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

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Abstract

Among the most significant forms of political writing to emerge from the medieval period are texts offering advice to kings and other high-ranking officials. Books of counsel varied considerably in their content and form; scholars agree, however, that such texts reflected the political exigencies of their day. As a result, writings in the "mirrors for princes" tradition offer valuable insights into the evolution of medieval modes of governance. While European mirrors (and Machiavelli's *Prince* in particular) have been extensively studied, there has been less scholarly examination of a parallel political advice literature emanating from the Islamic world. We compare Muslim and Christian advisory writings from the medieval period using automated text analysis, identify sixty conceptually distinct topics that our method automatically categorizes into three areas of concern common to both Muslim and Christian polities, and examine how they evolve over time. We offer some tentative explanations for these trends.

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1 Introduction

An influential literature in political economy seeks to explain the historical roots of economic and institutional divergence within and across world regions (Kuran, 2010; North, Wallis and Weingast, 2009; Morris, 2010; Acemoglu and Robinson, 2012). There remains little consensus, however, as to why some parts of the world came to develop impersonal political institutions earlier than others. While some have argued that the growth trajectories of the "Western core" (i.e., Europe, North Africa, Anatolia and Mesopotamia) and the "East" (i.e., China, Japan and Southeast Asia) paralleled each other over the historical long-term (Morris, 2010), such accounts still leave unanswered how we can explain divergence *within* the Western core in the medieval and early modern period.[1] Blaydes and Chaney (2013) document significant differences in the duration of rule for monarchs in Christian Europe and the Islamic world beginning in the medieval period. If Muslim and Christian political institutions were changing in meaningful ways during this era, such changes should be apparent in writings of political philosophy focused on modes of rulership.

Among the most important genres of political writing emanating from the medieval and early modern periods are works of advice offered to rulers. Termed "mirrors for princes" in the European tradition, such texts are typically book-length writings providing useful information for rulers on subjects as diverse as how to guard against one's political enemies, how to choose a competent administrator, or how to negotiate one's personal relationship with God. These texts — while long considered valuable literary contributions — can also be read as reflections of the political and cultural ideas of their times. 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). Scholars have argued that the content of such texts reflect the political challenges facing the monarchs for whom the texts were written. In this way, "mirrors" texts provide a window into the inner political life of otherwise opaque polities.

While European texts offering advice to rulers are well known and widely studied, there has been relatively less scholarly work comparing such texts to a parallel political advice literature written in the Islamic world (Darling, 2013). We use automated text analysis to examine the comparative discourse on kingship and governance in the Christian and Muslim worlds during the medieval and early modern periods and identify three broad, conceptually distinct areas of discussion common to both regions as well as sixty subtopics nested within these themes. We find that Muslim and Christian texts pay roughly similar attention to the three broad topics we identify — the art of rulership, religion and virtue and the inner life of rulers. We also observe that a focus on the practical duties of kingship increase over the interval 700 to 1200 CE as monarchy becomes the predominant mode of governance after almost a millennium of imperial rule. While Muslim and Christian texts in the "mirrors for princes" genre display important similarities in our empirical analysis, we are also able to use nested subtopics, or specific themes, to explore more fine-grained trends which may assist in resolving debates in historical sociology about the origins of the state. As such, we believe

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[1]See Olsson and Paik (2013) for one prominent explanation for reversal within the Western core.

that this project contributes to multiple literatures, including historical institutionalism, comparative political theory and political methodology.

The remainder of the paper is organized as follows. Section 2 describes the "mirrors for princes" genre in political theory and considers the opportunities automated text analysis offers for exploring works of this sort. Section 3 provides a brief discussion of medieval kingship in Christian Europe and the Islamic world. Section 4 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 three broad topic areas uncovered by the automated text analysis, offer our interpretation of these themes, and identify the more granular themes. In section 5, we present our interpretation of the observed empirical trends. Section 6 concludes.

2   "Mirrors for Princes" in Political Theory

The term "mirrors from princes" has been a common designation for texts that seek to offer wisdom or guidance to monarchs and other high-ranking advisors. In this section, we characterize the scope, features, and thematic content of this genre of political writing at a high level of generality. A second section describes how automated text analysis might be applied to works of political thought in general and to the mirrors genre in particular.

2.1   Advice on Governance

Advice literature is a genre of political writing offering counsel to rulers (and frequently also to their delegates and courtiers) that flourished in both 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.

Often called "mirrors for princes" in the European tradition, the works were intended 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).[2] 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, 2013a, 349). A stricter definition might be limited to works entirely focused on the manners, conduct, and

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[2]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).

counsel of kings and their immediate delegates (Marlow, 2009, 2013a). 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.

In both the Christian European and Islamic traditions, advice literature reflects an acceptance of monarchical government.[3] 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; Marlow, 2013b; Crone, 2004). The hope behind much of the advice literature was that it might be used to educate a ruler, 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. In the Islamic tradition in particular, advice books often presented an image of a ruler that enhanced his legitimacy and sovereign power. Furthermore, as Marlow (2013b) suggests, "a ruler's generous reception of such a work was a sign of his subscription to the catalogue of royal virtues it contained, and reflected positively on his personal merit and that of his court." Beyond the intention of shaping a ruler's character and legitimizing his reign, authors wrote mirrors 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, 2013b). Prescriptions are often offered to rulers indirectly through the use of classical and scriptural authorities and examples. Authors are often at pains to balance praise with counsel, conveying more subtle critiques through their choice of quotations and their presentation of examples.[4]

These generic conventions extended to the issues and themes that dominated advice works. European mirrors tended to offer a vision of a just ruler who "treated equals equally"

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[3]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 *The Prince*).

[4]Because both Christian European and Islamic mirrors seem to adhere so closely to these conventions of framing, source material, and thematic content, an older generation of scholars tended to miss the ways in which authors tailored their advice to the exigencies of their times, often with a subtle and sometimes even an overt critical edge (Nederman, 1998; Marlow, 2009). Scholarship on mirrors 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.

by maintaining a balance between the various social orders (Forhan, 2002, 35). While many European mirrors took the ruler to be above the law, they nonetheless tended to insist that the good ruler would conform with the law as a matter of virtue and faith (Born, 1928; Nederman, 1998). Beyond this, most European mirrors emphasized 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 mirrors, which also offered 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 mirror genre), practices the cardinal virtues, consults with advisors and heeds good advice, avoids ostentation, and attends to the material and spiritual wellbeing of his subjects (Lambton, 1971; Marlow, 2013a).[5]

A common stock of source material for Christian European mirrors texts include classical sources 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 24th chapter of the latter's *City of God*) (Forhan, 2002; Lambertini, 2011). Islamic advice books similarly drew 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, 2013b). Overlaps in their periods of production, the aims of their authors, and their generic conventions make the Christian European and Islamic mirrors ripe for comparative analysis.[6]

2.2 Text Analysis for Political Theory

The comparative analysis of Christian European and Islamic advice books 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 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 non-contextual terms or function words (e.g., articles, pronouns, prepositions, and

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[5]See London (2011) for a discussion of Islamic conceptions of the 'circle of justice.'

[6]Like the mirrors literature emanating from Europe at this time, there existed no clear dividing line between administrative manuals, works 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).

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 twelve disputed papers in the *Federalist*. More recently, wordprint analysis has been used to confirm that Thomas Hobbes was very likely the author of three discourses in the *Horae Subseviae* (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 the mirror genres across the Muslim and Christian kingdoms, we introduce a new statistical topic model for texts and show how it can be combined with a set of predetermined categories to produce new insights. In so doing we contribute a new model and area of application 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 in the in the literary analysis of poetry and novels (Jockers, 2013; Rhody, 2012), the historical analysis of newspaper articles (Yang, Torget and Mihalcea, 2011; Newman and Block, 2006), and textual analysis of disciplinary history (Goldstone and Underwood, 2012; Mimno, 2012). Our use of statistical models is not intended to replace careful reading nor the subtle work required to interpret and understand works of political thought. Rather, we view our use of such methods as an aid to political theorists — a resource that can provide a thematic guide to direct more careful and nuanced readings of the texts.

Text-as-data methods are particularly useful to political theorists when they are exploring new and large collections of texts. For example, scholars of comparative political thought interested in charting cross-cultural themes or variations in conceptual vocabulary through time are often confronted with a large set of texts. Likewise, when scholars want to know about the historical, intellectual, and linguistic context in which canonical texts are produced, they will often want to consider not only non-canonical works of political thought but also perhaps less formal texts like political pamphlets, newspaper articles, sermons, correspondence, and diary entries (Skinner, 2002) . The large number of texts make it difficult for scholars to allocate careful and equal attention to each text and make organization into broader themes more challenging. Large numbers of texts, then, challenge the limits of our cognitive ability.

When considering many texts, a political theorist's familiarity with particular authors and modes of argument will inevitably vary. This varying level of expertise can make it harder for readers to identify coherent themes or to engage in a true comparison of the content of the texts. Without additional guidance, researchers may tend to focus on the texts that are more familiar and and might struggle to identify content from the 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 for the large sets of texts that could be considered to address more macroscopic questions about the history of political thought.

Text-as-data methods, then, are particularly useful for our comparison of the mirrors 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. First, however, we briefly review the literature on medieval kingship in the Christian and Muslim worlds.

3 Medieval Kingship

By focusing on the two medieval civilizations within what has been called the "Western core" (i.e., Europe, North Africa, Anatolia and Southwest Asia), we seek to understand political and institutional development in a comparative context. What can be said about the aptness of this comparison? Scholars of Islamic history have long argued that common philosophical ideas underpin political thought in the Christian and Muslim worlds. For instance, Lambton (1974, 420) has suggested that Islamic philosophers, like their Christian European counterparts, were heavily influenced by classical Greek philosophy. Lapidus (1984, 2-3) describes the Mediterranean region as sharing an "essentially uniform ecological situation" with the "common historical and political experience of the Roman Empire" and roots in Greek urban society.

Al-Azmeh (1997) 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 that wars between Persians and Greeks or Byzantines were "integrative and universalizing" moments (1997, 8). There existed considerable similarity between Roman, Persian and Indian political forms, for example, and Persian kings were seen to be exemplary rulers (Al-Azmeh, 1997, 9-10). Until the Middle Ages, there was a well-integrated Mediterranean political culture with strong ties to western Asia before the areas of northern Europe were even admitted to the Euro-Asian system (Al-Azmeh, 1997). As a result, there is a high level of consistency in terms of how kingship is represented in the two world regions over both time and space (Al-Azmeh, 1997, 18).

This section describes patterns related to governance in the European Christian and Islamic worlds. These factors are not intended as either predictors or outcomes associated with the conceptual schema presented in the section to follow. Rather, they might be considered institutional forms that evolved alongside the prevailing political-literary traditions.

3.1 Kingship in Christian Europe

Monarchy dominated most of medieval Europe, with the exception of the Northern Italian city-states. For the most part, the position of king was a hereditary one and primogeniture gradually evolved from an informal custom to an institutionalized principle during the medieval period (Bertocchi, 2006). Germany, however, continued the Roman imperial practice of selection. Kingship carried generally favorable associations for medieval Europeans. However, as Black (1992, 136) notes, "not unlike 'democracy' today, it connoted a whole bundle of ideals, and could mean a variety of things." Ideologically, there were powerful justifications for kingship. Some found it the only viable form of rule for a sinful humanity,

others saw it as God's preferred form of government, while others still saw kinship as the result of ancient popular demand (Forhan, 2002). At the level of practical politics, kings tended to be more effective than other groups (e.g., nobles and the Church) at keeping the peace, rendering some degree of impartial justice, repelling foreign invaders, and defending and strengthening the Christian faith (Myers and Wolfram, 1982). While there was both geographical and temporal variation in medieval kingship, it is possible to identify several broad sets of patterns.

First, medieval kingship was fundamentally shaped by its complex relationship to the Church. From Constantine's conversion in 312 CE onward, the bounds of secular and ecclesiastical jurisdiction were subject to fraught debate and perpetual renegotiation. This debate came to a head in the Investiture Controversy (a series of papal challenges to the royal appointment of bishops) of the eleventh and twelfth centuries, which prompted a protracted civil war in Germany and permanently weakened monarchical power there (Cantor, 1994).

More minor but still consequential disputes about appropriate spheres of jurisdiction persisted throughout medieval Europe. At an ideological level, these disputes were sharpened by the belief that both secular and ecclesiastical powers received their authority from God. While this shared divine origin could ground an argument for separate spheres in which the Church wielded moral and spiritual authority and kings exercised political and administrative jurisdiction (Black, 1992), the belief that the Pope was God's vicar on earth could just as easily support Papal interference in the exercise of royal power (Forhan, 2002).

In practical political terms, the relationship between the Church and kings was similarly complex. When faced with a king with the will and the means to threaten its spiritual authority and worldly interests, the Church had a number of powerful disciplinary tools with which to extract compliance — the threat of excommunication, control of episcopal appointments, influence over marital alliances, and its moral and sovereign-legitimating authority. The history of Church-state relations in medieval Europe reveals that the Papacy was more than willing to use all of these means (Forhan, 2002). However, the Church also depended on monarchical power. It lacked an army and relied on kings to provide peace and security. Economically, the Church relied on tithes, donations, and secure lands and property, all of which in turn required the order and stability that effective kings could provide and therefore made the Church dependent on monarchical power (Myers and Wolfram 1982). This dependence supported strong monarchical government and often made the Church willing to tolerate, if not always overtly endorse, kingship.

Second, feudalism emerged as the dominant system of political economy in much of Christian Europe. As a system of land apportionment, feudalism has its roots among the ancient Germanic tribes. However, it would flourish among the Roman Empire's German successor states, which were not in a position to extract the tax revenues required to pay mercenary forces (Mann 1986). The Carolingians introduced a crucial innovation when they combined "the institutions of *vassalage*, the personal element in nascent feudalism, with *benefice*, the property element in it" (Myers and Wolfram, 1982, 150). Cash-strapped but land-rich and lacking the capacity for effective tax collection, Charlemagne exchanged land

for loyalty and military resources.

These feudal arrangements spread throughout much of medieval Europe but met with uneven success, prospering in England and France but faltering or failing altogether in Germany and Poland (Myers and Wolfram, 1982). Where successful, the effects of these arrangements would prove momentous. The Carolingian innovation produced a landed and armed aristocracy. While benefices were not originally inter-generationally transferrable, the expectation that land and property would be inherited, increasingly through primogeniture, became thoroughly entrenched during the feudal revolution. This shift in expectations and customs, combined with a tendency to pool land in order to more widely distribute the burdens of military service, led to a concentration of economic and military power in noble hands (Myers and Wolfram, 1982; Mann, 1986; Blaydes and Chaney, 2013).

As was the case with the monarchical relationship to the Church, the effects of feudalism on kingship were far from uniform and consistent. On the one hand, feudalism placed limits on monarchical power because it emphasized the conditional nature of the king's authority, fragmented political authority, increased the bargaining power of the nobility, and tended to generate expectations of aristocratic consultation that would become the basis for proto-parliamentary institutions (Strayer, 1970; Myers and Wolfram, 1982; Bisson, 1994; Breay, 2002; Van Zanden, Buringh and Bosker, 2012). On the other hand, as long as there was land to be distributed, feudal arrangements strengthened aristocratic obligations to the crown, increased ruler legitimacy whilst lending it the stamp of noble consent, deepened political stability, and arguably increased ruler duration (Strayer, 1970; Myers and Wolfram, 1982; Blaydes and Chaney, 2013).

Third, particularly in larger kingdoms, some delegation of the king's powers was essential. A kingdom like Ireland could function with a small royal household and minimal specialization of tasks. The rulers of larger kingdoms, by contrast, required a large and functionally differentiated group of agents, advisors, and attendants. Members of the king's household staff and court were frequently favored aristocrats and their positions carried political and administrative influence. Those agents whose functions took them far from the royal household were difficult to oversee and control and sometimes attracted charges of corruption. Counts and earls were tasked with a range of essential royal functions in their localities: maintaining order and administering civil and criminal justice, overseeing royal estates, and gathering military forces (Nelson, 1995). Once again, this delegation of authority both supported and limited royal power.

The administration of justice, for instance, was a crucial royal function. Settling disputes and gaining a reputation for impartial justice helped keep subjects loyal, increase the status and power of the king, and gathered revenue through the imposition of fines and forfeitures. The delegation of enforcement and judicial functions allowed the king to secure these benefits over the full extent of his territory (Myers and Wolfram, 1982). However, this delegation also tended to fragment royal power by increasing the local political capital of local nobles. In England and France, the king's magnates and counselors began to see themselves almost as his co-rulers and as a check on his extra-legal actions (Black, 1992).

3.2 Modes of Governance in the Islamic World

While there existed tremendous diversity across Muslim polities in forms and styles of rule, some threads of commonality that might be drawn out of the historical literature. First, delegation of political, military and bureaucratic power to "outsiders" carried into multiple realms. The backbone of Muslim militaries frequently consisted of a professionalized class of soldier-slaves, or mamluks, who came from areas peripheral to the polity, most frequently central Asia, sub-Saharan Africa or southern Europe. Eunuchs, often of foreign origin, were trusted advisors who had the advantage of being without local contact and thus dependent on the king for political power (Kennedy 2004, 264). The bureaucracies of Muslim polities were frequently staffed by local minorities — like Christians or Jews — whose literacy allowed them to constitute a secretarial class (Brett 2004, 680)

Delegation to competent outsiders was deemed necessary to avoid society falling into a state of anarchy. Muslim histories tend to emphasize that government was responsible for maintaining a kind of social equilibrium (Mottahedeh, 2001, 179). This desire to strong government reflected a belief on the part of early Muslims that ungoverned society provided the conditions under which anarchy might dominate (Mottahedeh, 2001, 179). Social disorder was seen as a worst case scenario (Mottahedeh, 2001, 178). A constant source of potential disorder related to the desert peripheries of many Muslim cities. Bedouin were seen as potentially "destructive elements" that had to be driven off from time to time (Mottahedeh, 2001, 176). *Qabus Nama*, for example, refers to the dangers of having exposed land and the need to defend against peripheral areas. Because a weakly ruled or rulerless town might be vulnerable to attack from peripheral people, citizens of many Near Eastern communities "yearned to be ruled" (Mottahedeh, 2001, 176-7).

Second, the system of political economy that emerged and prevailed in a large number of Muslim polities relied on government ownership of land and distribution of *iqta'* — the Islamic land grant — where *iqta'* holders enjoyed the right to revenue from the land.[7] Mottahedeh (2001, 36) defines the *iqta'* as a "financial arrangement in which government revenues were assigned to specific employees or pensioners of the government." Such assignments were generally short-term and not intergenerationally transferable. While Muslim administrators may have preferred to develop a proper tax system based on salaried officials, the granting of *iqta'* was a functional solution to fiscal exigencies (Humphreys, 2004, 721). Indeed, although the system had its origins in the 10*th* century, it persisted in various forms for hundreds of years to follow (Mottahedeh, 2001, 37). While there exist considerable similarities between the *iqta'* system and granting of fiefs to vassals in feudal Europe, with a key distinction relating to ultimate ownership of the resource and transferability across generations.

A third factor worth highlighting relates to reliance on patterns of kinship and patronage in the distribution of political power. Writing of the Buyid dynasty that ruled Iran and Iraq during the 10*th* and 11*th* centuries, Mottahedeh (2001) argues that Islamic society enjoyed forms of social and political stability built on interconnected loyalties rather than

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[7]*Iqta'* were not limited to grants of land but might also include rights to infrastructure, like waterways or other resources. Mottahedeh writes that "virtually any governmental source of income could be assigned as an *iqta'at*, even water rights or rights of access" (2001, 36).

institutions. While formal commitments of loyalty tended to be rare, long-term informal commitments were commonplace (Mottahedeh, 2001, 37). Loyalty between actors was underpinned simultaneously by "oath and benefit" where oaths served as "prototypes" for later forms of commitment (Mottahedeh, 2001, 41-2). Loyalty in the this context frequently built upon existing ties of kinship where political confederations were not shaped by formally articulated institutions (Humphreys, 2004, 722).

A final point relates to the nature of the relationship between state and Islamic institutions. Islamic religious institutions tended to be more loosely organized than those of the Christian West. Nonetheless, scholars have argued that Islam consists of or relates to a series of institutions "through which many of the political functions of the Church are performed" despite the differences between religious organization in the Christian and Muslim worlds of this period (Watt, 2000, 64). Scholars have argued that it is difficult to determine if explicitly Islamic religious thought was more or less dominant than that of Catholic Christian thought in Europe of the Middle Ages (Watt, 2000, 72). Religious scholars in the Islamic world dominated higher education, for example, where the study of Islamic jurisprudence was a crucial area of investigation (Watt, 2000, 67). Religious leaders often found rivals in prominent administrators who reported directly to the ruler or regime (Watt, 2000, 74). Some dynasties came to realize that they could increase political influence by allying with religious elites (Watt, 2000, 74) but, in many contexts, regime administrators and religious elites were rivals for political influence. Religious leaders — like judges who dealt with issues of Islamic law — were often important representatives of citizen interests, particularly in urban areas.

4 Empirical Analysis

This section describes the empirical analysis that we undertake. A first section discusses the selection of texts used in our analysis. A second section describes 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.

4.1 Selection of Texts

Our empirical analysis is focused on 21 texts in the Islamic tradition and 26 texts from Christian Europe. 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 $8th$ century through the $17th$ century with most drawn from the $11th$ and $12th$ centuries. The Christian texts span the period from the $6th$ to the $17th$ century. 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," or perhaps

Christian Texts	Author	Date Produced	Location	Language	Descriptor
Advice to Justinian	Agapetus	527 CE	Eurasia-Byzantium	Latin	ATJ
Life of Charlemagne	Einhardt	831-2 CE	Central Europe-Central Carolingian Empire	Latin	LCH
Handbook for William	Dhuoda	842 CE	Western Europe-Frankish Kingdom	Latin	HW
On the Education of a Christian Prince	Sedulius Scottus	857 CE	Western Europe-Western Frankish Empire	Latin	OEC
De Administrando Imperio	Constantine VII	950 CE	Eastern Europe-Northwest Balkan Peninsula	Latin	DAI
Policraticus[a]	John of Salisbury	1159 CE	Western Europe-England/France	Latin	POL
The Italian Guest	Thomasin von Zerclare	1215 CE	Western Europe-Italy	High Middle German	IG
On the Instruction of Princes	Gerald of Wales	1217 CE	Western Europe-England/France	Latin	OIP
The King's Mirror	Anonymous	1247 CE	Northern Europe-Norway	Old Norse	KM
On the Government of Rulers	Ptolemy of Lucca[b]	1265 CE	Western Europe-Italy	Latin	OGR
On the Nobility, Wisdom, and Prudence of Kings	Walter de Milemete	1326 CE	Western Europe-England	Latin	NWP
The Mirror of KIng Edward III[c]	William of Pagula	1330s CE	Western Europe-England	Latin	MKEa, MKEb
Education of the Prince[d]	Guillaume Budé	1375 CE	Western Europe-France	French	EP
A Medieval Woman's Mirror of Honor	Christine de Pizan	1405 CE	Western Europe-France	French	MWM
Book of the Body Politic	Christine de Pizan	1407 CE	Western Europe-France	French	BBP
Tract on the Prince	Giovanni Pontano	1468 CE	Western Europe-Italy	Latin	POTP
On the Prince[e]	Bartolomeo Sacchi	1471 CE	Western Europe-Italy	Latin	OTP
On Majesty	Giuniano Maio	1492 CE	Western Europe-Italy	Latin	OM
The Prince	Niccolò Machiavelli	1513 CE	Western Europe-Italy	Italian	PRN
Education of a Christian Prince	Erasmus	1516 CE	Central Europe-Switzerland	Latin	ECP
Utopia[f]	Thomas More	1516 CE	Western Europe-England	Latin	UT
Book of the Courtier	Baldesar Castiglione	1528 CE	Western Europe-Italy	Latin	BC
Basilikon Doron	James VI/I	1599 CE	Western Europe-Scotland	English	BD
Leviathan[g]	Thomas Hobbes	1651 CE	Western Europe-England	English	LEV
Testament Politique[h]	Cardinal Richlieu	1699 CE	Western Europe-France	French	TP
The Adventures of Telemachus	Archbishop Fénelon	1699 CE	Western Europe	French	AT

Table 1: *Listing of all Chrisian texts used in the empirical analysis with author (when known), approximate date of writing, region from which the text emanates and original language of the text.*

[a]Book II is ommitted

[b]Also, Thomas Aquinas (attributed), see Blythe (1997) on disputes about the authorship of parts of this text.

[c]There are two "versions" of this text. The second is a substantially revised version of the first and restates the earlier text's central grievances in a more direct and urgent language (Nederman, 2002). We include both versions and, following scholarly convention, refer to them as versions 'A' and 'B.'

[d]Chapters 3, 5, 7, 9, 20, 27, 33

[e]Books 1, 2, and 3

[f]Book 1

[g]Chapter 25 (Counsel)

[h]Selections from chapters 1.1-1.4, 1.8, II.9; chapters I.6-1.7, II.1-II.8, II.10; chapter 1.5 omitted.

Islamic Texts	Author	Date Produced	Location	Language	Descriptor
Kalila wa Dimna	folk/Abdullah Ibn Muqaffa'	748 CE	Mesopotamia-Persia	Arabic from Persian	KD
Letter on Companionship	Abdullah Ibn Muqaffa'	mid-8th CE	Mesopotamia-Persia	Arabic	LC
Major Works of Secretarial Etiquette	Abdullah Ibn Muqaffa'	mid-8th CE	Mesopotamia-Persia	Arabic	MWSE
Epistle to his Son	Tahir ibn al-Husayn	821 CE	Mesopotamia	Arabic	ES
Book of the Land Tax	Qudama ibn Ja'far	928 CE	Mesopotamia-Persia	Arabic	BLT
On the Perfect State	Al-Farabi	942-3 CE	Levant-Mesopotamia	Arabic	PS
Aphorisms of a Statesman	Al-Farabi	942-9 CE	Levant-Mesopotamia	Arabic	AS
Ordinances of Government	Al-Mawardi	late 10th CE	Mesopotamia	Arabic	OG
Wisdom of Royal Glory	Yusuf Khass Hajib	1070 CE	Turkic Central Asia	Middle Turkish	WRG
Qabus Nama	Kai Ka'us	1080 CE	Persia	Persian	QN
Book of Government	Nizam al-Mulk	1090 CE	Turko-Persian Eurasia	Persian	BG
Counsel for Kings	Al-Ghazali[a]	1110 CE	Turko-Persian Eurasia	Persian	CK
Four Discourses	Nizami-i-Arudi	1152-7 CE	Turko-Persian Eurasia	Persian	FD
Consolation for the Ruler	Muhammad ibn Zafar al-Siqilli	1159 CE	Sicily	Arabic	CRHS
Sea of Precious Virtues	Anonymous	1159-62 CE	Levant-Mesopotamia	Persian	SPV
Treatise on Advice to Kings[b]	Sa'di	mid-13th CE	Persia	Persian	TAK
The Manners of Kings[b]	Sa'di	1258 CE	Persia	Persian	MK
The Nature of Governance[c]	Ibn al-Azraq	1485 CE	Spain	Arabic	NG
The Morals of the Beneficent	Hussein Vaiz Khashifi	1494-5 CE	Persia	Persian	MB
Advice on the Art of Governance	Mauizah I Jahangiri	1612 CE	Mughal India	Persian	AAG
The Sultan's Register of Laws	Aziz Effendi[d]	1632-33 CE	Ottoman Empire	Ottoman Turkish	SRL

Table 2: *Listing of all Muslims texts used in the empirical analysis with author (when known), approximate date of writing, region from which the text emanates and original language of the text.*

[a]See Crone (1987) on the disputed authorship of this text.
[b]Chapter 1 of The Gulistan
[c]Table of Contents and First and Second Premises
[d]Disputed authorship.

even the "broad" definitions of the mirror genre described in Section 2.1. 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 list all of the texts used in our empirical analysis. In Appendix B we show that the selected texts are similar to other, untranslated texts. This is useful, because it allays some concern that translated texts are qualitatively different than untranslated texts.

4.2   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 a thematic hierarchy, 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 thematic issues that the mirror texts engage. We suppose that there are three such themes. Below the coarse themes in the hierarchy are more granular themes, that identify more specific differences in what the texts engage. We assume there are sixty of these more granular themes. Our model supposes that the more granular topics are nested within the coarser themes — so that the granular topics refine and clarify distinctions within each of our broader themes. We determine the number of coarse and granular topics through extensive testing, using both quantitative and qualitative measures. Following Roberts et al. (2014); Mimno et al. (2011) we use quantitative measures to measure the cohesiveness and exclusivity of the coarse and granular 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; Quinn et al., 2010; Grimmer and Stewart, 2013). Both our quantitative and qualitative analysis agreed on the number of coarse 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 underlying 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.[8] All together our 47 books are composed of 9,763 shorter sections in total. 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 the text to a single coarse theme at the top of the hierarchy as our granular themes are nested within the coarse 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, commonly called pre-processing steps 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 and language is used in

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[8]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.

every day discussions (Grimmer and Stewart, 2013). Rather, the assumptions are intended to simplify language to aid in the identification of broad and specific themes in the mirrors texts. Our preprocessing steps are similar to numerous other applications of text as data in political science (Quinn et al., 2010; Hopkins and King, 2010); we discard word order, remove common placeholding words, discard punctuation and capitalization, and map variants of a word to a common term.

The varied content of our texts also lead us to impose 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 translations. For example, we combined *God* and *Allah*, ensuring that our model did not arbitrarily separate religious appeals based on differences in translation. The result of this procedure is that each document is represented as an 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 estimates (1) a set of specific themes, (2) a set of broad themes, and (3) classifies each specific theme into a single broad theme. For each of the 47 books in our collection ($i = 1, \ldots, 47$) the model estimates (4) how each book divides its attention over the 60 specific themes. For book i, define $\mathbf{theme}_i$ as

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

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 — so we suppose that each entry in $\mathbf{theme}_i$ is greater than zero ($\text{theme}_{i,k} > 0$) and that the $\mathbf{theme}_i$ 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 $\mathbf{theme}_i$ to obtain the attention each book allocates to the more general themes by summing together the attention to the specific themes assigned to each coarse theme. 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 (Jordan et al., 1999; Grimmer, 2011). To select the final model, we run the model several times from different starting values and selected the fit using both quantitative and qualitative evaluations (Roberts et al., 2014). In the Appendix A, we provide full model details and derive the estimation algorithm.

4.3 Themes

We estimate 3 broad themes and 60 specific themes with our model. We summarize our broad and specific themes in Table 3. 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. We offer more more detailed descriptions of these subtopics in Appendix C.

Table 3: Broad and Specific Themes in the Mirrors Genre

1	king,princ,citi,great,place,work,emperor,enemi,armi,letter	0.365
1	king,kingdom,royal,minist,reign,father,court,majesti,presenc,war	0.062
2	princ,good,peopl,christian,tyranni,war,mind,ought,state,public	0.031
3	peopl,king,lineag,tribe,war,peac,famili,order,soldier,citi	0.03
4	king,man,kingdom,father,manner,order,command,court,reign,servic	0.027
5	great,majesti,roman,far,danger,necessari,princ,present,occas,point	0.026
6	citi,river,island,countri,citizen,inhabit,built,wall,nation,excel	0.02
7	enemi,fight,victori,arm,war,battl,attack,troop,armi,defeat	0.018
8	natur,art,human,accord,perfect,anim,instruct,principl,disposit,reason	0.017
9	state,necessari,order,public,majesti,import,realm,affair,punish,reform	0.015
10	place,stone,hous,water,air,travel,region,order,silver,wonder	0.015
11	honour,great,nobl,lord,knight,good,roman,deed,respect,rich	0.014
12	armi,troop,soldier,battl,camp,war,command,order,hors,fight	0.013
13	princ,king,head,wise,master,servant,servic,realm,great,slave	0.013
14	work,seek,book,need,market,employ,reason,slave,servant,task	0.013
15	emperor,roman,countri,citi,imperi,son,provinc,rome,militari,receiv	0.013
16	appoint,judg,offic,deleg,evid,right,public,author,sovereign,governor	0.009
17	govern,politi,lordship,reason,roman,polit,citi,exercis,human,natur	0.008
18	letter,write,read,secretari,wrote,mind,command,king,messeng,secret	0.008
19	share,pay,alm,money,treasuri,muslim,belong,poor,given,properti	0.008
20	lion,majesti,jackal,bull,head,tree,camel,king,crow,grass	0.006
2	almighti,good,virtu,power,ruler,justic,prayer,rule,prophet,mena	0.322
1	almighti,bless,grant,peac,messeng,prophet,merci,holi,command,grace	0.069
2	almighti,man,sin,merci,david,wish,holi,command,bless,fear	0.032
3	good,almighti,evil,wise,ought,princess,instruct,nobl,honour,deed	0.032
4	good,man,bad,evil,wick,wise,world,better,sens,wish	0.022
5	ruler,peopl,power,consid,new,princip,help,individu,empir,qualiti	0.019
6	peopl,good,lord,know,ought,wish,sin,evil,bad,fear	0.018
7	son,father,life,death,almighti,dear,glori,mother,thee,perish	0.017
8	virtu,man,nobl,generos,vice,great,nobil,virtuou,knight,magnific	0.017
9	justic,generos,right,law,equiti,judg,injustic,judgment,court,almighti	0.015
10	power,alexand,author,pope,kingdom,abl,destroy,strength,duke,forc	0.014
11	virtu,vice,knowledg,wisdom,almighti,good,happi,path,spirit,truth	0.012
12	rule,arab,govern,ruler,survey,lordship,best,art,excel,chief	0.011
13	desir,life,wish,fear,hope,peac,pleasur,wealth,slave,man	0.011
14	prophet,almighti,companion,relat,priest,perish,bless,islam,sin,paradis	0.009
15	intellig,caus,substanc,intellect,perfect,essenc,contrari,excel,necessarili,mean	0.008
16	mena,imperi,polit,state,man,reason,scienc,citizen,divin,militari	0.007
17	prayer,almighti,pray,lead,leader,friday,priest,pilgrimag,servic,prophet	0.005
18	mentor,ship,perceiv,sea,heart,isl,goddess,danger,dear,eye	0.003
3	man,land,woman,know,bodi,eye,ladi,love,faculti,old	0.312
1	man,rich,wisdom,poor,generos,stupid,fool,learn,advic,wish	0.042
2	man,almighti,know,wealth,world,wish,rich,wisdom,sin,soul	0.026
3	know,knowledg,man,learn,master,tell,better,count,don,ought	0.023
4	man,great,life,food,eat,fish,wise,wish,sens,turn	0.02
5	law,unlaw,allow,punish,princ,wine,accord,divin,book,almighti	0.02
6	world,life,death,almighti,soul,wealth,perish,desir,heart,seek	0.019
7	woman,wive,man,husband,beauti,ladi,young,marri,hous,love	0.019
8	peopl,man,religion,better,tell,know,truth,believ,bad,behav	0.014
9	bodi,soul,mind,form,contrari,relat,celesti,aris,motion,sens	0.013
10	friend,friendship,rat,crow,enemi,tale,tell,heart,don,laugh	0.013
11	love,passion,woman,heart,ladi,lover,lord,wish,beauti,affect	0.012
12	land,water,river,owner,properti,cultiv,grant,spring,reviv,muslim	0.012
13	eye,head,hair,hors,beauti,blood,voic,black,face,heaven	0.011
14	ladi,lord,woman,courtier,duchess,court,laugh,mistress,love,discuss	0.01
15	night,sleep,tree,light,fruit,bear,morn,stay,dead,sun	0.01
16	old,man,young,youth,sheep,woman,avaric,thought,boy,camel	0.009
17	tax,land,collector,crop,muslim,collect,tith,pay,payment,offici	0.008
18	land,sea,countri,sun,winter,lie,earth,mountain,ocean,island	0.008
19	prais,highli,heart,brother,awak,king,face,wide,tell,world	0.007
20	faculti,sens,bodi,organ,imit,receiv,sensibl,form,appetit,provid	0.006
21	kill,muslim,properti,islam,almighti,prophet,unbeliev,punish,slave,compens	0.005
22	fortun,dream,interpret,moon,mean,man,signifi,life,turn,wealth	0.005

Figure 1 shows the proportion of Christian and Muslim books, respectively, that focus on each of the three 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. Figure 2 provides information on how the texts analyzed deal with each of the three themes discussed.

4.3.1 The Art of Rulership

This broad theme centers on the practices and ideals of political rule. This is the largest area of discussion among Christian texts and the second largest among Muslim ones. Three specific themes are especially prominent here. The first, and by far the most prominent, focuses on the "best practices" for rulership and the practical duties of rulers (1.1). It includes concrete and specific advice on topics ranging from the administration of justice and procedures for receiving visitors to coinage and the construction of fortifications. This specific theme also includes discussions of the practical responsibilities of rulers toward their subjects (e.g., punishment of injuries and injustices, distribution of alms, securing the state against foreign invasion) and detailed historical and contemporary examples of how rulers managed to discharge (or fail to discharge) these duties. The emphasis here is on practical, concrete, and specific advice.

The second prominent specific theme focuses on the attributes of the ideal or just ruler, often in contrast to those of the tyrant or unjust ruler (1.2). Particularly among the Christian texts in this category (e.g., *Policraticus*, *Education of the Christian Prince*), the defining feature of the ideal or just ruler is often taken to be a concern with the public good (as opposed to the ruler's own private good). This specific theme also includes discussions of the character virtues of the just ruler (e.g., prudence and patience), the connection between these virtues and the security and duration of the ruler's tenure, the king of education that is necessary to create a just ruler and curb tyrannical tendencies, and examples of rulers who either embodied or failed to embody the characteristics of a just ruler oriented toward the common good.

The third prominent specific theme is focused on discussions of particular classes or factions of people (e.g., nobles, soldiers, and masses), their roles in the polity, and the ruler's relationship to them. It also includes discussions of the importance of popular support (or the support of particular classes or factions) for effective and lasting rule, as well as advice on how the ruler should treat his people (e.g., according to standards of fairness and equity). Beyond these three prominent specific themes, we also see related but less prominent discussions here of exemplary rulers (particularly Roman ones) (1.5, 1.11, 1.15); political geography and the spaces of political rule (1.6, 1.10); war, conquest, and rebellion (1.7, 1.12); the management of labor, property, and taxation (1.14, 1.19), and political administration, public offices, and delegation of political authority (1.16, 1.18). There is also one specific theme that addresses nature and the natural order (1.8) and that is more distantly connected to discussions of political ideals and practice.
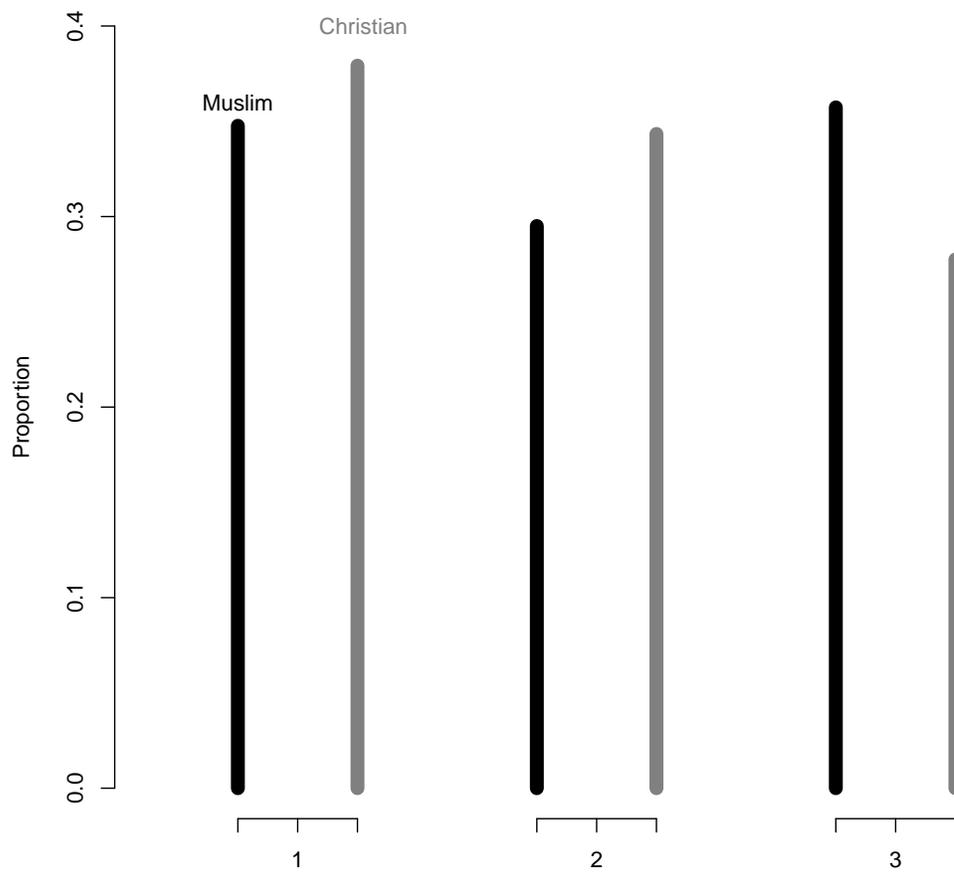
Figure 1: *Difference between Muslim and Christian Texts across Super Topics. Topic 1 focuses on the art of rulership; topic 2 focuses on religion and virtue; topic 3 focuses on the inner life of rulers.*
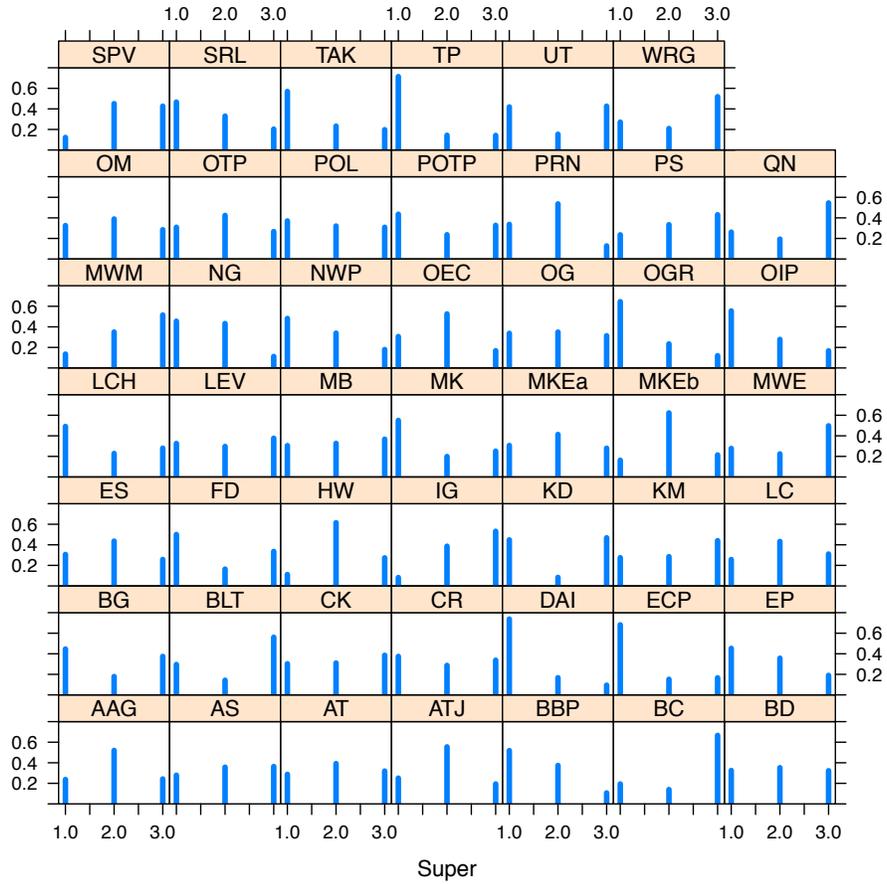
Figure 2: *Emphasis across Super Topics for each Text. Topic 1 focuses on the art of rulership; topic 2 focuses on religion and virtue; topic 3 focuses on the inner life of rulers. Text descriptors in Tables 1 and 2.*

4.3.2   Religion and Virtue

This broad theme centers on the connections between religion, virtue, and justice, on the one hand, and political rule, on the other. This is the second largest area of discussion among Christian texts and the third largest among Muslim ones. Once again, three specific themes are especially prominent here, all of which address the relationship between religion and politics. The first, and by far the most prominent, focuses on the connection between religious virtues and ideals, on the hand, and political arrangements, on the other (2.1). It includes evaluations of policies and institutions according to religious ideals (e.g., God's approval or disapproval of particular political and distributive practices), as well as discussions of God's role in political rulership, the religious virtues (e.g., humility and forbearance) in politics, and Scriptural examples and references. This specific theme also includes passages that ritually invoke God in the course of addressing other issues, which is a common practice in both Christian and Muslim texts.

The second prominent specific theme focuses on the connection between political rule and divine justice, with a particular emphasis on the consequences of disobeying or disregarding divine laws (2.2). It also includes discussions of punishment for sin, the ruler's duty to protect and defend the faith, and Scriptural examples and references.

A third prominent specific theme is focused on the relationship between secular and divine authority (2.3). It includes discussions of the ruler as an earthly imitation of God and the relationship between the ruler's actions and God's word. Christian texts, which contribute heavily to this specific theme, offer arguments that track the development of the notion of the divine right of kings and that repeatedly invoke Scriptural passages and examples as standards by which political rulers are to be assessed. Beyond these three prominent specific themes, we also related discussions here of good and evil (2.4), virtue and vice (2.8, 2.11), and particular religious practices (2.17). There are also several far less prominent specific themes that are more tangentially connected to these central concerns and that deal with power and the relationship between the ruler and the people (2.6, 2.10), rule and lordship (2.12), desire and passion (2.13), and knowledge and wisdom (2.15), as well as a number of less prominent specific themes that are each almost entirely associated with a single text (2.5, 2.7, 2.16, 2.18).[9]

4.3.3   The Inner Life

This broad theme centers on personal relationships, care for and practices of the self, and the ultimate fate of the soul. This is the largest area of discussion among Muslim texts and the third largest among Christian ones. By far its single most prominent specific theme focuses on knowledge, advice, and practical wisdom (3.1). This specific theme includes discussions of the management of political advice and counsel and the conduct of courtiers, as well as

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[9] 2.5, which focuses on power, the ruler and the people, is dominated by Machiavelli's *Prince*, where these themes are perhaps uniquely prominent; 2.7, which focuses on family lineages and life and death, and 2.18, which focuses on mentorship, voyage, and myth, are dominated by Fénelon's *Adventures of Telemachus*, whose narrative is centered on these themes; 2.16, which draws on Agapetus' *Advice to Justinian*.

aphorisms and fables (particularly among Muslim texts) that convey advice and practical wisdom about political rule. The subjects of this advice are broad and include both public matters (e.g., management of tax collectors, palace staff, or courtiers) and more personal concerns. This focus on the circulation of knowledge and practical wisdom is picked up in several comparatively less prominent specific themes that address the connections between wisdom and virtue (3.2) and wisdom and courtesy (3.3), as well as those offering practical advice to rulers directly or though cautionary tales (3.8). Other less prominent subtopics focus on the the nature and ultimate fate of the soul (3.2, 3.6, 3.9, 3.20); the management of quotidian affairs and the passing of the day (3.4, 3.15); advice directed at or about women (3.7, 3.14); relationships of love, as well as those with friends, enemies, and the old and young (3.10, 3.11, 3.16); geographical spaces and travel (3.12, 3.18); and dreams, fortune, and prophecy (3.22). Also included here are three specific themes of varying prominence that address the more overtly political questions of criminal justice (3.5), taxation (3.17), and the management of political violence (3.21).

5   Interpretation

Our analysis, thus far, has sought to conceptually characterize and describe the main topics found in the medieval Muslim and Christian "mirrors for princes" literature. We have identified three "super" topics, which are similarly-sized conceptual clusters focusing on 1) the art of rulership, 2) religion and virtues and 3) the inner life of rulers. Within each of these categories, we have also identified between 18 and 22 "sub" topics for each super topic which cover a range of more narrow themes of relevance to kings and rulers. In this section, we offer a tentative interpretation of the cross-regional and over-time differences in topic focus.

It is important to first point out the existence of important similarities in the broad comparison of Muslim and Christian advice texts. We find, for example, that there are not large differences between Muslim and Christian texts in the aggregated super topics (Figure 1). Super topics 1 and 2 — which we describe as the art of rulership and religion and virtues, respectively — see slightly more emphasis in Christian texts while there is a greater emphasis in the Muslim texts on the ruler's inner life (super topic 3). We find the existence of similar emphases across Muslim and Christian texts, in the aggregate, to be reassuring as this suggests that the broad comparability of the cases. This is consistent with arguments offered by Darling (2013), 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.

When examining the over-time trends in emphasis on each super topic, we find that for super topic 1 — the art of rulership — the Muslim and Christian texts track very closely over the historical interval. For super topic 2 — religion and virtues — we observe a declining emphasis on these issues for Christian texts and an increase in emphasis on these issues, over time, for Muslin texts. For super topic 3, which focuses on the inner life of the ruler, we observe another inversion of trend where Christian texts appear to increase slightly in their
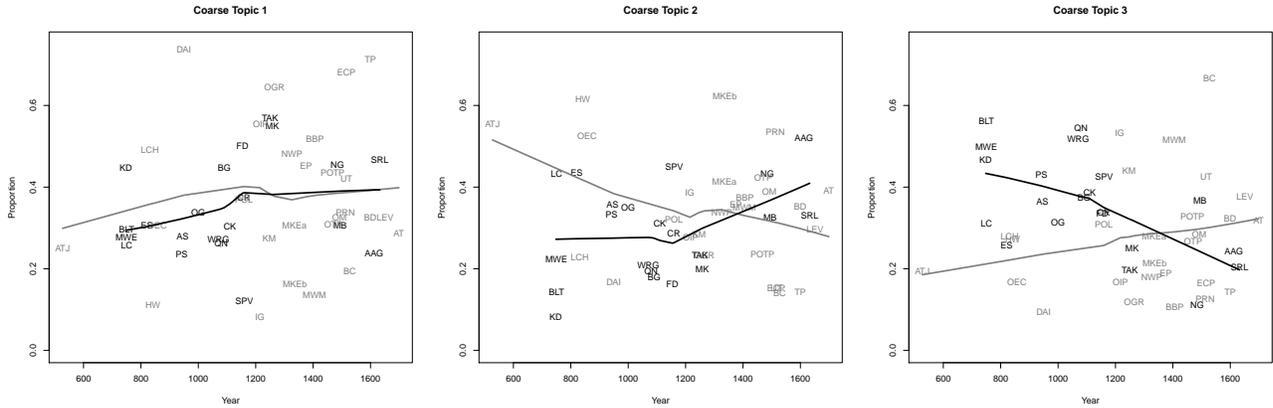
Figure 3: *Over-time Trends in Emphasis on each of three Super Topics from the 6th to the 19th centuries. Topic 1 focuses on the art of rulership; topic 2 focuses on religion and virtue; topic 3 focuses on the inner life of rulers. Light-grey indicates Christian texts and trend lines; dark-grey indicates Muslim texts and trend lines.*

emphasis on these issues while Muslim texts decline in the inner life as a focus. There are a relatively small number of texts being examined for any particularly time period, however, making it difficult for us to estimate these trends with precision.

Perhaps more revealing are the differential over-time trends across Muslim and Christian texts in terms of the subtopics. For example, subtopic 1 within super topic 1 (which we call Topic 1.1) is one of the larger areas of focus identified by the model. Topic 1.1 describes both "best practices" for rulers as well as a discussion of the duties associated with monarchy. The salience of that topic increases over time and peaks around 1200 CE, declining afterwards. Both the Muslim and Christian texts reflect this trend (left panel, Figure 4). One possible interpretation for the similar trajectories observed for this highly important category reflects a consolidation of knowledge and guidance regarding the craft of kingship in the period immediately following the decline of the two dominant empires of the "West" — the Roman and Persian Empires. The Parthian (247 BCE-224 CE) and Sasanian (224-651 CE) Empires of Persia dominated Western and Central Asia for the eight centuries preceding the rise of Islam. The Roman Empire (27 BCE-476 CE) — preceded by the Roman Republic (509 BCE-27 BCE) — came to dominate Europe and North Africa for the much of the same interval. With the decline of these large, imperial polities, kingship emerged as the dominant mode of governance for much of the Western world. Wormald (2005) argues that by 700 CE, monarchy was increasingly the modal political form and the matters of what kings "were for" and what kings should "do" were open questions in this post-Roman and post-Persian imperial setting. In this context, it is perhaps not surprising that on the interval 700 to 1200 CE, much was written in both Muslim and Christian societies about the best practices and practical duties of kings. While kingship had myriad ancient precedents, empire was the political norm for much of the century preceding 700 CE and societies with Jewish, Greek and Roman cultural antecedents were highly suspicious of individualist authority (Wormald,
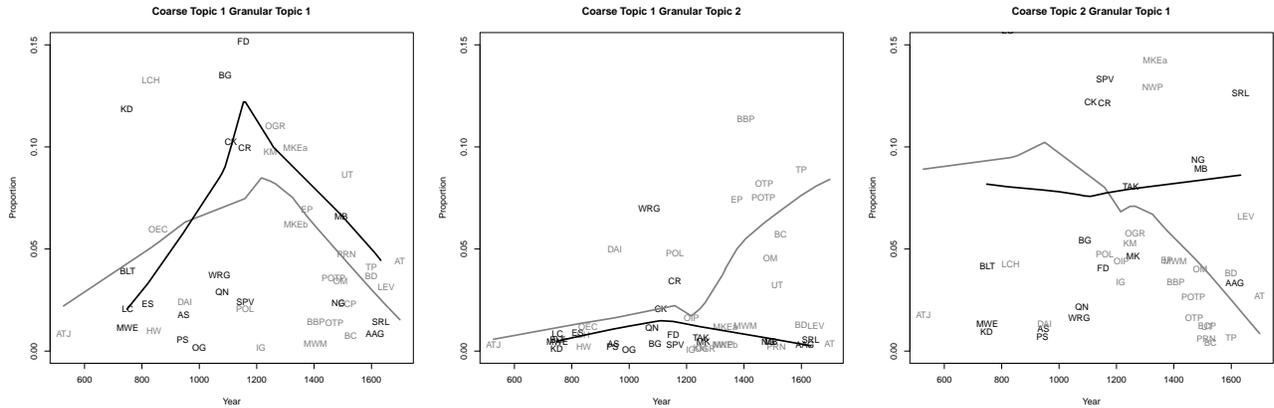
Figure 4: *Comparison of Over-time Trends of Subtopic 1.1 (best practices and practical duties), Subtopic 1.2 (just rule, tyranny, and the public good) and Subtopic 2.1 (religious virtues and ideals). Light-grey indicates Christian texts and trend lines; dark-grey indicates Muslim texts and trend lines.*

2005). With the consolidation of monarchy as the dominant mode of governance by the high Middle Ages, there may have reached a point of saturation for texts enumerating the types of wisdom reflected in Topic 1.1. The persistence of imperial rule to a greater extent in Muslim societies is consistent with the lower peak for the Muslim trend line.

Topics 1.2 and 2.1 are also among the largest of the subtopics estimated by the model. Topic 1.2 focuses on issues of just rule, its contrast with tyranny, and the importance of promoting the public good. Topic 2.1, on the other hand, focuses on religious virtues in politics and the role of God's rule in evaluating political arrangements according to religious ideals. The over-time trends for these two topics are displayed in the center and right panels of Figure 4. While there are not major changes with regard to the over time trajectories of emphasis for Muslim writers, Christian writers begin to focus much more on issues of just rule and much less on religious virtues beginning around 1200 CE. Political scientists specializing on the history of the modern state identify the late Middle Ages as a turning point in the development of the European state system as feudal lords and religious leaders — often with overlapping jurisdictional claims — came to eventually cede power to sovereign states (Spruyt, 1994). While some historical sociologists, most prominently Tilly (1992), place the origins of the state after 1400 CE with the rise of new military technologies, others have argued that state consolidation took much earlier (Strayer, 1970) with longer-term historical antecedents (Poggi, 1978). Blaydes and Paik (2014) argue that the raising of armies and funds to support Holy Land Crusades — which began in 1095 CE — had important implications for the consolidation of institutions in medieval Europe as kings were required to develop the fiscal and administrative capacity to support the staggering cost of military mobilization aimed at taking Jerusalem. The evidence presented here suggests an inflection point around 1200 CE for Christian societies. (Blaydes and Chaney, 2013) find that the Middle Ages

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witnessed growing ruler duration for European monarchs as the spread of feudal institutions increased the cost of unsuccessful revolt by the monarch's rivals by decentralizing political power.

6   Conclusions

In this paper, we explore temporal and cross-sectional trends in institutional development within the Western core through an examination of advice texts for royals — among the most important forms of political writing to emerge from the medieval and early modern periods. Our analysis of 47 "mirrors" texts suggests important similarities in theme and emphasis when comparing the ways that Muslim and Christian writers in this genre advised their patrons. Instruction on personal virtues, management of the king's family and household and religious duties, rights and obligations were comparably represented in both the Christian and Muslim texts. We find that advice on the best practices and practical duties of monarchy increased in prominence over the interval 700 to 1200 CE, as monarchical institutions came to predominate after almost a millennium of Roman and Persian imperial rule. While Muslim writers maintain a strong emphasis on religious virtues and ideals over the period of analysis, Christian authors appear to substitute discussions of just rule for religious virtues around 1200 CE, an historical inflection point associated with increasingly consolidation of territorial states in Europe.

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.

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Appendix A: Methods

In this appendix we provide the technical details for our statistical model. Suppose that we have 47 books, $(i = 1, 2, \ldots, 48)$ and that book i is composed of D_i total shorter segments $(j = 1, 2, \ldots, D_i)$. We will represent each document as a W element long vector $(W = 2124)$ $\boldsymbol{y}_{ij}$ and will collect each of the short documents into a term-document matrix $\boldsymbol{Y}$.

Like some previous statistical models for texts (Banerjee et al., 2005; Grimmer, 2010) we model the content of the mirrors using mixtures of von Mises-Fisher distributions (vMF). This is a distribution on a hypersphere—or on texts that are normalized to have unit length. This removes the influence of text length on the topic classification.

We normalize the documents to make them appropriate for the statistical model we apply. For each document $\boldsymbol{y}_{ij}$ we write its unit-length representation as

$$\boldsymbol{y}_{ij}^* \quad = \quad \frac{\boldsymbol{y}_{ij}}{\sqrt{\boldsymbol{y}_{ij}' \boldsymbol{y}_{ij}}}$$

We use two different kinds of hierarchies to model the content of the texts. As discussed above, our first hierarchy is a thematic hierarchy. We model the contents of the documents as a mixture of vMF. This facilitates statistical modeling using cosine based similarity measures, a popular measure of similarity between documents. At the top of the hierarchy we have M coarse themes $(m = 1, 2, \ldots, M)$. We will suppose that each coarse theme, $\boldsymbol{\eta}_m \sim \text{vMF}(\kappa, \frac{1}{\sqrt{W}})$, where κ is a concentration parameter and $\frac{1}{\sqrt{W}}$ is the least informative prior for a conjugate vMF distribution. We will suppose that each of the K $(k = 1, 2, \ldots, K)$ granular topics are classified into one of the coarse topics. For each granular topic k we draw an indicator vector $\boldsymbol{\sigma}_k$ with $\sigma_{mk} = 1$ if granular topic k is classified into coarse topic m. We will suppose that $\boldsymbol{\sigma}_k \sim \text{Multinomial}(1, \boldsymbol{\beta})$ and that $\boldsymbol{\beta} \sim \text{Dirichlet}(\mathbf{1})$.

Given each granular topic's assignment to one of the coarse topics, we can draw its content. We will suppose that for each granular topic k that $\boldsymbol{\mu}_k | \sigma_{mk} = 1 \sim \text{vMF}(\kappa, \boldsymbol{\eta}_m)$.

The second hierarchy models the content of the books. We will suppose that each book, i, is a mixture of themes. We will represent the mixture for book i as

$$\boldsymbol{\pi}_i \quad = \quad (\pi_{i,1}, \pi_{i,2}, \ldots, \pi_{i,60})$$

where $\pi_{i,k}$ represents the proportion of book i dedicated to theme k. We will suppose that $\boldsymbol{\pi}_i \sim \text{Dirichlet}(\boldsymbol{\alpha})$, with $\alpha_k \sim \text{Gamma}(1, 1)$. The model supposes that the distribution of themes, $\boldsymbol{\pi}_i$ stochastically controls the rate themes occur in each book. For each of the D_i smaller text sections in book i we will draw an indicator vector $\boldsymbol{\tau}_{ij}$ where $\tau_{ijk} = 1$ if document j in book i is assigned to the kth topic. Conditional on this assignment we draw the content of each document. We suppose that $\boldsymbol{y}_{ij}^* | \tau_{ijk} = 1 \sim \text{vMF}(\kappa, \boldsymbol{\mu}_k)$.

We summarize the model with the following hierarchical model,

$$
\begin{aligned}
\alpha_k &\sim \text{Gamma}(1,1) \\
\boldsymbol{\pi}_i | \boldsymbol{\alpha} &\sim \text{Dirichlet}(\boldsymbol{\alpha}) \\
\boldsymbol{\eta}_m &\sim \text{vMF}(\kappa, \frac{\mathbf{1}}{\sqrt{\boldsymbol{W}}}) \\
\boldsymbol{\beta} &\sim \text{Dirichlet}(\mathbf{1}) \\
\boldsymbol{\sigma}_k &\sim \text{Multinomial}(1, \boldsymbol{\beta}) \\
\boldsymbol{\mu}_k | \sigma_{mk} = 1 &\sim \text{vMF}(\kappa, \boldsymbol{\eta}_m) \\
\boldsymbol{\tau}_{ij} | \boldsymbol{\pi}_i &\sim \text{Multinomial}(1, \boldsymbol{\pi}_i) \\
\boldsymbol{y}_{ij}^* | \tau_{ijk} = 1, \boldsymbol{\mu}_k &\sim \text{vMF}(\kappa, \boldsymbol{\mu}_k)
\end{aligned}
$$

which implies the following posterior distribution

$$
p(\boldsymbol{\alpha}, \boldsymbol{\pi}, \boldsymbol{\eta}, \boldsymbol{\beta}, \boldsymbol{\sigma}, \boldsymbol{\mu}, \boldsymbol{\tau} | \boldsymbol{Y}) \quad \propto \quad \prod_{m=1}^{M} c(\kappa) \exp\left(\kappa \boldsymbol{\eta}_m' \frac{\mathbf{1}}{\sqrt{\boldsymbol{W}}}\right) \times \prod_{m=1}^{M} \prod_{k=1}^{K} \left[\beta_m c(\kappa) \exp\left(\kappa \boldsymbol{\mu}_k' \boldsymbol{\eta}_m\right)\right]^{\sigma_{mk}} \prod_{k=1}^{K} \exp(-\alpha_k) \times
$$

$$
\prod_{i=1}^{48} \left[\frac{\Gamma(\sum_{k=1}^{K} \alpha_k)}{\prod_{k=1}^{K}(\alpha_k)} \prod_{k=1}^{K} \pi_{ik}^{\alpha_k - 1} \times \prod_{j=1}^{D_i} \prod_{k=1}^{K} \left[\pi_{ik} c(\kappa) \exp(\kappa \boldsymbol{y}_{ij}^* \boldsymbol{\mu}_k)\right]^{\tau_{ijk}}\right] \tag{6.1}
$$

where $c(\kappa)$ is a normalizing constant.

Estimation

We approximate the posterior in Equation 6.1 using a variational approximation. A variational approximation is a deterministic alternative to Markov Chain Monte Carlo (MCMC) methods that are particularly useful in large and complex posteriors. A variational approximation approximates the posterior using a simpler, but still very general, class of functions. Specifically, we approximate the posterior in Equation 6.1 with the family of functions,

$$
\begin{aligned}
q(\boldsymbol{\alpha}, \boldsymbol{\pi}, \boldsymbol{\eta}, \boldsymbol{\beta}, \boldsymbol{\sigma}, \boldsymbol{\mu}, \boldsymbol{\tau}) &= q(\boldsymbol{\alpha}) q(\boldsymbol{\pi}) q(\boldsymbol{\eta}) q(\boldsymbol{\beta}) q(\boldsymbol{\sigma}) q(\boldsymbol{\mu}) q(\boldsymbol{\tau}) \tag{6.2} \\
&= q(\boldsymbol{\alpha}) \prod_{i=1}^{18} q(\boldsymbol{\pi})_i \prod_{m=1}^{M} q(\boldsymbol{\eta})_m q(\boldsymbol{\beta}) \prod_{k=1}^{K} q(\boldsymbol{\sigma})_k \prod_{k=1}^{K} q(\boldsymbol{\mu})_k \prod_{i=1}^{18} \prod_{j=1}^{D_i} q(\boldsymbol{\tau}) \tag{6.3}
\end{aligned}
$$

To find the member of the family functions defined in Equation 6.2 that most closely approximates the posterior in Equation 6.1 we follow a standard set of derivations to derive in iterative algorithm to approximate the posterior. We provide the update steps here.

Update for $q(\boldsymbol{\sigma})_k$

$q(\boldsymbol{\sigma})_k$ is a Multinomial$(1, \boldsymbol{c}_k)$ where typical element c_{mk} is equal to

$$
c_{mk} \quad \propto \quad \exp\left(\text{E}[\log \beta_m] + \text{E}[\kappa \boldsymbol{\mu}_k \boldsymbol{\eta}_m]\right).
$$

We will complete the update step when we have determined the remaining forms of the distribution

Update for $q(\boldsymbol{\tau})_{ij}$

$q(\boldsymbol{\tau})_{ij}$ is a Multinomial$(1, \boldsymbol{r}_{ij}$, with typical element of r_{ijk} equal to

$$r_{ijk} \quad \propto \quad \exp\left(\mathrm{E}[\log \pi_{ik}] + \mathrm{E}[\kappa \boldsymbol{y}_{ij}^* \boldsymbol{\mu}_k]\right)$$

Again, as we complete the parametric forms of the other update steps we can complete this update equation.

Update for $q(\boldsymbol{\pi})_i$

$q(\boldsymbol{\pi})_i$ is a Dirichlet$(\boldsymbol{\gamma}_i)$ distribution, where typical element γ_{ik} is equal to

$$\gamma_{ik} \quad = \quad \alpha_k + \sum_{j=1}^{D_i} r_{ijk}$$

Update for $q(\boldsymbol{\beta})$

$q(\boldsymbol{\beta})$ is a Dirichlet$(\boldsymbol{\phi})$ distribution with typical parameter ϕ_m equal to

$$\phi_m \quad = \quad 1 + \sum_{k=1}^{K} c_{mk}$$

Update for $q(\boldsymbol{\eta})_m$

Given the complications of taking expectations with the vMF distribution, we instead provide maximization steps for the vMF parameters. To obtain the form of the updates we follow the derivation outlined in Banerjee et al (2005). To do this, we take the log of the posterior distribution and identify the parameters that depend upon $\boldsymbol{\eta}_m$.

$$\log(p(\boldsymbol{\eta}_m)) \quad = \quad \sum_{k=1}^{K} c_{km} \kappa \boldsymbol{\mu}_k \boldsymbol{\eta}_m + \kappa \boldsymbol{\eta}_m \frac{1}{\sqrt{W}} + \text{constants}$$

To set up the constrained optimization we also introduce the Langragian λ, with the constraint that $\boldsymbol{\eta}_m' \boldsymbol{\eta}_m = 1$,

$$\log(p(\boldsymbol{\eta}_m)) \quad \propto \quad \sum_{k=1}^{K} c_{km} \kappa \boldsymbol{\mu}_k \boldsymbol{\eta}_m + \kappa \boldsymbol{\eta}_m \frac{1}{\sqrt{W}} - \lambda(\boldsymbol{\eta}_m' \boldsymbol{\eta}_m - 1).$$

Differentiating with respect to $\boldsymbol{\eta}_m$, setting equal to zero and solving yields

$$\frac{\kappa \left(\sum_{k=1}^{K} c_{mk} \boldsymbol{\mu}_k + \frac{1}{\sqrt{W}}\right)}{2\lambda} \quad = \quad \boldsymbol{\eta}_m \tag{6.4}$$

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If we differentiate with respect to λ and solve we see that $\boldsymbol{\eta}_m'\boldsymbol{\eta}_m = 1$ or that $||\boldsymbol{\eta}_m'\boldsymbol{\eta}_m|| = 1$. Substituting this into Equation 6.4 we have,

$$
\frac{\kappa}{2\lambda}\left(\left(\sum_{k=1}^{K} c_{mk}\boldsymbol{\mu}_k + \frac{1}{\sqrt{W}}\right)'\left(\sum_{k=1}^{K} c_{mk}\boldsymbol{\mu}_k + \frac{1}{\sqrt{W}}\right)\right)^{1/2} = 1
$$

$$
\frac{\kappa||\sum_{k=1}^{K} c_{mk}\boldsymbol{\mu}_k + \frac{1}{\sqrt{W}}||}{2} = \lambda
$$

Doing a final substitution we have

$$
\boldsymbol{\eta}_m^* = \frac{\sum_{k=1}^{K} c_{mk}\boldsymbol{\mu}_k + \frac{1}{\sqrt{W}}}{||\sum_{k=1}^{K} c_{mk}\boldsymbol{\mu}_k + \frac{1}{\sqrt{W}}||}
$$

Update for $q(\boldsymbol{\mu})_k$

Following a very similar set of derivations, the update step for $\boldsymbol{\mu}_k$ is

$$
\boldsymbol{\mu}_k^* = \frac{\sum_{i=1}^{18}\sum_{j=1}^{D_i} r_{ijk}\boldsymbol{y}_{ij}^* + \sum_{m=1}^{M} c_{mk}\boldsymbol{\eta}_m^*}{||\sum_{i=1}^{18}\sum_{j=1}^{D_i} r_{ijk}\boldsymbol{y}_{ij}^* + \sum_{m=1}^{M} c_{mk}\boldsymbol{\eta}_m^*||}
$$

Completing updates for $q(\boldsymbol{\sigma})_k$ and $q(\boldsymbol{\tau})_{ij}$

Given the forms $\mathrm{E}[\log \beta_m] = \Psi(\phi_m) - \Psi(\sum_{m=1}^{M}\phi_m)$ and $\mathrm{E}[\log \pi_{ik}] = \Psi(\gamma_{ik}) - \Psi(\sum_{k=1}^{K}\gamma_{ik})$ where $\Psi(\cdot)$ is the Digamma function.

Update for q($\boldsymbol{\alpha}$)

A closed form update for the $\boldsymbol{\alpha}$ parameters is unavailable. So we use the Newton-Raphson algorithm outlined in Minka (2000) and Blei, Ng, and Jordan (2003).

Appendix B: Temporal Selection of Texts

In this analysis, we use texts that have been translated into English as the basis for our empirical scholarship. One key reason for this choice relates to the unique challenges of conducting text analysis using non-Western script, as well as the difficulties of navigating material in multiple languages. A potential concern that might arise is that by relying on translated texts we may be be selecting texts that are not representative of the genre more broadly. One form of such bias might relate to the analysis of texts that do not reflect the temporal scope of the genre. In order to investigate this possibility, we have collected a dataset of the titles and approximate publication dates for 98 "mirrors for princes" texts, even though only 47 of these appear in our text analysis. The other 51 are excluded from our analysis because they have not yet been translated into English. This data set comes closer to characterizing the population of texts that we might include in our analysis, if all texts were available in translation. If we find few differences between the included and excluded texts, then we might feel more confident that the texts we have selected adequately represent the temporal scope of the broader universe of such texts.

Figure 5 displays histograms that compare the distribution of dates for the excluded (left column) and included (right column), Muslim (top row) and Christian (bottom row) texts. There are few obvious differences when comparing across the histograms. A more systematic analysis of the average date of publication leads to the same conclusion. On average, the included texts are published about 35 years later than the excluded texts, a difference we deem to be both substantively and statistically insignificant given the temporal scope of the project. And while the Christian texts tend to be produced about 200 years after the Muslim texts, on average, there are no within-region differences in the included texts.
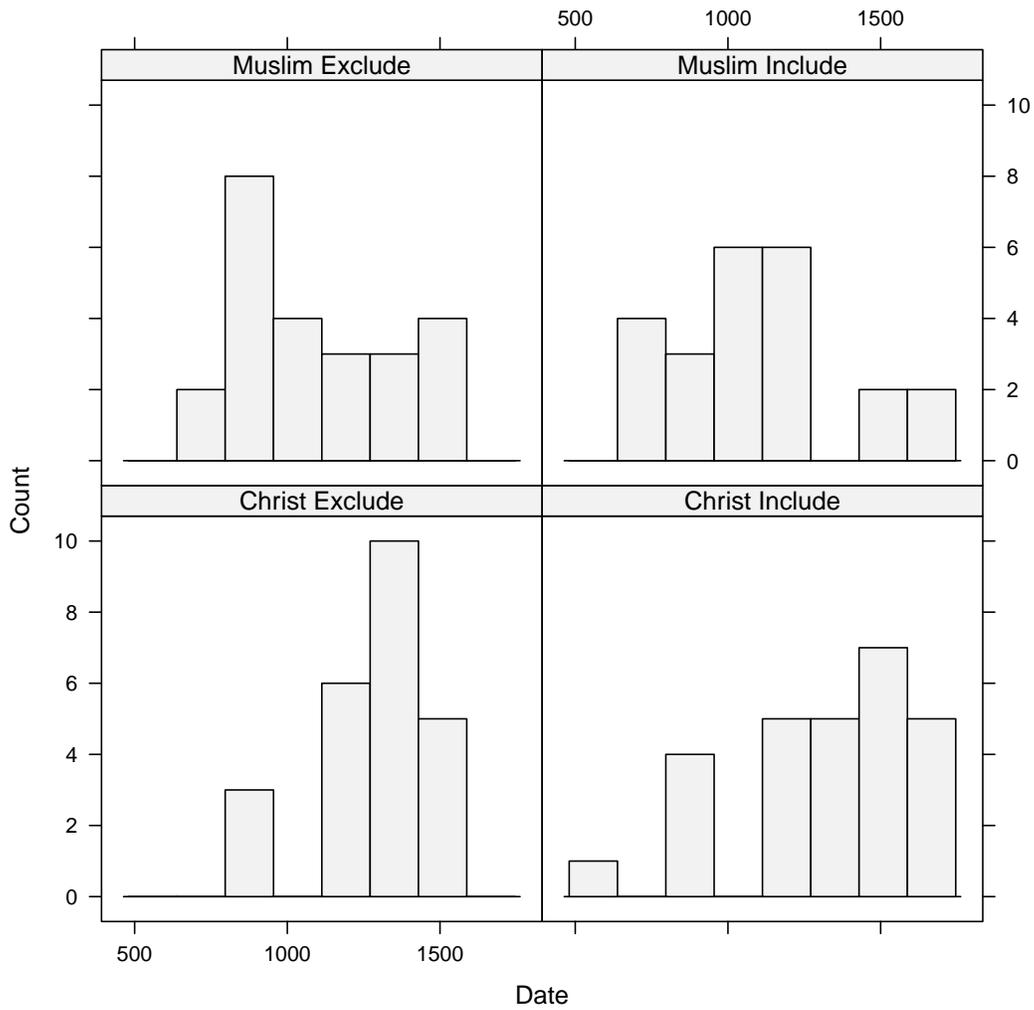
Figure 5: *Histograms displaying the distribution of Muslim (top) and Christian (bottom) texts excluded (left) and included (right) in this analysis.*

Appendix C: Descriptions of Subtopics

In this appendix, we provide a more detailed description of each of the sixty subtopics that emerge from the text analysis. Each subtopic is numbered, first, to reflect its associated supertopic and, second, the nested subtopic number. For example, subtopic 1.2 would reflect correspond to super topic 1 and subtopic 2 within that super topic.

Supertopic 1: The Craft of Rulership

1.1: Best practices and practical duties. This subtopic is focused on discussions of historical and contemporary "best practices" for rulership and the practical duties of rulers. It includes practical and specific advice on topics ranging from the administration of justice and procedures for receiving visitors to coinage and the building of fortifications. The subtopic also includes discussions of the practical duties of rulers toward subjects (e.g., punishment of injuries and injustices, the distribution of alms, securing the state against foreign invasion) and includes detailed historical and contemporary examples of how rulers discharged (or failed to discharge) these duties.

1.2: Just rule, tyranny, and the public good. This subtopic is focused on the attributes of the ideal ruler, often in contrast to those of the tyrant. Particularly among the Christian texts in this category, the defining feature of the ideal or just ruler is often taken to be a concern with the public good (as opposed to the ruler's own private good). The subtopic also includes discussions of the virtues of character of the just ruler, the connection between these virtues and the security and duration of ruler's tenure, the kind of education that is necessary to create a just ruler and curb tyrannical tendencies, and examples of rulers who either embodied or failed to embody the characteristics of a just ruler oriented toward the public good. This category is dominated by passages from Christian texts.

1.3: The ruler and the people. This subtopic is focused on discussions of particular classes or factions of the people (e.g., nobles, soldiers, and masses), their roles in society and the ruler's relationship to them. It also includes discussions of the importance of popular support (or the support of particular classes or factions) for effective rule and how the ruler should treat the people (e.g., according to standards of fairness, equity, etc.).

1.4: References to majesty and kingship. This subtopic includes passages that, in the course of other discussions, make passing use of words like "king," "kingdom," "reign." This is particularly true of the Christian texts in this category. The subtopic also includes stories of idealized kingship and narratives about exemplary kings. This is particularly true of the Muslim texts in this category.

1.5: Rome, as a source of examples or in passing. This subtopic is focused on discussions of Rome (the city and/or the empire) as an example, as well as passages that mention Rome in passing. It also includes passages that cover issues (e.g., education, the virtues of

the prince, religious commitments) that are seemingly unrelated to Rome. This subtopic is heavily dominated by Christian texts.

1.6: The spaces and places of rule. This subtopic is focused on the spaces and places of rule and politics. It also includes discussions of the management of "cities" (referring both to urban areas and to "polities" more generally), the relationship between the city and the country, and geographical features and markers.

1.7: War and defense. This subtopic is focused on discussions of the conduct of war and the defense of the polity from attack. It also includes discussions of particular battles and conquests, classical and contemporary military examples, and protection against personal violence.

1.8: Nature and the natural order. This subtopic is focused on discussions of nature and the natural order. It also includes discussions of the laws of nature; the natural characteristics of humans, with a particular focus on rationality and the superiority of humans relative to other animals; astrology and the use of indicators from the natural world to make inferences about the future; the connection between environment (e.g., rural vs. urban) and human habits and dispositions.

1.9: Just and effective rulership. This subtopic is overwhelmingly dominated by a single Christian text, Cardinal Richlieu's *Testament Politique*, which is concerned with institutional reform in France and the standards of kingship.

1.10: Spaces, natural wonders, and awe. This subtopic is focused on discussions of particular places and locales. It also includes discussions of natural wonders, travel, local practices and customs, places and sights that generate a sense of awe, and, in Christian passages, miracles.

1.11: The honor and dignity of the ruler. This subtopic is focused on discussions of the standards of honorable and/or dignified behavior and particular behaviors classed as honorable and/or dignified. Christian passages in this category make heavy use of classical (and especially Roman) examples.

1.12: War, battles, and rebellion. This subtopic is focused on discussions of war, battle, and rebellion. It also includes discussions of particular battles (both contemporary and historical), military preparedness, the ideal size of armies, military administration and the ruler's control of his armed forces.

1.13: Power relationships. This subtopic is very generally focused on hierarchical power relationships between rulers and political and administrative officials (ministers, counselors, etc.), rulers and subjects, masters and servants, and masters and slaves. It also includes

passages that make passing reference to the language of power and mastery in the course of other discussions.

1.14: Labor and laborers. This subtopic is focused on discussions of labor and laborers. It also includes discussions of slavery and the management of slaves, remuneration of laborers, the value and pleasures of laboring, and metaphorical understandings of labor.

1.15: Roman examples. This subtopic is focused on discussions involving Rome. It includes discussions of Rome's administration of its empire, military campaigns, imperial succession, and rebellions. This subtopic is overwhelmingly dominated by a single Christian text, Constantine VII's *De Administrando Imperio*.

1.16: Political office and delegated authority. This subtopic is focused on discussions of political office. The passages included here address both the royal office and the offices of delegates (e.g., ministers, judges, etc.), as well as questions of advice and counsel.

1.17: Rule and lordship. This subtopic is overwhelmingly dominated by a single Christian text, Ptolemy of Lucca's *On the Government of Rulers*, which is centrally concerned with the distinction between different kinds of rule and lordship (e.g., "regal" vs. "political") and includes various Roman and Scriptural examples on this and related questions.

1.18: Royal correspondence. This subtopic is focused on royal correspondence. It includes discussions of the art and skills necessary to be a royal secretary, the etiquette and practice of letter-writing, and the choice of particular forms of communication (e.g., messengers vs. letters).

1.19: The distribution of wealth and property. This subtopic focuses on discussions of wealth and property. It includes discussions of the maintenance of the treasury, financial aphorisms, and the distribution of war spoils. This subtopic is dominated by Muslim texts.

1.20: Animal fables. This subtopic stories about animals, including lions, bulls, and jackals. In general, these are metaphorical tales, rather than stories about actual encounters with animals. The Muslim text, *Kalila wa Dimna*, which makes a strong contribution to this subtopic, includes many animal fables which convey metaphorical lessons about rulership and virtue.

Supertopic 2: Religion and Virtue

2.1: Religious virtues and ideals in politics. This subtopic is focused on discussions of the evaluation of political arrangements according to religious ideals (e.g., God's approval or disapproval of particular political and distributive arrangements). It also includes God's role in political rulership, religious virtues (e.g., forbearance) in politics and other arenas,

Scriptural examples and references, and invocations of God in the course of other discussions.

2.2: Political rule and divine justice. This subtopic is focused on discussions of the connection between political rule and divine justice, with a particular emphasis on the consequences of disobeying or disregarding divine laws. It also includes discussions of punishment for sin, the ruler's protection and defense of faith, and Scriptural examples.

2.3: Secular and divine authority. This subtopic is focused on discussions of the divine source of the ruler's authority. It also includes discussions of the ruler's imitation of God and the relationship between the ruler's actions and God's word. This subtopic is dominated by Christian texts. The selections from one of these texts, Christine de Pisan's *Book of the Body Politic*, not only include passages focused on the subtopic's central themes but also a notable number of passages connected to seemingly unrelated secular discussion of the education of rulers and political virtues.

2.4: Good and evil. This subtopic is focused on discussions of the existence and examples of good and evil in the world and the connections between good and evil, on the one hand, and virtue and vice, on the other. In the Christian passages in this category, these discussions are both religious and secular. The Christian passages also include some discussions of beauty and aesthetic pleasure and property.

2.5: Power, the ruler, and the people. This subtopic is focused on discussions of power and the relationship between the ruler and the people. It is dominated by Niccolo Machiavelli's *Prince*.

2.6: People and "the people." This subtopic is focused on the characteristics of "the people" and on specific groups of people. It includes discussions of the attributes, behavior, virtue, and vices of "the people" and of particular groups; the ruler's relationship to the "the people" and to particular groups; and methods for securing the love and obedience of "the people."

2.7: Family lineages and life and death. This subtopic is focused on discussions of family lineage, either in substance or in passing, and life and death. It is dominated by a Christian text, Francois de Fenelon's *Adventures of Telemachus*, whose narrative centers on a son searching for his father and encountering numerous dangers.

2.8: Virtue, honor, and dignity. This subtopic is focused on discussions of the connections between virtue or particular virtues and nobility, honor, and dignity. It includes historical and contemporary examples of rulers seen to possess these characteristics, as well as more abstract discussions of the value and rareness of virtue. This category is dominated by Christian passages.

2.9: The administration and exercise of justice. This subtopic is focused on discussions of the administration of justice (moral, legal, and distributive). It also includes discussions of the connection between justice and virtue, and the importance of justice for good and effective rulership.

2.10: The acquisition and exercise of power. This subtopic is focused on discussions of acquisition and exercise of political power by both rulers or particular groups. It also includes a number of passages that contain passing references to words with an "Alexand" stem (e.g. Machiavelli's references to Pope Alexander in *The Prince* and references to Alexandria in several of the Islamic texts).

2.11: Virtue and Vice. This subtopic is focused on discussions of virtue and vice. It includes distinctions between particular kinds of virtue (e.g., Al-Farabi's distinctions between ethical, rational, and reflective virtue in *Aphorisms of a Statesman*), particular virtues (e.g., the cardinal virtues), and the relationship between virtue, on the one hand, and knowledge and truth on the other.

2.12: Rule and lordship. This subtopic is very broadly focused on discussions of rule and lordship. It includes discussions of political and religious rule and lordship, the rule of the heart and the brain over the rest of the body, various virtues of the ideal ruler, the ruler's management of family and counselors, and several examples of political and military rulers from the history of the Arab world (a particular focus in passages from Constantine Vii's *De Administrando Imperio*.

2.13: Desire and passion. This subtopic is very broadly focused on desire and the passions. It includes discussions of bad passions and desires that should be resisted because they endanger just rule and/or interfere with reason, the importance of moderating passions and desires in order to be a virtuous person and/or ruler, good or neutral desires, and several passages that mention passions or desires in passing.

2.14: The Prophet. This subtopic includes predominantly Islamic passages that make some reference to the Prophet and/or his descendants.

2.15: Knowledge, intelligence, and wisdom. This subtopic is focused on knowledge, intelligence, and wisdom, and the relationships between them. This category is overwhelmingly dominated by passages from Muslim texts.

2.16: *Advice to Justinian.* This subtopic draws entirely from Agapetus' *Advice to Justinian.* The passages draw from the entire work and discuss topics ranging from the personal virtues of the ruler to political wisdom and the sources of legitimate authority.

2.17: Prayer. This subtopic focuses on prayer. It includes discussions of types of prayer,

the qualities required of prayer leaders, and the practice of prayer. This category is over-whelmingly dominated by Muslim texts.

2.18: Mentorship, voyage, and myth. This subtopic draws entirely from Francois de Fenelon's *Adventures of Telemachus*, which centers on a sea voyage undertaken with a mentor and draws on elements of classical mythology.

Supertopic 3: The Inner Life: Relationships, Practices of the Self, and the Fate of the Soul

3.1: Knowledge, advice, and practical wisdom. This subtopic is focused on knowledge, advice, and practical wisdom. It includes discussions of advice and counsel, the conduct of courtiers, and aphorisms and fables that convey practical advice. The subjects of this advice are broad and include both public (e.g., management of tax collectors and courtiers) and personal concerns.

3.2: Virtue, wisdom, and the fate of the soul. This subtopic is focused on religious discussions of virtue, wisdom, and the fate of the soul. Many of the passages from both Christian and Muslim texts focus on the connections between virtue and wisdom, on the hand, and the passing of one's soul to a heaven or a hell, on the other.

3.3: Knowledge, wisdom, courtesy, and manners. This subtopic is focused on knowledge, wisdom, courtesy, and manners and includes several discussions of the relationships between some or all of these things and moral virtue.

3.4: Life skills, food, and the sea. This subtopic lacks a unified focus and includes passages on 'life skills" like property acquisition, speech, and writing; food; and fish and seafaring. There are a large number of passages from the Christian text, *The King's Mirror*, which is preoccupied with seafaring and sea life.

3.5: Justice, law, and punishment. This subtopic is focused on the administration of justice and criminal law and punishment. It also includes discussions of the relationships between divine and human law and divine and human punishment, wealth, and customs.

3.6: Life, death, and the fate of the soul. This subtopic is focused on life, death, and the ultimate fate of the soul. It includes discussions about preparation for and mindfulness of death, the ultimate fleetingness of temporal political power, and the importance of pursuing virtue while one is alive.

3.7: Women and wives. This subtopic is focused on women and wives. It includes discussions of the attributes of women, contrasts between women and men, stories and examples

that feature women prominently, relations between men and women (including marriage, courtship, and concubinage), and the selection of wives.

3.8: Practical advice and cautionary tales. This subtopic is very broadly focused on practical advice and cautionary tales. This advice includes how to behave toward particular groups of people, treatment of medical concerns, and virtuous behavior more generally. It also includes a number of passages that convey (through cautionary tales or otherwise) arguments about truth and lies and appearances and reality.

3.9: Body and soul. This subtopic is focused on the relationship between body and soul and the ultimate fate of the soul. It also includes discussions of the essence of matter and bodily punishments and purity, as well as seemingly less relevant discussions of celestial bodies, recreation and relaxation, and uses of words and language.

3.10: Friends, friendship, and enemies. This subtopic is focused on human relationships, especially those between friends and enemies. It includes discussions of the requirements of true friendship, categories of friends, and the attributes of an enemy. It also includes discussions of laughter and amusement, on the hand, and secrets, lies, deceit, and truth, on the other. These latter discussions are often (though not always) related to those of friendship and enemies.

3.11: Love. This subtopic is focused on love of various kinds. It includes discussions of romantic love, lovesickness, political love (e.g. the ruler's love for his people, the people's love for one another and/or their ruler, etc.), and divine love.

3.12: Water and land. This subtopic is focused on water and land as locations and objects of political management. It includes discussions of land, water, and canal management; famine; land ownership; agriculture and taxation; and important rivers. It also includes stories and examples that take place in and around water. This subtopic is overwhelmingly dominated by passages from Muslim texts.

3.13: The human body and aesthetic description. This subtopic is focused both on the human body and forms of aesthetic description. It includes passages that use extensive body imagery (e.g., eyes, hair, etc.) and passages that rely heavily on aesthetic description of people, natural settings, and events.

3.14: Advice to women. This subtopic is focused on advice to women about behavior, comportment and virtue, as well as advice to men about how to behave toward women both within marriage and in other social contexts.

3.15: Day and night. This subtopic is focused on the passing from day to night. It includes discussions of light and dark, sleep and dreams, and quotidian activities and habits.

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3.16: Age and generations. This subtopic is focused on age and generational comparisons. It includes discussions of the attributes of the young and old, the wisdom of the elderly, and comparisons between the young and old. It also includes stories in which elderly or youthful characters feature prominently.

3.17: Taxation. This subtopic is focused on taxation, and particularly land tax, tax collection, and various forms of property ownership. It includes discussions about setting the tax rate, taxation during famine and catastrophe, the characteristics of good and bad tax collectors, and the connections between the military and taxation. This category is overwhelmingly dominated by passages from Muslim texts.

3.18: Travel and the sea. This subtopic is focused on travel (particularly by sea) and myths and stories about the sea. It also includes descriptions of foreign lands and their populations and customs. This category is overwhelmingly dominated by Christian texts.

3.19: Praise. This subtopic is focused on praise. It includes discussion of both deserved and undeserved praise, as well as distinctions between praise, on the one hand, and flattery or other forms of pleasing deceit, on the other. While this category includes passages that are primarily drawn from Christian text, passages from one Muslim text, *Wisdom of Royal Glory* are included here because one of the main characters in the narrative is called "Highly Praised."

3.20: Human senses and faculties. This subtopic is focused on the human senses and faculties. It includes discussions of the five external senses, the faculties of the soul, bodily organs, sickness and health, and comparisons between the polity and the body. This category is overwhelmingly dominated by passages from Muslim texts.

3.21: Violence and "deviants." This subtopic is focused on violence, death and conflict, and the treatment of social or religious "deviants" (including apostates, heretics, and idolators). It also includes discussions of the permissibility of killing certain classes of people (e.g., elderly idolators, women), the permissibility of killing in war, classes of homicide, and the issue of "blood" money. This category is overwhelmingly dominated by passages from Muslim texts.

3.22: Dreams, fortune, and visions of the future. This subtopic is focused on dreams, fortune, and visions of the future. It includes discussions of the interpretation of dreams, good and bad fortune, the instability or fickleness of fortune, fate, and prophecy.