texts appear to emphasize religious themes at similar levels, there is important comparative temporal variation.

The downward trend in religious themes among the Christian texts is pronounced in a number of subtopics, many of which deal with the connection between the spiritual realm and political rule. In two cases, this downward trend is steady and continuous, while in others it is most pronounced after the twelfth century. First, subtopic 3.1 is the largest of the subtopics within the “religion” theme. This subtopic is focused on the relationship between God’s will and political rule. It includes discussions of the religious virtues and habits that rulers ought to practice, the relationship between divine favor and worldly political success, the subjection of political rulers to divine rule, and the divine sources of religious authority. Focus on these issues in the Christian texts declines across the entire period of analysis.²⁶ We see a similar pattern in the Christian texts in subtopic 3.5, which is focused on discussions of religious virtues and vices and their connections to political authority. It includes passages that admonish rulers for failures of virtue, warn them against the vices of political rule, and urge them toward the difficult path of virtue. Attention to these issues declines sharply within the Christian

25. However, the exact dimensions of this change would have to be confirmed with closer analysis of texts from the immediate aftermath of the Mongol invasion.

26. For Muslim texts, emphasis on this topic declines until roughly 1100 CE and then increases thereafter (see fig. 4).

24. See Darling (2013b) and Broadbridge (2008) for more on this.

texts across the entire period (but remains constant within the Muslim texts).

Subtopic 3.3 exhibits a different but related pattern. This subtopic focuses on a ruler's obligations to God and includes discussions of the kinds of virtues (e.g., wisdom) and practices (e.g., nourishing and caring for the soul) necessary to fulfill one's obligations to God, as well as arguments about the connection between the ruler's relationship with his own people and his degree of divine support. Attention to these questions in the European texts remains steady until about the twelfth century and then declines thereafter.²⁷ Within the Muslim texts, we see an increasing focus on these questions until about 1150–1200 CE, after which attention remains steady. In short, we observe an overall decline in attention to religious themes within the Christian texts. When we narrow our attention to some of the more specific religious themes, we see either a steady and continuous decline (subtopics 3.1 and 3.5) or a decline that starts roughly around the twelfth century.

What might account for these trends? Our view is that they may indicate a gradual process of secularization in Christian advice literature. By "secularization" here, we mean the development of an idea of the political realm as a separate and differentiated sphere of activity.²⁸ Conflicts over ecclesiastical and secular jurisdiction were being worked out during the medieval period in many European states, leading to a differentiation between religious and political authority.²⁹

Acknowledging this contestation challenges a conventional story about the relationship between church and state in the medieval period. The conventional story holds

27. The trend is similar among the European texts for subtopic 3.4, which captures discussions of God's mercy and rewards. It includes passages that stress the importance of being grateful for and to God and advice on appropriate displays of reverence to God in return for his gift of political rulership.

28. What we have in mind here is something close to Charles Taylor's first conception of secularity. Note that even if the advice literature were tracking a broader process of secularization within medieval and early modern Europe, this kind of secularity would still be "compatible with the vast majority of people still believing in God, and practicing their religion vigorously" (Taylor 2007, 2).

29. While most of the European advice books written after 1150 cluster quite tightly around the trend line for theme 3, two texts from this period are prominent outliers. These are the two versions of William of Pagula's *King Edward's Mirror*. This pattern is repeated in subtopics 3.3 and 3.5. In all cases, religious rhetoric is more prominent in the second version of the work than it is in the first. This is hardly surprising. Pagula was a canonist and theologian who relies comparatively heavily on scriptural argument and canon law. Furthermore, the second version of the work relies more heavily on religious arguments than the first. As Nederman (2002, 68) summarizes, the first version "is a case constructed on the basis of law and reason, whereas the second "adopts the rhetorical style of the pulpit."

that the Middle Ages was a time of a single faith in which religious and political authority were largely symbiotic; the ideational and institutional changes of the Reformation and the ensuing wars of religion brought this world to an end. This narrative goes on to suggest that from the ashes of this medieval world arose the secular, differentiated, and territorially bound political authority that we now associate with the modern state (e.g., Berger 1967; Gregory 2012; Parsons 1978; Weber 2002).

A major objection to this narrative, however, comes from historians, sociologists, and political scientists who point to the much earlier differentiation of religious and political authority in the Middle Ages and to the role that this process played in early state formation (e.g., Bueno de Mesquita 2000; Gorski 2000; Spruyt 1994; Strayer 1970; Tierney 1982). As Gorski (2000, 157) notes, while there was persistent conflict about where the line between religious and political authority should be drawn, "there was no question that the two should be, and were distinct. . . . The Popes were to rule over the Church, and the princes were to rule over the state, and each had its own property, personnel, and political-legal apparatus."³⁰ The decline in emphasis on religious themes within the advice literature over our entire period of study—and the stability and pace of this trend after the twelfth century—is consistent with arguments that focus on the Middle Ages as a period of increasing differentiation between religious and political authority.³¹

While religious discourse decreased over time in European advice books, we observe no comparable decline in the Islamic texts. Why might this be? Some scholars have argued that Islamic societies have found it difficult to distinguish between religious and political authority (Lewis 1993, 3–5). We find this common story to be deeply misleading.³² Distinctions be-

30. Gorski (2000) also suggests that, contrary to another conventional story, the Reformation marked a "de-differentiation" between religious and political authority. With the religious fracturing of Europe and the rise of confessional states with official faiths and state churches, the boundaries between state and church were once again blurred.

31. An alternative interpretation of our empirical findings suggests that as the relationship between these two kinds of authority was stabilizing (either with sphere differentiation or not), discussions of the relationship between the sacred and the secular no longer demanded detailed attention in the European advice literature. Accepting this interpretation does not require one to believe that the role of religion in public life was declining, that rates of religious belief were waning, or that rulers did not still appeal to forms of religious legitimation in Europe. It implies, however, that the relationship between religious and political authority was becoming more stable and that addressing religion at length in advice literature was less necessary. Our evidence does not allow us to adjudicate between these two interpretations of the empirical patterns.

32. This approach has been challenged by scholars who have suggested that a bifurcation of sovereignty into religious and political spheres

tween political and religious authority were subject to virtually continual renegotiation starting almost immediately after the religion's founding (Black 2008; Lapidus 1996).³³ In the Islamic world, however, religious leaders served as an important and often effective "check" on the executive power of Muslim sultans (Blaydes and Chaney 2016; Chaney 2013). In Europe, proto-parliamentary and parliamentary institutions were developing to check executive power (e.g., North and Weingast 1989). Both sets of institutional developments could account for the declining emphasis on religious discourse in European texts, compared to Muslim ones.

An analysis of the more granular over-time trends in the European advice literature points to more specific institutional explanations. For subtopics like 3.3, the twelfth century marks a decisive turning point in the over-time trends among the European mirrors. There are at least two potentially consequential events in Europe during this period. First, the Investiture Controversy—a struggle that was nominally about whether monarchs or the Church had the authority to select (invest) bishops and abbots, but that raised much broader questions about the content and scope of political and ecclesiastical authority—was resolved in 1122 CE. The controversy was the outcome of a broader agenda of reform within the Church that sought to secure the independence of ecclesiastical authority. This resolution was formalized in the Concordat of Worms, which not only gave the Church the powers of investment but also established a number of institutional and symbolic distinctions between spiritual and worldly authority (Bueno de Mesquita 2000). While this outcome was seen as a partial victory for the Church, Strayer (1970, 22) argues that it had unforeseen consequences: "by asserting its unique character, by separating itself so clearly

from lay governments, the Church unwittingly sharpened concepts about the nature of secular authority."³⁴

Second, 1200 CE marks the approximate middle of the Crusades to the Holy Land. Blaydes and Paik (2016) argue that Holy Land Crusades organized to counter Islam's rise encouraged the consolidation of the territorial state by increasing European political stability, strengthening political institutions, and dismantling feudal estates with implications for the rise of towns and bourgeoisie interests. Thus, while it was pious idealism that may have initially led Europeans to the Holy Land, the net effect of crusader mobilization was to strengthen territorial political authorities relative to the Church. Together, these developments served to differentiate the political from ecclesiastical authority and to strengthen the former relative to the latter. The pronounced decline in attention to religious questions in European advice books, particularly after 1150 CE, could well reflect these important institutional turning points.

Thus far, our interpretation has focused primarily on the ways in which our findings might reflect broader institutional developments. Our findings suggest that European advice books may well track a longer history of secularization whose course and details were particular to western Christendom. However, we should also note that the decline in attention to religious themes within the European mirrors should lead us to question accounts that cast Machiavelli's *Prince* as a radical break from earlier advice manuals and political theory more generally. Often, this break is seen to consist, at least in part, in Machiavelli's rejection of medieval religious statecraft and Christian standards of political rule (e.g., Strauss 1958, 1989; Wolin 2004). For instance, Strauss (1989, 86) famously argues that "Machiavelli rejects the whole philosophic and theological tradition" of the classical and medieval world." Similarly, Wolin (2004, 178) suggests that Machiavelli breaks with medieval moral and religious thought in an effort to undertake "the first great experiment in 'pure' political theory." Our findings suggest that, at least insofar as *The Prince's* place within the genre of advice literature is concerned, the work might profitably be viewed as the culmination of the decline of religious discourse, rather than the initiator of an entirely new mode of political thought. Machiavelli may have been more bold than other authors of advice manuals in announcing his break with theological modes of thought, but our findings suggest that this shift in emphasis had been happening quietly for several centuries.³⁵

has been a general feature of Middle Eastern states from the tenth century onward (e.g., Arjomand 2010; Berkey 2010; Lapidus 1975).

33. The question of the separation of "church" and state in Muslim societies reflects the complexity and diversity of Islamic communities over time and space. Hallaq (2009, 44–45) argues that political power and religious law were an arena of constant societal friction and debate but that in the postformative years of Islamic history, "rulers generally preferred to maintain an equation in favor of compliance with religious law." Sadeghi (2013) argues that what constituted Islamic law was endogenously determined by contemporary and historical social factors. For Sadeghi (2013), Islamic legal opinions reflect a combination of contemporaneous social conditions and legal precedent but neither the Islamic canon—including the Koran and *hadith*—nor the techniques for interpreting the canon serve as a binding constraint on interpretation. This suggests that prevailing Islamic legal opinions regarding the religious authorities and state structures in Muslim societies might be viewed as endogenously and dynamically generated rather than the result of a more static, canon-driven legal interpretation.

34. On this point, see also Black (2008) and Bueno de Mesquita (2000).

35. This is not to suggest that Machiavelli may not have broken with the traditions of advice literature in other ways and perhaps particularly in his open resistance to the moralization of politics. However, even here,

CONCLUSIONS

In this paper, we explore temporal and cross-sectional trends in institutional development within Muslim and Christian societies through an examination of advice texts for rulers—among the most important forms of political writing to emerge from the medieval and early modern periods. Our analysis of 46 “mirrors for princes” texts suggests important similarities in theme and emphasis when comparing the ways that Muslim and Christian writers advised their patrons. Instruction on the art of political rule, personal virtues, management of the king’s family and household, and religious duties, rights, and obligations were comparably represented—in the aggregate—for both the Christian and Muslim texts.

The examination of temporal trends reveals important differences, however. The relatively rapid entrance of large numbers of nomadic Turkic peoples onto the political landscape of the Eastern Islamic world increased focus on the divine mandate of kings and a consolidation of roles and responsibilities around the monarchy. The Mongol invasions that followed—culminating in the sacking of Baghdad in 1258 CE—created tremendous upheaval, however, which may have been responsible for changing directions in political rhetoric. We find that for Christian polities, religious discourse become less central to political advice over time while emphasis on religious themes remains fairly steady for Muslim writers over the study period. Our findings point to one empirical manifestation of a growing separation of church and state for the Latin West that did not witness a parallel for the Islamic world. Our evidence suggests that while European political advice texts saw a marked decline in religious discourse by the Enlightenment, Muslim writers continued to invoke religious themes into the early modern period.

More generally, we offer the first major attempt to apply automated text analysis to important questions in the history of political thought. Through an examination of texts in a relatively well-defined genre of political theory—the “mirrors for princes” literature—we are able to highlight some of the benefits of automated methods for examination of both large numbers of texts as well as texts from different cultural and religious traditions. Our introduction of a new model for estimating both broad and more specific themes across texts allows for multiple levels of analysis and comparison. We believe that the methods introduced in this paper might be fruitfully applied to a variety of subject areas.

there are perhaps more continuities with medieval advice literature than most scholars commonly acknowledge. For arguments that *The Prince* is less exceptional within the genre of advice books that many standard accounts suppose, see Ferster (1996) and Gilbert (1938, 160–73). For another argument that Machiavelli’s *Prince* is a culmination of, rather than a break with, medieval developments, see Nederman (1998, 34–35).

London (2016) argues that text-as-data methods provide new opportunities for studying the history of ideas. Within political theory, we think that these methods can complement existing approaches based on close reading and contextual analysis in at least two ways. First, text-as-data methods provide an avenue for venturing far beyond a small (and predominantly Western) canon of political texts. The relatively limited number of works on which political theorists focus the bulk of their interpretive attention is a narrow percentage of the total number of political texts.³⁶ To the extent that political theorists are interested in the fate of ideas and concepts over the *longue durée*, venturing beyond the canon in this way is essential. While statistical models “cannot perfectly replicate human synthesis and intuition, [they] can take us a long way down this road” (Jockers 2013, 19).

Second, text-as-data methods can provide information at a larger scale than close reading. They can reveal details that are generally unavailable even to the most discerning of readers. This new information might provide complementary evidence for existing interpretations generated by close reading. It might also question and challenge existing interpretations in fruitful ways, as we have done here with conventional readings of Machiavelli that see *The Prince* as a radical break with medieval advice literature. Either way, text-as-data methods, like those we have used here, can identify general trends that are worthy of additional exploration or that invite the production of new theories. We hope our analysis serves as an invitation for this kind of collaborative work.

ACKNOWLEDGMENTS

We wish to thank Michaelle Browsers, Gary Cox, David Laitin, Glory Liu, Jennifer London, Josiah Ober, Tomer Perry, Hannah Wallach, and Barry Weingast, as well as Lisa Ellis and several anonymous reviewers for help with and feedback on earlier versions of the paper.

REFERENCES

- Acemoglu, Daron, and James Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Business.
- Al-Azmeh, Aziz. 1997. *Muslim Kingship: Power and the Sacred in Muslim, Christian, and Pagan Politics*. London: Tauris.
- Arjomand, Said Amir. 2010. “Legitimacy and Political Organisation: Caliphs, Kings and Regimes.” In Robert Irwin, ed., *The New Cambridge History of Islam*, vol. 4. Cambridge: Cambridge University Press, 225–73.
- Berger, Peter L. 1967. *The Sacred Canopy: Elements of a Sociological Theory of Religion*. New York: Doubleday.
- Berkey, Jonathan. 2010. “Islam.” In Robert Irwin, ed., *The New Cambridge History of Islam*, vol. 4. Cambridge: Cambridge University Press, 19–59.
- Black, Antony. 2001. *The History of Islamic Political Thought: From the Prophet to the Present*. New York: Routledge.

36. See Moretti (2005, 3–4) for a similar argument in literary studies.

- Black, Antony. 2008. *The West and Islam: Religion and Political Thought in World History*. New York: Oxford University Press.
- Blaydes, Lisa, and Eric Chaney. 2013. "The Feudal Revolution and Europe's Rise: Political Divergence of the Christian West and the Muslim World before 1500 CE." *American Political Science Review* 107 (1): 16–34.
- Blaydes, Lisa, and Eric Chaney. 2016. "Political Economy Legacy of Institutions from the Classical Period of Islam." In Steven Durlauf and Lawrence Blume, eds., *New Palgrave Dictionary of Economics*. London: Palgrave Macmillan, 1–5.
- Blaydes, Lisa, and Christopher Paik. 2016. "The Impact of Holy Land Crusades on State Formation: War Mobilization, Trade Integration and Political Development in Medieval Europe." *International Organization* 70 (3): 551–86.
- Born, Lester Kruger. 1928. "The Perfect Prince: A Study in Thirteenth- and Fourteenth-Century Ideals." *Speculum* 3 (4): 470–504.
- Boroujerdi, Mehrzad. 2013. "Introduction." In Mehrzad Boroujerdi, ed., *Mirror for the Muslim Prince: Islam and the Theory of Statecraft*. Syracuse, NY: Syracuse University Press.
- Bosworth, Edmund. 2010. "The Steppe Peoples of the Islamic World." In David Morgan and Anthony Reid, eds., *The New Cambridge History of Islam*, vol. 3. Cambridge: Cambridge University Press.
- Brinner, W. N. 1985. "Abd al-Hamid B. Yahya." In Eshan Yarshater, ed., *Encyclopaedia Iranica*, vol. 1. London: Routledge, 111–12.
- Broadbridge, Anne. 2008. *Kingship and Ideology in the Islamic and Mongol Worlds*. Cambridge: Cambridge University Press.
- Bueno de Mesquita, Bruce. 2000. "Popes, Kings, and Endogenous Institutions: The Concordat of Worms and the Origins of Sovereignty." *International Studies Review* 2 (2): 93–118.
- Chaney, Eric. 2013. "Revolt on the Nile: Economic Shocks, Religion and Political Power." *Econometrica* 81 (5): 2033–53.
- Chang, Jonathan, Jordan Boyd-Graber, Sean Gerrish, Chong Wang, and David Blei. 2009. "Reading Tea Leaves: How Humans Interpret Topic Models." Presented at the annual conference on Neural Information Processing Systems, Vancouver.
- Crone, Patricia. 2004. *Medieval Islamic Political Thought*. Edinburgh: Edinburgh University Press.
- Dallmayr, Fred. 2004. "Beyond Monologue: For a Comparative Political Theory." *Perspectives on Politics* 2 (2): 249–57.
- Darling, Linda T. 2013a. *A History of Social Justice and Political Power in the Middle East: The Circle of Justice from Mesopotamia to Globalization*. New York: Routledge.
- Darling, Linda T. 2013b. "Mirrors for Princes in Europe and the Middle East: A Case of Historiographical Incommensurability." In Albrecht Classen, ed., *East Meets West in the Middle Ages and Early Modern Times: Transcultural Experiences in the Premodern World*. Berlin: De Gruyter, 223–42.
- Davis, Dick. 2010. "Persian Literature." In Robert Irwin, ed., *The New Cambridge History of Islam*, vol. 4. Cambridge: Cambridge University Press, 414–23.
- Euben, Roxanne L. 1999. *Enemy in the Mirror: Islamic Fundamentalism and the Limits of Modern Rationalism*. Princeton, NJ: Princeton University Press.
- Faksh, Mahmud A. 1983. "Theories of State in Islamic Political Thought." *Journal of South Asian and Middle Eastern Studies* 6:62–79.
- Ferster, Judith. 1996. *Fictions of Advice: The Literature and Politics of Counsel in Late Medieval England*. Philadelphia: University of Pennsylvania Press.
- Forhan, Kate Langdon. 2002. *The Political Theory of Christine De Pizan*. Aldershot: Ashgate.
- Gadamer, Hans-Georg. 2004. *Truth and Method*. London: Bloomsbury.
- Gilbert, Allan H. 1938. *Machiavelli's "Prince" and Its Forerunners: "The Prince" as a Typical Book "de Regimine Principum"*. Durham, NC: Duke University Press.
- Goldstone, Andrew, and Ted Underwood. 2012. "What Can Topic Models of PMLA Teach Us about the History of Literary Scholarship?" *Journal of the Digital Humanities* 2 (1). <http://journalofdigitalhumanities.org/2-1/what-can-topic-models-of-pmla-teach-us-by-ted-underwood-and-andrew-goldstone/>.
- Gorski, Philip S. 2000. "Historicizing the Secularization Debate: Church, State, and Society in Late Medieval and Early Modern Europe, ca. 1300 to 1700." *American Sociological Review* 65 (1): 138–67.
- Gregory, Brad S. 2012. *The Unintended Reformation: How a Religious Revolution Secularized Society*. Cambridge, MA: Harvard University Press.
- Grimmer, Justin. 2010. "A Bayesian Hierarchical Topic Model for Political Texts: Measuring Expressed Agendas in Senate Press Releases." *Political Analysis* 18 (1): 1–35.
- Grimmer, Justin. 2011. "An Introduction to Bayesian Inference via Variational Approximations." *Political Analysis* 19 (1): 32–47.
- Grimmer, Justin, and Brandon Stewart. 2013. "Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts." *Political Analysis* 21 (3): 267–97.
- Hallaq, Wael. 2009. *An Introduction to Islamic Law*. New York: Cambridge University Press.
- Hopkins, Daniel, and Gary King. 2010. "Extracting Systematic Social Science Meaning from Text." *American Journal of Political Science* 54 (1): 229–47.
- Jenco, Leigh Kathryn. 2007. "'What Does Heaven Ever Say?' A Methods-Centered Approach to Cross-Cultural Engagement." *American Political Science Review* 101 (4): 741–55.
- Jockers, Matthew L. 2013. *Macroanalysis: Digital Methods and Literary History*. Urbana: University of Illinois Press.
- Jordan, Michael, Zoubin Ghahramani, Tommi S. Jaakkola, and Lawrence K. Saul. 1999. "An Introduction to Variational Methods for Graphical Models." *Machine Learning* 37:183–233.
- Kadi, Wadad. 2014. "Identity Formation of the Bureaucracy of the Early Islamic State: Abd al-Hamid's 'Letter to the Secretaries.'" In John Watkins and Kathryn L. Reyerson, eds., *Mediterranean Identities in the Premodern Era: Entrepôts, Islands, Empires*. Farnham: Ashgate, 141–54.
- Khalidi, Muhammad Ali, ed. 2005. *Medieval Islamic Philosophical Writings*. Cambridge: Cambridge University Press.
- Kuran, Timur. 2010. *The Long Divergence: How Islamic Law Held Back the Middle East*. Princeton, NJ: Princeton University Press.
- Lambertini, Roberto. 2011. "Mirrors for Princes." In Henrik Lagerlund, ed., *Encyclopedia of Medieval Philosophy*. New York: Springer, 791–97.
- Lambton, Ann K. S. 1962. "Justice in the Medieval Persian Theory of Kingship." *Studia Islamica* 17:91–119.
- Lambton, Ann K. S. 1971. "Islamic Mirrors for Princes." In *Atti del convegno internazionale sul tema: La Persia del medioevo*. Roma: Accademia Nazionale dei Lincei, 419–42.
- Lambton, Ann K. S. 1974. "Islamic Political Thought." In Joseph Schacht and Clifford Edmund Bosworth, eds., *The Legacy of Islam*. Oxford: Oxford University Press, 404–24.
- Lapidus, Ira M. 1975. "The Separation of State and Religion in the Development of Early Islamic Society." *International Journal of Middle East Studies* 6 (4): 363–85.
- Lapidus, Ira M. 1984. *Muslim Cities in the Later Middle Ages*. Cambridge: Cambridge University Press.
- Lapidus, Ira M. 1996. "State and Religion in Islamic Societies." *Past and Present* 151 (1): 3–27.
- Lewis, Bernard. 1993. *Islam and the West*. New York: Oxford University Press.

- Li, Wei, and Andrew McCallum. 2006. "Pachinko Allocation: DAG-Structure Mixture Models of Topic Correlations." Presented at the International Conference on Machine Learning, Pittsburgh.
- London, Jennifer. 2008. "How to Do Things with Fables: Ibn Al-Muqaffa's Frank Speech in Stories from 'Kalila wa Dimna.'" *History of Political Thought* 29 (2): 189–212.
- London, Jennifer. 2011. "The 'Circle of Justice.'" *History of Political Thought* 32 (3): 425–37.
- London, Jennifer. 2016. "Re-imagining the Cambridge School in the Age of Digital Humanities." *Annual Review of Political Science* 19:351–73.
- Manz, Beatrice Forbes. 2010. "The Rule of the Infidels: The Mongols and the Islamic World." In David Morgan and Anthony Reid, eds., *The New Cambridge History of Islam*, vol. 3. Cambridge: Cambridge University Press, 128–68.
- Marlow, Louise. 2009. "Surveying Recent Literature on the Arabic and Persian Mirrors for Princes Genre." *History Compass* 7 (2): 523–38.
- Marlow, Louise. 2013a. "Advice and Advice Literature." In Kate Fleet, Gundrun Krämer, Denis Matringe, John Nawas, and Everett Rowson, eds., *Encyclopedia of Islam*. vol. 3. Brill Online.
- Marlow, Louise. 2013b. "Mirrors for Princes." In Gerhard Böwering, Patricia Crone, and Mahan Mirza, eds., *The Princeton Encyclopedia of Islamic Political Thought*. Princeton, NJ: Princeton University Press, 348–50.
- Mimno, David. 2012. "Computational Historiography: Data Mining in a Century of Classics Journals." *ACM Journal on Computing and Cultural Heritage* 5 (1): 3.
- Mimno, David, Hanna M. Wallach, Edmund Talley, Miriam Leenders, and Andrew McCallum. 2011. "Optimizing Semantic Coherence in Topic Models." Presented at the conference on Empirical Methods in Natural Language Processing, Edinburgh.
- Moretti, Franco. 2005. *Graphs, Maps, Trees: Abstract Models for Literary History*. London: Verso.
- Moretti, Franco. 2013. *Distant Reading*. London: Verso.
- Morris, Ian. 2010. *Why the West Rules—for Now: The Patterns of History, and What They Reveal about the Future*. New York: Farrar, Straus & Giroux.
- Mosteller, Frederick, and David L. Wallace. 1964. *Inference and Disputed Authorship: The Federalist*. Reading, MA: Addison-Wesley.
- Nederman, Cary J. 1998. "The Mirror Crack'd: The *Speculum Principum* as Political and Social Criticism in the Late Middle Ages." *European Legacy* 3 (3): 18–38.
- Nederman, Cary J. 2002. "Introduction to *The Mirror of King Edward III*." In *Political Thought in Early Fourteenth-Century England*. Turnhout: Brepols, 63–72.
- Newman, David J., and Sharon Block. 2006. "Probabilistic Topic Decomposition of an Eighteenth-Century American Newspaper." *Journal of the American Society for Information Science and Technology* 57 (6): 753–76.
- North, Douglass, John Wallis, and Barry Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge: Cambridge University Press.
- North, Douglass, and Barry Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." *Journal of Economic History* 49 (4): 803–32.
- Parsons, Talcott. 1978. *Action Theory and the Human Condition*. New York: Free Press.
- Quinn, Kevin, Burt L. Monroe, Michael Colaresi, Michael H. Crespin, and Dragomir R. Radev. 2010. "How to Analyze Political Attention with Minimal Assumptions and Costs." *American Journal of Political Science* 54 (1): 209–28.
- Reynolds, Noel B., and Arlene Saxonhouse. 1995. "Hobbes and the *Horae subsecivae*." In Noel B. Reynolds and Arlene Saxonhouse, eds., *Three Discourses: A Critical Modern Edition of Newly Identified Work of the Young Hobbes*. Chicago: University of Chicago Press, 3–22.
- Rhody, Lisa. 2012. "Topic Modeling and Figurative Language." *Journal of Digital Humanities* 2 (1). <http://journalofdigitalhumanities.org/2-1/topic-modeling-and-figurative-language-by-lisa-m-rhody/>.
- Roberts, Margaret E., Brandon M. Stewart, Dustin Tingley, Christopher Lucas, Jetson Leder-Luis, Shana Kushner Gadarian, Bethany Albertson, and David G. Rand. 2014. "Structural Topic Models for Open-Ended Responses." *American Journal of Political Science* 58 (4): 1064–82.
- Sadeghi, Behnam. 2013. *The Logic of Law Making in Islam*. New York: Cambridge University Press.
- Schreibman, Susan, Ray Siemens, and John Unsworth, eds. 2004. *A Companion to Digital Humanities*. London: Blackwell.
- Skinner, Quentin. 2002. *Visions of Politics*. Vol. 1, *Regarding Method*. Cambridge: Cambridge University Press.
- Spruyt, Hendrik. 1994. *The Sovereign State and Its Competitors*. Princeton, NJ: Princeton University Press.
- Stasavage, David. 2010. "When Distance Mattered: Geographic Scale and the Development of European Representative Assemblies." *American Political Science Review* 104 (4): 625–43.
- Stasavage, David. 2016. "Representation and Consent: Why They Arose in Europe and Not Elsewhere." *Annual Review of Political Science* 19:145–62.
- Strauss, Leo. 1958. *Thoughts on Machiavelli*. Chicago: University of Chicago Press.
- Strauss, Leo. 1989. "The Three Waves of Modernity." In Hilail Gildin, ed., *An Introduction to Political Philosophy: Ten Essays by Leo Strauss*. Detroit: Wayne State University Press, 81–98.
- Strayer, Joseph R. 1970. *On the Medieval Origins of the Modern State*. Princeton, NJ: Princeton University Press.
- Tabatabai, Javad. 2013. "An Anomaly in the History of Persian Political Thought." In Mehrzad Boroujerdi, ed., *Mirror for the Muslim Prince: Islam and the Theory of Statecraft*. Syracuse, NY: Syracuse University Press, 107–22.
- Taylor, Charles. 2007. *A Secular Age*. Cambridge, MA: Harvard University Press.
- Tierney, Brian. 1982. *Religion, Law, and the Growth of Constitutional Thought, 1150–1650*. Cambridge: Cambridge University Press.
- Van Zanden, Jan Luiten, Eltjo Buringh, and Maarten Bosker. 2012. "The Rise and Decline of European Parliaments, 1188–1789." *Economic History Review* 65 (3): 835–61.
- Wallach, Hanna. 2008. "Structured Topic Models for Language." PhD diss., University of Cambridge.
- Weber, Max. 2002. "The Protestant Ethic and the 'Spirit' of Capitalism." In Peter Baehr and Gordon C. Wells, eds., *The Protestant Ethic and the "Spirit" of Capitalism and Other Writings*. New York: Penguin Books.
- Wolin, Sheldon S. 2004. *Politics and Vision: Continuity and Innovation in Western Political Thought*. Princeton, NJ: Princeton University Press.
- Wormald, Patrick. 2005. "Kings and Kingship." In Paul Fouracre, ed., *New Cambridge Medieval History*, vol. 1. Cambridge: Cambridge University Press, 571–604.
- Yang, Tze-I, Andrew J. Torget, and Rada Mihalcea. 2011. "Topic Modeling on Historical Newspapers." Presented at the fifth ACL-HLT Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities, Portland, OR.
- Yavari, Neguin. 2014. *Advice for the Sultan: Prophetic Voices and Secular Politics in Medieval Islam*. London: Hurst.