

# Are Uncles Evil?\*

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## Abstract

Do brothers/uncles destabilize autocracies? Violent examples of uncles of autocrats murdering their nephews to take power themselves suggest that autocracies face acute threats from within via monarchs' brothers and uncles. Through a novel dataset on all legitimate and illegitimate siblings of monarchs from 32 European polities between 1000 and 1800, I employ a quasi-experimental design comparing monarchs with brothers to those with sisters to evaluate if brothers of monarchs, or uncles of successors, threaten existing regimes and monarchs' sons. Then, with novel data on abrupt and exogenous natural deaths of monarchs, I evaluate whether brothers threaten the stability of the next reign with their royal brothers now removed. In neither case are brothers more destabilizing to regimes than sisters. In fact, through personalistic powersharing arrangements, monarchs can protect their sons and translate their ambitious brothers into stabilizing actors. From novel data on secular and ecclesiastical appointments to royal brothers and brotherly conflicts, I find that secular appointments of royal brothers stabilize monarchs' reigns when monarchs have an heir. In short, uncles are not evil, just buyable.

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## Introduction

“And thus I clothe my naked villany  
With odd old ends stol’n out of holy writ,  
And seem a saint, when most I play the devil.”

- Richard III from *The Tragedy of Richard III*, [Shakespeare](#) (2000/1597)

Edward IV, King of England, died on April 9th, 1483. Edward IV left his 12-year-old son, and heir to the throne of England, Edward V, under the protection of his brother Richard III. While escorting his regal nephew to London for his coronation, Richard placed Edward V and his younger nephew Prince Richard of Shrewsbury in the Tower of London. With his nephews confined, Richard III seized the throne for himself in June of 1483. That same summer, his two nephews disappeared from the Tower. Their remains were never found. The accusation made in Shakespeare’s dramatic history and by philosopher and statesman Thomas More suggests Richard III ordered his servants to murder his nephews ([More, 1883](#)).<sup>1</sup>

Richard III’s ambition and murder of his nephews perhaps best represent the evil uncle stereotype and decision-making when considering insider threats to autocratic regimes, particularly hereditary regimes. Consider an ambitious brother of a monarch. He desires the throne. While his brother is alive, he could challenge both his brother and his crown prince nephew for the throne. Or he could wait until his brother dies, giving up precious years on the throne for a potentially easier path through his weak nephews. Richard III chose to wait. He chose successfully.

A large body of work in history highlights brothers of reigning or deceased monarchs usurping the throne from their brother’s son/their nephew (e.g., [Freed, 1995](#); [Bartlett, 2020](#); [Bushkovitch, 2021](#)). For historians of medieval and early modern Europe, brothers are uniquely positioned to evaluate the temporal trade-offs of when to make an attempt for the throne. Brothers have ample resources to launch a challenge, can leverage their family and

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<sup>1</sup>The veracity, particularly of More’s account of events and specific murderers, is still subject to debate among historians. For example, see [Thornton \(2021\)](#).

elite networks to gain political and military support, and often are the next in line for the throne after their nephew. This paper asks the basic question: Are brothers/uncles evil? Do they pose dire threats to autocratic stability?

While evil uncles were not, and are not, the only potential threat to historical European monarchs, this paper evaluates the impact of a monarch having a brother on the stability of their regime and their successor's regime in historical Europe. Through a novel dataset on all legitimate and illegitimate siblings and children of monarchs from 32 European polities between 1000 and 1800, I employ a quasi-experimental design leveraging the comparison of monarchs with brothers to those with sisters to see if brothers of monarchs/uncles of crown princes threaten existing regimes and monarch's sons. Examining 699 polity-reigns, I find no impact of monarchs having at least one brother on the number of civil wars started during their reign, the number of international wars started during their reign, the probability their reign ends in deposition, or the probability their reign ends in a natural death (i.e., does not resign, does not get conquered, or does not get deposed). When evaluating whether brothers impact reign stability if the monarch has at least one son, I still find no significant effect of a monarch having a brother instead of a sister on any measure of reign stability. Alone, these findings do not dispel the evil uncle stereotype. Rather, they suggest that uncles may forgo challenging both their brother and nephews and simply wait for their brothers to die (like Richard III) to just challenge their nephews at the cost of a few years not on the throne.

To evaluate if evil uncles choose this approach, I generate a second novel data set on the abrupt natural deaths of monarchs (e.g., falling off horses, strokes, shipwrecks, etc.). Leveraging these exogenous abrupt natural deaths, I evaluate whether a monarch having at least one brother and at least one son destabilizes the successive regime after the monarch dies an abrupt natural death. If brothers/uncles truly do pose a threat to their nephews, then the successive reign should face more destabilizing events should the new monarch's predecessor have a brother. I do not find that having at least one brother, compared to a sister, for a monarch who dies an abrupt death, destabilizes the successive reign, regardless

if the deceased monarch had a son or not.

If brothers do not destabilize their own brother's reigns or their brother's successive reigns, what keeps these ambitious brothers in check? I argue that personalistic powersharing arrangements via landed titles or ecclesiastical positions can sufficiently satiate royal brothers and prevent sitting monarchs and their sons, crown princes, from facing an ambitious challenger. Collecting data on secular (sovereigns, counts, and duke), ecclesiastical (bishops and cardinals) appointments to royal brothers, and instances of direct conflict between a monarch and his royal brother(s), I find evidence that royal brothers with secular appointments are less likely to rebel against their brother, but only if their brother has a son.

These findings add an important dimension to the general literature on the politics of succession in historical autocracies ([Kokkonen and Sundell, 2014](#); [Abramson and Carter, 2016](#); [Kokkonen and Sundell, 2020](#); [Kokkonen, Møller and Sundell, 2022](#); [Zhang, Yu and Zhang, 2023](#); [Nong, 2024](#); [Smith, 2026](#)) and modern autocracies ([Svolik, 2012](#); [Meng, 2021](#)): hereditary succession that favors males is more stable than previously thought. One of the key tradeoffs between hereditary and non-hereditary succession rules would be challenges from outside elites vs. inside family members. Establishing a hereditary rule can dissuade outside challengers, but potentially embolden challengers at the top of the succession order, like brothers of the sitting monarch.

More generally, the results add to the growing scholarly understanding of the positive, or at least non-negative, impact family members play in stabilizing historical ([Dube and Harish, 2020](#); [Kokkonen et al., 2021](#)) and modern autocracies ([Herb, 2016](#)). From daughters helping to cement foreign alliances ([Benzell and Cooke, 2021](#); [Pastrnak, 2023](#)), to sons increasing state capacity ([Acharya and Lee, 2019](#)), the finding that uncles do not increase the probability of conflicts helps shift their image from a dangerous hindrance to a familial asset, or at the very least no different than other ambitious elites, for a ruling monarch.

Results from the analyses evaluating the impact of position appointments to brothers

and the stability of the reign contribute to growing literature on how different types of powersharing goods can achieve stability for the autocrat ([Arriola, 2009](#); [Meng, Paine and Powell, 2023](#); [Desierto and Koyama, 2026](#); [Pengl and Roessler, 2026](#)). Landed titles, ways that historical European monarchs could form credible commitments with elites ([Blaydes and Chaney, 2013](#); [Erickson, 2026](#)), provide stable powersharing avenues for autocrats to reduce conflict and remain in power without formalized bureaucracies to distribute positions to quell elites.

The rest of the paper proceeds as follows. I outline the logic behind the evil uncle stereotype and the existing case-study evidence to support the logic. I then introduce considerations into this logic that may mute or outright negate the logic of the evil uncle stereotype, with particular emphasis on the power-sharing arrangements monarchs can strike with their brothers to cement their rule. Next, I present analyses on the impact of ambitious brothers on the stability of their monarchical brothers' reigns and the results on thier impact of their nephews' reigns following the abrupt death of their brother. An examination of the role of monarch-brother powersharing arrangements can quell the evil uncle threat follows the main results.

## The Evil Uncle Stereotype

[Bartlett \(2020\)](#) condenses the evil uncle logic into a simple question, “If your father was a king, you might well dream of being a king yourself, and although you might have to tolerate your older brother inheriting the throne, why should his sniveling children have precedence over you (p. 211)?” Bartlett’s question implicitly refers to three trade-offs a brother navigates when considering taking the throne: remaining peaceful or challenging his brother and nephew now, remaining peaceful and challenging his nephew later, and if he decides to challenge, when.

Consider a singular, ambitious brother of a reigning monarch. All else equal, he desires

the throne. His brother sits on the throne and has a son. The monarch designates his son the crown prince, who will inherit the throne once the monarch dies. The king's brother faces no reasonable or legal path to place himself on the throne. The ambitious brother confronts a temporal trade-off. Immediately, he considers whether to challenge his brother and nephew for the throne or remain peaceful. Conflict is costly. Plus, his strength relative to the combined forces of his brother and nephew (i.e., his probability of winning) is less than if he simply faced his nephew. However, should he wait until his brother dies to challenge his nephew's nascent reign, he sacrifices valuable years on the throne. In other words, the brother/uncle may challenge early to win more spoils at a higher risk of losing the conflict, or he can sacrifice years on the throne for an easier fight once his brother dies.

If years on the throne are sufficiently lucrative, if life expectancies are low,<sup>2</sup> or if their successor nephews are relatively young and therefore weak, ambitious brothers will risk challenging their monarchical brothers and crown princes when their regal brothers are still alive. One example of an ambitious and impatient royal brother was Duke of Albany and Earl of March Alexander Stewart<sup>3</sup>, brother of King James III of Scotland from 1460 to 1488. In 1482, Stewart leveraged a deal with the English king, Edward IV, to bring English forces to attack his brother James II. At the time, James III had a nine-year-old son, James IV. The attack and temporary control of the Scottish government in 1482 and 1483 was a mild success as Stewart gained the titles of the Earl of Mar and Garioch in a 1483 peace arrangement between him and his brother. Stewart remained unsatisfied. In December of 1483, Stewart again tried to attack James III, but failed the kidnapping ([Stephen, 1898](#)).

Royal brothers made similar gambles beyond the British Isles. Henry the Fratricidal (i.e., Henry III), the illegitimate son of Alfonso XI of Castile, partnered with Peter IV of Aragon and disgruntled Castilian nobles to challenge Henry's brother Peter I of Castile in 1351 ([Kagay and Villalon, 2021](#)). With the Castilian succession crises folded into a larger

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<sup>2</sup>This is similar logic to the argument of [Kokkonen and Sundell \(2014\)](#) and [Kokkonen, Møller and Sundell \(2022\)](#) as to why primogeniture succession regimes are more stable than agnatic seniority succession regimes.

<sup>3</sup>Alexander Stewart earned the title of Earl of March in 1255 and Duke of Albany before 1258 during the reign of his father, James II.

international conflict, Henry III gained the throne from his brother for a year in 1366. Losing the monarchy in 1367, Henry III continued the fight against his restored brother, who at this point had a 12-year-old son, John. During the autumn siege of his brother in Toledo, Henry III bribed an ally of Peter I to trick and lead Peter I and some trusted men to Henry III outside the town walls. When Henry III approached the unsuspecting and waiting Peter I, Henry III shouted “Who is the son of Jewish whore who calls himself king of Castile?” Peter I responded, “Thou art the son of a whore, I am the son of Alfonso ([Kagay and Villalon, 2021](#)).” The brothers wrestled until one of Henry III’s men tossed him a dagger that Henry III lodged into Peter I. Then Henry III’s men provided the finishing blow. Henry the Fratricidal became king of Castile once again.

In both examples, the brothers received considerable support from international allies to buttress their campaigns against their monarchical sibling and crown princes. However, their immediate success was tenuous and did not always translate into permanent rule. Thus, the extra years gained on the throne, if not spent fighting long civil wars from challenging a brother directly, may not justify the risky strategy of an immediate challenge, even for the most ambitious and relatively strong brother.

Suppose a royal brother forgoes challenging both his kingly brother and nephew during his brother’s reign. Once his ruling brother dies, he may agitate. Consider the same ambitious brother who faced the choice to immediately rebel or remain peaceful. His royal brother now dies an abrupt death. The abruptness of the death does not allow for the king, ambitious brother, and crown prince to negotiate further succession or powersharing arrangements. The crown prince assumes the monarchy. The crown prince, now king, inherits his father’s assets but loses his father as a powerful ally and protector if the crown prince is very young. The brother, now uncle, now faces more favorable odds. He just needs to remove the crown prince. The increased probability of winning a succession fight comes at the price of waiting for his brother to die. There is no guarantee that he outlives his ruling brother. And while waiting, the uncle sacrifices rents he could only receive on the throne.

Richard III of England exemplifies this option for the evil uncle. However, he is not the only example, nor the most violent. A particularly sanguine example involves the two brothers of the King of Franks in Orleans, Chlodomer. Chlodomer died in 524 survived by two sons and his two brothers, Childebert and Clothar. To prevent their nephews from inheriting lands and the throne, Childebert and Clothar intercepted their nephews and their nephews' entourage in the woods. Clothar wrestled one nephew to the ground and stabbed him in the armpit. After Childebert protested going any further, Clothar threatened to kill his brother if they did not follow through on their plan. Clothar then killed his other nephew and his nephews' entire retinue of servants. Their nephews were seven and 10 years old ([Doolittle, 2018](#)).

Beyond brutal historical examples, empirical scholarship finds some narrow support for the evil uncle stereotype. [Kokkonen et al. \(2021\)](#); [Kokkonen, Møller and Sundell \(2022\)](#) find in their work on family size and regime stability that the more uncles and brothers a monarch has, the more likely he is to be deposed. In evaluating the relationship between family member presence and deposition, they find that uncles and brothers are those most strongly associated with monarch deposition.

## Just a Stereotype?

While vicious and memorable examples of brothers challenging their monarchical brothers and crown prince nephews and uncles murdering their nephews after their brothers die persist, I argue there are a few potential reasons these violent examples are exceptions rather than the rule.

Firstly, the most likely opportunities for an ambitious brother to take the throne for himself are extremely rare. Abrupt deaths of sitting monarchs were not common. For 32 polities from 1000 to 1800 in Europe, there are 699 polity-reigns. Only 82 died abruptly from a sudden medical event or an accident. With these quick removals of strong rivals so rare, most monarchs' brothers never get a chance to exclusively challenge their nephews.

Second, the costs of either challenging both one's brother and crown prince nephew or simply one's newly crowned nephew may be exceedingly high. Consider the case of Henry the Fratricidal. He first rebelled against his brother Peter I in 1351, albeit with the support of Peter IV of Aragon. It took 15 years for Henry to gain the throne, and once he did, he lost it within a year before taking it back after murdering his brother in hand-to-hand combat. A long, costly battle was also the case for Alexander Stewart when he besieged his brother James III, King of Scotland, in 1482. Even with the support of the English, Alexander did not make it to the throne. Should an ambitious brother wait until his brother dies, murdering one's nephews, even young ones, comes at an exceedingly high cost, as evident from Childebert almost backing down from killing his second nephew in the woods in 524.

Beyond the rarity of opportunity and the high costs of conflict, monarchs are not passive in response to their brother's potential ambition. Monarchs could strike and did strike arrangements with rivals, both distant and familial, to minimize the probability that an individual would challenge the monarch's rule. While monarchs could not choose their siblings or what gender they were, monarchs could and did form powersharing arrangements with family members.

## **Moderating Impacts of Individualized Powersharing Arrangements.**

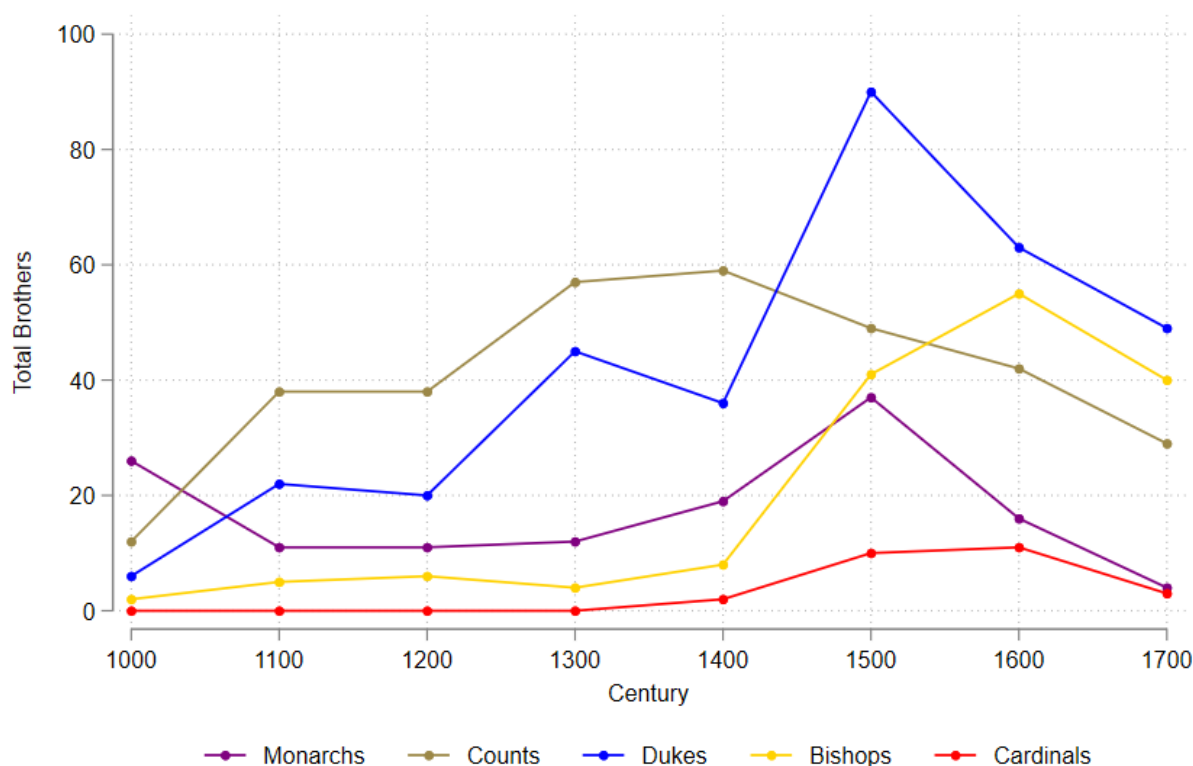
Unlike their autocratic contemporaries in China with robust bureaucracies to employ and pacify potential elite or family rivals ([Wang, 2022](#); [Chen, Wang and Zhang, 2024](#)), European monarchs did not have access, at least not until the modern period, to robust bureaucracies. In fact, most monarchs had very little liquid wealth to quickly buy off their family members ([Mann, 1987](#); [Strayer, 2005](#); [Blaydes and Chaney, 2013](#)). But monarchs did have land. Giving brothers land directly provided two benefits to the monarch's brother. Land was productive, and he could extract rents from it. Land, the men it provides, the income it can generate, and the resources it can produce, imbue the recipient with coercive capacity that he can deploy against the monarch should the monarch try to take away his brother's land.

In other words, land grants provide strong, credible commitments between the monarch and his brother [Blaydes and Chaney \(2013\)](#); [Blaydes and Paik \(2016\)](#); [Kokkonen, Møller and Sundell \(2022\)](#); [Erickson \(2026\)](#). A deal between a monarch and his brother involving land can buy off an ambitious brother with assurances that his monarchical brother cannot take away that land easily.

However, some polities might not have an overabundance of land to distribute. In that scenario, rulers typically turn to positions within the bureaucracy, but those robust institutions were lacking in historical Europe, particularly before the 17th century. Rather, rulers could turn to the church as a source of appointments to assign to their brothers. Though many bishoprics were formally elected, European monarchs often retained the right to approve bishops' elections. Or monarchs leveraged political or financial levers to see their preferred candidate in a given diocese. Bishoprics, or the more prestigious College of Cardinals, provide brothers of the monarch with lucrative rents, domestic and international influence, all while without transferring direct coercive capacity to the brother.

Autocrats throughout Europe's history relied on both secular landed titles (monarchs of other polities, counts, and dukes) and ecclesiastical positions (bishops and cardinals) to strike bargains with their brothers to protect themselves and their crown prince sons. [Figure 1](#) shows the total number of positions held by 1114 royal brothers of 32 European polities from 1000 to 1800 by century. In 1000, when Europe was fragmented, the most common position a brother held was a sovereign of another polity. As states consolidated through warfare and marriage, this became less common and non-sovereign territorial distributions, titles of counts and dukes, increased in their relative share of appointments. It is only after the 15th century that appointments to ecclesiastical positions, particularly bishoprics, became a common position held by royal brothers.

Figure 1: Position Held Century



Whether secular or ecclesiastical, positions given to royal brothers when the monarch has an heir play a particular role in deterring rebellion. Should a monarch rule without a son, this lowers the barriers to the throne for the monarch's brother. But without a son, royal brothers were often the next in line for the throne, meaning a royal brother's only trade-off between waiting for the throne or killing his brother immediately would be the lost rents for wait a few extra years to take the throne. Compared to a royal brother whose nephew will take the throne, who has no chance of the throne without rebelling, a monarch's royal brother who is an uncle poses the serious threat. Therefore, distributing positions to royal brothers who have nephews should decrease their odds of rebellion compared to brothers without nephews.

Before turning to ways kings could buy off their ambitious brothers, I first evaluate whether they needed to be bought off in the first place.

# Empirical Approach

## Data

The sample includes 32 polities across Europe between 1000 and 1800 AD. This dataset builds on samples of European polities in previous studies examining succession regimes and the role of sons in autocratic stability ([Acharya and Lee, 2019](#); [Kokkonen and Sundell, 2020](#); [Kokkonen et al., 2021](#)). Existing samples of historical European polities bias towards larger and longer-lasting states, as data survivability and availability are greater for larger polities. This bias particularly alters an evaluation on the impact on brothers/uncles on regime stability as: 1) larger polities have larger endowments of land to distribute via titles in monarch-brother powersharing arrangements, 2) smaller polities may rely on ecclesiastical rather than secular powersharing arrangements with brothers, 3) siezing the throne of smaller polities may not provide as many rents to the usurper as a larger state would gain, and 4) larger polities with more state capacity strucurally deter both domestic and international challengers. To remedy these biases, I expand the [Kokkonen et al. \(2021\)](#) polity sample by 20 percent. I collect novel data on monarchs, their children, siblings, parliamentary meetings, depositions, civil conflicts, international conflicts, size, and natural deaths for six smaller European polities: Barcelona, Florence, Gwynedd, Hanover, Majorca, and Milan (See Appendix Figure [A1](#)).

Additionally, this new dataset collects information on all known illegitimate siblings and children of all monarchs in the sample’s 32 polities and merges with existing data on legitimate monarchical siblings ([Kokkonen et al., 2021](#)). I collect data on illegitimate siblings as they play a non-negligible role in succession conflicts ([Duindam, 2016](#)) and their inclusion increases the reasonableness of the research design: the as-if-random assignment of brothers to monarchs when conditioning on the number of siblings.<sup>4</sup> I also collect novel data on abrupt natural deaths (i.e., natural deaths from unexpected medical events and fatal accidents).

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<sup>4</sup>Though some scholarship explicitly argues illegitimate family members play minor to non-important roles in the affairs of monarchs ([Acharya and Lee, 2019](#)).

Appendix Table A1 contains a full list of polities, their years in the sample, and sources for data collection for each polity. I discuss the additional novel dataset on powersharing arrangements between monarchs and their brothers before that set of analyses.

## Unit of Analysis

Rather than examine the impact of brothers on autocratic stability at the polity-year level, I examine the impact of brothers at the polity-reign level. Though this drastically reduces the number of observations in each analysis (from 14,000 polity-years to 699 polity-reigns<sup>5</sup>), polity-reign level analyses have four main empirical advantages over polity-year analyses.

First, many, if not a majority, of the illegitimate (and sometimes legitimate) siblings in the data have missing birth years or years of death. However, the information on whether or not an illegitimate sibling was alive during their sibling's reign is far more credible. Analyzing the impact of having a brother in any given year is subject to heavy measurement bias, as one would need to conjecture when they enter or leave the data. Collapsing down to the reign level eschews this issue by considering the maximum number of siblings during the reign: often either the first or second year of the monarch's tenure.

Second, the evidence for a balanced gender ratio of siblings, an underlying assumption necessary for the plausible as-if-random assignment of brothers, is stronger at the polity-reign level. This is likely due to the heavy measurement error of siblings entering or leaving the sample at the polity-year level. Third, a polity-reign analysis allows one to evaluate an additional outcome variable of regime stability: whether the reign ended in a natural death. Fourth, the polity-reign level elicits a more straightforward approach when analyzing the impact of brothers/uncles on the subsequent regime's stability after an abrupt natural death.

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<sup>5</sup>I exclude interregnum reigns. Assigning siblings to these types of reigns is not possible.

## Treatment

To identify the as-if-random assignment of a brother to a monarch in his reign, I examine the effect of a monarch having at least one brother at the beginning of his reign on the probability of a host of stability outcomes, conditional on the total number of siblings a monarch has at the start of his reign. Mechanically, I do this by including fixed effects for each monarch’s total number of siblings. This technique, employed in work gender and political economy ([Washington, 2008](#); [Glynn and Sen, 2015](#)) follows similar principles to historical economy political work leveraging gender of family members and changes in state capacity ([Acharya and Lee, 2019](#); [Becker et al., 2020](#)): fixing the total number of siblings, the gender of each sibling is as-if-random with each sibling having a roughly 50 percent chance of being a brother.

The as-if-random treatment specification relies on parents not employing some type of fertility-stopping rule that biases the gender ratio of their children away from a 1-to-1 ratio as the number of children increases ([Glynn and Sen, 2015](#)). In the historical European context, this could be a concern. Since many succession regimes rely on the presence of a male heir, European monarchs and ambitious nobles may stop having children after giving birth to a boy more frequently than girls, thus inflating the gender ratio for a monarch’s siblings. This is a substantial concern given previous work that shows monarchs having more sons increases state capacity ([Acharya and Lee, 2019](#)) and having daughters can produce civil conflict from the expectation of succession issues ([Becker et al., 2020](#)), if monarchs at the time are aware of these consequences.

Monarchs might hold preferences about their child’s gender, but politicking, medical realities, and sexual behavior made biases in a monarch’s sibling gender ratio unlikely. First, both sons and daughters provided political value to a monarch beyond securing succession. Monarchs leveraged their sons for military and bureaucratic service ([Freed, 1995](#); [Kokkonen, Møller and Sundell, 2022](#)) and relied on daughters to cement domestic and international partnerships through marriage alliances ([Benzell and Cooke, 2021](#); [Pastrnak, 2023](#)), making

both genders advantageous to a monarch’s political survival. Second, childhood in medieval and early modern Europe posed medical dangers for children. The average life expectancy for royals and nobles eclipses non-noble life expectancy, but often life expectancy estimates of historical Europe were conditional on surviving childhood ([Jonker, 2003](#); [Carrieri and Serraino, 2005](#)). Having as many children as possible, whose gender is uncontrollable, can serve as a genealogical insurance policy.

Third, though there is evidence that women during the Middle Ages in Europe had common knowledge that herbal abortifacients like Artemisia and juniper were somewhat effective ([Riddle, 2013](#)), there is no historical evidence of known, consistent medicinal contraceptives during that time in Europe ([Riddle, 1999](#)). However, mechanical birth control methods existed, but late in the sample of polities. The male sheath (i.e., condom) was introduced in Great Britain during the reign of Charles II (1660-1685), but was first mentioned in an Italian publication *De Morbo Gallico* (i.e., *The French Disease* or syphilis). I take this fertility-stopping rule into account by evaluating gender ratios before and after the 1564 publication. They remain relatively balanced. See Appendix Figure [A2](#).

Fourth, a monarch’s sexual proclivities outside their royal marriage resulted in illegitimate children that could balance out any potential fertility-stopping rules in their official marriage.<sup>6</sup> Royal mistresses, even during times of considerable Church influence from Rome, were common ([Abbott, 2010](#)) and their children played roles in succession conflicts ([Duin-dam, 2016](#)).

Finally, even if Europe monarch did not employ fertility-stopping rules writ large, monarchs themselves could change the composition of their siblings before taking the throne. One way to prevent a brother from usurping the throne is to remove that threat entirely. European monarchs did kill their brothers before taking the throne, but fratricide was extremely rare. From 1000 to 1800 for 32 European polities, I only identified 21 cases where a monarch’s brother died from conflict or foul play before his brother took the throne (See Appendix Ta-

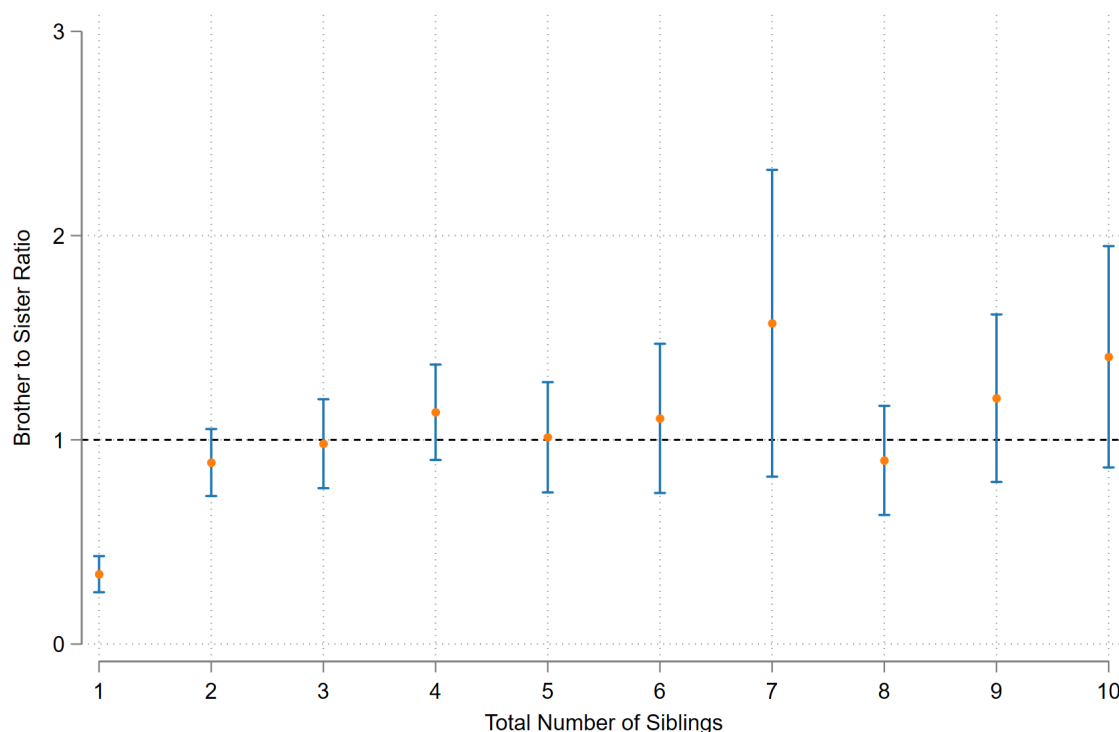
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<sup>6</sup>As [Acharya and Lee \(2019\)](#) note, illegitimate children are more likely to be recorded if they are male, but as Figure [2](#) shows, this paper’s sample of monarchs does not suffer from this issue.

ble A4). The sample contains 1114 brothers, making the 21 pre-ruling deaths just 1.9 percent of the total sample of brothers.

Taking these factors into account, the gender ratio of monarchs' siblings should be relatively balanced. Figure 2 shows the sibling gender ratio at the beginning of a monarch's reign by the total number of siblings for a monarch. For all but monarchs with one sibling, the gender ratios are balanced. Since the majority of the monarchs in the data are male, it is not surprising, or an empirical concern, that the monarchs with one sibling have more sisters than brothers on average. With multiple theoretical justifications against fertility stopping rules, preemptive alterations to the treatment, and relatively balanced sibling gender ratios for different total sibling combinations, it is very likely that the as-if-random assignment assumptions of the treatment specifics are met in this case.

Figure 2: Monarch's Sibling Gender Ratios at Beginning of Reign



Ratios include monarch's illegitimate siblings. Ten siblings include ten or more siblings. Bars show a 95 percent confidence interval.

## Outcome

When considering regime stability, I measure four outcomes: the number of civil war onsets during the reign, the number of international war onsets, whether the reign ends in deposition, and whether the reign ends in a natural death

I consider both civil and international conflict onsets, as many international European conflicts, especially in the 1700s, were fought over the succession of a major state (e.g., the War of Spanish Succession in 1701 or the War of Austrian Succession in 1740). Henry the Fratricidal's struggle against his brother Peter I in the 14th century was one of these civil-international conflicts. Plus, exact coding distinctions between civil and international conflicts in historical Europe are challenging. Another example of the challenging distinction is the War of the Public Weal in the 15th century. The Duchy of Burgundy, Palatinate, and the Duchy of Cleves allied with domestic French dukes to challenge the French king Louis XI in 1465. However, the main challenger to Louis XI was his brother Charles, Duke of Berry, supported by a handful of other French dukes, giving the conflict a vital civil dimension. I rely on conflict data from [Kokkonen et al. \(2021\)](#) for larger European polities. For the smaller polities in my sample not in existing datasets (Barcelona, Florence, Gwynedd, Hanover, Majorca, and Milan), I collect data on conflict onsets from a variety of sources ([Wright and Wright, 1983](#); [Dupuy and Dupuy, 1977](#); [Phillips and Axelrod, 2005](#); [Clodfelter, 2017](#)).

For depositions and natural deaths, I rely on existing data collection efforts by [Kokkonen et al. \(2021\)](#) paired with a new collection of natural death and deposition data for the smaller polities in the dataset from [Eisner \(2011\)](#) and [Morby \(2014\)](#). The added benefit of considering whether a reign ends in a natural death is to account for the few, but non-zero, cases of resignation, abdication, and absorption into another state through conquest. I discuss the novel dataset of abrupt natural deaths preceding those results.

## Controls

A major threat to the presence of a brother at the start of a monarch’s reign is non-random events that could increase the probability of one type of sibling (i.e., brother or sister) dying prior to their regal sibling’s death compared to siblings of the opposite gender. In other words, if monarchs’ brothers die off more frequently than sisters, or vice-versa, from non-natural causes, then the measure of at least one brother at the beginning of a monarch’s reign, conditional on the total number of siblings, is biased. Events or characteristics that equally impact the probability of a sister or brother dying off before their regal brother (e.g., the Black Death after accounting for time fixed effects) would not bias the treatment variable.

Figure 2 shows relatively balanced sibling gender ratios for deceased monarchs. However, these controls can help address remaining biases. Below, I identify two “gendered sibling survivability” confounders that the analyses control for: the presence of parliaments and polity size.<sup>7</sup>

The presence of parliamentary meetings indicates that the ruler can leverage formal networking opportunities with domestic elites (Cox, Dincecco and Onorato, 2024). Since parliamentary networking could imperfectly substitute for domestic marriage networks, the current monarch’s parents possibly viewed the survivorship of their daughters as less of political importance. Thus, daughters might receive less medical care, downwardly biasing the probability that sisters survive to their siblings’ reign or throughout their siblings’ reign compared to brothers. To account for this, I control for the presence of a parliamentary assembly by dichotomizing Van Zanden and Van Leeuwen (2012) measure of parliamentary meeting frequency in a given century. For the new, smaller polities in the dataset that do not have parliamentary meeting frequency data from Van Zanden and Van Leeuwen (2012), I construct the binary measure from a variety of historical sources following Van Zanden et

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<sup>7</sup>Other current monarch characteristics like age, tenure, and gender all impact the stability outcomes of interest. However, controlling for them would induce post-treatment bias as those controls manifest post the current monarch’s gender ratio of children.

al.’s definition of parliaments. See Appendix Table [A1](#).

A country’s land mass and terrain may also confound the results. Traveling long and dangerous distances for marriage arrangements for sisters may impact their survival until their monarch sibling dies. Size and terrain also impact brothers’ survivability. Since brothers are tasked by their regal siblings to act as trusted military agents, larger and more treacherous lands increase the likelihood of pockets of domestic dissent and the deadliness of battles from terrain more conducive to combat. Thus, topography could reduce the probability that a brother survives until his regal brother’s death compared to the monarch’s sister. To measure this control, I calculate the logged  $km^2$  for a polity every quarter century from [Davies \(1992\)](#), [Hatton \(2001\)](#), [Seshat Data \(2026\)](#), and [EurAtlas \(2026\)](#).

Finally, analyses include both place fixed effects, via polity fixed-effects, and time fixed effects via century fixed-effects. Polity fixed-effects can capture any stable cultural norms that impact gendered sibling survivability or even cultural norms around royal mistresses and region-specific birth control methods that could impact fertility stopping rules. Century fixed-effects account for time-varying but not country-specific factors that could impact sibling survivability, like the nature, intensity, and frequency of warfare. Additionally, century fixed-effects can also account for the improving childbirth survival rates over time in Europe.

## Main Results

### Living Pricipal Monarch

Figure [4](#) estimates the following empirical model:

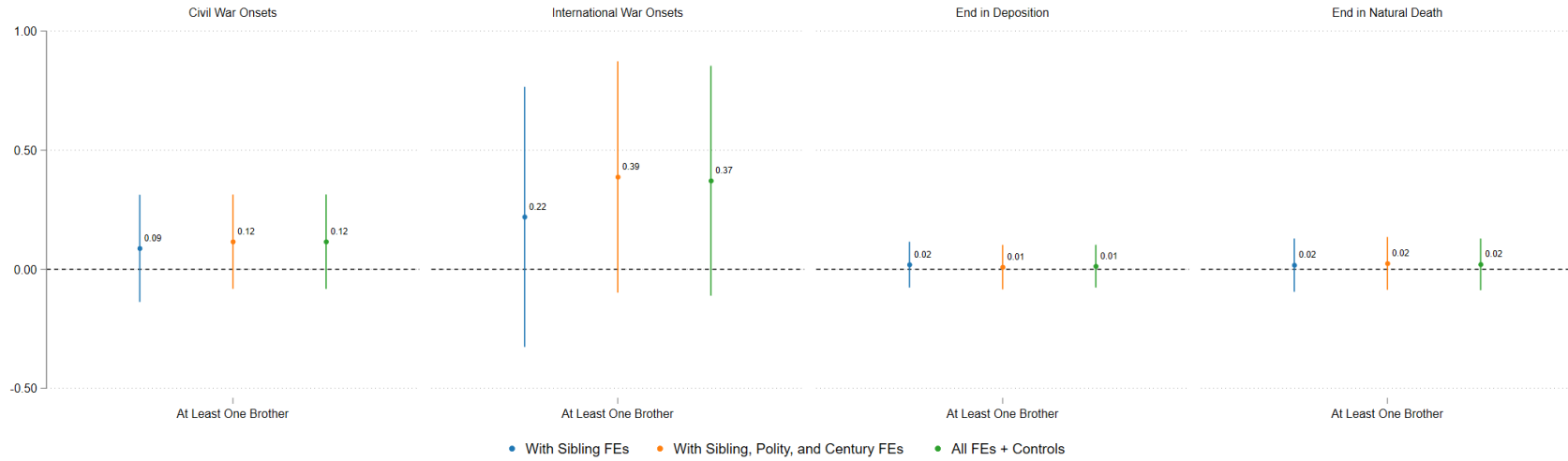
$$Y_{P,R} = \alpha + \beta_1(\text{At Least One Brother}_{P,R}) + \sigma_{P,R} + \kappa_{P,R} + \phi_P + \zeta_{P,R} + \epsilon_{P,R}$$

where  $P$  refers to the polity and  $R$  refers to a monarch’s reign. The main driver of the research design is  $\sigma_{P,R}$ , which are the sibling fixed effects. I control for the presence of parliaments and land size via  $\zeta_{P,R}$ , century fixed effects via  $\kappa_{P,R}$ , and polity fixed effects via

$\phi_P$ . Standard errors are still clustered at the monarch level. There are 632 unique monarchs.

From the simplest to the most robust, all model specifications show the impact of a monarch having at least one brother, compared to a sister, having null effects on all measures of regime stability. Beyond the estimates being statistically insignificant, the effect sizes are particularly small. Though these null results do not support the evil uncle stereotype, it is possible that the effects of brothers of monarchs with sons and monarchs without sons are pulling in opposite directions, biasing the total effect sizes towards zero.

Figure 3: Effect of Having at Least One Brother on Reign Stability

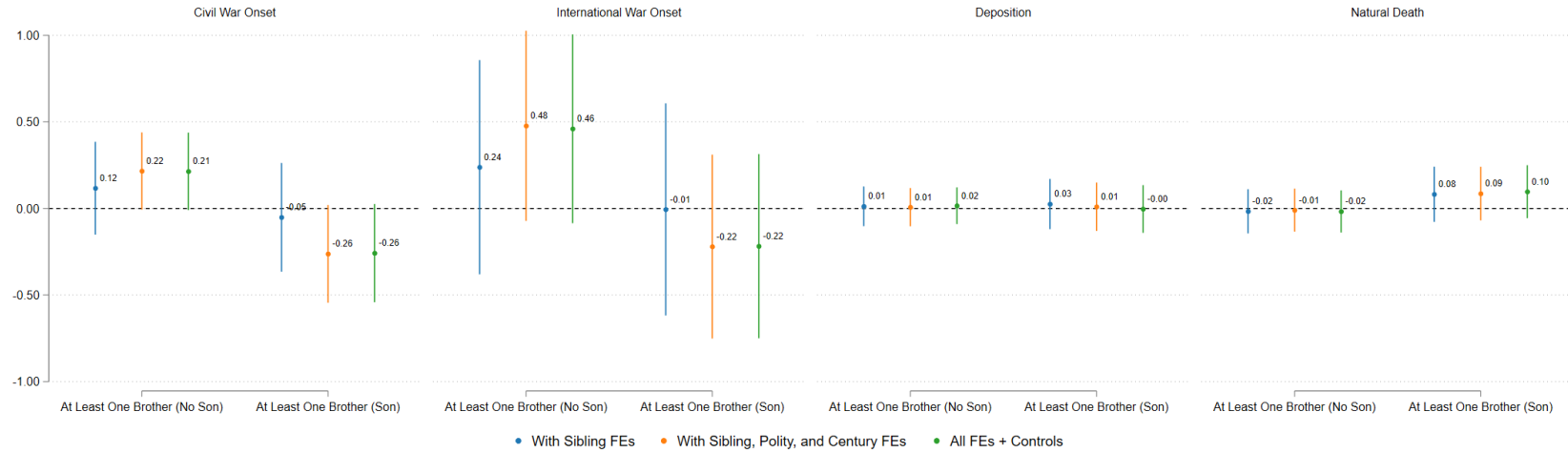


|                      | (1)               | (2)              | (3)              | (4)              | (5)              | (6)              | (7)                | (8)                 | (9)                | (10)               | (11)               | (12)               |
|----------------------|-------------------|------------------|------------------|------------------|------------------|------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| VARIABLES            | Civil War Onset   | Civil War Onset  | Civil War Onset  | Int. War Onset   | Int. War Onset   | Int. War Onset   | Deposition         | Deposition          | Deposition         | Natural Death      | Natural Death      | Natural Death      |
| At Least One Brother | 0.0876<br>(0.115) | 0.116<br>(0.101) | 0.116<br>(0.101) | 0.220<br>(0.278) | 0.388<br>(0.247) | 0.372<br>(0.246) | 0.0193<br>(0.0490) | 0.00897<br>(0.0476) | 0.0129<br>(0.0457) | 0.0172<br>(0.0569) | 0.0243<br>(0.0565) | 0.0204<br>(0.0552) |
| Observations         | 699               | 699              | 699              | 699              | 699              | 699              | 699                | 699                 | 699                | 699                | 699                | 699                |
| R-squared            | 0.008             | 0.308            | 0.309            | 0.023            | 0.349            | 0.354            | 0.025              | 0.159               | 0.182              | 0.024              | 0.120              | 0.135              |
| Siblings FE          | Yes               | Yes              | Yes              | Yes              | Yes              | Yes              | Yes                | Yes                 | Yes                | Yes                | Yes                | Yes                |
| Century FE           | No                | Yes              | Yes              | No               | Yes              | Yes              | No                 | Yes                 | Yes                | No                 | Yes                | Yes                |
| Polity FE            | No                | Yes              | Yes              | No               | Yes              | Yes              | No                 | Yes                 | Yes                | No                 | Yes                | Yes                |
| Controls             | No                | No               | Yes              | No               | No               | Yes              | No                 | No                  | Yes                | No                 | No                 | Yes                |

Controls include a binary measure of parliamentary meetings and logged polity area. Clustered standard errors by monarch id are in parentheses where \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

Figure 4 separates reigns for monarchs with a son and monarchs without a son. Results remain null and small in magnitude. If anything, the negative effect of at least one brother on civil war onsets suggests that brothers help stabilize their monarchical brother's reign if they have a son/crown prince. If brothers/uncles were as ambitious as the stereotype suggests, monarchs should experience less stable reigns when they have brothers compared to sisters. These results suggest that brothers and sisters provide equal levels of stability to the reigning monarch and his son.

Figure 4: Effect of Having at Least One Brother on Reign Stability by Son Status



|                                             | (1)                | (2)                | (3)                | (4)                 | (5)               | (6)               | (7)                 | (8)                 | (9)                  | (10)                | (11)                 | (12)                |
|---------------------------------------------|--------------------|--------------------|--------------------|---------------------|-------------------|-------------------|---------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| VARIABLES                                   | Civil War Onset    | Civil War Onset    | Civil War Onset    | Int. War Onset      | Int. War Onset    | Int. War Onset    | Deposition          | Deposition          | Deposition           | Natural Death       | Natural Death        | Natural Death       |
| At Least One Brother                        | 0.117<br>(0.136)   | 0.216*<br>(0.113)  | 0.214*<br>(0.114)  | 0.238<br>(0.315)    | 0.477*<br>(0.280) | 0.460*<br>(0.278) | 0.0123<br>(0.0584)  | 0.00742<br>(0.0562) | 0.0158<br>(0.0539)   | -0.0164<br>(0.0650) | -0.00974<br>(0.0632) | -0.0174<br>(0.0620) |
| At Least One Son                            | -0.148<br>(0.118)  | -0.0645<br>(0.101) | -0.0658<br>(0.101) | -0.239<br>(0.237)   | -0.140<br>(0.203) | -0.140<br>(0.202) | -0.0386<br>(0.0609) | -0.0335<br>(0.0590) | -0.0298<br>(0.0580)  | 0.0412<br>(0.0667)  | 0.0409<br>(0.0644)   | 0.0377<br>(0.0631)  |
| (At Least One Brother) * (At Least One Son) | -0.0513<br>(0.160) | -0.262*<br>(0.144) | -0.258*<br>(0.144) | -0.00565<br>(0.312) | -0.220<br>(0.270) | -0.218<br>(0.271) | 0.0255<br>(0.0738)  | 0.00984<br>(0.0712) | -0.00297<br>(0.0701) | 0.0820<br>(0.0811)  | 0.0858<br>(0.0788)   | 0.0968<br>(0.0779)  |
| Observations                                | 699                | 699                | 699                | 699                 | 699               | 699               | 699                 | 699                 | 699                  | 699                 | 699                  | 699                 |
| R-squared                                   | 0.015              | 0.321              | 0.322              | 0.026               | 0.353             | 0.358             | 0.025               | 0.159               | 0.183                | 0.034               | 0.130                | 0.146               |
| Siblings FE                                 | Yes                | Yes                | Yes                | Yes                 | Yes               | Yes               | Yes                 | Yes                 | Yes                  | Yes                 | Yes                  | Yes                 |
| Century FE                                  | No                 | Yes                | Yes                | No                  | Yes               | Yes               | No                  | Yes                 | Yes                  | No                  | Yes                  | Yes                 |
| Polity FE                                   | No                 | Yes                | Yes                | No                  | Yes               | Yes               | No                  | Yes                 | Yes                  | No                  | Yes                  | Yes                 |
| Controls                                    | No                 | No                 | Yes                | No                  | No                | Yes               | No                  | No                  | Yes                  | No                  | No                   | Yes                 |

Controls include a binary measure of parliamentary meetings and logged polity area. Clustered standard errors by monarch id are in parentheses where \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

## After Abrupt Death Principal Monarch

Following the logic of the evil uncle stereotype, ambitious brothers may wait to coup once their brother dies. Waiting can increase an uncle’s probability of winning a conflict against his newly crowned nephew. However, empirically examining the impact of the brothers of the previous monarch on the stability of the next monarch faces one large issue: anticipation of the uncle’s throne attempt. Even those monarchs who die a natural death often took precautions before they died to insulate their sons, often specifically from uncles. For example, William I of Sicily created a regency council under his widow’s control to prevent his brothers from acting as regents for his underage son, William II ([Weiler, 2021](#)). Similar episodes unfolded in Denmark in 1103 and in Germany in 1198. Fathers also gave their second, third, and fourth sons titles and positions in their will or right before their deaths to avoid future power struggles between their sons.

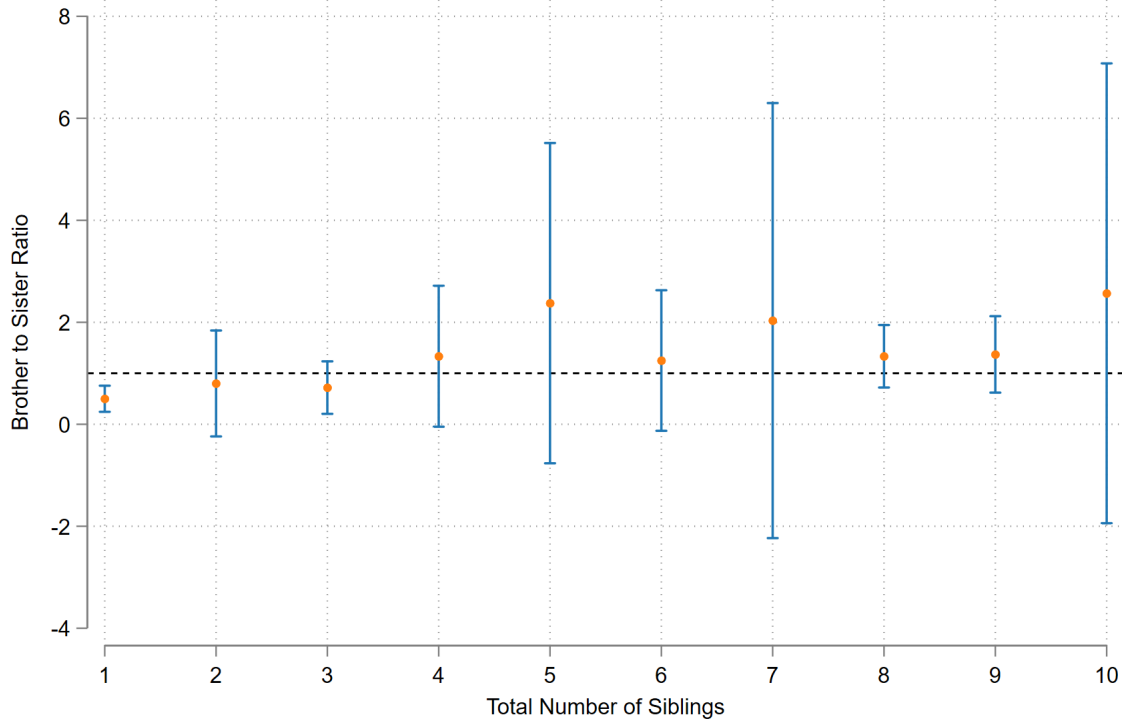
To circumvent this preemption issue that could bias against brothers of the previous reign destabilizing the next, I collect a novel dataset on abrupt (i.e., unanticipated and exogenous natural deaths), which I then use to consider the impact of brothers of monarchs who died abruptly on the successive regime. I rely on monarchy biographies on Wikipedia and encyclopedias on the Middle Ages with entries on individual monarchs (e.g., [Cantor, 1999](#)). Of the 699 reigns in the data set, 82 end in an abrupt natural death either through an accident (18 cases) or a medical event (64 cases). The abruptness of accidents and medical emergencies lessens the possibility of the monarch pre-emptively nurturing his uncle before the crown prince takes the throne. Appendix Tables [A2](#) and [A3](#) outline all the monarch’s whose reigns ended abruptly. The most common medical event was a stroke (20 cases) and the most common accident was falling from a horse (8 cases). Below are examples from England and France.

Table 1: Abrupt Monarch Natural Deaths

| Year of Abrupt Death | Monarch              | Polity  | Type of Abrupt Death | Description                               |
|----------------------|----------------------|---------|----------------------|-------------------------------------------|
| 1216                 | John                 | England | Medical Event        | Dysentery                                 |
| 1307                 | Edward I             | England | Medical Event        | Dysentery                                 |
| 1377                 | Edward III           | England | Medical Event        | Stroke                                    |
| 1685                 | Charles II           | England | Medical Event        | Stroke                                    |
| 1702                 | William III          | England | Accident             | Fell from Horse                           |
| 1727                 | George I             | England | Medical Event        | Stroke                                    |
| 1760                 | George II            | England | Medical Event        | Thoracic Aortic Dissection                |
| 1137                 | Louis VI             | France  | Medical Event        | Dysentery                                 |
| 1314                 | Philip IV (The Fair) | France  | Medical Event        | Stroke                                    |
| 1316                 | Louis X              | France  | Medical Event        | Pneumonia or Pleurisy                     |
| 1498                 | Charles VIII         | France  | Accident             | Struck Head on Stone Doorframe            |
| 1559                 | Henry II             | France  | Accident             | Eye and Brain Damage from Jousting Injury |

Since the filter of regimes preceding a reign ending with an abrupt natural death restricts the sample of reigns down to 82, Figure 5 checks the gender ratios between brothers and sisters of abruptly deceased monarchs at the end of their reign. Like the larger sample, the genders are balanced, and the issues of fertility stopping rules are even less of a concern as the monarch died unexpectedly, which would upset ongoing fertility plans.

Figure 5: Monarch's Sibling Gender Ratios at the End of Reigns that Conclude via Abrupt Natural Death



Ratios include monarch's illegitimate siblings. Ten siblings include ten or more siblings. Bars show a 95 percent confidence interval.

The empirical model estimate for reigns that began after the abrupt death of the previous monarch differs slightly from the model where the monarch and his siblings are both alive.

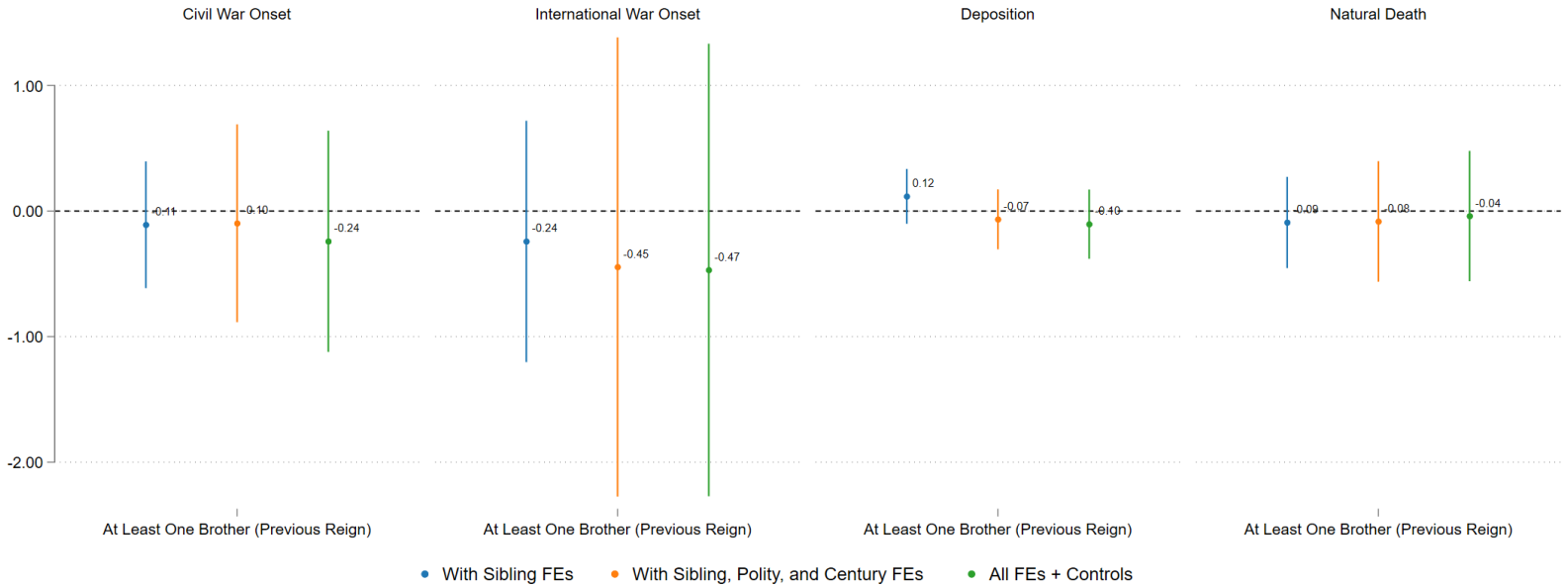
$$Y_{P,R} = \alpha + \beta_1(\text{At Least One Brother}_{P-1,R-1}) + \sigma_{P-1,R-1} + \kappa_{P,R} + \phi_P + \zeta_{P,R} + \epsilon_{P,R}$$

Rather than consider the brothers of the monarch current ruling, the model considers the presence of at least one brother and siblings at the end (i.e., year with the minimum number of siblings) of the previous reign, thus  $\beta_1(\text{At Least One Brother}_{P-1,R-1})$  and  $\sigma_{P-1,R-1}$ . Standard errors are still clustered at the monarch level. There are 76 unique monarchs.

Figure 6 below follows the same trend as the previous results. The relative impact of a monarch who dies an abrupt natural death having a brother, compared to a sister, does not

appear to destabilize the subsequent regime. All coefficients, no matter the robustness of the model, are null and are small in magnitude. These null results are particularly damning for the existence of the evil uncle trope because following an abrupt natural death drastically decreases an ambitious uncle's opposition's relative strength. If an uncle were to be evil, after the abrupt death of his brother would be the time.

Figure 6: Effect of Abruptly Deceased Monarch Having at Least One Brother on Subsequent Reign Stability



|                                       | (1)               | (2)                | (3)               | (4)               | (5)               | (6)               | (7)              | (8)                | (9)               | (10)               | (11)               | (12)               |
|---------------------------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|------------------|--------------------|-------------------|--------------------|--------------------|--------------------|
| VARIABLES                             | Civil War Onset   | Civil War Onset    | Civil War Onset   | Int. War Onset    | Int. War Onset    | Int. War Onset    | Deposition       | Deposition         | Deposition        | Natural Death      | Natural Death      | Natural Death      |
| At Least One Brother (Previous Reign) | -0.109<br>(0.253) | -0.0977<br>(0.395) | -0.241<br>(0.442) | -0.242<br>(0.482) | -0.446<br>(0.918) | -0.470<br>(0.905) | 0.117<br>(0.110) | -0.0662<br>(0.120) | -0.105<br>(0.138) | -0.0914<br>(0.182) | -0.0832<br>(0.241) | -0.0401<br>(0.261) |
| Observations                          | 81                | 81                 | 81                | 81                | 81                | 81                | 81               | 81                 | 81                | 81                 | 81                 | 81                 |
| R-squared                             | 0.063             | 0.648              | 0.666             | 0.109             | 0.736             | 0.737             | 0.084            | 0.588              | 0.608             | 0.054              | 0.483              | 0.491              |
| Siblings FE                           | Yes               | Yes                | Yes               | Yes               | Yes               | Yes               | Yes              | Yes                | Yes               | Yes                | Yes                | Yes                |
| Century FE                            | No                | Yes                | Yes               | No                | Yes               | Yes               | No               | Yes                | Yes               | No                 | Yes                | Yes                |
| Polity FE                             | No                | Yes                | Yes               | No                | Yes               | Yes               | No               | Yes                | Yes               | No                 | Yes                | Yes                |
| Controls                              | No                | No                 | Yes               | No                | No                | Yes               | No               | No                 | Yes               | No                 | No                 | Yes                |

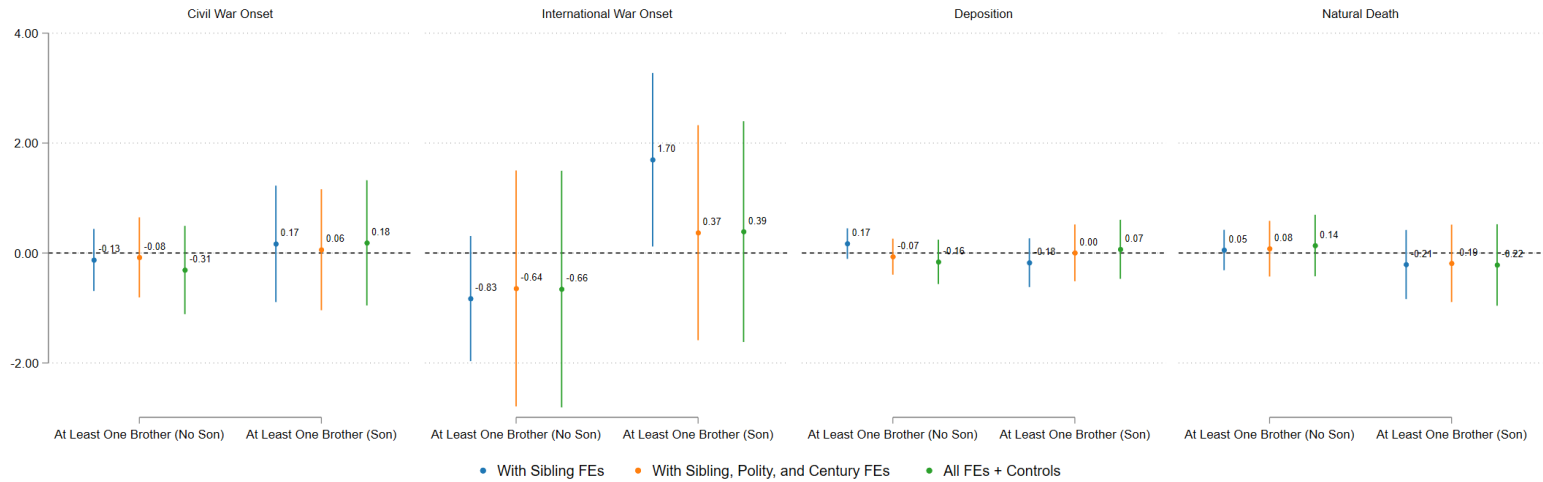
Controls include a binary measure of parliamentary meetings and logged polity area. Clustered standard errors by monarch id are in parentheses where \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

However, it is possible that the small magnitude of these estimates are driven by cases where the ambitious brother's royal sibling had no sons. Therefore, the brother need not be ambitious because he need not dispose of his nephew. Figure 7 adjudicates this possibility. I estimate the model:

$$\begin{aligned}
 Y_{P,R} = & \alpha + \beta_1(\text{At Least One Brother}_{P-1,R-1} * \text{At Least One Son}_{P-1,R-1}) \\
 & + \beta_2(\text{At Least One Brother}_{P-1,R-1}) + \beta_3(\text{At Least One Son}_{P-1,R-1}) \\
 & + \sigma_{P-1,R-1} + \kappa_{P,R} + \phi_P + \zeta_{P,R} + \epsilon_{P,R}
 \end{aligned}$$

where  $\beta_3(\text{At Least One Son}_{P-1,R-1})$  measures if the monarch who died an abrupt natural death had at least one son at the end of his reign. Focusing on the estimates of the impact of the previous ruler having a brother and a son on the stability of the subsequent regime, brother's of the previous abruptly dead monarch appear to have no impact on subsequent ruler stability. While the effect sizes are slightly larger than not considering the presence of a son, all the estimates, across all measures, across all specifications are null. Even under the most advantageous circumstances of an exogenous death of the sitting monarch, it does not appear that having a brother destabilizes subsequent regimes. The null findings for both when a monarch is alive and should he die abruptly hold under a series of additional robustness tests I describe below.

Figure 7: Effect of Abruptly Deceased Monarch Having at Least One Brother on Subsequent Reign Stability by Son Status



|                                             | (1)               | (2)                | (3)               | (4)                | (5)               | (6)               | (7)               | (8)                | (9)               | (10)               | (11)               | (12)               |
|---------------------------------------------|-------------------|--------------------|-------------------|--------------------|-------------------|-------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|
| VARIABLES                                   | Civil War Onset   | Civil War Onset    | Civil War Onset   | Int. War Onset     | Int. War Onset    | Int. War Onset    | Deposition        | Deposition         | Deposition        | Natural Death      | Natural Death      | Natural Death      |
| At Least One Brother (Previous Reign)       | -0.126<br>(0.283) | -0.0792<br>(0.365) | -0.309<br>(0.403) | -0.829<br>(0.571)  | -0.644<br>(1.077) | -0.656<br>(1.080) | 0.171<br>(0.139)  | -0.0661<br>(0.164) | -0.161<br>(0.202) | 0.0543<br>(0.184)  | 0.0795<br>(0.254)  | 0.137<br>(0.281)   |
| At Least One Son (Previous Reign)           | 0.273<br>(0.366)  | 0.178<br>(0.405)   | 0.158<br>(0.400)  | -0.631<br>(0.394)  | -0.372<br>(0.420) | -0.382<br>(0.430) | 0.153<br>(0.114)  | 0.129<br>(0.176)   | 0.113<br>(0.178)  | -0.0667<br>(0.138) | -0.0512<br>(0.210) | -0.0469<br>(0.218) |
| At Least One Brother * Son (Previous Reign) | 0.167<br>(0.532)  | 0.0597<br>(0.552)  | 0.185<br>(0.572)  | 1.697**<br>(0.792) | 0.370<br>(0.982)  | 0.390<br>(1.008)  | -0.176<br>(0.223) | 0.00358<br>(0.259) | 0.0676<br>(0.269) | -0.209<br>(0.315)  | -0.187<br>(0.353)  | -0.217<br>(0.372)  |
| Observations                                | 82                | 82                 | 82                | 82                 | 82                | 82                | 82                | 82                 | 82                | 82                 | 82                 | 82                 |
| R-squared                                   | 0.079             | 0.671              | 0.704             | 0.143              | 0.763             | 0.764             | 0.123             | 0.560              | 0.587             | 0.097              | 0.514              | 0.523              |
| Siblings FE                                 | Yes               | Yes                | Yes               | Yes                | Yes               | Yes               | Yes               | Yes                | Yes               | Yes                | Yes                | Yes                |
| Century FE                                  | No                | Yes                | Yes               | No                 | Yes               | Yes               | No                | Yes                | Yes               | No                 | Yes                | Yes                |
| Polity FE                                   | No                | Yes                | Yes               | No                 | Yes               | Yes               | No                | Yes                | Yes               | No                 | Yes                | Yes                |
| Controls                                    | No                | No                 | Yes               | No                 | No                | Yes               | No                | No                 | Yes               | No                 | No                 | Yes                |

Controls include a binary measure of parliamentary meetings and logged polity area. Clustered standard errors by monarch id are in parentheses where \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

## Robustness of Main Results

**Personalistic vs. Constitutional Monarchies.** It is possible that royal brothers are more likely to challenge their brother and nephew in personalistic autocratic regimes than constitutional regimes because constitutional regimes place significant restraints on the monarch, the rents they receive from office, and the positions they can distribute to insulate their regimes. While the main estimates control for the presence of parliament, many personalistic regimes had parliamentary meetings. In order, to parse out if constitutional monarchies are muting the evil uncle concern, I re-run the main analyses for reigns in the sample prior to 1600. [Dincecco \(2011\)](#) outlines dates of limited government and constitutional monarchies in Europe. Many form after 1800, where this data sample ends. However, certain polities like England transitioned in the 17th century. I use this as a rough cutoff, assuming that pre-17th-century monarchs were less constrained and more likely to suffer from an evil uncle threat. Appendix Figures [A3](#) and [A4](#) show similar null results. And it appears royal brothers stabilized their monarchical brother's regime when there was an heir.

**Collective Action Issues as a Detering Force.** Copious amounts of brothers may increase the odds a monarch and his son have an ambitious brother/uncle challenger. However, the more brothers/uncles a monarch and crown prince have, the more difficult it is for one or multiple uncles to band together to launch a rebellion or carry out a deposition. Whether some brothers/uncles side with their monarchical brother/nephew or whether brothers/uncles struggle to agree on who will assume the throne should they depose the current ruler, these collective action issues may dampen the probability of a brother/uncle attempting to seize the throne, rather than the presence of the brother/uncle himself. To rule out this potential collective action stabilizing effect, I run the main analyses for monarch-reigns at various for monarchs with one, two, three, four, and five siblings. Should collective action be the barrier to brothers making challenges for the throne one should see destabilizing outcomes decrease in the number of siblings. The results in Appendix Figure [A5](#) and [A6](#) do not show this decreasing impact of brothers on stability outcomes. If there is a pattern,

it appears to be the opposite, that having a brother gets more dangerous for monarchs for each additional sibling they have.

**Young Natural Deaths.** Abrupt deaths are rare. The sample contains 82 cases. Natural death, even if not from a sudden medical event or accident, of a young ruler could produce similar opportunities for an uncle to dispose of his young nephews. To ensure the null results were not a function of the small sample size of abrupt natural deaths, I rerun the analysis using the natural deaths of monarchs who died at or before 40-years-old. This alternative measure of non-anticipated deaths increases the number of qualifying regimes from 82 to 112. But the results remain null.

## The Role of Individual Powersharing Arrangements

If having a brother has no differential impact on the number of civil or international conflicts he faces, whether he gets deposed, or whether he is afforded a natural death, than having a sister, what keeps royal brothers satiated? I suggest, as other historians ([Freed, 1995](#)) and work on autocratic powersharing (e.g., [Arriola, 2009](#); [Paine, 2021](#); [Wang, 2022](#); [Meng, Paine and Powell, 2023](#); [Erickson, 2026](#)) do, that personalized powersharing arrangements between the monarch and his brothers, satiate brothers enough to protect the current monarch and the crown prince from their brotherly ambition.

## Data

To evaluate the potential assuaging effects of personalized powersharing arrangements between monarchs and their brothers, I collect position appointment data and brotherly conflict data for 1114 royal brothers across the 32 polities in the data sample during their monarchical brothers' rule.<sup>8</sup>

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<sup>8</sup>The panel dataset has 17,051 brother-reign-years.

## Brotherly Appointments

Though the types of positions royal brothers held varied from polity to polity and across time, I gather five specific types that fall into two broad categories: secular and ecclesiastical positions. For secular positions, I relied on noble titles of counts (earls in England and jarls in Scandinavian countries), dukes, and sovereigns of other polities. Secular positions derive from three main sources: [Louda and MacLagan \(1999\)](#), [Lundy \(2026\)](#), which heavily relies on [Cokayne \(1898\)](#), and Wikipedia. Though sovereigns, counts, and dukes are by no means the only secular titles, royal brothers hold these positions across all centuries in the sample. Plus, these specific secular positions imbue the recipient with land, a necessary condition for credible powersharing arrangements in Europe, particularly during the high and late medieval periods ([Blaydes and Chaney, 2013](#); [Erickson, 2026](#)).

For ecclesiastical positions, I catalogue information on whether a royal brother was a bishop or cardinal. Using [Cheney \(2026\)](#) to gather every Catholic bishop ever appointed, I match appointments of bishoprics to brothers from names, diocese-polity locations, birth years, and death years. Bishop positions include regular bishops, archbishops, bishop-princes (who functioned more similarly to counts and dukes), and administrators of bishoprics post-Reformation positions in former Catholic dioceses. For bishop-princes and administrators of bishoprics, I rely on Wikipedia and [Louda and MacLagan \(1999\)](#), which are also used to cross-validate [Cheney \(2026\)](#) positions.

I also collect the biographical information on all 2643 men who joined the College of Cardinals between 1000 and 1800 via biographies written and compiled by [Miranda \(2026\)](#). From these biographies, I hand-match cardinals to the sample of brothers. Though church positions do not transfer the same credible commitments to brothers as kingdoms, counties, or dukedoms do, they offer a reasonable avenue for brothers to pursue positions that yield high rents, that sometimes physically remove the brother as a threat (i.e., moving to Rome to serve as cardinal or far from the power center to serve as bishop of a diocese).

Across the 1114 royal brothers in the sample, royal brothers held 140 sovereign titles (i.e.,

king, emperor, independent archduke, etc.), 328 count titles, 336 duke titles, 163 bishoprics, and 26 cardinalates (See Appendix Table A8 for full royal brother summary statistics). However, there is striking skew in what types of royal brothers receive positions. Collapsing down to the brother-reign level, calculating the maximum positions a given royal brother held, royal brothers without nephews averaged 0.67 positions per royal brother. Royal brothers with nephews averaged 1 position per brother.

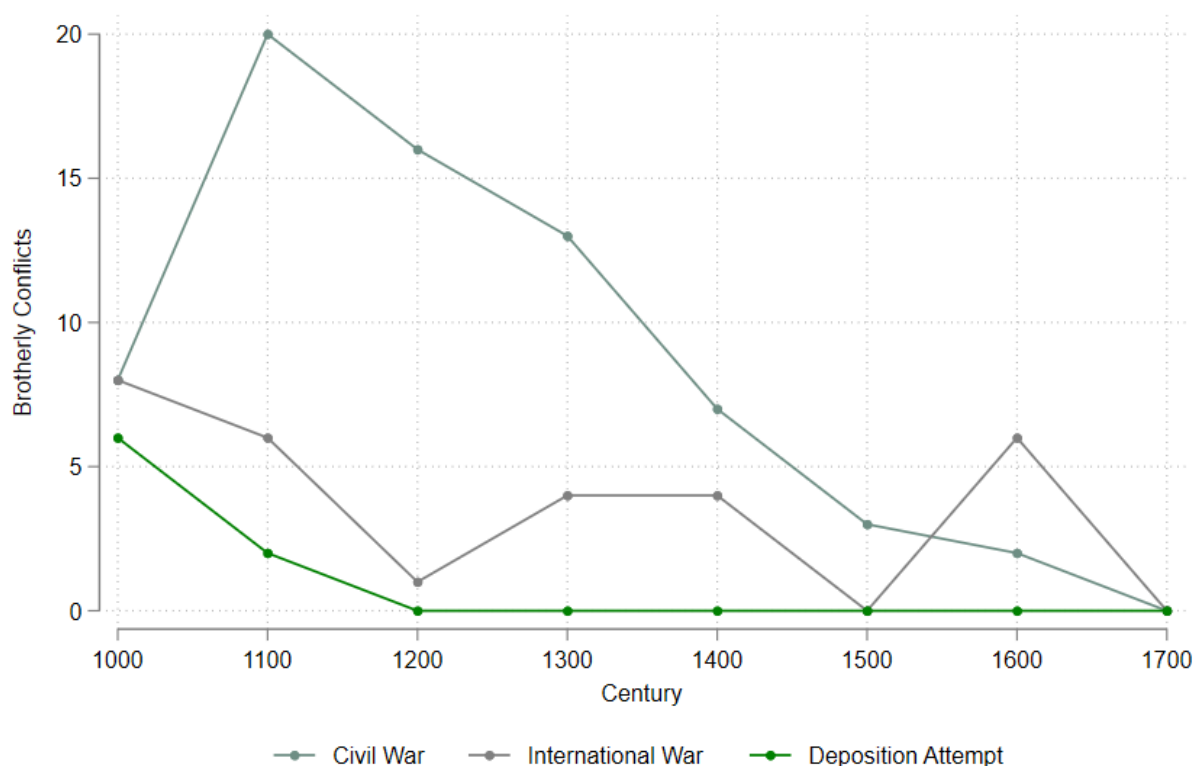
## Brotherly Conflicts

To pair with the brotherly positions data, I gather every instance of royal brothers directly challenging their monarchical brother during their brother's rule. Using English, Spanish, French, Hungarian, Polish, Russian, Portuguese, Swedish, and German Wikipedia biographies of royal brothers to identify mentions of conflicts and dozens of general political and military histories of polities in the sample to verify those mentions, I gather information on 106 brotherly conflicts.<sup>9</sup> Of the 106 brotherly conflicts, there are: 69 civil conflicts; 29 international conflicts; and 8 coup, assassination, or general deposition attempts. All types of brotherly conflict decreased the farther Europe moved past the Middle Ages. See Figure 8. With the exception of the 1600s, civil wars, not international wars or direct deposition attempts, were the most common brotherly quarrel in each century.

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<sup>9</sup>See Appendix Tables A5, A6, and A7 for conflict descriptions and sources.

Figure 8: Brotherly Conflicts by Century



## Brother's Position Analysis

The panel dataset of monarchs' brothers collects royal brother information at the brother-reign level. If a monarch rules multiple polities, either simultaneously or concurrently, their brothers will appear in the panel multiple times. Though the level of analysis occurs at the brother-reign level, I cluster standard errors at the brother level. There are 816 unique brothers in the sample. Similar to the polity-level analyses, I control for confounders to royal brothers receiving positions: whether the polity held a parliament in a given century, the logged size of the polity, and the monarch's total number of royal brothers. Following a standard two-way fixed-effects model, I include year and brother-reign fixed effects. Table 2 presents the results.

Table 2: Impact of Royal Brothers' Positions on Brotherly Conflict

| VARIABLES                     | (1)<br>No Son             | (2)<br>At Least One Son   | (3)<br>No Son            | (4)<br>At Least One Son   | (5)<br>No Son           | (6)<br>At Least One Son | (7)<br>No Son         | (8)<br>At Least One Son |
|-------------------------------|---------------------------|---------------------------|--------------------------|---------------------------|-------------------------|-------------------------|-----------------------|-------------------------|
| Secular Positions Held        | 0.00327**<br>(0.00135)    | -0.000365<br>(0.000270)   | 0.00306**<br>(0.00132)   | -0.000413<br>(0.000295)   | 0.00340***<br>(0.00130) | 7.89e-05<br>(0.000469)  | -0.00332<br>(0.00724) | -0.00418**<br>(0.00201) |
| Ecclesiastical Positions Held | -0.00235***<br>(0.000581) | -0.00252***<br>(0.000632) | -0.00134**<br>(0.000546) | -0.00268***<br>(0.000699) | -0.000153<br>(0.000662) | -0.000493<br>(0.000485) | 0.00209<br>(0.00199)  | 0.00409<br>(0.00248)    |
| Observations                  | 7,325                     | 9,709                     | 7,325                    | 9,709                     | 7,325                   | 9,709                   | 7,325                 | 9,709                   |
| R-squared                     | 0.002                     | 0.000                     | 0.004                    | 0.003                     | 0.157                   | 0.182                   | 0.293                 | 0.326                   |
| Controls                      | No                        | No                        | Yes                      | Yes                       | Yes                     | Yes                     | Yes                   | Yes                     |
| Year FE                       | No                        | No                        | No                       | No                        | Yes                     | Yes                     | Yes                   | Yes                     |
| Reign-Brother FE              | No                        | No                        | No                       | No                        | No                      | No                      | Yes                   | Yes                     |

Controls include a binary measure of parliamentary meetings, total number of royal brothers, and logged polity area. Clustered standard errors by brother id are in parentheses where \*\*\*p<0.01, \*\*p<0.05, \*p<0.10.

In the most robust estimation, a royal brother holding one secular position reduces the probability he fights his monarchical brother, with a son, by 0.418 percentage points. Though a small coefficient, royal brothers often held multiple secular positions. A royal brother, with a nephew, in the 90th percentile of secular positions held (2 positions) is 0.836 percentage points less likely to rebel than a brother with no secular positions. And a royal brother, with a nephew, in the 99th percentile of secular positions held (9 positions) is 3.762 percentage points less likely to rebel than a brother with no secular titles. The conflict-reducing effects of secular positions only for royal brothers with nephews suggest that powersharing arrangements work best to deter potential evil uncles, but not royal brothers simply waiting their turn on the throne. Though non-robust, columns 1, 3, and 5 suggest that royal brothers gaining power through secular positions threaten childless monarchs.

Having ecclesiastical positions does not reduce the likelihood a royal brother fights the sitting monarch with or without a son. Though the base regressions in column suggest a rebellion quelling effect in base OLS regression, including year and brother-reign fixed effects dampen any potential effect. Since royal brothers who enter the “clerical path” often early in life and rarely deviate, it is possible that any ecclesiastical position below bishop and cardinal (e.g., priest, abbot, or deacon) permanently removes the royal brother from throne contention before earning more senior ecclesiastical positions. A royal brother would likely receive those less senior ecclesiastical positions before their monarchical brother took the

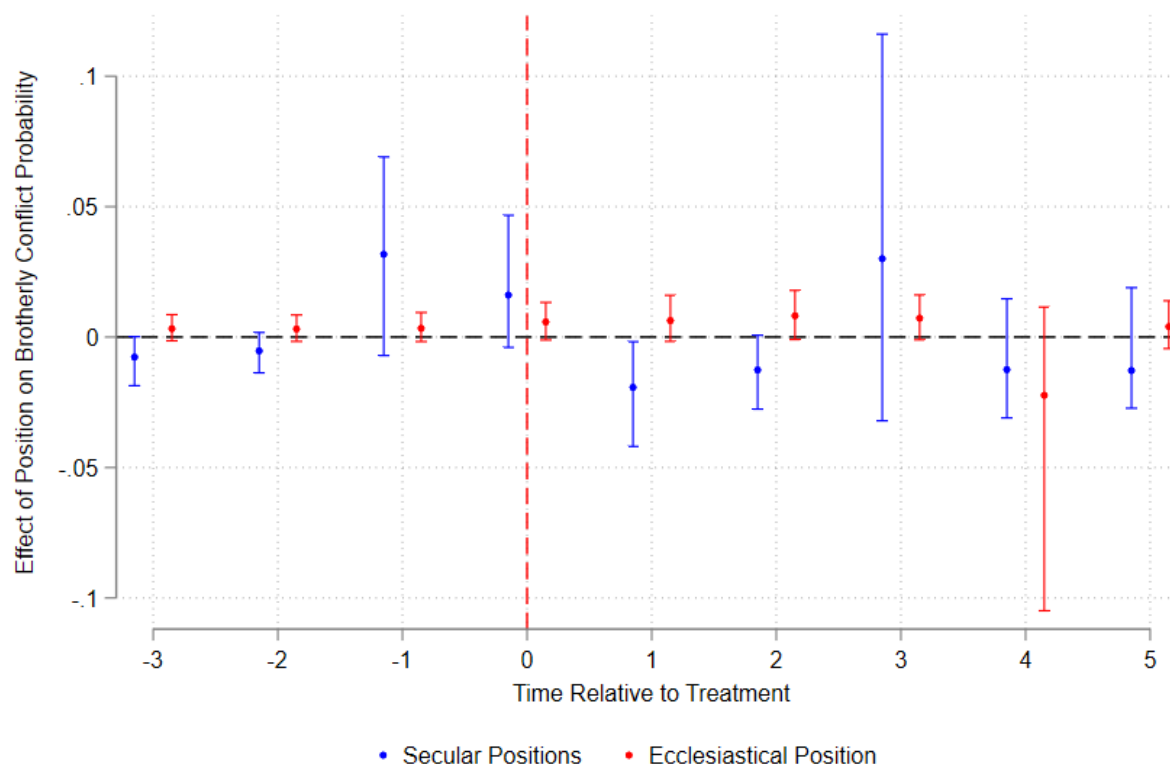
throne.

### **Event Study of Brothers with Nephews**

To evaluate the temporal nature of a conflict-quelling effect of secular positions given to royal brothers, I perform an event study analysis a la (Liu, Wang and Xu, 2024), which accounts for panel data designs where units enter and exit treatment. The event study differs slightly from the standard two-way fixed-effect model above. Rather than a continuous treatment, I generate a binary variable that considers a brother treated with either a secular position or an ecclesiastical position if they hold at least two secular or ecclesiastical positions (i.e., a 90th percentile cutoff rule for entering treatment). And unlike the standard two-way fixed-effect model, the estimator from (Liu, Wang and Xu, 2024) adjusts for staggered treatment adoption to account for comparisons between treated units and temporarily untreated units, instead of never-treated units.

Figure 9 below shows the event plot of the impact of a brother gaining a position while controlling for the other position type, presence of a parliament, the total number of royal brothers, and the logged size of the polity. Plots only consider the first five years after position appointment because the number of observations drops off dramatically beyond five years. Most reigns in the sample are less than 10 years.

Figure 9: Royal Brother Positions and Conflict Event Study for Monarchs with Heirs



The trends test for periods -2 to 0 weakly holds, and the results for secular appointments mimic the main two-way fixed-effects analysis, where at least in the first period after receiving a position, a royal brother is less likely to rebel. But this is only the case if the current monarch has an heir. And like the main results, ecclesiastical positions do not impact a royal brother's propensity to challenge his monarchical brother and heir nephew.

## Conclusion

This paper attempts to answer the simple question(s): Are uncles evil? Do they destabilize autocracies? The answers are simple: no and no.

I present evidence relying on three novel datasets: one containing all legitimate and illegitimate siblings and children of monarchs from 32 European polities between 1000 and 1800,

one cataloguing the abrupt natural deaths of 699 monarchs, and one collecting positions of brothers to secular positions (soveriegns, counts, and dukes) and ecclesiastical positions (bishops and cardinals) pared with their conflicts with their brother. Using a quasi-experimental design I leverage the comparison of monarchs with brothers to those with sisters to evaluate if brothers of monarchs/uncles of crown princes threaten existing regimes and the monarch's sons. Examining 699 polity-reigns, I find no impact of monarchs having at least one brother on the number of civil wars started during their reign, the number of international wars started during their reign, the probability their reign ends in deposition, or the probability their reign ends in a natural death (i.e., does not resign, does not get conquered, or does not get deposed). Further, relying on abrupt and exogenous natural death of monarchs, I find that even then, the successive reign does not face instability from the brother of the deceased monarch, compared to sisters. Finally, I consider the role brotherly powersharing arrangements have in deterring attacks from royal brothers on their brother's rule. From a continuous treatment two-way fixed effects designs and a binary treatment event study, monarchs whose royal brothers gain secular titles are less likely to challenge their brother's rule, but only if the monarch has an heir.

Richard III, Childebert and Clothar, Alexander Stewart, and Henry the Fratricidal killed innocent boys and servants, started civil wars, besieged and starved towns, invaded foreign countries, and destabilized entire regions of Europe. But these brothers and uncles appear outliers, rather than exemplars.

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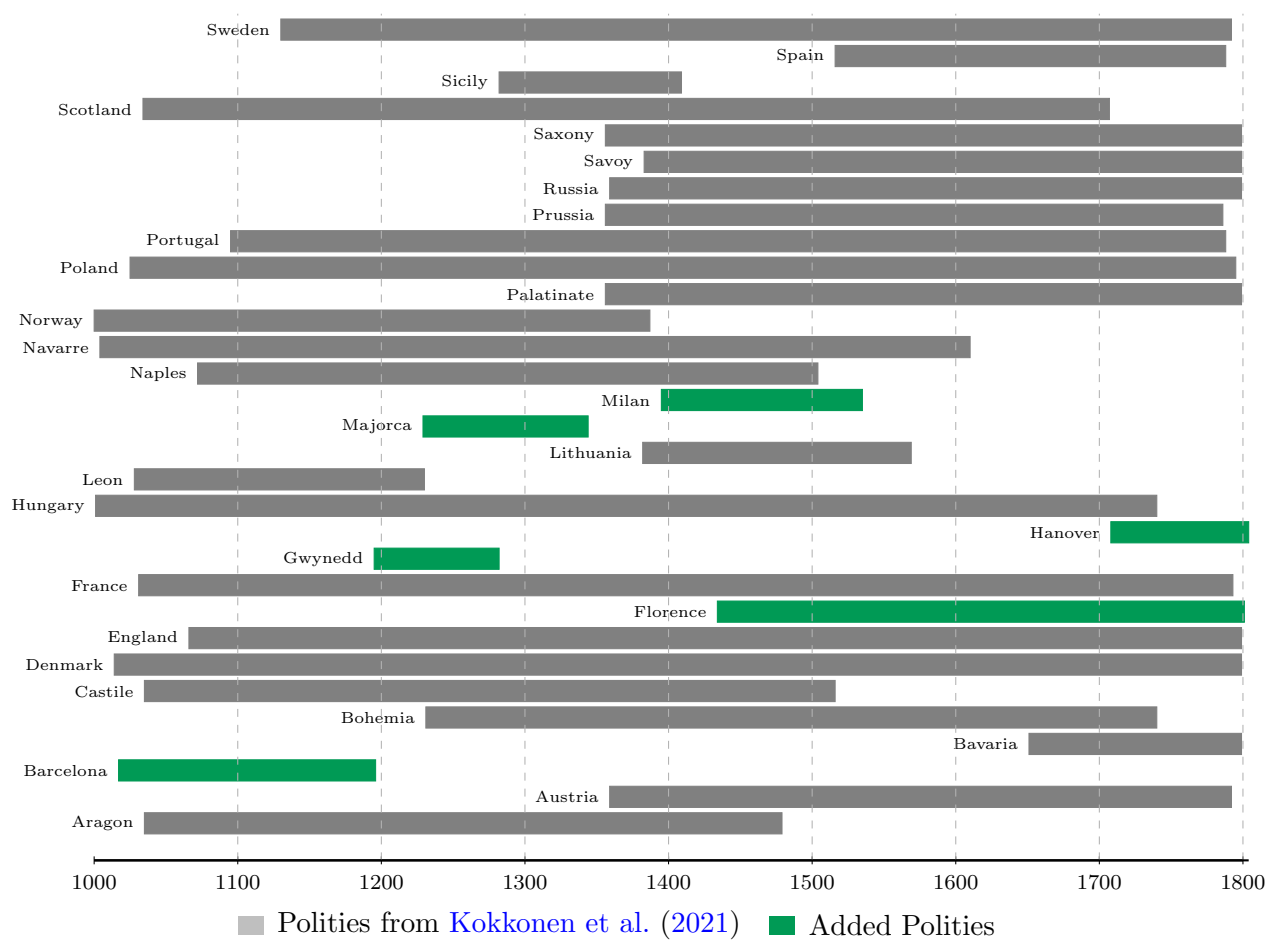
# Appendix for Are Uncles Evil?

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## Polities in Sample

Figure A1: Polity Years in Sample



## Reign-Level Data Sources

Table A1: Data Sources

| Politiy                                                                                                                                                                                                                         | Monarchs                               | Succession<br>Regime                                         | Siblings/Sons                                                  | Illegitimates    | Polity Size                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|------------------|----------------------------------------------------------------------|
| <a href="#">Kokkonen et al. (2021)</a> Politics                                                                                                                                                                                 | <a href="#">Kokkonen et al. (2021)</a> | <a href="#">Kokkonen and Sundell (2014)</a>                  | <a href="#">Kokkonen et al. (2021)</a>                         | Wikipedia        | <a href="#">EurAtlas (2026)</a> ; <a href="#">Seshat Data (2026)</a> |
| Barcelona                                                                                                                                                                                                                       | Wikipedia                              | <a href="#">Kokkonen and Sundell (2014)</a>                  | Wikipedia                                                      | Wikipedia        | <a href="#">Seshat Data (2026)</a>                                   |
| Florence                                                                                                                                                                                                                        | Wikipedia                              | <a href="#">Kokkonen and Sundell (2014)</a>                  | Wikipedia                                                      | Wikipedia        | <a href="#">Seshat Data (2026)</a>                                   |
| Gwynedd                                                                                                                                                                                                                         | Wikipedia                              | <a href="#">Kokkonen and Sundell (2014)</a>                  | Wikipedia                                                      | Wikipedia        | <a href="#">Davies (1992)</a>                                        |
| Hanover                                                                                                                                                                                                                         | Wikipedia                              | <a href="#">Kokkonen and Sundell (2014)</a>                  | Wikipedia                                                      | Wikipedia        | <a href="#">Hatton (2001)</a>                                        |
| Majorca                                                                                                                                                                                                                         | Wikipedia                              | <a href="#">Kokkonen and Sundell (2014)</a>                  | Wikipedia                                                      | Wikipedia        | <a href="#">Seshat Data (2026)</a>                                   |
| Milan                                                                                                                                                                                                                           | Wikipedia                              | <a href="#">Kokkonen and Sundell (2014)</a>                  | Wikipedia                                                      | Wikipedia        | <a href="#">Seshat Data (2026)</a>                                   |
| Politiy                                                                                                                                                                                                                         | Conflicts                              | Depositions                                                  | Parliaments                                                    | Abrupt<br>Deaths |                                                                      |
| <a href="#">Kokkonen et al. (2021)</a> Politics                                                                                                                                                                                 | <a href="#">Kokkonen et al. (2021)</a> | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Van Zanden, Bur-<br/>ingh and Bosker (2012)</a>    | Wikipedia        |                                                                      |
| Barcelona                                                                                                                                                                                                                       | Conflict Sources <sup>†</sup>          | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Marongiu (1968)</a>                                | Wikipedia        |                                                                      |
| Florence                                                                                                                                                                                                                        | Conflict Sources <sup>†</sup>          | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Marongiu (1968)</a> ; <a href="#">Hale (1977)</a>  | Wikipedia        |                                                                      |
| Gwynedd                                                                                                                                                                                                                         | Conflict Sources <sup>†</sup>          | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Lloyd (1911)</a>                                   | Wikipedia        |                                                                      |
| Hanover                                                                                                                                                                                                                         | Conflict Sources <sup>†</sup>          | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Dann (1991)</a>                                    | Wikipedia        |                                                                      |
| Majorca                                                                                                                                                                                                                         | Conflict Sources <sup>†</sup>          | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Marongiu (1968)</a>                                | Wikipedia        |                                                                      |
| Milan                                                                                                                                                                                                                           | Conflict Sources <sup>†</sup>          | <a href="#">Eisner (2011)</a> ; <a href="#">Morby (2014)</a> | <a href="#">Marongiu (1968)</a> ; <a href="#">Black (2009)</a> | Wikipedia        |                                                                      |
| Conflict Sources <sup>†</sup> <a href="#">Wright and Wright (1983)</a> ; <a href="#">Dupuy and Dupuy (1977)</a> ; <a href="#">Phillips and Axelrod (2005)</a> ; <a href="#">Kohn (2013)</a> ; <a href="#">Clodfelter (2017)</a> |                                        |                                                              |                                                                |                  |                                                                      |

## List of Monarch Abrupt Deaths

Table A2: Abrupt Monarch Natural Deaths

| Year | Monarch                  | Polity   | Type          | Description                    |
|------|--------------------------|----------|---------------|--------------------------------|
| 1396 | John I, the Careless     | Aragon   | Accident      | Fall from Horse                |
| 1457 | Ladislaus the posthumous | Austria  | Medical Event | Plague or Leukemia             |
| 1711 | Joseph I                 | Austria  | Medical Event | Smallpox                       |
| 1740 | Charles VI               | Austria  | Medical Event | Mushroom Consumption           |
| 1726 | Maximilian II Emanuel    | Bavaria  | Medical Event | Stroke                         |
| 1777 | Maximilian III Joseph    | Bavaria  | Medical Event | Smallpox                       |
| 1799 | Charles IV Theodore      | Bavaria  | Medical Event | Stroke                         |
| 1419 | Wenceslaus IV            | Bohemia  | Medical Event | Heart Attack                   |
| 1457 | Ladislaus the Posthumous | Bohemia  | Medical Event | Plague or Leukemia             |
| 1711 | Joseph I                 | Bohemia  | Medical Event | Smallpox                       |
| 1740 | Charles VI               | Bohemia  | Medical Event | Mushroom Consumption           |
| 1126 | Urraca                   | Castile  | Medical Event | Childbirth                     |
| 1217 | Henry I                  | Castile  | Accident      | Falling Roof Tile              |
| 1312 | Ferdinand IV             | Castile  | Medical Event | Unknown Sudden Illness         |
| 1390 | John I                   | Castile  | Accident      | Fell from Horse                |
| 1474 | Henry IV                 | Castile  | Medical Event | Plague                         |
| 1047 | Magnus I the Good        | Denmark  | Accident      | Falling                        |
| 1095 | Olaf I Hunger            | Denmark  | Accident      | Suicide                        |
| 1513 | John                     | Denmark  | Accident      | Fell from Horse                |
| 1699 | Christian V              | Denmark  | Accident      | Hunting Accident               |
| 1216 | John                     | England  | Medical Event | Dysentery                      |
| 1307 | Edward I                 | England  | Medical Event | Dysentery                      |
| 1377 | Edward III               | England  | Medical Event | Stroke                         |
| 1685 | Charles II               | England  | Medical Event | Stroke                         |
| 1702 | William III              | England  | Accident      | Fell from Horse                |
| 1727 | George I                 | England  | Medical Event | Stroke                         |
| 1760 | George II                | England  | Medical Event | Thoracic Aortic Dissection     |
| 1670 | Ferdinando II de' Medici | Florence | Medical Event | Stroke                         |
| 1137 | Louis VI                 | France   | Medical Event | Dysentery                      |
| 1314 | Philip IV (The Fair)     | France   | Medical Event | Stroke                         |
| 1316 | Louis X                  | France   | Medical Event | Pneumonia or Pleurisy          |
| 1498 | Charles VIII             | France   | Accident      | Struck Head on Stone Doorframe |
| 1559 | Henry II                 | France   | Accident      | Jousting Injury                |
| 1727 | George I Louis           | Hanover  | Medical Event | Stroke                         |
| 1760 | George II                | Hanover  | Medical Event | Thoracic Aortic Dissection     |
| 1490 | Matthias I Corvinus      | Hungary  | Medical Event | Stroke                         |
| 1711 | Joseph I                 | Hungary  | Medical Event | Smallpox                       |

Table A3: Abrupt Monarch Natural Deaths Cont.

| Year | Monarch               | Polity     | Type          | Description           |
|------|-----------------------|------------|---------------|-----------------------|
| 1740 | Charles III           | Hungary    | Accident      | Mushroom Consumption  |
| 1126 | Urraca                | Leon       | Medical Event | Childbirth            |
| 1324 | Sancho                | Majorca    | Medical Event | Asthma Attack         |
| 1250 | Frederick I           | Naples     | Medical Event | Dysentery             |
| 1274 | Henry I               | Navarre    | Medical Event | Suffocated by Own Fat |
| 1284 | Joan I                | Navarre    | Medical Event | Childbirth            |
| 1316 | Louis                 | Navarre    | Medical Event | Pneumonia or Pleurisy |
| 1349 | Joan II               | Navarre    | Medical Event | Plague                |
| 1387 | Charles II            | Navarre    | Medical Event | Burned Alive          |
| 1425 | Charles III           | Navarre    | Medical Event | Sudden Collapse       |
| 1030 | Haakon Eiriksson      | Norway     | Accident      | Shipwreck             |
| 1343 | Magnus Eriksson       | Norway     | Medical Event | Plague                |
| 1387 | Olav IV Haakonsson    | Norway     | Medical Event | Brugada Syndrome      |
| 1513 | John                  | Norway     | Accident      | Fell from Horse       |
| 1799 | Charles IV Theodore   | Palatinate | Medical Event | Stroke                |
| 1399 | Jadwiga of Poland     | Poland     | Medical Event | Childbirth            |
| 1673 | Michael I Korybut     | Poland     | Medical Event | Food Poisoning        |
| 1696 | Jan III Sobieski      | Poland     | Medical Event | Heat Attack           |
| 1763 | Augustus III Sas      | Poland     | Medical Event | Stroke                |
| 1521 | Emanuel               | Portugal   | Medical Event | Fever                 |
| 1557 | John III              | Portugal   | Medical Event | Stroke                |
| 1584 | Ivan IV, the Terrible | Russia     | Medical Event | Stroke                |
| 1605 | Boris Godunov         | Russia     | Medical Event | Stroke                |
| 1730 | Peter II              | Russia     | Medical Event | Smallpox              |
| 1796 | Catharine II          | Russia     | Medical Event | Stroke                |
| 1496 | Charles II            | Savoy      | Accident      | Fell from Bed         |
| 1630 | Charles Emmanuel I    | Savoy      | Medical Event | Stroke                |
| 1796 | Victor Amadeus III    | Savoy      | Medical Event | Stroke                |
| 1422 | Albert III            | Saxony     | Accident      | Fire                  |
| 1486 | Ernest                | Saxony     | Accident      | Fell from Horse       |
| 1553 | Maurice               | Saxony     | Medical Event | Wound from Combat     |
| 1611 | Christian II          | Saxony     | Medical Event | Heart Attack          |
| 1694 | Johan George IV       | Saxony     | Medical Event | Smallpox              |
| 1763 | Frederick Augustus II | Saxony     | Medical Event | Stroke                |
| 1763 | Frederick Christian   | Saxony     | Medical Event | Smallpox              |
| 1286 | Alexander III         | Scotland   | Accident      | Fell from Horse       |
| 1290 | Margaret              | Scotland   | Medical Event | Food Poisoning        |
| 1542 | James V               | Scotland   | Medical Event | Cholera or Dysentery  |
| 1685 | Charles II            | Scotland   | Medical Event | Stroke                |
| 1702 | William III           | Scotland   | Accident      | Fell from Horse       |
| 1342 | Peter II              | Sicily     | Medical Event | Sudden Illness        |
| 1355 | Louis                 | Sicily     | Medical Event | Plague                |
| 1746 | Philip V              | Spain      | Medical Event | Stroke                |
| 1465 | Kettel Karlsson       | Sweden     | Medical Event | Plague                |
| 1771 | Adolphus Frederick    | Sweden     | Medical Event | Heart Failure         |

# Royal Sibling Attrition and Balance

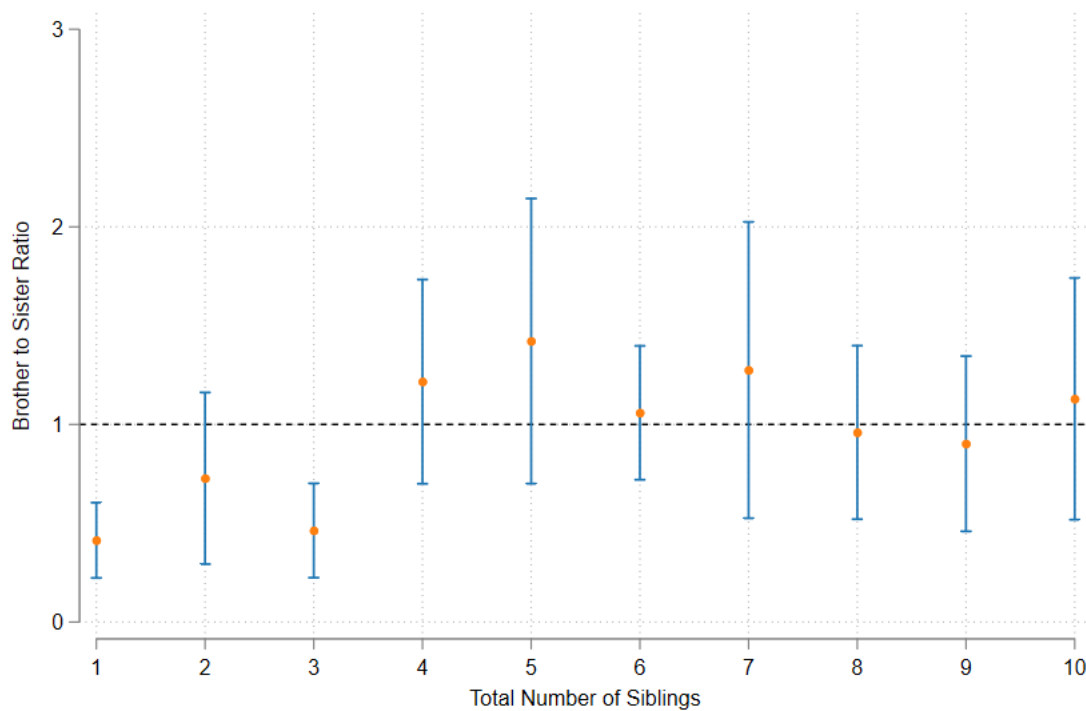
## Attrition

Table A4: Directed Killings of Brothers Prior to Monarch Reign

| Monarch                                  | Polity    | Description                                                                                                                                                                                                                                        | Source                                                  |
|------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Peter III, the Great                     | Aragon    | Fernando Sánchez de Castro was an illegitimate son of James I, James II's father. Fernando rebelled against James I and his son Peter III of Aragon (James II's brother). Fernando was captured in battle in 1275 and forcibly drowned in a river. | <a href="#">Gerli (2013)</a>                            |
| Berenguer Ramon II                       | Barcelona | Berenguer Ramon II is credited with organizing the murder of his co-ruling brother Ramon Berenguer II while his brother was hunting in the woods.                                                                                                  | <a href="#">Bensch (2002)</a>                           |
| Alfonso VI, the Brave                    | Castile   | Sancho II was killed, though it is unclear who precisely arranged the killing. Though, Alfonso VI, the Brave was the beneficiary.                                                                                                                  | <a href="#">Cantor (1999)</a>                           |
| Henry II                                 | Castile   | Fadrique Alfonso died in battle during the Castilian Civil War (i.e., War of the Two Pedros)                                                                                                                                                       | <a href="#">Gerli (2013)</a>                            |
| Peter the Cruel                          | Castile   | Fadrique Alfonso died in battle during the Castilian Civil War (i.e., War of the Two Pedros)                                                                                                                                                       | <a href="#">Gerli (2013)</a>                            |
| Henry II                                 | Castile   | Fadrique Alfonso died in battle during the Castilian Civil War (i.e., War of the Two Pedros). At this point Peter the Cruel is killed in the civil war.                                                                                            | <a href="#">Gerli (2013)</a>                            |
| Eric II the Memorable                    | Denmark   | Canute Lavard was killed by Eric II's son, Magnus the Strong, in a forest.                                                                                                                                                                         | <a href="#">Pulsiano and Wolf (2017)</a>                |
| Abel                                     | Denmark   | Eric IV was murdered at his brother's home.                                                                                                                                                                                                        | <a href="#">Helle (2003)</a>                            |
| Richard I                                | England   | Henry the Young King died of dysentery during a military campaign against his father and brother (Richard I).                                                                                                                                      | <a href="#">Cantor (1999)</a>                           |
| John                                     | England   | Henry the Young King died of dysentery during a military campaign against his father and brother (Richard I).                                                                                                                                      | <a href="#">Cantor (1999)</a>                           |
| Bela I                                   | Hungary   | Andrew I died from a civil war with his brother Bela I.                                                                                                                                                                                            | <a href="#">Engel (2005)</a>                            |
| James II                                 | Majorca   | Fernando Sánchez de Castro was an illegitimate son of James I, James II's father. Fernando rebelled against James I and his son Peter III of Aragon (James II's brother). Fernando was captured in battle in 1275 and forcibly drowned in a river. | <a href="#">Gerli (2013)</a>                            |
| James II                                 | Majorca   | Fernando Sánchez de Castro was an illegitimate son of James I, James II's father. Fernando rebelled against James I and his son Peter III of Aragon (James II's brother). Fernando was captured in battle in 1275 and forcibly drowned in a river. | <a href="#">Gerli (2013)</a>                            |
| Eystein II and Inge I Krokrygg           | Norway    | Inge I sent men to kill Sigurd and his guards in Sigurd's home.                                                                                                                                                                                    | <a href="#">Larsen (2015)</a>                           |
| Inge I Krokrygg and Haakon II Sigurdsson | Norway    | Inge I sent men to kill Sigurd and his guards in Sigurd's home. Igne I defeated Eystein II in a brotherly civil war.                                                                                                                               | <a href="#">Larsen (2015)</a>                           |
| Wladyslaw I                              | Poland    | With the help of Polish nobles, Wladyslaw I killed his brother, Boleslaw I.                                                                                                                                                                        | <a href="#">Reddaway et al. (1950)</a>                  |
| Henry II                                 | Poland    | Henry II defeated his brother Konrad the Curly in an open civil conflict and the suggestion is that Konard's subsequent death was directly related to the conflict.                                                                                | <a href="#">Reddaway et al. (1950)</a>                  |
| Elizabeth                                | Russia    | Alexei Petrovich was tortured and killed by his father on suspicion of ginning up a rebellion.                                                                                                                                                     | <a href="#">Millar (2004)</a>                           |
| Edgar                                    | Scotland  | Edmund sided and conspired with his uncle Donald III to depose his brother Duncan II.                                                                                                                                                              | <a href="#">Dictionary of National Biography (2004)</a> |
| Philip III                               | Spain     | Phillip's brother Carlos was imprisoned by their father Phillip II and died as a result of hunger during his imprisonment.                                                                                                                         | <a href="#">Commire (1994)</a>                          |
| Charles IX                               | Sweden    | John III poisoned his brother's (Eric XIV's) pea soup.                                                                                                                                                                                             | <a href="#">Roberts (1968)</a>                          |

## Post Male Sheath in Europe Sibling Balance

Figure A2: Monarch's Sibling Gender Ratios After 1564

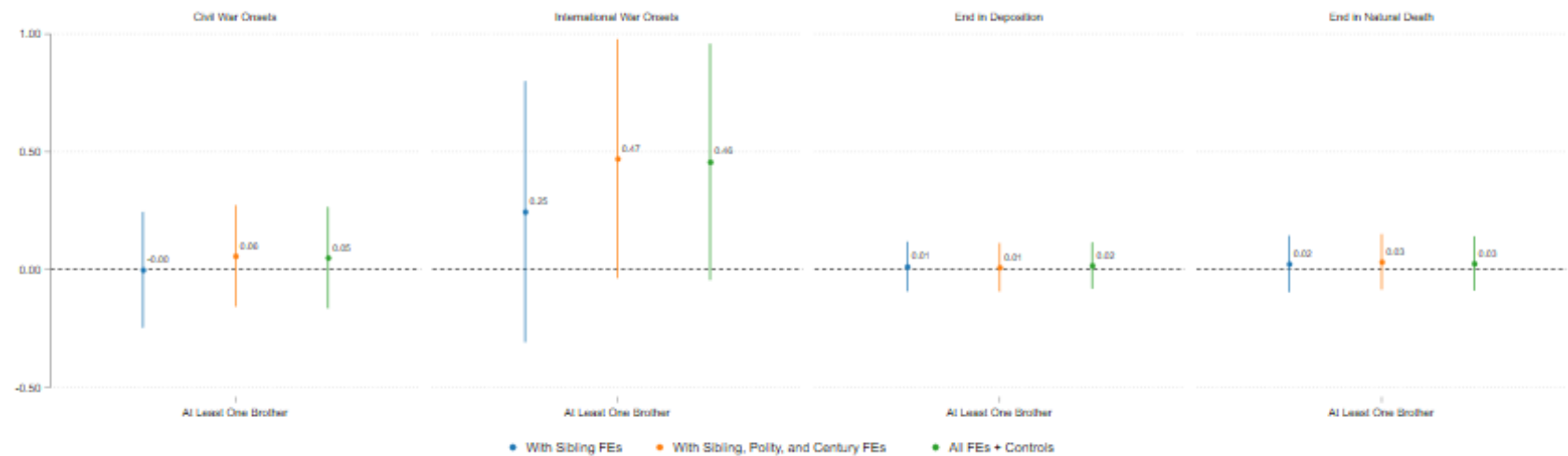


Ratios include monarch's illegitimate siblings. Ten siblings include ten or more siblings. Bars show a 95 percent confidence interval.

## Reign-Level Robustness Tests

### Personalistic vs. Constitutional Monarchies

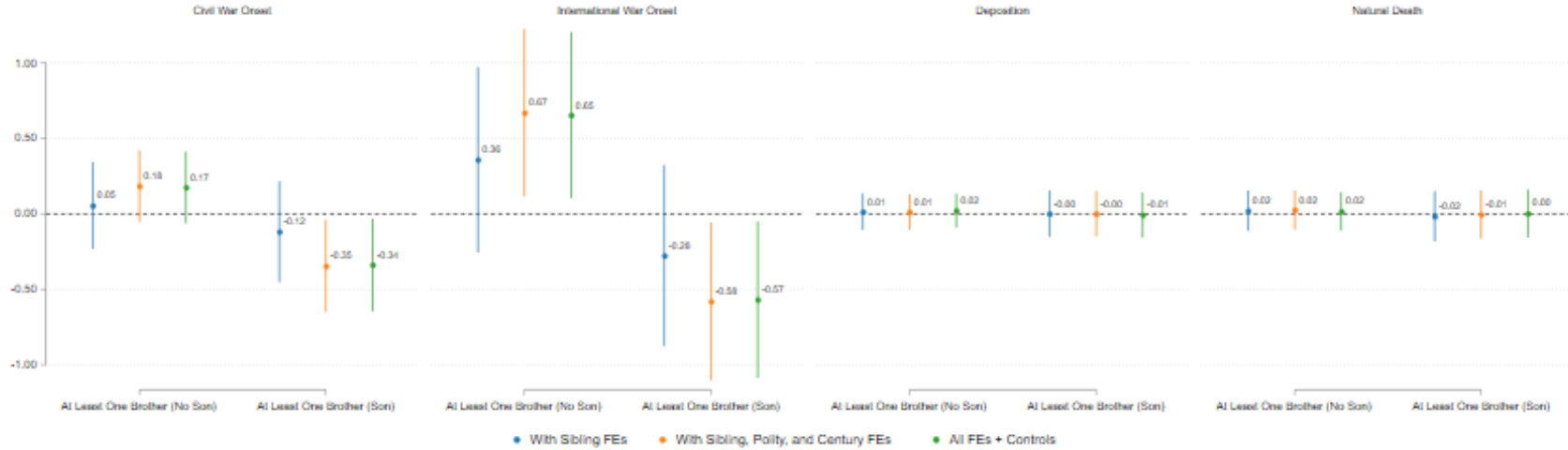
Figure A3: Effect of Having at Least One Brother on Reign Stability Pre-1600



| VARIABLES            | (1)                 | (2)               | (3)               | (4)              | (5)               | (6)               | (7)                | (8)                 | (9)                | (10)               | (11)               | (12)               |
|----------------------|---------------------|-------------------|-------------------|------------------|-------------------|-------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| At Least One Brother | -0.00100<br>(0.125) | 0.0579<br>(0.110) | 0.0506<br>(0.110) | 0.246<br>(0.282) | 0.471*<br>(0.258) | 0.457*<br>(0.256) | 0.0130<br>(0.0538) | 0.00971<br>(0.0524) | 0.0172<br>(0.0502) | 0.0243<br>(0.0612) | 0.0329<br>(0.0601) | 0.0259<br>(0.0587) |
| Observations         | 659                 | 659               | 659               | 659              | 659               | 659               | 659                | 659                 | 659                | 659                | 659                | 659                |
| R-squared            | 0.011               | 0.321             | 0.324             | 0.029            | 0.392             | 0.402             | 0.018              | 0.138               | 0.160              | 0.036              | 0.137              | 0.152              |
| Siblings FE          | Yes                 | Yes               | Yes               | Yes              | Yes               | Yes               | Yes                | Yes                 | Yes                | Yes                | Yes                | Yes                |
| Century FE           | No                  | Yes               | Yes               | No               | Yes               | Yes               | No                 | Yes                 | Yes                | No                 | Yes                | Yes                |
| Polity FE            | No                  | Yes               | Yes               | No               | Yes               | Yes               | No                 | Yes                 | Yes                | No                 | Yes                | Yes                |
| Controls             | No                  | No                | Yes               | No               | No                | Yes               | No                 | No                  | Yes                | No                 | No                 | Yes                |

Controls include a binary measure of parliamentary meetings and logged polity size. Clustered standard errors by monarch id are in parentheses where \*\*\*p<0.01, \*\*p<0.05, \*p<0.10. Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

Figure A4: Effect of Having at Least One Brother on Reign Stability by Son Status Pre-1600



| VARIABLES                                   | (1)               | (2)                 | (3)                 | (4)               | (5)                 | (6)                 | (7)                   | (8)                   | (9)                  | (10)                | (11)                 | (12)                 |
|---------------------------------------------|-------------------|---------------------|---------------------|-------------------|---------------------|---------------------|-----------------------|-----------------------|----------------------|---------------------|----------------------|----------------------|
|                                             | Civil War Onset   | Civil War Onset     | Civil War Onset     | Int. War Onset    | Int. War Onset      | Int. War Onset      | Deposition            | Deposition            | Deposition           | Natural Death       | Natural Death        | Natural Death        |
| At Least One Brother                        | 0.0530<br>(0.146) | 0.182<br>(0.121)    | 0.173<br>(0.121)    | 0.357<br>(0.313)  | 0.668**<br>(0.283)  | 0.652**<br>(0.280)  | 0.0128<br>(0.0615)    | 0.0103<br>(0.0599)    | 0.0204<br>(0.0574)   | 0.0197<br>(0.0681)  | 0.0246<br>(0.0662)   | 0.0150<br>(0.0651)   |
| At Least One Son                            | -0.111<br>(0.126) | -0.0263<br>(0.109)  | -0.0279<br>(0.110)  | -0.105<br>(0.232) | 0.0793<br>(0.197)   | 0.0708<br>(0.195)   | 0.00432<br>(0.0629)   | -0.000908<br>(0.0619) | 0.00129<br>(0.0613)  | 0.115*<br>(0.0685)  | 0.115*<br>(0.0648)   | 0.113*<br>(0.0643)   |
| (At Least One Brother) * (At Least One Son) | -0.120<br>(0.170) | -0.347**<br>(0.156) | -0.340**<br>(0.156) | -0.279<br>(0.305) | -0.581**<br>(0.266) | -0.569**<br>(0.263) | -0.000601<br>(0.0782) | -0.00138<br>(0.0766)  | -0.00924<br>(0.0758) | -0.0178<br>(0.0850) | -0.00676<br>(0.0815) | 0.000719<br>(0.0809) |
| Observations                                | 659               | 659                 | 659                 | 659               | 659                 | 659                 | 659                   | 659                   | 659                  | 659                 | 659                  | 659                  |
| R-squared                                   | 0.019             | 0.337               | 0.340               | 0.034             | 0.400               | 0.410               | 0.018                 | 0.138                 | 0.161                | 0.046               | 0.148                | 0.163                |
| Siblings FE                                 | Yes               | Yes                 | Yes                 | Yes               | Yes                 | Yes                 | Yes                   | Yes                   | Yes                  | Yes                 | Yes                  | Yes                  |
| Century FE                                  | No                | Yes                 | Yes                 | No                | Yes                 | Yes                 | No                    | Yes                   | Yes                  | No                  | Yes                  | Yes                  |
| Polity FE                                   | No                | Yes                 | Yes                 | No                | Yes                 | Yes                 | No                    | Yes                   | Yes                  | No                  | Yes                  | Yes                  |
| Controls                                    | No                | No                  | Yes                 | No                | No                  | Yes                 | No                    | No                    | Yes                  | No                  | No                   | Yes                  |

Controls include a binary measure of parliamentary meetings and logged polity size. Clustered standard errors by monarch id are in parentheses where \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

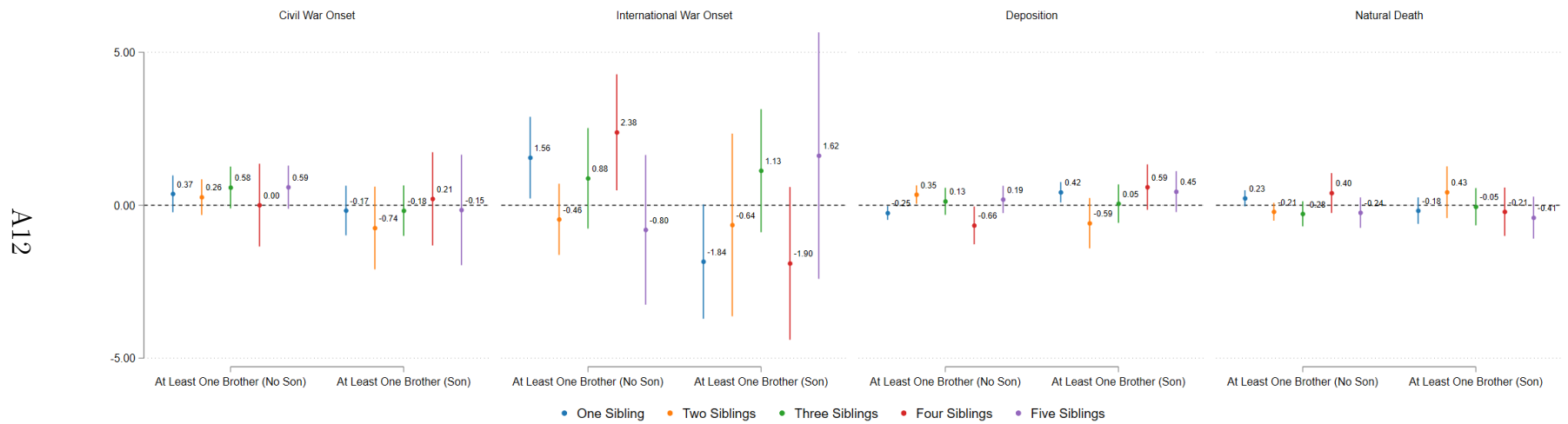
# Collective Action Issues as a Deterring Force.

Figure A5: Effect of Having at Least One Brother on Regime Stability Conditional on Total Number of Siblings



Controls include a binary measure of parliamentary meetings and logged polity size. Confidence intervals clustered by monarch are shown at the 95 percent threshold.

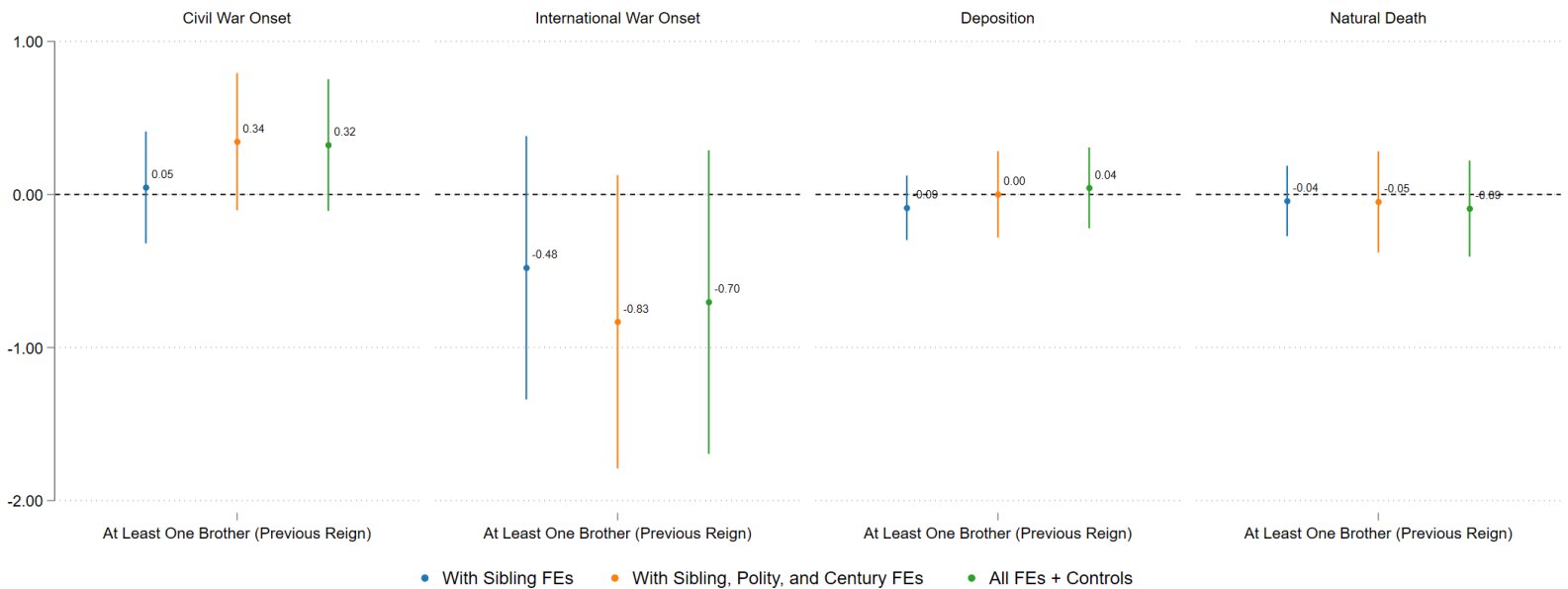
Figure A6: Effect of Having at Least One Brother and Son on Regime Stability Conditional on Total Number of Siblings



Controls include a binary measure of parliamentary meetings and logged polity size. Confidence intervals clustered by monarch are shown at the 95 percent threshold.

## Young Natural Deaths

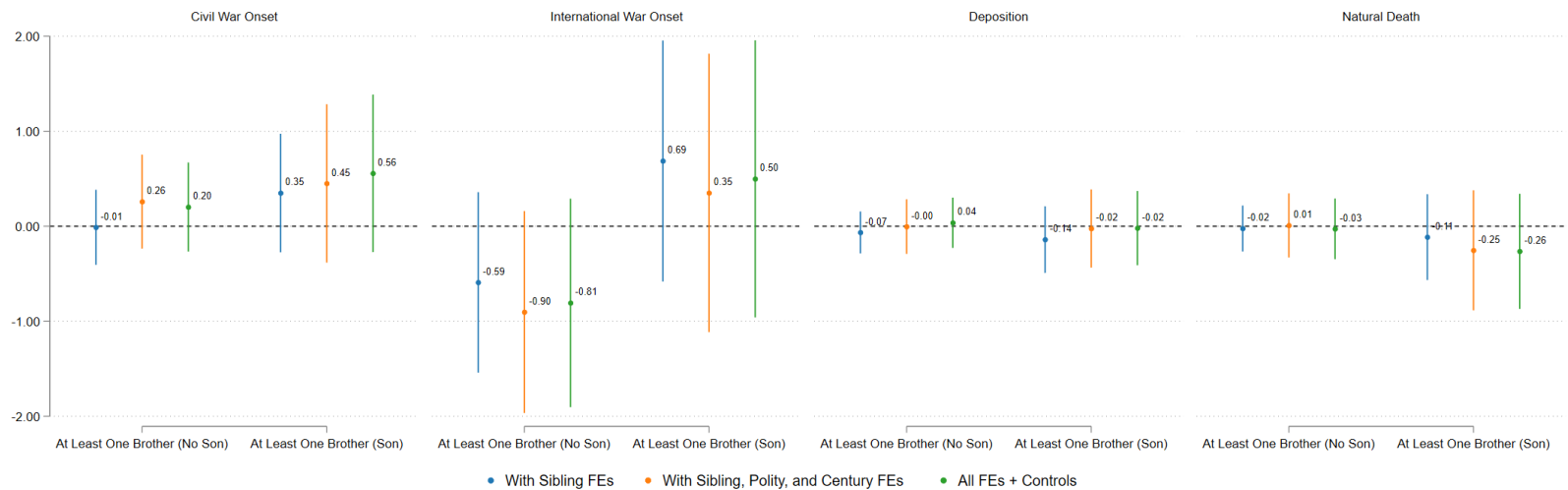
Figure A7: Effect of Young Monarch Dying Naturally Having at Least One Brother on Subsequent Reign Stability



|                                       | (1)               | (2)              | (3)              | (4)               | (5)                | (6)               | (7)                | (8)                 | (9)               | (10)               | (11)               | (12)               |
|---------------------------------------|-------------------|------------------|------------------|-------------------|--------------------|-------------------|--------------------|---------------------|-------------------|--------------------|--------------------|--------------------|
| VARIABLES                             | Civil War Onset   | Civil War Onset  | Civil War Onset  | Int. War Onset    | Int. War Onset     | Int. War Onset    | Deposition         | Deposition          | Deposition        | Natural Death      | Natural Death      | Natural Death      |
| At Least One Brother (Previous Reign) | 0.0458<br>(0.184) | 0.345<br>(0.226) | 0.323<br>(0.217) | -0.479<br>(0.434) | -0.832*<br>(0.483) | -0.703<br>(0.500) | -0.0876<br>(0.106) | 0.000488<br>(0.142) | 0.0424<br>(0.133) | -0.0427<br>(0.116) | -0.0486<br>(0.167) | -0.0925<br>(0.158) |
| Observations                          | 112               | 112              | 112              | 112               | 112                | 112               | 112                | 112                 | 112               | 112                | 112                | 112                |
| R-squared                             | 0.307             | 0.648            | 0.678            | 0.187             | 0.611              | 0.654             | 0.147              | 0.506               | 0.541             | 0.133              | 0.454              | 0.479              |
| Siblings FE                           | Yes               | Yes              | Yes              | Yes               | Yes                | Yes               | Yes                | Yes                 | Yes               | Yes                | Yes                | Yes                |
| Century FE                            | No                | Yes              | Yes              | No                | Yes                | Yes               | No                 | Yes                 | Yes               | No                 | Yes                | Yes                |
| Polity FE                             | No                | Yes              | Yes              | No                | Yes                | Yes               | No                 | Yes                 | Yes               | No                 | Yes                | Yes                |
| Controls                              | No                | No               | Yes              | No                | No                 | Yes               | No                 | No                  | Yes               | No                 | No                 | Yes                |

Controls include a binary measure of parliamentary meetings and logged polity size. Clustered standard errors by monarch id are in parentheses where \*\*\*p<0.01, \*\*p<0.05, \*p<0.10. Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

Figure A8: Effect of Young Monarch Dying Naturally Having at Least One Brother on Subsequent Reign Stability by Son Status



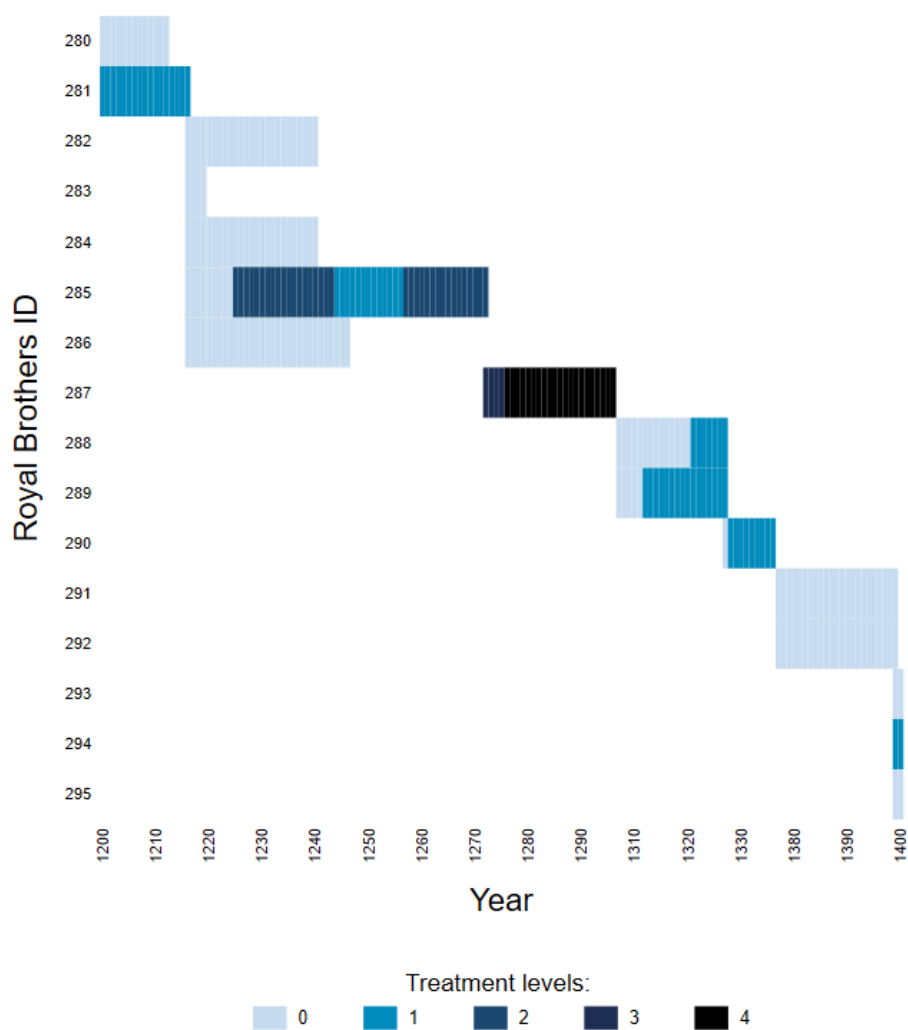
|                                             | (1)                | (2)               | (3)               | (4)               | (5)                | (6)               | (7)                 | (8)                 | (9)                | (10)               | (11)               | (12)               |
|---------------------------------------------|--------------------|-------------------|-------------------|-------------------|--------------------|-------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| VARIABLES                                   | Civil War Onset    | Civil War Onset   | Civil War Onset   | Int. War Onset    | Int. War Onset     | Int. War Onset    | Deposition          | Deposition          | Deposition         | Natural Death      | Natural Death      | Natural Death      |
| At Least One Brother (Previous Reign)       | -0.0110<br>(0.199) | 0.259<br>(0.249)  | 0.202<br>(0.236)  | -0.591<br>(0.479) | -0.903*<br>(0.536) | -0.807<br>(0.553) | -0.0651<br>(0.111)  | -0.00325<br>(0.145) | 0.0369<br>(0.133)  | -0.0239<br>(0.122) | 0.00890<br>(0.170) | -0.0269<br>(0.161) |
| At Least One Son (Previous Reign)           | -0.192<br>(0.160)  | -0.308<br>(0.359) | -0.439<br>(0.342) | -0.346<br>(0.474) | -0.295<br>(0.524)  | -0.356<br>(0.496) | -0.0835<br>(0.0966) | -0.0950<br>(0.124)  | -0.0711<br>(0.114) | 0.238**<br>(0.107) | 0.300**<br>(0.122) | 0.285**<br>(0.115) |
| At Least One Brother * Son (Previous Reign) | 0.350<br>(0.315)   | 0.451<br>(0.420)  | 0.557<br>(0.418)  | 0.687<br>(0.639)  | 0.351<br>(0.739)   | 0.499<br>(0.735)  | -0.140<br>(0.177)   | -0.0241<br>(0.208)  | -0.0192<br>(0.197) | -0.114<br>(0.228)  | -0.253<br>(0.319)  | -0.264<br>(0.305)  |
| Observations                                | 112                | 112               | 112               | 112               | 112                | 112               | 112                 | 112                 | 112                | 112                | 112                | 112                |
| R-squared                                   | 0.312              | 0.656             | 0.690             | 0.191             | 0.613              | 0.657             | 0.168               | 0.513               | 0.544              | 0.157              | 0.478              | 0.499              |
| Siblings FE                                 | Yes                | Yes               | Yes               | Yes               | Yes                | Yes               | Yes                 | Yes                 | Yes                | Yes                | Yes                | Yes                |
| Century FE                                  | No                 | Yes               | Yes               | No                | Yes                | Yes               | No                  | Yes                 | Yes                | No                 | Yes                | Yes                |
| Polity FE                                   | No                 | Yes               | Yes               | No                | Yes                | Yes               | No                  | Yes                 | Yes                | No                 | Yes                | Yes                |
| Controls                                    | No                 | No                | Yes               | No                | No                 | Yes               | No                  | No                  | Yes                | No                 | No                 | Yes                |

Controls include a binary measure of parliamentary meetings and logged polity size. Clustered standard errors by monarch id are in parentheses where \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ . Graphic confidence intervals clustered by monarch are shown at the 95 percent confidence interval.

# Brother-Level Data Samples, Sources, and Statistics

## Representative Panel Views

Figure A9: Brother-Reign Panel View for England 1200 - 1400



## Brotherly Conflict Data

Table A5: Brotherly Conflict Descriptions and Sources

| Polity    | Monarch                                | Year | Brother             | Conflict Type | Name                                            | Source                                                  |
|-----------|----------------------------------------|------|---------------------|---------------|-------------------------------------------------|---------------------------------------------------------|
| Aragon    | Peter IV                               | 1347 | Fernando            | Civil         | Aragonese Civil War                             | <a href="#">O'callaghan (1975)</a>                      |
| Aragon    | Peter IV                               | 1347 | Jaime               | Civil         | Aragonese Civil War                             | <a href="#">O'callaghan (1975)</a>                      |
| Aragon    | Peter IV                               | 1356 | Fernando            | Int.          | Castillian Civil War                            | <a href="#">O'callaghan (1975)</a>                      |
| Austria   | Frederick III                          | 1458 | Albrecht            | Civil         | First Austrian Rebellion                        | <a href="#">Jeep (2001)</a>                             |
| Austria   | Frederick III                          | 1462 | Albrecht            | Civil         | Second Austrian Rebellion                       | <a href="#">Jeep (2001)</a>                             |
| Austria   | Rudolph II                             | 1606 | Matthias            | Int.          | Brother's Quarrel                               | <a href="#">Bireley (2014)</a>                          |
| Austria   | Rudolph II                             | 1606 | Maximilian          | Int.          | Brother's Quarrel                               | <a href="#">Bireley (2014)</a>                          |
| Barcelona | Ramon Berenguer II, Berenguer Ramon II | 1082 | Berenguer Ramon II  | Dep.          | Brother's Murder                                | <a href="#">O'callaghan (1975)</a>                      |
| Bohemia   | Wenceslaus I                           | 1233 | Premysl             | Civil         | Siding with Austrian Invasion                   | <a href="#">Wihoda (2015)</a>                           |
| Bohemia   | Wenceslaus I                           | 1237 | Premysl             | Civil         | Rebellion                                       | <a href="#">Wihoda (2015)</a>                           |
| Bohemia   | Ladislaus II                           | 1490 | Jan Olbracht        | Int.          | Polish Border Invasions of Hungary              | <a href="#">Engel (2005)</a>                            |
| Bohemia   | Rudolph II                             | 1606 | Matthias            | Int.          | Brother's Quarrel                               | <a href="#">Bireley (2014)</a>                          |
| Bohemia   | Rudolph II                             | 1606 | Maximilian          | Int.          | Brother's Quarrel                               | <a href="#">Bireley (2014)</a>                          |
| Castile   | Ferdinand I                            | 1054 | Garcia              | Civil         | Battle of Atapuerca                             | <a href="#">Gerli (2013)</a>                            |
| Castile   | Sancho II                              | 1067 | Alfonso             | Int.          | Battle of Llantada                              | <a href="#">O'callaghan (1975)</a>                      |
| Castile   | Sancho II                              | 1071 | Garcia              | Int.          | Battle of Pedroso                               | <a href="#">O'callaghan (1975)</a>                      |
| Castile   | Sancho III                             | 1157 | Fernando            | Int.          | Sancho's Conquest of Territories                | <a href="#">O'callaghan (1975)</a>                      |
| Castile   | Alfonso X                              | 1255 | Enrique             | Civil         | Revolt of 1255                                  | <a href="#">Hillgarth (1976)</a>                        |
| Castile   | Alfonso X                              | 1255 | Fadrique            | Civil         | Revolt of 1255                                  | <a href="#">Hillgarth (1976)</a>                        |
| Castile   | Peter the Cruel                        | 1350 | Fadrique Alfonso    | Civil         | Castilian Civil War                             | <a href="#">Hillgarth (1976)</a>                        |
| Castile   | Peter the Cruel                        | 1350 | Sancho Alfonso      | Civil         | Castilian Civil War                             | <a href="#">Hillgarth (1976)</a>                        |
| Castile   | Peter the Cruel                        | 1350 | Tello Alfonso       | Civil         | Castilian Civil War                             | <a href="#">Hillgarth (1976)</a>                        |
| Castile   | Peter the Cruel                        | 1358 | Fadrique Alfonso    | Civil         | Castilian Civil War                             | <a href="#">Hillgarth (1976)</a>                        |
| Castile   | Peter the Cruel                        | 1356 | Henry II of Castile | Civil         | Castilian Civil War                             | <a href="#">Gerli (2013)</a>                            |
| Castile   | John I                                 | 1381 | Alfonso Enriquez    | Civil         | Third Fernandine War                            | <a href="#">López de Ayala (1780)</a>                   |
| Castile   | Peter the Cruel                        | 1360 | Henry II of Castile | Civil         | Castilian Civil War                             | <a href="#">Gerli (2013)</a>                            |
| Castile   | Henry II                               | 1366 | Peter the Cruel     | Civil         | Castilian Civil War                             | <a href="#">Gerli (2013)</a>                            |
| Castile   | Peter the Cruel                        | 1366 | Henry II of Castile | Civil         | Castilian Civil War                             | <a href="#">Gerli (2013)</a>                            |
| Castile   | Henry IV                               | 1465 | Alfonso             | Civil         | Second Battle of Olmedo (happened in 1467)      | <a href="#">Gerli (2013)</a>                            |
| Denmark   | Eric IV Ploughpenny                    | 1241 | Abel                | Civil         | Contestation for the Throne                     | <a href="#">Helle (2003)</a>                            |
| England   | William II (Rufus)                     | 1088 | Robert              | Civil         | Rebellion of 1088                               | <a href="#">Dictionary of National Biography (2004)</a> |
| England   | William II (Rufus)                     | 1090 | Robert              | Civil         | Rouen Revolt                                    | <a href="#">Dictionary of National Biography (2004)</a> |
| England   | William II (Rufus)                     | 1091 | Henry               | Int.          | Rebellion Quelling with Brother Robert Curthose | <a href="#">Dictionary of National Biography (2004)</a> |
| England   | William II (Rufus)                     | 1094 | Robert              | Civil         | Invasion of Midlent                             | <a href="#">Dictionary of National Biography (2004)</a> |

Table A6: Brotherly Conflict Descriptions and Sources Cont.

| Polity  | Monarch              | Year | Brother                          | Conflict Type | Name                                                      | Source                                                  |
|---------|----------------------|------|----------------------------------|---------------|-----------------------------------------------------------|---------------------------------------------------------|
| England | Henry I (Beauclerc)  | 1101 | Robert                           | Civil         | Crisis of 1101                                            | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Henry I (Beauclerc)  | 1106 | Robert                           | Civil         | Continuation of the Crisis of 1101 - Battle of Tinchebray | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Stephen              | 1141 | Henri                            | Civil         | Crisis of 1141                                            | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Henry II             | 1155 | Geoffroy                         | Civil         | Geoffrey fitz Count's Revolt                              | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Richard I            | 1193 | John                             | Civil         | Rebellion Against Richard I                               | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Henry III            | 1227 | Richard                          | Civil         | Fallout from Waleran the German At-tempted Ejection       | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Henry III            | 1238 | Richard                          | Civil         | Opposition to his Sister's Marriage to Simon de Montfort  | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Edward II            | 1326 | Edmund                           | Int.          | Isabella and Motinmer Invasion of England                 | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Edward II            | 1326 | Thomas                           | Int.          | Isabella and Motinmer Invasion of England                 | <a href="#">Dictionary of National Biography (2004)</a> |
| England | Edward IV            | 1470 | George                           | Civil         | War of the Roses                                          | <a href="#">Dictionary of National Biography (2004)</a> |
| France  | Henry I              | 1031 | Robert                           | Civil         | French Civil War                                          | <a href="#">Axelrod and Phillips (1995)</a>             |
| France  | Louis XI             | 1465 | Charles                          | Civil         | League of the Public Weal                                 | <a href="#">Axelrod and Phillips (1995)</a>             |
| France  | Henry III            | 1574 | Francois                         | Civil         | Fifth French War of Religion                              | <a href="#">Kamen (2003)</a>                            |
| France  | Louis XIII           | 1614 | Caesar de Bourbon                | Civil         | Familial Conflict                                         | <a href="#">Sandberg (2010)</a>                         |
| France  | Louis XIII           | 1632 | Gaston                           | Civil         | Battle of Castelnau-dary                                  | <a href="#">Sandberg (2010)</a>                         |
| Gwynedd | Dafydd ap Llwyn      | 1240 | Gruffudd ap Llywelyn ap Iorwerth | Civil         | Imprisonment                                              | <a href="#">Dictionary of National Biography (2004)</a> |
| Gwynedd | Llywelyn ap Gruffudd | 1255 | Dafydd ap Gruffydd               | Civil         | Battle of Bryn Derwin                                     | <a href="#">Dictionary of National Biography (2004)</a> |
| Gwynedd | Llywelyn ap Gruffudd | 1255 | Owain Goch ap Gruffydd           | Civil         | Battle of Bryn Derwin                                     | <a href="#">Dictionary of National Biography (2004)</a> |
| Gwynedd | Llywelyn ap Gruffudd | 1263 | Dafydd ap Gruffydd               | Int.          | Joined Henry III in Conflict Against Llywelyn             | <a href="#">Dictionary of National Biography (2004)</a> |
| Hungary | Andrew I             | 1060 | Bela                             | Dep.          | Brother's Deposition                                      | <a href="#">Engel (2005)</a>                            |
| Hungary | Coloman              | 1098 | Almos                            | Int.          | Almos' Revolt                                             | <a href="#">Engel (2005)</a>                            |
| Hungary | Coloman              | 1105 | Almos                            | Int.          | Almos' Revolt                                             | <a href="#">Engel (2005)</a>                            |
| Hungary | Coloman              | 1112 | Almos                            | Civil         | Almos' Revolt                                             | <a href="#">Engel (2005)</a>                            |
| Hungary | Geza II              | 1157 | Istvan                           | Dep.          | Overthrow of Geza II                                      | <a href="#">Engel (2005)</a>                            |
| Hungary | Bela III             | 1173 | Geza                             | Civil         | Family Rebellion                                          | <a href="#">Engel (2005)</a>                            |
| Hungary | Emeric               | 1197 | Andras                           | Civil         | First Brothers' Quarrel (Hungary)                         | <a href="#">Kosztolnyik (1996)</a>                      |
| Hungary | Emeric               | 1203 | Andras                           | Civil         | Second Brothers' Quarrel (Hungary)                        | <a href="#">Kosztolnyik (1996)</a>                      |
| Hungary | Ladislaus II         | 1490 | Jan Ol-bracht                    | Int.          | Polish Border Invasions of Hungary                        | <a href="#">Engel (2005)</a>                            |
| Hungary | Rudolf II            | 1606 | Matthias                         | Int.          | Brother's Quarrel                                         | <a href="#">Bireley (2014)</a>                          |
| Hungary | Rudolf II            | 1606 | Maximilian                       | Int.          | Brother's Quarrel                                         | <a href="#">Bireley (2014)</a>                          |
| Leon    | Ferdinand I          | 1054 | Garcia III Sanchez               | Civil         | Battle of Atapuerca                                       | <a href="#">Gerli (2013)</a>                            |
| Leon    | Alfonso VI           | 1071 | Garcia                           | Civil         | N/A                                                       | <a href="#">Gerli (2013)</a>                            |
| Leon    | Alfonso VI           | 1071 | Sancho                           | Civil         | N/A                                                       | <a href="#">Gerli (2013)</a>                            |
| Leon    | Ferdinand II         | 1157 | Sancho                           | Int.          | N/A                                                       | <a href="#">Gerli (2013)</a>                            |

Table A7: Brotherly Conflict Descriptions and Sources Cont.

| Polity    | Monarch                         | Year              | Brother         | Conflict Type | Name                                             | Source                                                  |
|-----------|---------------------------------|-------------------|-----------------|---------------|--------------------------------------------------|---------------------------------------------------------|
| Lithuania | Jogaila                         | 1387              | Andrei          | Int.          | Attack of Livonian Order                         | <a href="#">Reddaway et al. (1950)</a>                  |
| Naples    | William I                       | 1161              | Simon           | Civil         | Revolt of 1161                                   | <a href="#">Takayama (1993)</a>                         |
| Navarre   | Garcia III                      | 1035              | Ramiro          | Int.          | Battle of Tafalla                                | <a href="#">Fitz and Monteiro (2018)</a>                |
| Navarre   | Garcia III                      | 1054              | Sanchez         | Int.          | Battle of Atapuerca                              | <a href="#">O'callaghan (1975)</a>                      |
| Navarre   | Sancho IV                       | 1076              | Ramon Garces    | Dep.          | Brotherly Assasination                           | <a href="#">O'callaghan (1975)</a>                      |
| Norway    | Sigurd II, Eystein II, Krokrygg | Munn, Inge I 1155 | Inge            | Dep.          | Civil War Period                                 | <a href="#">Larsen (2015)</a>                           |
| Norway    | Eystein II, Krokrygg            | Inge I 1157       | Inge            | Civil         | Civil War Period                                 | <a href="#">Larsen (2015)</a>                           |
| Poland    | Mieszko II                      | 1031              | Bezprym         | Int.          | German Invasion of Poland                        | <a href="#">Lerski (1996)</a>                           |
| Poland    | Mieszko II                      | 1031              | Otto            | Int.          | German Invasion of Poland                        | <a href="#">Lerski (1996)</a>                           |
| Poland    | Bezprym                         | 1032              | Mieszko         | Dep.          | Brotherly Suspected Poison                       | <a href="#">Lerski (1996)</a>                           |
| Poland    | Bezprym                         | 1032              | Otto            | Dep.          | Brotherly Suspected Poison                       | <a href="#">Lerski (1996)</a>                           |
| Poland    | Zbigniev                        | 1103              | Boleslaw        | Civil         | Boleslaw's Rebellions                            | <a href="#">Reddaway et al. (1950)</a>                  |
| Poland    | Boleslaw III                    | 1107              | Zbigniev        | Civil         | Zbigniev's Rebellion                             | <a href="#">Axelrod and Phillips (1995)</a>             |
| Poland    | Wladyslaw II                    | 1140              | Boleslaw        | Civil         | Brotherly Conflict                               | <a href="#">Lerski (1996)</a>                           |
| Poland    | Wladyslaw II                    | 1145              | Boleslaw        | Civil         | Brotherly Civil War                              | <a href="#">Lerski (1996)</a>                           |
| Poland    | Wladyslaw II                    | 1140              | Mieszko         | Civil         | Brotherly Conflict                               | <a href="#">Lerski (1996)</a>                           |
| Poland    | Wladyslaw II                    | 1145              | Mieszko         | Civil         | Brotherly Civil War                              | <a href="#">Lerski (1996)</a>                           |
| Poland    | Boleslaw IV                     | 1146              | Wladyslaw       | Int.          | Attempt to Escape Exile                          | <a href="#">Lerski (1996)</a>                           |
| Poland    | Boleslaw IV                     | 1157              | Wladyslaw       | Int.          | Attempt to Escape Exile                          | <a href="#">Lerski (1996)</a>                           |
| Poland    | Boleslaw IV                     | 1166              | Kazimierz       | Civil         | Dukedom Partition Rebellion                      | <a href="#">Reddaway et al. (1950)</a>                  |
| Poland    | Boleslaw IV                     | 1166              | Mieszko         | Civil         | Dukedom Partition Rebellion                      | <a href="#">Reddaway et al. (1950)</a>                  |
| Poland    | Boleslaw IV                     | 1172              | Mieszko         | Civil         | Dukedom Partition Rebellion                      | <a href="#">Reddaway et al. (1950)</a>                  |
| Poland    | Mieszko III                     | 1177              | Kazimierz       | Civil         | Elite Rebellion                                  | <a href="#">Lerski (1996)</a>                           |
| Poland    | Casimir II                      | 1181              | Mieszko         | Int.          | Mieszko's Foreign Invasions into Poland          | <a href="#">Lerski (1996)</a>                           |
| Portugal  | Alfonso II                      | 1211              | Pedro           | Civil         | Leon Invasion of Portugal                        | <a href="#">Lay (2009)</a>                              |
| Portugal  | Sancho II                       | 1245              | Afonso          | Civil         | Castilian Civil War                              | <a href="#">Livermore (1966)</a>                        |
| Russia    | Ivan III                        | 1479              | Boris           | Civil         | Threatened Rebellion                             | <a href="#">Martin (1995)</a>                           |
| Russia    | Ivan III                        | 1479              | Andrei          | Civil         | Threatened Rebellion                             | <a href="#">Martin (1995)</a>                           |
| Scotland  | Duncan II                       | 1094              | Edmund          | Dep.          | Duncan II's Deposition                           | <a href="#">Dictionary of National Biography (2004)</a> |
| Scotland  | James III                       | 1482              | Alexander       | Int.          | Alexander and French First Invasion of Scotland  | <a href="#">Dictionary of National Biography (2004)</a> |
| Scotland  | James III                       | 1484              | Alexander       | Int.          | Alexander and French Second Invasion of Scotland | <a href="#">Dictionary of National Biography (2004)</a> |
| Sweden    | Valdemar                        | 1275              | Bengt           | Civil         | Battle of Hova                                   | <a href="#">Helle (2003)</a>                            |
| Sweden    | Valdemar                        | 1275              | Erik Birgersson | Civil         | Battle of Hova                                   | <a href="#">Helle (2003)</a>                            |
| Sweden    | Valdemar                        | 1275              | Magnus          | Civil         | Battle of Hova                                   | <a href="#">Helle (2003)</a>                            |
| Sweden    | Birger                          | 1306              | Erik            | Civil         | The Hatuna Game                                  | <a href="#">Helle (2003)</a>                            |
| Sweden    | Birger                          | 1306              | Valdemar        | Civil         | The Hatuna Game                                  | <a href="#">Helle (2003)</a>                            |
| Sweden    | Eric XIV                        | 1568              | Johan           | Civil         | The Duke's Uprising                              | <a href="#">Axelrod and Phillips (1995)</a>             |
| Sweden    | Eric XIV                        | 1568              | Karl            | Civil         | The Duke's Uprising                              | <a href="#">Axelrod and Phillips (1995)</a>             |

## Summary Statistics

Table A8: Royal Brothers Panel Summary Statistics

|                                       | Mean     | Standard Deviation | Minimum  | Maximum  |
|---------------------------------------|----------|--------------------|----------|----------|
| Secular Positions Held                | 0.621    | 1.510              | 0.000    | 15.000   |
| Ecclesiastical Positions Held         | 0.135    | 0.547              | 0.000    | 6.000    |
| Sovereign Position Held               | 0.097    | 0.407              | 0.000    | 4.000    |
| Count Position Held                   | 0.268    | 0.797              | 0.000    | 7.000    |
| Duke Position Held                    | 0.255    | 0.761              | 0.000    | 7.000    |
| Bishop Position Held                  | 0.118    | 0.507              | 0.000    | 6.000    |
| Cardinal Position Held                | 0.017    | 0.131              | 0.000    | 1.000    |
| Brotherly Conflict (General)          | 0.006    | 0.079              | 0.000    | 1.000    |
| Brotherly Conflict (Civil War)        | 0.004    | 0.063              | 0.000    | 1.000    |
| Brotherly Conflict (Int. War)         | 0.002    | 0.041              | 0.000    | 1.000    |
| Brotherly Conflict (Dep. Attempt)     | 0.000    | 0.022              | 0.000    | 1.000    |
| Parliament                            | 0.627    | 0.484              | 0.000    | 1.000    |
| Monarch's Brothers                    | 3.367    | 2.588              | 0.000    | 14.000   |
| Monarch's Sons                        | 1.698    | 2.166              | 0.000    | 16.000   |
| Logged Polity Area                    | 11.588   | 1.437              | 7.601    | 16.587   |
| Monarch Reign Start (Quarter Century) | 1403.341 | 215.553            | 1000.000 | 1775.000 |
| Observations                          | 17051    |                    |          |          |

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