

Papal Correspondence: Gregory VII's Influence Network, Urban Self-Government, and the Papal Revolution

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ABSTRACT

This paper analyzes medieval Pope Gregory VII's role in building coalitions that stimulated urban self-government, a crucial development in the European state-formation process. In the eleventh century, Gregory came to spearhead a reform program that attempted to curb lay control of the Catholic Church, in direct opposition with secular rulers such as German Emperor Henry IV. We argue that Gregory's campaign — called the “papal revolution” by one prominent scholar — fostered urban associationalism and political autonomy via his ties to local town elites. Gregory's promotion of church reform through his network thereby opened up a wedge that enabled towns to become self-governing. Enlisting new data on Gregory's correspondence, we provide evidence that receiving more letters from the pope is associated with a higher likelihood of overthrowing the authority of lay-appointed bishops and introducing political self-government.

Keywords: Gregorian reforms, papal letters, urban self-government, medieval Europe

Online Appendix available from:

http://dx.doi.org/10.1561/115.00000093_app

MS received 18 March 2025; revised 1 April 2025; accepted 7 May 2025

ISSN 2693-9290; DOI 10.1561/115.00000093

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Introduction

Individual leaders are often thought to be important for the success of reforms, the eruption of conflicts, and sometimes even for revolutions to occur (e.g., Becker *et al.*, 2020; Brooke and Ketchley, 2018; Horowitz *et al.*, 2005). By passing on information, exercising influence, and building alliances, leaders can increase the likelihood that radical movements succeed. This paper shows how Pope Gregory VII (r. 1073–84) used his continent-spanning network to spread ideas about and preferences for church reform that sparked a wave of urban regime change. The ensuing flourishing of self-governing cities impacted patterns of state-formation and regime developments in medieval and early modern Europe (e.g., Cox *et al.*, 2024; Ertman, 1997; Nexon, 2009; Spruyt, 1994; Tilly, 1990). Gregory's actions, prompted by an unrelated institutional conflict that concerned church reform, opened up a wedge that enabled towns in Western and Central Europe to switch to self-governance. Our paper thus supports the notion — held by several historians — that Gregory instigated a veritable “papal revolution” with important downstream consequences for later European development (Berman, 1983; Siedentop, 2014).

This papal revolution began when Gregory unleashed the Investiture Controversy in 1075–1076, and it marks a rupture or even critical juncture in European history (e.g., Berman, 1983; Grzymala-Busse, 2020, 2023; Møller and Doucette, 2022; Moore, 2000; Oakley, 2010, 2012, p. 37, 2015, p. 4; Siedentop, 2014; Tierney, 1988; Wickham, 2016). The Investiture Controversy pitted Gregory and a series of subsequent “Gregorian” reform popes, including his direct successor Urban II (r. 1088–99), against the German emperors Henry IV (r. 1056/1084–1106) and his son and successor Henry V (r. 1098/1106–1125), of the mighty Salian imperial dynasty.

Gregory sought to strategically build alliances with pious townsmen across Italy, Germany, France and the Low Countries to push his reform program, the so-called Gregorian reforms, and to weaken the power of his lay rivals in the Investiture Controversy, particularly Henry IV. Gregory's lay rivals were normally allied with unreformed bishops, who controlled many towns in, e.g., the Holy Roman Empire. Gregory's response was to get his partisans, pious townsmen convinced by the reform program, to take power away from these bishops and reform their church institutions from below.

Gregory's alliance building had political consequences that were probably unforeseen by him and his fellow church reformers as it affected collective activity in towns in Western and Central Europe. To impose reforms on unreformed lord-bishops or the local clergy more generally, townsmen had to take political power, in the form of urban self-government (Doucette and Møller, 2021). The towns that were more receptive of Gregory's new and radicalized version of the reform program are thus more likely to have built up popular mobilization for self-government. As Moore (1995, p. 27) puts it,

“the willingness of Gregory VII to call upon the people for direct assistance in his campaign to reform his own hierarchy, to invite the laity to judge their priests and lower clergy their superiors ... can only have stimulated popular activity.” We test this claim by investigating the relationship between Gregory’s correspondence, and hence his social interactions, and early urban political autonomy.

Our outcome, urban self-government (pre-1200), is substantially important for two reasons. First, the widespread presence of self-governing towns was unique to Western Europe, and they have been singled out as one of the key constraints on pre-modern European rulers (e.g., Angelucci *et al.*, 2022; Dincecco and Wang, 2018; Downing, 1989; Ertman, 1997; Tilly, 1990). Second, the later emergence of self-government was strongly related to city growth and diffusion from city-level self-governing institutions (Abramson and Boix, 2019; Doucette, 2021). We are thus interested in an outcome that has helped shape the European process of state-formation.

Our analysis draws inspiration from recent research that has used Martin Luther’s correspondence to examine whether local connections to him increased the odds of towns adopting Protestantism (Becker *et al.*, 2020). In a similar way, we are interested in finding out whether network effects explain the receptiveness of the Gregorian reform program in medieval towns and what the political consequences of this were. Becker *et al.*’s (2020, p. 858) central claim is that new heterodox ideologies — in their case, Protestant reforms; in our case, Gregorian reforms — spread not simply via information but via social linkages. We argue that this applies *a fortiori* in the High Middle Ages where the density of communication was much lower than in Reformation Europe.

We use Gregory’s letters to capture an ego-centered network, based on his ties with others, to analyze if there is evidence of Gregory’s “influence network” (Becker *et al.*, 2020, p. 858) increasing the odds of towns adopting political self-government, with a letter serving as an indicator of higher access to these mobilization networks. As we are dealing with an era of slow and difficult communication (more on this below), letters were in fact the main way of passing information within these networks, so in theoretical terms, letters both proxy and constitute the networks we are interested in. They helped spread ideas and preferences within Gregory’s influence network.

The paper proceeds as follows: We first use a historical narrative to demonstrate how Pope Gregory VII corresponded with town elites and encouraged them to disobey and denounce or even force out unreformed bishops. The narrative also shows that social interactions were needed to spread the new and heterodox Gregorian ideas in a context where travel was cumbersome. Second, we introduce geocoded data of letters sent by Gregory during his reign. The letters further document the ties between the pope and local elites in various cities across Western Europe. We find a strong positive relationship between Gregory’s diplomatic efforts and early transitions to urban self-government.

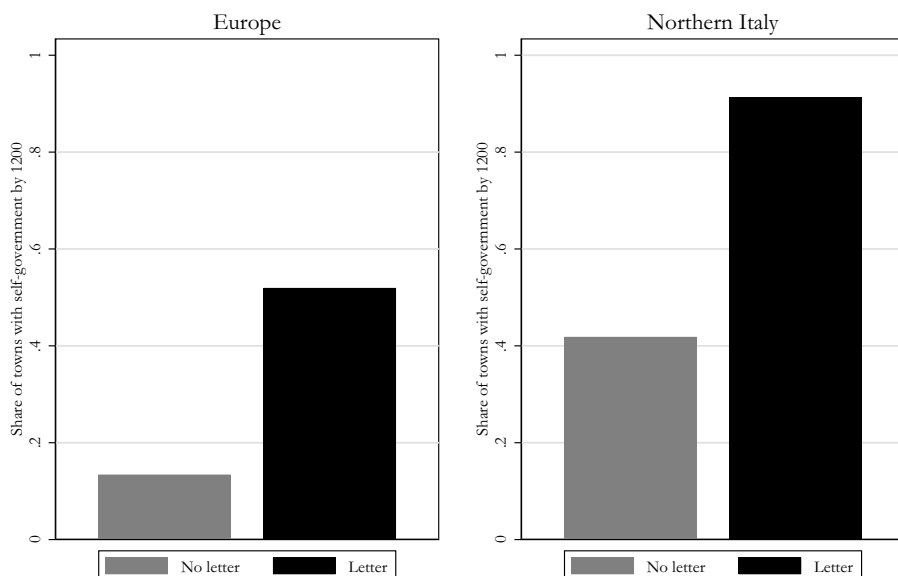


Figure 1: Papal letters and urban self-government in 1200.

Note: The figure shows the difference in political autonomy in 1200 between towns that received at least one letter from Gregory and towns that received no letter. In both the sample of European towns from Bosker *et al.* (2013) and in the sample of Italian towns from Belloc *et al.* (2016), towns that received a letter were more than twice as likely to experience an early transition to self-government in comparison with nonletter towns. No town in either sample achieved self-government prior to the reign of Gregory. The data is presented later in the paper.

Figure 1 gives a preview of this empirical pattern. Towns that received a letter from the pope were subsequently more than twice as likely to become self-governing.

Using detailed information on town characteristics from Bosker *et al.* (2013) and Belloc *et al.* (2016), we show that this relationship does not reflect prior differences that predict whether towns were letter receiving or nonletter receiving. These differences include population size, episcopal presence, Cluniac presence, warfare, characteristics of the polities, and biogeographical factors (e.g., Abramson and Boix, 2019; Belloc *et al.*, 2016; Dincecco *et al.*, 2016). Consistent with our argument that townspeople had to take political power from unreformed clergy, we find that the impact of ties to Gregory is concentrated in towns with a bishop. In addition, we show that Gregory's influence was stronger in towns that were also influenced by the Cluniac reform movement, which had pursued a similar bottom-up reform strategy and can hence be seen as another indicator of the Gregorian influence network (Doucette and Møller, 2021).

Gregory's Revolutionary Alliance with Popular Forces

The papal revolution is intimately associated with the reform program of Pope Gregory, what is today known as the Gregorian reforms (e.g., Berman, 1983, p. 15–19; Moore, 2000, p. 29). The Gregorian reforms were inspired by the earlier Cluniac monastic reforms, which had begun around AD 1000 (Doucette and Møller, 2021; Moore, 2000). The reform program centered on combating simony (the selling of church offices) and clerical concubinage (also called nicolaitism) (Cowdrey, 1998, p. 242).

The Gregorian or papal reform movement is normally dated to either 1046 or 1049. On the former occasion, German King and Emperor-to-be¹ Henry III (r. 1028/1046–1056) deposed three scandalized popes at a synod; on the latter, he elevated his kinsman Bruno of Egisheim-Dagsburg as pope under the name Leo IX (r. 1049–1054). With Leo, the papal reform movement began in earnest. The new pope traveled through Italy, France, and Germany where he called synods that spread the reform program by actively denouncing simony and clerical concubinage.

The Gregorian reform movement was thus initially allied with (or even an instrument of) German imperial power, and its main aim was to sever local lay control over ecclesiastical institutions as well as married clergy's secular entanglements. However, this changed as the influence of Gregory VII — known as Hildebrand until his papal election — grew. Hildebrand led the Roman clergy from around 1059 and was a form of power behind the throne during his predecessor Alexander II's (r. 1061–1073) spell as pope (Wickham, 2014, p. 30). Alexander II adopted a decree of the Council of Rheims in 1049, one of the meetings called by Leo IX, to the effect that regular people should “judge and discipline the hierarchy over which they themselves presided” (Moore, 1985, p. 54). After becoming pope in 1073, Gregory came to base his attempt to spread the reform agenda on this policy.

Gregory thus broke with precedence in the way he attempted to reform the Catholic Church. He challenged the power of the German Emperor — even claiming the right to excommunicate and depose him — and he harnessed popular forces to the papal reform agenda, especially in France, Germany, and Italy.² Gregory's aim was to push through the reform agenda in towns not via a top-down exercise of power (e.g., administrated by representatives of the German emperor or French king) but via bottom-up pressure from pious townsmen, who proved to be willing allies of the Gregorian reform movement.

¹The German king or “King of the Romans” (*König der Römer, Rex Romanorum*) had to be crowned by the pope to become emperor. Henry III's imperial crowning took place in December 1046.

²In the newly Christianized periphery (The British Isles, The Low Countries, Scandinavia, and Poland and Hungary) Gregory tended to instead ally with lay rulers (Bartlett, 1993, p. 248; Cowdrey, 1998, Chapter 6; see also Møller and Doucette, 2022, Chapter 5).

This was a complete break with the traditional top-down Carolingian/imperial blueprint for carrying out church reforms,³ which had most recently been pursued by German Emperor Henry III when he decided to reform the papal Church in the late 1040s (see Møller and Doucette, 2022, p. 22–23, 32–33). Gregory, the right-hand man to several prior reform popes, was thus the only pope — indeed the only important actor in the eleventh-century church reform movement — to commit himself so blatantly to the bottom-up strategy of appealing to popular forces (the lay nobility and townsmen) to push the reform program, bypassing monarchs and sometimes even the ecclesiastical hierarchy of the Latin West (Bartlett, 1993, p. 244; Moore, 2000, p. 29). As Moore (2000, p. 29) puts it, while “Gregory VII was far from being alone in his willingness to invoke popular enthusiasm to subvert the existing hierarchy and the existing distribution of wealth and power . . . he was almost alone in doing so explicitly.”

During the first years of his papacy, Gregory was actively urging both laity and clergy in, for instance, the Holy Roman Empire to stop obeying bishops who continued to condone simony and clerical in chastity (Cowdrey, 2000, p. 278). One of the best illustrations of this policy comes from the northern Italian city of Milan, which until the 1070s was one of the main bastions of imperial rule south of the Alps. Beginning in the 1040s, Milan had been the scene of clashes between reformers and supporters of simoniac archbishops who were allied with German imperial power (Wickham, 2015, p. 22–25; Wilson, 2016, p. 54). From the 1060s onwards, we find a popular movement in Milan called the Patarenes (*patarini*, “ragpickers”), who repeatedly tried to rid themselves of archbishops known to have bought their office and who were allied with the German king (Wilson, 2016, p. 54; see also Cowdrey, 1998, 2000, p. 271; Jordan, 2001, p. 88–91; Moore, 2000, p. 14–16, 47; Wickham, 2015, p. 24–25; 2016, p. 112).

Hildebrand had long been one of the strongest supporters of the Patarenes within the church hierarchy (Cowdrey, 1998, p. 68–70, 281; Cowdrey, 2000, p. 271). Now Pope Alexander’s second-in-command, he threw his weight behind the Patarene leader Erlembald: “in 1071 and 1072, Hildebrand’s dealings with Erlembald were extremely close and that they led to actions upon Erlembald’s part that Alexander may not have approved” (Cowdrey, 1998, p. 70). In 1073, the Patarenes had managed to take political power in Milan. Hildebrand, now Pope Gregory VII, lent all his force to this rebellion. He proclaimed it a war of God (*bellum Dei*) (Cowdrey, 1998, p. 128), and he regularly corresponded with Erlembald to counsel and encourage him (Cowdrey, 1998, p. 281–286). He also wrote to other influential people in the region, including bishops Albert of Acqui and William of Pavia, asking them to assist Erlembald (Cowdrey,

³A good example are the monastic reforms that Emperor Louis the Pious forced on monastic communities of the Frankish realm at three synods in Aachen in 816, 817, and 818/19 (Melville, 2016, p. 40).

1998, p. 128). To illustrate the tenor of Gregory's message, we can take an encyclical letter from his early papal reign, mainly directed to his supporters in Lombardy, in which he accused Archbishop Godfrey of Milan, appointed by the German emperor, of presuming "to buy the church of Milan like a common slave-girl, thereby seeking to prostitute the bride of Christ to the devil and to separate her from the catholic faith" (Cowdrey, 1998, p. 280).

Gregory also used his correspondence to bolster reform movements that fought unreformed bishops in other north Italian cities. Take, for instance, this letter sent by Gregory to the population of the northern Italian city of Piacenza in 1075 to set them against their simoniac bishop:

He absolved from their oaths those who owed him [the bishop] fealty and called for outright opposition to him of the most determined kind. Gregory would himself see that all the faithful of St Peter should come to their aid in expelling the wolf and choosing a shepherd. As citizens of God (*cives Dei*) they should be strong, for God was with them. He specially absolved any who should die in defence of righteousness (*pro defensione iustitiae*) (Cowdrey, 1998, p. 287).

We here see the active hand of Gregory in disputes about ecclesiastical reforms that would repeatedly create popular mobilization in north Italian towns as well as towns in Germany and France. Gregory pursued this policy most actively in the early years of his papacy, for instance via a series of letters addressed to towns in Germany in 1075 (Cowdrey, 1998, Chapter 3). His subsequent all-or-nothing struggles with King and Emperor-to-be Henry IV, which began in 1076, meant that he often had his hands full and was unable to devote as much attention to reforming towns as he probably wanted to. But the policy remained a pillar or core tenet of the Gregorian reforms (Cowdrey, 2000, p. 280), and in many ways it was tangential with his struggle against the unreformed emperor, who after all was the linchpin of simony in Gregory's view. When it was possible, Gregory would still push these ideas via his correspondence in his later years. For instance, in "1076, he dispatched to Flanders the kind of letter that in 1075 he had addressed to Germany, urging its lay rulers to mobilize both clergy and laity against married priests and simoniacal bishops" (Cowdrey, 1998, p. 247). Likewise, in 1079, he sent a "letter, widely circulated in Germany and Italy, in which he revived his call to the faithful to shun the ministrations of fornicating clergy, branded disobedience to the apostolic see as 'the sin of heathenism', and insisted upon obedience to apostolic precepts as the condition of entering the kingdom of heaven" (Cowdrey, 1998, p. 188).

The letters were so effective because the demand for church reform was already there. This is most obvious in the case of northern Italian towns

where we have the best historical information about what was happening at the town level. Milan is but one of the urban spaces where pious townsmen had for decades chafed under the rule of unreformed lord-bishops, or at least faced an unreformed local clergy, who “remained unhappy about ‘reform’ . . . for two generations or more” (Wickham, 2014, p. 415). Large urban groups were therefore receptive of Gregory’s message (Cowdrey, 1998, Chapter 4). Urban leagues — “sworn associations of the godly to provide a more moral and autonomous government” (Wilson, 2016, p. 54) — fought simony within their local ecclesiastical hierarchy and denounced clerical concubinage. This popular activity sparked a “general belief among townsfolk that self-government was essential to ensuring a peaceful, godly community” (Wilson, 2016, p. 513). The result was a veritable campaign for “civic emancipation” (Wilson, 2016, p. 513), in the form of urban self-government which would allow devout townsmen to correct or rid themselves of unreformed lord-bishops.

What, more precisely, was in it for the townsmen? The townsmen were motivated by religious belief, in the form of considerations about their own salvation in the afterlife. Recent work has argued that townsmen who had been convinced of the church reform program — the struggle against simony and clerical marriage — took power in towns to force these ideas on recalcitrant (unreformed) bishops who opposed the reform program, often in alliance with Emperor Henry IV (Doucette and Møller, 2021; Møller and Doucette, 2022, Chapter 3). Self-government provided the reform camp within towns with a guarantee that future bishops would not defect from the reform program; it was therefore a more lasting solution than simply forcing out the individual simoniac bishop. Early urban self-government can thus be seen as a commitment device that ensured that the reform program would have staying power and safeguarded the (religious) self-interests of pious townsmen — just as it has been argued that modern democracy enables self-interested citizens to redistribute material wealth on a permanent basis (Boix, 2015; Boix and Stokes, 2003).

During the eleventh-century Gregorian Revolution, we thus see the same phenomenon as later during the Protestant Reformation, namely how urban political coalitions pushed reform through in the face of local resistance from established elites who had a stake in the old religious and institutional arrangements.⁴ Just as in sixteenth-century Germany, “these coalitions challenged the local political and religious establishment, pressuring local elites to institute a new religious regime” (Becker *et al.*, 2020, p. 865).

⁴In both instances, the problem was the same: When new heterodox ideas such as those presented by Gregory compete against an established orthodoxy, the odds are normally not in favor of sudden change (Becker *et al.*, 2020, p. 861).

Gregory's Letters, His Network, and the Low Density of Communication

To understand the importance of the network effects set in train by Gregory's correspondence, some historical context is needed. Medieval historian Chris Wickham (2016, p. 141) relates the following story about how news of the new Gregorian ban of lay investiture reached England, carried by the Italian cleric and former abbot of a Norman monastery, Anselm of Bec (also known as Anselm of Canterbury):

When in 1093 King William II of England appointed a new archbishop of Canterbury, Anselm of Bec, he invested him as archbishop with the staff of office, as kings had traditionally done. Anselm soon fell out with William and left the country, arriving in Rome in 1098. Here, however, he discovered that, as we saw earlier, popes had been condemning lay investiture since 1078: so, when he returned to England after William's death in 1100, he duly informed the new king Henry I that such rituals were invalid.

Let us pause briefly to take this in. As we have seen, the linchpin of Gregory's reforms was the prohibition of lay investiture of bishops, based on a new and wider interpretation of simony that had first been broached by Cardinal Humbert in the 1050s (in the treatise tract *Adversus simoniacos*) but only became official papal policy in the years following Gregory's papal election in 1073 (Cowdrey, 1998, p. 546–7, 690; Morris, 1989, p. 106; Wickham, 2016, p. 114). A decree to this effect seems to have first been publicly proclaimed by Gregory at his Lent synod in 1075, the same year as it was inserted into the (unpublicized) *Dictatus Papae* (Cowdrey, 1998, p. 103–4, 546–53). In 1076, Gregory excommunicated and deposed Henry IV over lay investiture, triggering what we today refer to as the Investiture Controversy.

By 1093, the fact that the conflict between pope and emperor revolved around investiture was seemingly still unknown in England, even among well-connected clerics such as Anselm of Bec, who only learned about it at the Vatican Council of 1099, where “Urban II unexpectedly excommunicated all who associated with clergy who had received ecclesiastical offices by lay investiture” (Southern, 1995, p. 242). As Wickham (2016, p. 141) observes, Anselm was one of the most learned and respected theologians of his day. He was also an Italian with strong connections within west European monastic circles. That someone like him “could have been unaware of one of the major elements of the conflict between popes and emperor tells us something about the lack of density in political communication in the years around 1100” (Wickham, 2016, p. 141).

In this context, where travel and communications were slow and costly, official papal letters were one of the few effective ways to spread papal ideas

(another was to send papal legates to spread the word by mouth, but even in this case legates would often carry letters as well). Letters were one of the main tools of medieval popes; an instrument of exercising influence which they used actively to keep contact with, spur on, and reward potential allies and to reproach or to excommunicate and interdict their adversaries or unfaithful allies (Grzymala-Busse, 2023; Southern, 1970, p. 108–109). Even if addressed to a particular person, the letters normally had a public aim: They were meant to be read aloud to wider groups of people.

A total of 423 of Gregory's letters survive. In general, the volumes of regesta of papal letters in the Vatican archives are rather incomplete before the papacy of Innocent III (r. 1198–1216). But Gregory VII is a partial exception as 381 of his letters are contained in a manuscript in the Vatican archives. The 381 letters are obviously not all the letters Gregory sent, neither is the total of 423 we have preserved when we include other sources. There is bound to be missingness on a large scale. Some historians have claimed that in urgencies letters were not registered and that some registered letters might never have been sent.⁵ However, what is important for our purposes is that the bulk of Gregory's surviving letters come from the archive of the sender, not the archives of the recipient, meaning that we need not fear some kind of survivor bias in towns that had better preconditions for later self-government. In a nutshell, our findings will not be biased by towns that turned to self-government having a higher propensity to preserve letters from Gregory.

Stafford *et al.* (2020) from the Department of History at the University of Sheffield have collected data on the location of recipients of letters sent by Gregory. For each letter, they register whether the likely recipient was a secular or lay person (group) and what year it was sent. Relying on Murray (1966) and Cowdrey (1998), who we have used to provide examples of individual letters above, they were able to identify the geographic location of recipients for 398 letters. Figure 2 uses this information to map the geographic location of letter recipients and the number of letters sent to that location.

Gregory sent many letters to nearby locations in Italy. However, he also had many contacts north of the Alps, even corresponding with Danish King Sweyn Estrithson. In our dataset, Gregory's letters in almost all cases predate urban self-government, which only genuinely began to spread after his death. This is important as it means that our analysis does not reflect that already self-governing towns were more likely to attract the attention of Gregory (cf. Becker *et al.*, 2020, p. 867).

⁵As papal letters were often forged, some townsmen may also have believed that they were receiving genuine letters from Gregory in instances where they were not. Any such forged letters are not captured by our coding, even if they could theoretically have similar effects as real letters among those who believed the fabricated letters to be genuine.



Figure 2: Mapping Gregory VII's papal correspondence.

Note: The figure shows the location of recipients of Pope Gregory VII's letters.

We use Gregory's correspondence to map network ties of Gregorian influence at the town level. We follow Becker *et al.* (2020) in using the letters as a proxy for network ties between Gregory VII and townsmen in medieval cities as well as a conduit for signals about when townsmen could expect papal support in their struggle against unreformed local bishops. As explained above, the letters thus both proxy and constitute the influence networks we are interested in, in a situation where the lack of density of political communication was otherwise glaring. The Gregorian networks spread ideas and preferences that enabled collective action in towns. What we attempt to track is thus the association between the Gregorian reform impulses and transitions to urban self-government, or to investigate how being part of Gregory's network triggered urban mobilization and, downstream, self-government.

As in the case of Luther and the Protestant Reformation, Gregory clearly overshadows all other church reformers — popes as well as other ecclesiastics — of the period. Historians have observed that the most radical of Gregory's policy statements, including the way the *Dictatus Papae* of 1075 established the pope's right of investiture of bishops and his right to depose monarchs who

did not observe this, were revolutionary (Berman, 1983, p. 96; Jordan, 2001, p. 91; Oakley, 2010, p. 165–173, 220–221; Oakley, 2012, p. 1, 30; Southern, 1970, p. 103; Tierney, 1988, p. 56). Gregory was even seen by some contemporaries as a revolutionary force. The monk Peter Damian, who was another influential church reformer of the period, tellingly called Hildebrand his “holy Satan,” a reference to the Satan of the Book of Job: “the chief officer of God’s court who was God’s agent in afflicting a righteous man with plagues from which he was eventually delivered” (Cowdrey, 1998, p. 41). Even more telling is an apocryphal story related by an anonymous chronicler in the 1070s about how the first reform pope, Leo IX, at some point is to have said to Hildebrand, the later Gregory VII: “If, as hopefully will not happen, you ever succeed to the apostolic see, you will throw the whole world into confusion” (quoted in Osiander, 2007, p. 268). While Pope Leo almost certainly never made this prediction, it reflected the popular perception of Gregory in the eyes of contemporaries. In Becker *et al.*’s (2020, p. 860) terminology, Gregory was “a ‘hyper-influential’ person who could sway many people through persuasion and example.”

Urban Political Autonomy

We use Gregory’s letters to capture an ego-centered network, based on his ties with others (not ties between alters in his network; cf. Becker *et al.*, 2020, p. 872), to analyze if there is evidence of ties with Gregory increasing the odds of towns adopting political self-government.

Many European towns had some degree of informal political autonomy prior to the eleventh century (see in particular Reynolds, 1997[1984]). However, around the close of the century, the first towns began to formally separate from lay lord or bishop control by introducing assembly governments based on citizen representatives (Belloc *et al.*, 2016; Bosker *et al.*, 2013; Stasavage, 2014). In the ensuing centuries, we find what amounts to a veritable wave of urban self-government; what is also known as the medieval “communal revolution” or, in Italian, the *moto associativo*, the “associative movement” (Wickham, 2015, p. 4).

It has long been recognized that the consequent flourishing of self-governing cities was crucial for European processes of state-formation and regime developments (e.g., Ertman, 1997; Nexon, 2009; Spruyt, 1994; Tilly, 1990). Urban self-government acted as a constraint on royal power but also allowed kings and princes to project power (Møller, 2015). It has been shown how urban self-government was a catalyst for realm-wide institutions of self-government, such as parliaments (Cox *et al.*, 2024), the only institutions that were capable of systematically constraining royal power (Ertman, 1997, p. 19).

The development we analyze is thus a first-order aspect of European state-formation. We attempt to shed light on the initial spread of politically autonomous towns beginning in the late eleventh century and gathering pace throughout the twelfth century. To do so, we need information on urban political institutions for towns that could potentially be part of Gregory's network. We rely on two datasets. The first, collected by Belloc *et al.* (2016), registers the year that 121 northern and central Italian towns became self-governing (if they ever did so). Autonomy is coded as having begun the first documented year that (i) citizens ejected the feudal leader from the town, (ii) the townspeople were granted a charter of self-government, or (iii) historical documents mention the presence of citizen representatives in the town assembly. Eleven Italian towns introduced self-government before 1100, and 62 did so before 1200. This dataset has two advantages. First, it has annualized data on political institutions between 1000 and 1300, which allows us to better track the sequence of letter receiving and transitions. Second, it covers the main area where Pope Gregory VII clashed with the German king/emperor over clerical reform (see also the number of letters sent to this area in Figure 2; see Cowdrey, 1998, Chapter 3). In the sample, 19% of the towns received at least one letter from Gregory.

Our second dataset, from Bosker *et al.* (2013), covers 793 towns across Europe that at some point between 800 and 1800 had at least 10,000 inhabitants. It thus provides broader geographical coverage, but it only tracks self-government at the century level. Transitions are coded by looking for the first mention of a ruling assembly comprised of citizens. Sixteen towns had introduced self-government by 1100, and 136 did so before 1200. In the sample, 9.7% of the towns received at least one letter from Gregory. Figure 3 plots the distribution of towns in the two datasets.

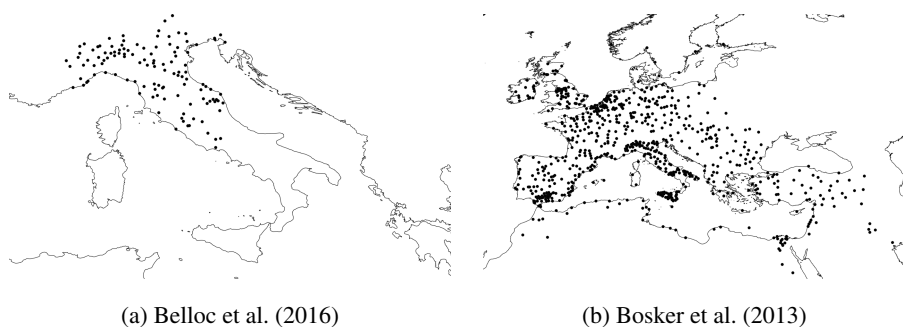


Figure 3: Urban political institutions datasets.

Note: Black dots are towns covered by the datasets.

What Predicts Papal Correspondence?

Why did Pope Gregory send letters to some towns and not others? This question is important to answer first as it speaks to our ability to infer whether it is the Gregorian efforts to reform church institutions or other underlying factors that explain any observed relationship between letters and urban regime change (see Figure 1).

First, as the papal head of the Catholic Church, it is likely that Gregory would send letters to his regional leaders, bishops. Consequently, we expect towns that function as the seat of a bishop to be more likely to receive a letter. Second, the geography of each town also likely plays a role. If towns were too far away or too hard to get to, the travel time associated with sending a letter may have meant that it would arrive too late to make a difference, or even that there was a big risk that it would never arrive. Thus, we expect towns that (i) have access to waterways, (ii) are located closer to Rome, (iii) are connected to the Roman road network, and (iv) with accessible terrain to be more likely to receive a letter. Third, towns that were previously part of a conflict might be more likely to attract Gregory's attention. Fourth, it is unlikely that Gregory would spend time on smaller villages or hamlets; thus, we expect larger towns or towns with a higher probability of experiencing urban agglomeration (i.e., which had lower soil constraints or bigger urban potential; see Abramson, 2017; Bosker *et al.*, 2013) to have a higher likelihood of receiving a letter.⁶

In addition, we consider two factors that might predict Gregory's correspondence in Italy. First, many of Gregory's letters had to do with his conflict with the German Emperor, which culminated in several invasions of northern Italy and attacks on Rome by Henry IV. As a result, we might expect that towns closer to the emperor's likely invasion path — the standard 'Italian expedition' (*expeditio Italica*) of German medieval emperors (Bartlett, 2020, p. 417) — received more attention. We therefore check if distance to the Brenner Pass serves as a predictor. Second, towns with a significant and long urban history may be more inclined to attract the attention of the pope; we assess if being a former Etruscan town had an impact.

Table 1 shows the relationship between these factors (measured in 1000 AD) and receiving at least one letter from Pope Gregory by 1084, for our two samples.⁷ As expected, we find that town size and being the seat of a bishop

⁶Urban potential is the distance-weighted sum of the population of neighboring cities (see Bosker *et al.*, 2013).

⁷All variables for the Europe dataset as well as the Italian dataset are taken from Bosker *et al.* (2013) — although we have added information on soil quality (based on caloric suitability using pre-1500 crops) from Galor and Özak (2016) and information on elevation and ruggedness from EEA (2018) to the Italian dataset. We measure conflict using an indicator of the number of battles that took place within 50 km of a town between 800 and 1073 from Kitamura (2022). We have updated population numbers using Buringh (2021). Information on connection to the Roman road network is from McCormick *et al.* (2013).

Table 1: Predicting receiving a letter from Gregory.

Sample	(1) Italy	(2) Europe
Sea access	−0.035	0.058
River access	0.087	0.097**
Soil quality	−0.161	−0.018
Elevation	0.058	0.078
Ruggedness	−0.064	−0.116**
Roman road	−0.053	0.153***
Etruscan	0.094	
Dist. to Rome	0.078	−0.184***
Dist. to Brenner Pass	0.150	
Ln(pop.size in 1000)	0.263*	0.222***
Urban potential	0.223 ⁺	−0.092
Bishop	0.275**	0.103**
Battles, 800–1073	−0.044	−0.050
Adj. R^2	0.22	0.20
N	121	793

Note: Estimated using OLS. Standardized beta coefficients: ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

are the strongest predictors of receiving letters from Gregory. Based on model (1), it appears that these are the only factors that predict letter writing in Italy. This is perhaps not so surprising, as geographical constraints are less likely to have played a role for short distances in an area where communications were denser than in the rest of Western Europe. Model (2) shows that in the broader European sample, towns connected to the Roman road network, with access to waterways, less rugged terrain, and which are closer to Rome are significantly more likely to become a recipient of a Gregorian letter.

Papal Correspondence and Urban Regime Change

We now turn to our main empirical expectation, that towns in Gregory’s network were more likely to introduce political autonomy as a means of achieving clerical reform. As an initial test, we plot the descriptive relationship between Gregory’s correspondence and urban political institutions. Figure 4 shows the share of towns with self-government from 1000 to 1200 for the group of towns inside and outside of Gregory’s network, proxied by letters.

Reassuringly, no towns introduced self-government before Gregory came to head the papal reform movement in 1073 (and by then he had effectively dominated the reform movement for more than a decade). However, a clear subsequent pattern emerges. Towns that received at least one letter from

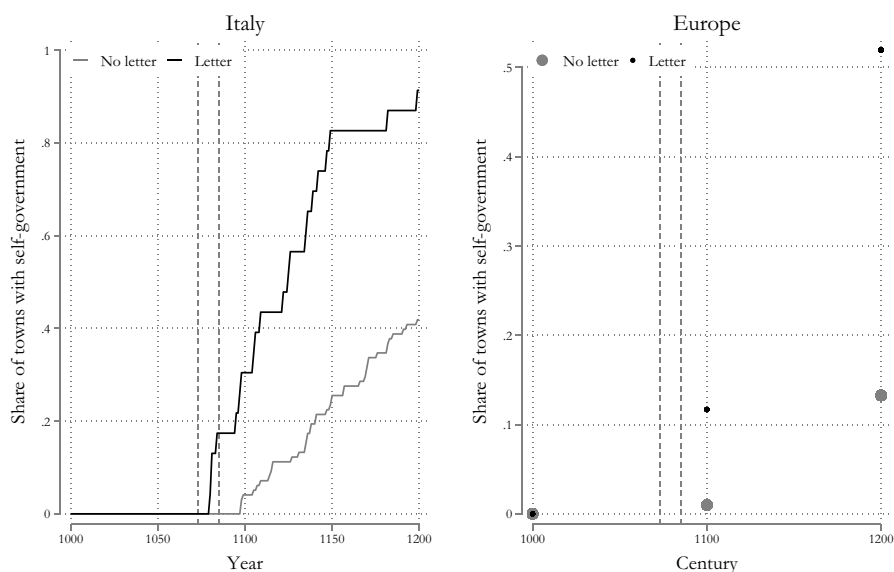


Figure 4: Papal letters and the development of urban self-government, 1000–1200.

Note: The figure shows the difference in the share of self-governing towns between 1000 and 1200 for towns that received at least one letter from Gregory and towns that received no letter. The vertical gray dashed lines demarcate the period that Gregory was in office (1073–1085). Both in the sample of European towns from Bosker *et al.* (2013) and in the sample of Italian towns from Belloc *et al.* (2016), there are no autonomous towns prior to 1073. Letter receiving towns introduce self-government at a higher rate for the next approximately 125 years.

Gregory were more likely to attain self-government before 1200. This is in line with our argument that urban self-government provided a long-term commitment device that ensured the staying power of church reform — as opposed to the short-term solution of simply ousting a specific simoniac bishop whose successors might then defect from the reform program. Looking at the temporally more fine-grained Italian data, this difference already begins during Gregory's time in office. This supports our interpretation that Gregory formed alliances with townspeople to oppose unreformed clergy, which required the reform-minded sections of towns to fight for political autonomy.

Table 2 presents a more systematic test that also includes controls for the factors used to predict correspondence. Extant explanations of self-government stress three factors that are also well captured by our predictors of correspondence: (i) urbanization and the associated development of an urban class of merchants that fight for inclusive institutions (e.g., Pirenne, 1925), (ii) warfare which forced rulers to grant concessions in exchange for aid from urban elites (e.g., Downing, 1989), and (iii) geographic factors, including access to trade via waterways or road networks and hinterlands with good agricultural potential,

Table 2: Papal letters and self-government.

	(1)	(2)	(3)	(4)	(5)
	Europe	Europe	Europe	Italy	Italy
Sample	Centuries of	Centuries of	Centuries of	Years with	Years with
outcome	autonomy	autonomy	autonomy	autonomy	autonomy
	by 1200	by 1200	by 1200	by 1200	by 1200
Letter	0.493***	0.297***	0.211**	49.31***	19.3*
	(0.079)	(0.077)	(0.074)	(8.603)	(7.476)
Controls	No	Yes	Yes	No	Yes
Polity in 1000 FE	No	No	Yes	NA	NA
Observations	793	793	793	121	121

Note: Estimated using OLS; Robust standard errors in parentheses $^+p < 0.10$, $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Controls: sea and river access, elevation, ruggedness, soil quality, logged population size in 1000, urban potential in 1000, bishop in 1000, distance to Rome, connection to Roman road network, conflict exposure; (Italy only) Etruscan past, distance to the Brenner Pass. Table A5 in the Online Appendix presents the regression results with coefficients and standard errors for all controls included.

that allow cities to grow and protect them from predation (e.g., Abramson and Boix, 2019). The association is similar in these specifications. Without controls, a letter is estimated to increase the number of years with self-government by 1200 with around half a century in both samples. The estimate drops to 21 years and 19 years, respectively, when controls are introduced but it remains highly significant. Finally, for the European sample we include polity fixed effects, thus only looking at variation in letter receiving within each polity that was present in 1000 (data on polities is from Nüssli and Nüssli, 2008).⁸

In the “Spatial Diffusion of the Movement” section in the Online Appendix, we examine whether spatial dependence affects our findings. We find little evidence of general spatial diffusion, as only towns that did receive a letter or towns that were located very close to letter recipients exhibit additional self-government. We also show that our results hold when using spatially corrected standard errors and when estimating spatial autoregressive models that include spatial lags of the dependent variable and letter receiving. In Figure A2 in the Online Appendix, we interrogate the relationship between the number of letters received and self-government. The main difference seems to be between letter-receiving and nonletter receiving towns, i.e., being part of the Gregorian influence network or outside of it. Table A3 in the Online Appendix shows that the findings are similar if we drop all towns from our samples with an observed population size below 1000; our results are thus not driven by the inclusion of small towns that would never warrant the attention of Gregory VII.

⁸There is basically no variation in polity for the Italian sample, and thus this test does not make sense there.

Next, we investigate a battery of more specific empirical implications of our argument. First, as we have seen, Gregory VII's reform efforts were aimed at using popular power to remove unreformed clergy. As a result, we expect that townspeople were more likely to introduce self-government in towns that were controlled by bishops, as a new political system was needed to reform the clergy in the face of unreformed lord-bishops, who were normally appointed by lay rulers such as the German king/emperor. We have already given several qualitative examples of this, including the 1075 letter that Gregory sent to encourage reformers in Piacenza to expel their unreformed bishop. Letters such as this would circulate among reformers, especially in northern Italy and Germany (see Cowdrey, 1998, Chapters 3 and 4). Sometimes, the letter was addressed directly to the unreformed bishop, who therefore had the chance to strategically withhold information. But the letters were meant to be read out loud to communities of believers and there were clear limits to what bishops could do to fake the message. Moreover, Gregory would sometimes push the message by sending legates to directly spread the word. Here is how Cowdrey (1998, p. 287) describes these dynamics in the case of northern Italy: "Gregory's letters and privileges show that he encouraged reforming groups wherever he could, to the extent of directly intervening through legates".

Figure 5 presents the relationship between Gregory's correspondence and self-government in episcopal and nonepiscopal towns. Consistent with our

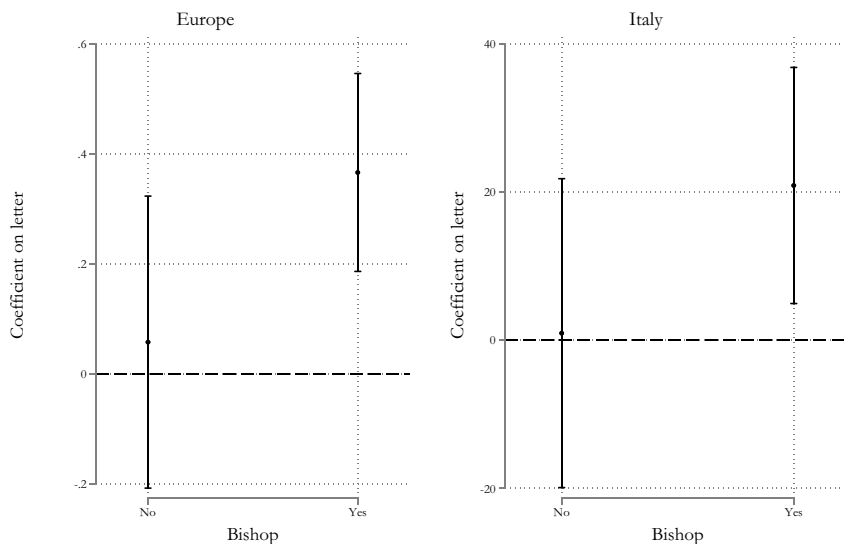


Figure 5: Bishops, letters, and self-government.

Note: Based on models (2) and (5) from Table 2 with an added interaction term between letter receiving and bishop presence. 95% confidence intervals.

argument, being part of Gregory's influence network has no impact on transitions to self-government in towns that were not controlled by a bishop. Conversely, where townspeople could oust unreformed clergy from political power, we find a strong positive relationship between correspondence and transitions. There is thus clear evidence that the Gregorian party within the Catholic Church used pious townspeople to clip the wings of the main agents of their lay opponents, particularly unreformed bishops who had been invested by the German emperor.

Second, we take advantage of the fact that — according to medieval historians — after 1200 AD, the papacy cut its ties with the communal sentiment that Gregory VII had appealed to, thus divorcing itself from the popular urban movement for clerical reform (Moore, 2000, p. 174; see also Møller and Doucette, 2022, Chapter 3). Hence, while we expect that belonging to Gregory's network had an impact on urban political autonomy during the latter half of the eleventh century and throughout the twelfth century, we do not expect it to influence later transitions: being part of the Gregorian influence network should only stimulate urban self-government in the period where the bottom-up urban alliance with papal reformers persisted.

Figure 6 presents event-studies of the impact of letters over time. Prior to Gregory's campaign, there is no discernable difference in the likelihood of attaining self-government (corresponding to the lack of autonomous towns in this period, see Figure 4).⁹ The right graph in Figure 6 shows that letter receiving Italian towns had between 11 and 27 percentage points higher probability of transitioning to self-government during the first 75 years after the movement began. Subsequently, as the Papal Church cut ties with the communal movement around 1200, the likelihood of attaining self-government remained about the same in letter receiving and nonletter towns. A similar picture is visible for the wider European sample, as letter receiving towns have around 11 to 28 percentage points higher likelihood of transitioning to self-government between 1001 and 1200 when compared to nonletter towns, but a similar likelihood from 1201 to 1800.

Third, we leverage the fact that the Gregorian reform movement was inspired by the monastic Cluniac reform movement that also sought to stir popular action against unreformed clerics. Thus, we would expect Gregorian influence to be stronger in areas where Cluniac influence ran highest: Cluniac proximity is another proxy of the Gregorian influence network that

⁹Specifically, we estimate the following equation: $\text{selfgov.it} = i + t + q\text{Dit} + \text{XitxTt} + \text{it}$. Where selfgov.it is an indicator for the presence of self-government in town i in century/year t . $i + t$ are city and period fixed effects respectively. q are average effects of relative time q to the reign of Gregory for towns that receive a letter (relative to the period just before Gregory's ascension). XitxTt is a vector of controls (same as in Table 2) interacted with time.

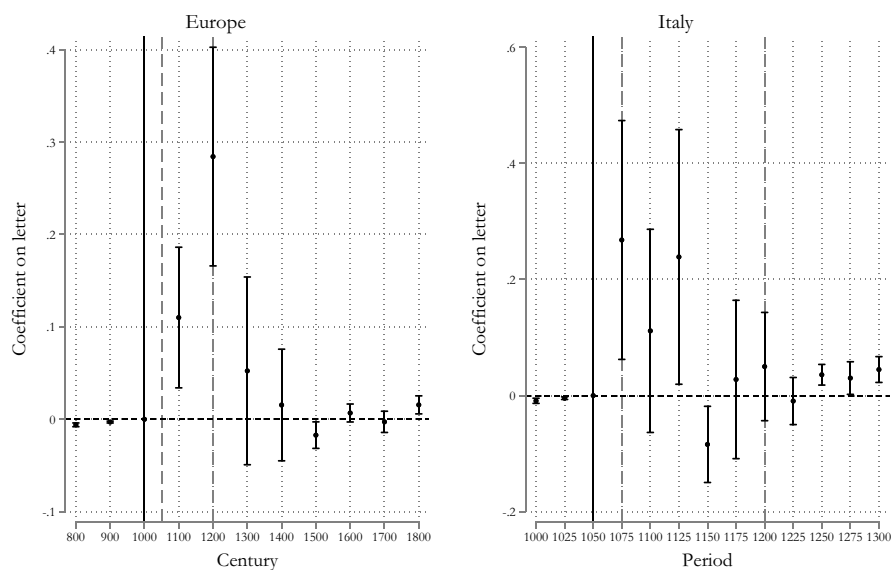


Figure 6: Letters and self-government over time.

Note: The coefficients show the average difference in the likelihood of transitioning to self-government when comparing letter receiving to nonletter towns (relative to the difference in the period just before receiving a letter — the vertical black line). 95% confidence intervals based on town level clustering. The vertical dashed gray lines demarcate the approximate duration of the Church's alliance with the communal movement. Estimates prior to the first dashed gray line are preletter, while estimates within the two dashed gray lines are postletter but preend of communal ties, while estimates after the second dashed gray line are postcommunal ties. Estimated using OLS with city and time-period fixed effects. Models include all controls from models (2) and (5) in Table 2 interacted with time to allow for a changing impact over time. The Europe regression uses 100-year periods, such that, for example, 1100 includes years from 1001 to 1100. The Italy regression uses 25-year periods, such that, for example, 1075 includes years from 1075 to 1100.

complements and should thus strengthen the relationship we are expecting.¹⁰ We use data on the location of Cluniac monasteries in the eleventh century from Doucette and Møller (2021) to test whether letters have a stronger relationship with self-government in towns that were proximate to the centers of the Cluniac movement. Figure 7 presents the findings. Reassuringly, the

¹⁰Some might object that distance to Cluny could be a predictor of underlying preferences for urban self-government — and that Gregorian letters were thus sent to towns that were predisposed to claim urban autonomy. Our theoretical expectation is that Cluniac influence strengthened the resonance of the Gregorian influence network; this is why we have theorized this relationship in interactive terms (see Doucette and Møller, 2021). However, in Table A4 in the Online Appendix we also show that the relationship holds when controlling for Cluny influence rather than estimating an interaction. We thank an anonymous reviewer for raising this issue and allowing us to clarify.

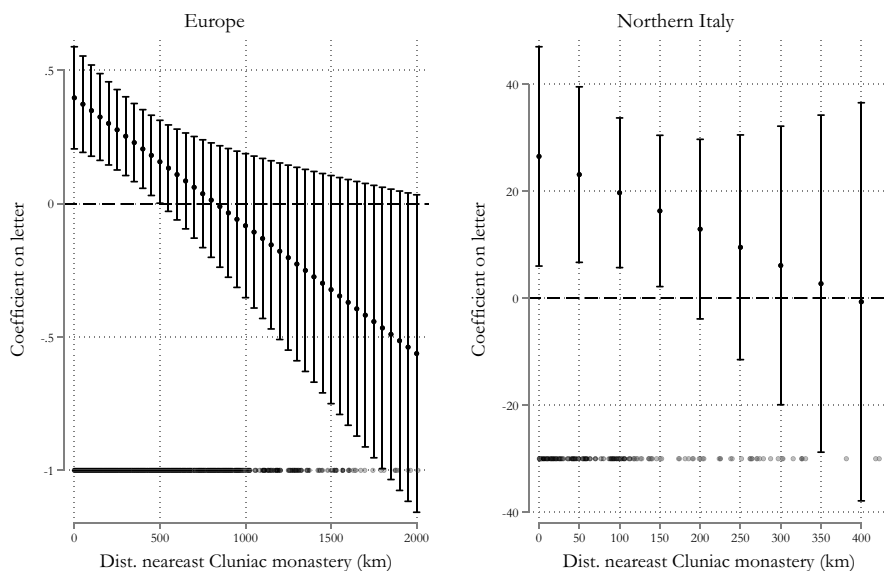


Figure 7: Cluniacs, letters, and self-government.

Note: Based on models (2) and (5) from Table 2 with an added interaction term between letter receiving and distance to the nearest Cluniac monastery at the close of the eleventh century. 95% confidence intervals. Rug plots at the bottom of each graph show the distribution of distances to Cluniac monasteries in the samples.

impact of Gregory's diplomatic efforts is strongest in towns that were located in areas where the Cluniac reform movement resonated.

Fourth, we use information on the content of each letter from Stafford *et al.* (2020), which provides an abstract summarizing the main points made in each letter. Specifically, we code whether a letter was related to investiture, which was vital to Gregory's reform agenda. Figure 8 plots the predicted number of years with self-government in 1200 in towns that either (i) did not receive a letter, (ii) received a letter centered on investiture, or (iii) received a letter but it did not center on investiture. There is some evidence that towns receiving letters specifically concerning investiture are more likely to have self-government in the European sample. However, there is no relationship in the Italian sample. Overall, this seems to suggest that the main impact is not driven by the content of the letters per se but rather comes from the connection to Gregory's network that the letters proxy; this can be seen as evidence in favor of the network mechanism we have theorized, although we cannot say anything definitive about this in the absence of better town-level data about how actors used and reacted to the letters.

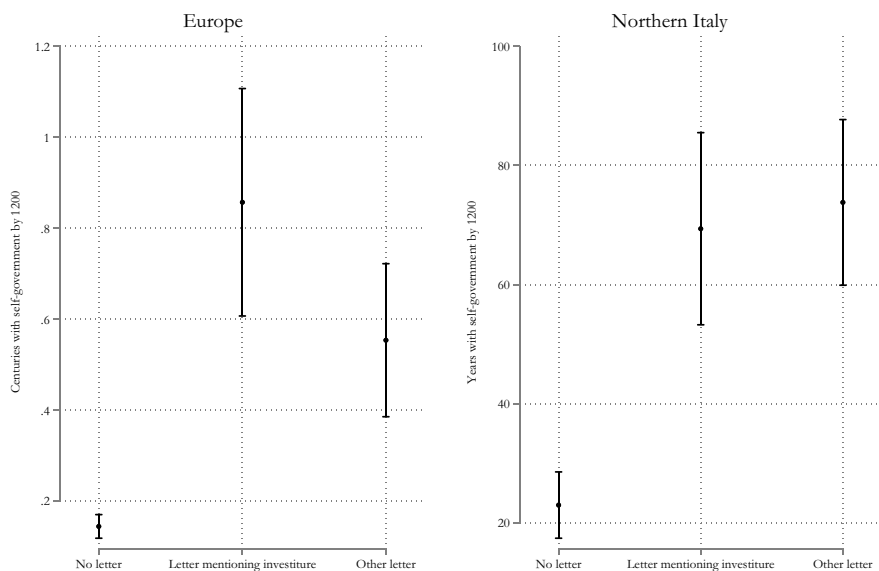


Figure 8: Letter content and self-government.

Note: Based on models (2) and (5) from Table 2 splitting the treatment dummy into two variables. One equal to 1 if a letter concerning investiture has been received, and another equal to 1 if a letter has been received but no letter has been received which centered on investiture. 95% confidence intervals.

Conclusions

Historians and social scientists have seen the eleventh-century “papal revolution” (Berman, 1983) as a critical part of the process of European state-formation. In this paper, we have investigated a specific aspect of this, namely the notion that Pope Gregory VII’s reform agenda — the Gregorian reforms — stimulated urban self-government where his influence ran high. We have used Gregory’s papal correspondence to measure his influence network and the signals he sent to pious townsmen. In a series of statistical analyses, we have demonstrated that towns that received letters from Gregory were much more likely to subsequently adopt urban self-government. The results are strongest within Italy but manifest across the Latin West in general. We have also shown that these results are driven by towns that were the seat of bishops, which corroborates the notion that Gregory stimulated popular associationalism in places where unreformed lord-bishops allied with, e.g., the German emperor Henry IV blocked the reform agenda, and that proximity to Cluniac monasteries further increases the effects of Gregory’s correspondence on transitions to urban self-government, because it increased the resonance of

Gregory's reform agenda. Furthermore, we have shown how the relationship dissipates after the Gregorian movement within the papal Church stopped leaning on popular movements to push the reform program around AD 1200.

These findings indicate that frequent contacts with the church reform movement is related to early urban self-government. More specifically, like Martin Luther more than 400 years later Gregory was a hyper-influential person who allows us to identify specific political corollaries of the papal revolution. Our analysis shows how determined actors can sometimes tip the power scales by strategically building new sources of support. Gregory's papal revolution opened up a wedge that transformed the face of urban life in Western and Central Europe; even though the revolution concerned church reform and not urban self-government *per se*. In Gregory's case, the proximate aim seems to have been to oust bishops allied with the German emperor and have townsmen allied with the Gregorian reform program elect new ones, thereby strengthening Gregory's hand at the expense of Henry IV. These network effects, in turn, had important but probably unforeseen long-term political consequences, in this case inaugurating a new model of urban self-government that was to have staying power in medieval and early modern Europe, and which previous scholarship has seen as crucial to the European state-formation process (e.g., Cox *et al.*, 2024; Ertman, 1997; Nexon, 2009; Spruyt, 1994; Tilly, 1990).

Acknowledgements

We are indebted to two anonymous reviewers who pushed us to further clarify several important points. We also thanks Stephen Hanson and Svend-Erik Skaaning for comments on earlier versions of the paper. Support for this research was provided by the Independent Research Fund Denmark (grant 1028-00011B).

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