

Religious Seduction in Autocracy: A Theory Inspired by History*

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Abstract

The increasingly visible presence of religion, in developing countries especially, has aroused the interest of economists during the last decades. What is generally overlooked, however, is the relationship between religion and politics and, in particular, the possibility that the former is instrumentalised by the latter. This paper explores this relationship from a theoretical standpoint, assuming that religious clerics can be co-opted or seduced by the ruler acting as an autocrat. Islam is a special concern and one of its defining characteristics is that it does not possess a centralized church structure. It is therefore important to understand the comparative effects of decentralized versus centralized religions on the (optimal) level of cooperation between the autocrat and the religious clerics, which itself impinges upon political stability. The paper shows that the presence of a decentralized body of clerics makes autocratic regimes more unstable. It also shows that when the clerics become more radical the optimal policy of the autocrat is to forego progressive reforms (or reduce corruption) in order to enlist a larger clerical support and mitigate the risk of regime collapse. Historical case studies are presented that serve to illustrate the main results.

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1 Introduction

The increasingly visible presence of religion, in developing countries especially, has aroused the interest of economists during the last decades. What is generally overlooked, however, is the relationship between religion and politics and, in particular, the possibility that the former is instrumentalized by the latter (see Aldashev and Platteau, 2013, for a recent survey). This is precisely the issue that this paper wants to address from a theoretical standpoint and in the specific context of autocracy, a political regime commonly found in developing countries. Islam is a special concern and one of its defining characteristics is that it does not possess a centralized church structure. It is therefore important to understand the comparative effects of decentralized versus centralized religions on the (optimal) level of cooperation between the autocrat and the religious clerics, which itself impinges upon political stability.

As current observation testifies, few developing countries turn out to be genuine democracies. This was more evident in the 1960s and 1970s than today, especially when attention is focused on Latin America and Africa. It nevertheless remains true in a large part of the developing world, political regimes prevail that lack some basic attributes of democracy. This is especially true of Asia where India is standing almost alone in the democratic category and where many rapidly growing countries, such as Vietnam, Thailand, and China, are strong autocracies. It also bears emphasis that latecomers in the industrial revolution (Germany, Russia, and Japan) during the 19th and beginning of the 20th centuries were not governed in a democratic way. Moreover, many old democracies of Western Europe, with the notable exception of the Netherlands, started as absolute monarchies. What all this evidence suggests, therefore, is that modern states tend to be non-democratic during the crucial phase of their formation and consolidation.

Since their legitimacy cannot rest on the principles of democracy, developing autocracies need to rely on other sources of legitimacy. Two such sources are available, and they can be used in combination: nationalism and religion. The first source has been amply used by today's developed

countries in the stage of their consolidation, as is evident from 17th century Europe, and from the role of nationalistic or communist ideology in Germany, Japan and Russia. In these cases, dramatic efforts and sacrifices for achieving rapid development are typically represented as arising from the need to restore national dignity and protect territorial integrity in the face of outward pressures and challenges. Because of its reference to the sacred, religion provides a transcendental legitimacy which the autocrat may seek in support of his rule. This may be a particularly effective strategy in traditional societies where the influence of religion is pervasive due to low rates of urbanization and low education levels of the majority of people. The experience of Europe, most notably in the course of the 17th and 18th centuries attests to the importance of a strategy based on a strong identification with a particular religion and on the ruling principle '*cujus regio eius religio*' according to which a citizen should have the same religion as the sovereign. Since the latter rule implies that not espousing the sovereign's faith is tantamount to betraying one's country, it is actually quite difficult to disentangle the two sources of legitimacy, at least in the case of modern Europe (both Western and Eastern). The same principle is still observed in a significant number of developing countries where the religious establishment believes it to be its duty to obey a secular ruler, however despotic and corrupt, provided that he proclaims official allegiance to their religion. This was particularly evident with Catholicism in many Latin American countries during the 1960s and 1970s, with Islam in many Muslim countries, and even with Buddhism in times of crisis (e.g., during and after the Tamil rebellion in Sri Lanka).

To gain religious legitimacy, it is not sufficient for an autocrat to proclaim officially his adherence to a particular religion. He must also strive toward seducing or co-opting religious clerics with the purpose of obtaining their support for his policies by means of legitimating statements or speeches. But, unlike the first component of the strategy, the second one involves a cost: religious clerics have to be bought into submission, implying that rewards and privileges must be granted to them in exchange for their cooperation. The ideal situation seems to be the one where the

clerical body is unified under a centralized church structure headed by an undisputed authority, and where that authority is rather close to political power. This situation has actually existed in some countries (e.g., France, Spain, the Netherlands, Poland, Sweden) while it has been deliberately created as the consequence of a schismatic break with a foreign church in some others (most notably, England during Henry VIII's reign). Completely different is the situation where there is no vertical chain of command but a decentralized clerical structure. Since clerics have different levels of attachment to the ethical values and moral principles inspired by their religion and, therefore, different tastes for the autocrat's policies, it is not a priori clear which proportion of them the autocrat will be willing to co-opt. The most uncompromising clerics are those who require the highest price to be 'seduced'.

The most topical example of a decentralized religion combined with political autocracy is, without doubt, Islam. The difference in centralization between Catholicism and Islam has deep historical roots: unlike the first Christians who built up a church structure to defend themselves against a state which oppressed them, the Muslims had no need to construct a centralised religious organisation because Muhammad, the founder of the religion, held political power as governor of Medina (Greif, 2006, p. 206; see also Lal, 1998, pp. 62-64; Lewis, 2002, pp. 113-15; Kepel, 2005, p. 237; Lilla, 2007, pp. 56-8, 318).¹ In all Muslim countries, except in Iran, there is no hierarchy that exerts authority over the whole clerical profession. No church establishment exists and, as a result, the clerics operate in a rather decentralised way, pronouncing their own fatwas (juridical rulings or opinions based on the Islamic Law) as they deem fit. A fatwa issued by one cleric can therefore be followed by counter-fatwas issued by other clerics. Moreover, the impact of a fatwa depends mainly on the prestige of the cleric or the group of clerics who issue it, whether they occupy an official position or are self-appointed (Beloucif, 2003; Filin, 2008).

¹Inside Christianity, Protestantism is quite decentralized compared to Catholicism and Eastern Orthodoxy, especially the strand of Protestantism encountered in the United States. It is noteworthy, however, that this strand of such Protestantism tends to predominate in advanced democratic countries, which are out of our study.

There are two reasons why conservative or radical clerics may not like the autocrat's policies or actions. First, the autocrat may have carried out progressive reforms that violate, or are believed to violate, basic tenets of the faith. Think of reforms that liberalize divorce, allow gender mixing or reduce women's dependence upon male relatives or the husband, reforms whereby traditional religious courts are replaced by secular courts, reforms that promote modern curricula at schools, reforms that place the whole system of religious education under the control of the state, or reforms that enlarge the scope of individual liberties. Second, the autocrat and his close circle may have indulged in corruption and all sorts of illegal enrichment practices, while simultaneously evincing cynical cold-heartedness toward ordinary people living in precarious conditions. In the former instance, religious dissenters are conservative and perhaps even puritan clerics while in the latter they are socially-minded clerics sensitive to the ideals of social justice and equality inherent in monotheist religions. In the Muslim world, legal and administrative reforms of the aforementioned types have been undertaken in countries such as Turkey, Syria, Egypt, Iraq, Indonesia, Morocco, and Tunisia. By contrast, Algeria, Sudan, Pakistan, and Saudi Arabia made important concessions to the conservative religious circles. In many of these countries (but not in Turkey under Mustapha Kemal Atatürk, not in Egypt under Gamal Abdel Nasser, and not in Iraq under Abdelkarim Qasim, three despotic modernizers), rulers and their inner circles were tainted by corruption, thereby causing deep-seated popular frustrations often echoed by Islamist movements and radical clerics (Platteau, 2015).

When considering the possibility of introducing progressive reforms, the autocrat is obviously confronted with a trade-off between the extent of these reforms and political stability. More precisely, forsaking reforms may allow him to enlist more clerics in his support and thereby enhance the stability of his regime while, conversely, pushing forward with reforms may cost him the support of a fraction of the clerics with the attendant consequence of diminished political stability. The question arises as to how the trade-off plays out when we compare autocracy under a centralized

religion with autocracy under a decentralized religion. In other words, can we say that an autocracy is a more stable but less reformist regime under a decentralized than under a centralized one?

The paper is therefore an exploration into the relationship between (autocratic) politics and religion in the context of non-secularized developing countries. More precisely, it looks at the instrumentalization of religion by an autocratic ruler concerned with the stability of his hold on power. Although the exercise is essentially theoretical, it is inspired by history in the sense that the assumptions on which the theory is based and the analytical questions addressed are drawn from our knowledge of the relationship between politics and religion both in countries that are now advanced and in currently developing countries. The paper contains a good amount of empirical material, but rather than constituting a rigorous empirical test of the theory, it provides rich qualitative insights aimed at motivating it.

The paper is constructed as follows. In Section 2, we review the related literature. Section 3 is the central part of the paper where our theory is expounded and its results are derived. Section 4 presents illustrative evidence by the way of historical case studies. Section 5 concludes.

2 Related literature

Our theory is comprised of three components: (1) there is an autocrat who maximizes his expected surplus, the uncertainty arising from the risk of political rebellion; (2) in order to mitigate that risk, the autocrat resorts to seduction or co-optation of potential leaders of a rebellion; and (3) the leaders to be tamed are religious clerics.

The point of departure given by (1) echoes a long tradition initiated by Gordon Tullock (1987), who claimed that dictators primarily seek to remain in office, and often face a high risk of being overthrown. It is therefore natural that many political scientists and political economists have subsequently examined the strategies which rulers use to stay in office, ranging from loyalty and repression (Wintrobe, 1998), divide-and-rule strategies (e.g., Verdier et al., 2004; De Luca et al., 2014), power-sharing

and bargaining (e.g., Lizzeri and Persico, 2004; Morelli and Rohner, 2014), or even optimal succession rules (Konrad and Skaperdas, 2007; 2015). The two classical instruments of authoritarian control are repression and co-optation, and a few authors have explicitly studied the trade-off between them. Among them are Desai et al. (2009) who have labeled such a trade-off "the authoritarian bargain", or Bove and Rivera (2015) who analyze it as a balancing act between vertical repression of the population and horizontal repression of the elites (see also Koga, 2015). The latter, whom De Mesquita et al. (2005) call the "selectorate", are generally considered the most serious threat to the dictators' power.

Among the most commonly mentioned motives of the elites for deposing a dictator are: the realization that democracy may be a more profitable political regime for them because of new economic or political conditions; the realization that democracy is a necessary compromise to avoid costly revolutions (Robinson and Acemoglu, 2006); and the existence of incentives driving the elites to contest the autocrat's rule in the hope of occupying power themselves (Acemoglu et al. , 2010; Konrad and Skaperdas, 2007, 2015), or of obtaining more favours under another dictator (Sekeris, 2011). Evidence shows that elites tend, indeed, to control the fates of dictators, and statistically most dictators were overthrown by members of their inner circle rather than as a result of genuine popular uprisings. By one estimate (i.e., Svobik, 2009), out of 303 authoritarian rulers, 205 (68 percent) were deposed by a coup between 1945 and 2002. Recent political upheavals, such as those that occurred in Tunisia (2011), Ukraine (2014), or Hong Kong (2014) suggest that vertical accountability, or the autocrat's responsiveness to the broader population, may be playing an increasingly important role as a result of the growing presence of social media and their ability to overcome coordination problems (Bove and Rivera, 2015).

In this paper, as pointed out under (2), we focus attention on the co-optation strategy of the autocrat. The people whom he seeks to co-opt are members of the elite because they can potentially organize and lead people into open confrontation with the ruling clique. We thus depart from political economy models in which a dictator makes transfer payments directly

to the population or to a subgroup (say, an ethnic group) of it in order to stay in power and generate personal rents (Acemoglu and Robinson, 2001; 2006; Padro i Miquel, 2007; Sekeris, 2011; Hodler, 2012).

The third ingredient of our theory, as reported under (3), is the religious nature of the elites considered as a target for favours by the autocrat. Religious clerics have two special features that distinguish them from other elites: (1) they hold values regarding social justice and human rights, or regarding the kind of behavior that their religion prescribes; (2) they have a natural prestige and influence on the population as representatives of the supernatural world and as wise men with a lot of knowledge (theological and philosophical, in particular). Because of these two traits, the clerics are susceptible of playing a role as political actors. However, they are also susceptible of being 'bought' off by the autocrat, yet the price to be paid increases with the distance between the values held by the clerics and the policies or practices of the autocrat. There is, indeed, a continuum of values that differentiate the clerics. The autocrat chooses the mass of religious clerics that he wants to 'seduce' or co-opt, and those excluded form the category of non-official or self-appointed clerics who stand beyond the autocrat's control. They represent a threat to the stability of the autocracy. In many countries a long tradition took roots in which socio-economic and cultural grievances tend to be "expressed in the only way familiar to most people, a religious idiom arraying the forces of good against the forces of evil and promising to bring justice to the oppressed" (Keddie, 2003: 3).

There is ample evidence about the sort of bargain that occurred between political leaders and religious clerics in the lands of Islam. In the Ottoman empire, for example, "the entire religious establishment held office at the pleasure of the sultan" (Cleveland, 2004: 48). The "cozy relationship" between the religious clerics (meaning not only the ulama but also the Sufi orders) and the sultan "translated into significant economic and political privileges" for the former (Malik, 2012: 8). Offices typically involved lucrative functions which included revenue generation and the administration of religious endowments that controlled vast tracts of land. Religious appointments were all the more coveted as the associated incomes were

exempt from taxes. It is therefore not surprising that religious families possessing long-standing honourable ancestries competed for religious offices, titles and tax farms and, when successful, became a core component of the Ottoman nobility and a linchpin of provincial administration (Hourani, 1991: 224-25; 1993; Malik, 2012: 8; Coulson, 1964).²

The same observation applies to the Mamluk state in which many ulama served not only as religious functionaries but also as administrators and full-edged members of the state bureaucracy. In particular, the qadis (Islamic judges) were commonly employed by the Sultan in his private secretarial service, in his private treasury, and in the military bureaux. Some even became viziers and, in many cases, "the post of qadi was itself the culmination of an official rather than a religious career" (Lapidus, 1984:137-8). We can sum up the situation by citing Zubeida (2011) for whom the ulama "as figures of power and influence... acted like other politicians, participating in patronage, control of resources and factional struggles, but with the advantage of being able to invoke religious sanction" (p. 15). Since they were thus subservient to the interests of the ruler and his clique, their religious autonomy was seriously compromised and they would always be able to formulate legal justifications for whatever decision the ruler wished to make. As pointed out by Roy (1990): "Public order, which is a prerequisite of all what is socially desirable in society (maslahat), has always seemed to the ulama preferable to the demands that politics should be completely open to the promptings of religion" (p. 49). All these statements are remarkably close to the conclusion reached by an authority in Islamic law: "Might, in fact, was right, and this was eventually recognised by the scholars in their

²The following excerpt from the monumental work of Lapidus speaks of itself: "The biographies of scholars show that, with the elaboration of a bureaucratic hierarchy, interest in careers outweighed genuine piety and learning. The influence of entrenched families enabled them to promote their children into the higher grades of the educational and judicial hierarchies without having reached the proper preliminary levels, while theological students who could not find patronage were excluded. In the course of the eighteenth century the ulama became a powerful conservative pressure group. As servants of the state the ulama no longer represented the interests of the people, nor protected them from the abuses of political power. No longer did they represent a transcendental Islamic ideal opposed to worldly corruption. Their integration into the Ottoman empire made them simply the spokesmen of Ottoman legitimacy" (Lapidus, 2002: 268).

denunciation of civil disobedience even when the political authority was in no sense properly constituted" (Coulson, 1964: 83; see also Hourani, 1991: 144; Lapidus, 2002: 260).

Similarly for Catholic Christianity, priests were discouraged from expressing dissent against even tyrannical governments. It is St. Augustine who established the key principle in this matter. According to him, despite all its imperfections and the "sinful" behaviour of those who govern it, the "earthly city" exists for the sake of protecting the "city of God", and its role is therefore vital for people's salvation. To oppose worldly rulers amounts to opposing God's plan and Roman Catholic believers should avoid attempting to overthrow governments even if they turn out to be tyrannical (O'Daly, 2004). This belief in the God-given authority of monarchs was central to the Roman Catholic vision of governance in the Middle Ages, Renaissance and the Ancien Regime. Thus, for example, the kings and emperors of medieval Christendom had always invoked divine blessing on their rule, and by the 14th and 15th centuries the parish clergy were called to disseminate news of military victories and lead prayers requiring God's help for further success (Gunn, 2001: 124). As will be emphasised in Section 7.1, even tighter intermeshing of politics and religion occurred after the Reformation and Counter-Reformation led to the emergence of truly "national" religions. Secular and ecclesiastical bureaucracies then expanded in parallel and became intertwined in such a way that changes enacted from the top of the state could reach every subject down to the parish level.

To our knowledge, our paper represents the first effort to model religious seduction under autocracy. Particular attention will be paid to the impact of the heterogeneity of the clerics in terms of their preferences and consequent willingness to compromise with the autocrat's policies. Because of this central concern, we need to ignore other dimensions of the problem of autocrats preoccupied with political stability. In particular, as noted above, violent repression is not considered an instrument available to the dictator.

3 The model

We consider an economy with an autocrat and a cleric. The cleric is composed of a continuum of individuals with different level of conviction and commitment to the faith. We assume that each member of the clerical class is characterized by a parameter $\theta \in [0, 1]$, which is distributed according to the continuous density $f(\theta)$ and cumulative distribution $F(\theta)$ functions. The mean value of θ is $E\theta$. We compare two types of religions: centralized and decentralized.

3.1 Decentralized religion

In the decentralized religion each cleric has to choose whether to support the autocrat, and hence compromises himself with the current political power, or to stay in the religious/spiritual sphere with no involvement into political issues. In the latter case the change of utility of the cleric is 0 (i.e., he gets the status quo utility). If he chooses to support the autocrat, the variation of utility of the cleric depends on his type $\theta \in [0, 1]$, on the probability that the autocrat stays in power, $p \geq 0$, on the monetary transfer or compensation which he obtains from the autocrat, $w \geq 0$, and on the extent of reforms implemented by the same, $\alpha \geq 0$. That is

$$U(\theta, w, \alpha, p) = pw - \theta V(\alpha) \quad (1)$$

where $V(0) = 0$ and $V'(\alpha) > 0$ and $V''(\alpha) \geq 0$.

The situation we have in mind is that of a reformist autocrat who tries to seduce a traditionalist cleric.³ Term α represents the degree of (legal/economic/social) reforms implemented by the ruler, such as, for example, the creation of a secular school system, the rationalisation of the national bureaucracy, the introduction of modern law codes dealing with administrative, criminal, commercial, or personal status matters, the founding of a modern judiciary system with wide-ranging competencies,

³However the model is also consistent with a situation where the autocrat is an extremist and the cleric is more moderate. And more generally any model where $\theta \geq 0$ represents the ideologic distance between the autocrat and the cleric.

including on subjects traditionally covered by religious courts.⁴ Religious leaders are generally standing for traditional values and order, as they confer them power, prestige and a sense of mission. If the cleric is very traditionalist, he will suffer (i.e., in term of reputation, prestige, authority, ideology) a lot by supporting the reforms of the autocrat. Such support will be much less costly for a moderate religious leader (i.e., a "reformist"). In the model, a low value of θ signals an individual who is a moderate, while a large θ signals someone who is a zealot or a fundamentalist.

An important point is that the benefit of supporting the current political regime depends on the autocrat staying in power, while the loss is incurred by the mere action of supporting the regime. The moral stain of supporting the autocrat will stick, whether the later stays in power or is overthrown, while the benefit will hold only if he stays in power. So the probability that the autocrat stays in power is pivotal to the clerics' decision to support him or not.

3.1.1 Stability of the autocracy with a decentralized religion

The probability that the autocrat stays in power depends on the proportion of clerics that supports him. To be more specific, let $\theta^d \in [0, 1]$ be the marginal cleric (i.e., the cleric who is indifferent between endorsing the regime and not endorsing it). The probability that the autocrat stays in power is:

$$p = \int_0^{\theta^d} f(\theta) d\theta = F(\theta^d). \quad (2)$$

The probability that the autocrat will stay in power increases with the fraction of religious leaders that support him. Substituting p by its value from (2) yields in (1):

$$U(\theta, w, \alpha, p) = F(\theta^d)w - \theta V(\alpha). \quad (3)$$

⁴Another interpretation of the model is that α represents the fraction of the national wealth the autocrat extracts from the economy. Religious leaders will find it more difficult to support the autocrat when he is more greedy. In both cases the utility of the cleric decreases with α , and the disutility of the reforms/extraction is larger when θ , the ideological bias of the religious leader, increases.

We deduce that, if an interior solution exists, θ^d is so that:

$$F(\theta^d) \frac{w}{V(\alpha)} = \theta^d. \quad (4)$$

Differentiating (4) yields:

$$\frac{\partial \theta^d}{\partial w} = \frac{F(\theta^d)}{V(\alpha) - f(\theta^d)w} \geq 0 \quad (5)$$

$$\frac{\partial \theta^d}{\partial \alpha} = \frac{-V'(\alpha)\theta^d}{V(\alpha) - f(\theta^d)w} \leq 0 \quad (6)$$

as long as $V(\alpha) > f(\theta^d)w$. We will show later that this condition always holds in equilibrium. Everything else being equal, increasing the monetary transfer to the cleric raises the support to the autocrat (i.e., it increases θ^d), while increasing the level of reforms decreases it.

There are generally multiple equilibria to the static cleric coordination game defined above. First of all, there always is the Nash equilibrium where nobody endorses the autocrat policies, so that $\theta^d = 0$. Next, depending on the value of the ratio $\frac{w}{V(\alpha)}$, and on the shape of $F(\theta)$, there will be, zero, one, two or several additional equilibria. The figures 1-3 represent some of the different possibilities for classical density functions. They represent the identity function θ and the function $\frac{w}{V(\alpha)}F(\theta)$. The intersection of the two functions represents an internal equilibrium (i.e., an equilibrium so that $\theta = \frac{w}{V(\alpha)}F(\theta) \in [0, 1]$). If at $\theta = 1$ we have $1 < \frac{w}{V(\alpha)}$, there is another equilibrium which is $\theta^d = 1$ (i.e., corner solution).

The multiplicity of pure Nash equilibria in the static coordination game implies a selection issue. Which one is going to be played? This question lies at the core of the literature on evolutionary game theory and social learning, the aim of which is to study equilibrium selection in games that have multiple equilibria.⁵ Here the agent needs to decide whether to join the network of the autocrat supporters or not and his utility depends on how many clerical members make the same decision. This problem is similar to problem of standard adoption in the presence of network externalities.⁶

⁵See Weibull (1996) for a primer on evolutionary game theory.

⁶In this literature the utility of an agent when she chooses to join a network or adopt a standard depends on the fraction/number of other agents who make the same decision. For a survey on standardization in presence of network externalities see Park (2006).

Adding some dynamic/noise into such coordination game helps with the selection issue. Auriol and Benaim (2000) show that only the stable equilibria of the Ordinary Differential Equation (ODE), $\frac{d\theta^d}{dt} = F(\theta^d)w - \theta^d V(\alpha)$, can be an equilibrium of this type of coordination game.⁷ We deduce the following definition.⁸

Definition 1 *An equilibrium $\theta^d \in [0, 1]$ of the static coordination game is stable if $f(\theta^d)w - V(\alpha) < 0$. It is unstable if $f(\theta^d)w - V(\alpha) > 0$.*

In what follows we focus on the stable equilibria of the coordination game. And the shape of the density function is crucial in determining which equilibrium is stable. The Figures 1-3 represents the function $F(\theta)\frac{w}{V(\alpha)}$, which varies between 0 when $\theta = 0$ and $\frac{w}{V(\alpha)}$ when $\theta = 1$. The shape of this function depends on the shape of the cumulative distribution function $F(\theta)$. The intersection between the bisectrix and the function represents a marginal cleric according to (4) (i.e., a cleric who is indifferent between supporting the autocrat or not supporting him). The clerics of type θ so that $F(\theta)\frac{w}{V(\alpha)}$ is greater than the bisectrix are those who support the autocrat. And symmetrically the clerics so that $F(\theta)\frac{w}{V(\alpha)}$ is below the bisectrix do not support him.

Figure 1 illustrates a case where the density function $f(\theta)$ is U-shaped (i.e., convex), which implies that $F(\theta)$ is first concave and next convex. It represents a decentralized distribution of clerics, which tends to put more weight at the extremes. If we think of Islam, at the lower extreme are located the representatives of 'high Islam' who typically come from well-to-do

⁷The model works as follow. Let the initial fraction of clerics that support the autocrat be $\theta_0^d \in (0, 1)$. Assume that at each point of time $t = 1, 2, 3, \dots$ a new cleric member is added to the pool of existing clerics according to the density function $f(\theta)$. This agent is faced with a given θ_t^d , which results from the past dynamic of the game, and has to decide whether to support the autocrat or not. As it is standard in the evolutionary game theory literature he is not forward looking. He support the autocrat if and only if $F(\theta_t^d)w > \theta_t^d V(\alpha)$. Adding such a dynamic stochastic process helps with the selection issue: only the stable equilibria of the ODE, $\frac{d\theta^d}{dt} = F(\theta^d)w - \theta^d V(\alpha)$, can be an equilibrium of the decentralized coordination game (see Auriol and Benaim 2000).

⁸Let $\frac{dx}{dt} = g(x)$ be an autonomous differential equation. Suppose $x(t) = x^*$ is an equilibrium, i.e., $g(x^*) = 0$. Then if $g'(x^*) < 0$, the equilibrium $x(t) = x^*$ is stable, and if $g'(x^*) > 0$, the equilibrium $x(t) = x^*$ is unstable. For more on selection of equilibria in dynamic coordination game see Auriol and Benaim (2000, 2001).

family dynasties and are well connected to power circles. At the higher extreme are clerics from the 'low Islam' who are typically residing in rural areas or poor urban neighbourhoods, and belong to mystical fraternities such as Sufi orders.⁹ With such an heterogeneous, polarized clerical group, the internal equilibrium, when it exists is stable: a fraction $F(\theta^d)$ (the high Islam) supports the autocrat, while a fraction $1 - F(\theta^d)$ (the low Islam) does not support him. Any random perturbation around the equilibrium (e.g., death of some cleric members, replaced by new draw) will bring back the system to the internal equilibrium. This is intuitive with such polarized clerics (see the quotation from Lapidus, 2002, in Section 2; see also Platteau, 2015: Chap. 5).

Figure 2 illustrates a case where the density function $f(\theta)$ is single-peaked with the peak at 1. In this case the internal equilibrium when it exists is unstable. The two stable equilibria are either nobody supports the autocrat, or everybody supports him. It implies that if he starts from scratch, it is very hard for the autocrat to get the support of the cleric. In particular small efforts will inevitably fail and the system will go back to 0 support from the cleric. It will require a big initial push to make the jump from the no support equilibrium to a large support one.

Figure 3 illustrates a case where the density function $f(\theta)$ is single-peaked with the peak at 0. It represents a distribution of clerics where the majority is close to the autocrat. It implies that the internal equilibrium is stable and the process to reach it is smooth. The autocrat can easily enroll the fraction of the cleric he wants by fine-tuning his bribes.

3.1.2 The autocrat's optimal policy with a decentralized religion

The autocrat needs to set $\alpha \geq 0$ and $w \geq 0$. The autocrat maximizes his expected payoff. If he climbs and stays in power, which occurs with prob-

⁹According to Nielsen (2012), Muslim clerics tend to avoid extremist positions if their career prospects are good. However, those who have relatively few connections with the religious establishment and do not have access to prestigious training or prominent teachers may be tempted to make careers outside of the state system by appealing to lay audiences directly. These clerics can credibly signal independence from state elites by openly espousing Jihadi ideology, making it a risky but potentially high-payoff way to advance their clerical careers.

ability $F(\theta^d)$, he gets the gross benefit $G(\alpha)$, which is a strictly increasing and concave function of α : $G(0) = 0$, $G'(\alpha) > 0$ and $G''(\alpha) \leq 0$. He must also pay w to the fraction $F(\theta^d)$ of clerics that supports him. The timing of the seduction game with a decentralized cleric is the following.

1. The autocrat announces α and w .
2. A fraction $\theta^d \in [0, 1]$ of the clerical members choose to support the autocrat where θ^d is a stable equilibrium of the coordination game.
3. The autocrat pays the wage w to the supportive cleric members and implement α .
4. The autocrat is overthrown with probability $1 - F(\theta^d)$ in which case he does not get $G(\alpha)$ and the supportive clerics loose w . If the autocrat stays in power he get $G(\alpha)$ and the supportive clerics keep w .

The objective function of the autocrat is:

$$U^p(\theta^d, w, \alpha) = F(\theta^d)(G(\alpha) - w), \quad (7)$$

where θ^d is a stable equilibrium of the clerics' coordination game. There are three possibilities.

If he chooses the corner solution $\theta^d = 0$, then his utility is 0.

If he chooses the corner solution 1, the autocrat solves: $\max G(\alpha) - w$ so that $\frac{w}{V(\alpha)} \geq a > 1$. The autocrat chooses the minimum value of w compatible with the constraint: $w = aV(\alpha)$, where a is the minimum value so that the corner solution holds. The optimal solution then is α_a^* so that $\frac{G'(\alpha)}{V'(\alpha)} = a > 1$. The minimum value ensuring that the corner solution holds, a , depends on the resolution of the stable interior solution case (see the examples below). Let us now look at interior solutions.

Let $\theta^d \in (0, 1)$ be so that: $F(\theta^d)\frac{w}{V(\alpha)} = \theta^d$. The autocrat solves:

$$\begin{aligned} \max_{w, \alpha} U^p(w, \alpha) &= F(\theta^d)(G(\alpha) - w), & (8) \\ \text{s.t.} & F(\theta^d)\frac{w}{V(\alpha)} = \theta^d \end{aligned}$$

Equivalently, after replacing w by its value from the constraint, $w = \frac{\theta^d V(\alpha)}{F(\theta^d)}$, we optimize the objective function with respect to (θ, α) . The autocrat's optimization problem becomes for $\theta \in [0, 1]$:

$$\max_{\theta, \alpha} U^p(\theta, \alpha) = F(\theta)G(\alpha) - \theta V(\alpha) \quad (9)$$

Optimizing (9) with respect to θ and α yields the first order conditions:

$$\frac{\partial U^p}{\partial \theta} = f(\theta)G(\alpha) - V(\alpha) = 0 \quad (10)$$

$$\frac{\partial U^p}{\partial \alpha} = F(\theta)G'(\alpha) - \theta V'(\alpha) = 0 \quad (11)$$

From (10) we deduce that at the optimum

$$V(\alpha) = f(\theta^d)G(\alpha). \quad (12)$$

The condition $V(\alpha) > f(\theta^d)w$, which is necessary for conditions (5) and (6) to hold and for the equilibrium to be stable (see definition 1) is thus equivalent to $G(\alpha) > w$, which is a necessary condition for the autocrat having a positive payoff. In other words, when the autocrat is willing to participate to the seduction game (i.e., when he makes a positive payoff), it is necessarily true that $\frac{d\theta^d}{dw} \geq 0$ and $\frac{d\alpha^d}{dw} \leq 0$ and that the equilibrium is stable. On the other hand, equation (11) implies that $\frac{F(\theta^d)}{\theta^d} = \frac{V'(\alpha)}{G'(\alpha)}$, while (4) implies that $\frac{F(\theta^d)}{\theta^d} = \frac{V(\alpha)}{w}$. Both equations yield $w := G'(\alpha)V(\alpha)/V'(\alpha)$. We can deduce the results stated in Proposition 1.

Proposition 1 *The autocrat who wants to implement a level $\alpha^d > 0$ of reforms offers to the decentralized cleric a wage:*

$$w^d = \frac{V(\alpha)}{V'(\alpha)} G'(\alpha). \quad (13)$$

Proof. See the appendix 6.1. ■

At this stage, it is useful to conduct some static comparative analysis. First, starting from the interior equilibrium, if the autocrat wants to increase the level of reforms, he will necessarily lose the support of some clerics. Since θ^d defined in (4) is such that $\frac{V(\alpha)}{w} F(\theta) = \theta$, then $\frac{d\theta^d}{d\alpha} = \frac{-\alpha \left(\frac{V'(\alpha)}{w} \right)}{f(\theta) \frac{V(\alpha)}{w} - 1}$.

The way θ^d evolves in equilibrium as α increases depends on the sign of $\frac{d(\frac{V(\alpha)}{w})}{d\alpha}$. By virtue of Proposition 1, we know that $\frac{V(\alpha)}{w} = \frac{V'(\alpha)}{G'(\alpha)}$, which implies:

$$\frac{d(\frac{V(\alpha)}{w})}{d\alpha} = \frac{V''(\alpha)}{G'(\alpha)} - \frac{G''(\alpha)V'(\alpha)}{(V'(\alpha))^2} \geq 0. \quad (14)$$

For instance, if $G(\alpha) = K\frac{\alpha^g}{g}$, and $V(\alpha) = W\frac{\alpha^v}{v}$, with $K, W > 0$ and $0 < g < 1 \leq v$, then $\frac{V(\alpha)}{w} = \frac{W\alpha^{v-g}}{K}$, which increases in α as $v - g > 0$. We deduce that $\frac{d\theta^d}{d\alpha} \leq 0$.

Second, it seems intuitive that an autocrat who wants to implement more reforms will also wish to raise the level of compensation offered to the clerics. This is not necessarily the case, however. To see this point, we differentiate w with respect to α in (13). This yields:

$$\frac{dw}{d\alpha} = \frac{(V'(\alpha))^2 - V''(\alpha)V(\alpha)}{(V'(\alpha))^2} G'(\alpha) + \frac{G''(\alpha)V(\alpha)}{V'(\alpha)}. \quad (15)$$

Since $G(\alpha)$ is increasing and concave, a *necessary* (but not sufficient) condition for the wage of the cleric to increase when the level of reform increases is that the first term is strictly positive, which requires $V(\alpha)$ to be log-concave. For instance this condition holds if $V(\alpha) = W\frac{\alpha^v}{v}$, with $W > 0$ and $0 < 1 \leq v$. By contrast, if $V(\alpha)$ is log-convex (e.g., $V(\alpha) = \exp(\alpha^2) - 1$), the wage of the clerics necessarily *decreases* with the level of reforms, which is rather counter-intuitive.

The analysis of this section is quite general and it is not clear which solution, corner or interior, will dominate in practice. We prove below that both solutions can be optimal depending on the cost and benefit of the reforms and on the distribution of the clerics. To make this point it is sufficient to consider an example. We assume that $G(\alpha) = K\frac{\alpha^g}{g}$, and $V(\alpha) = W\frac{\alpha^v}{v}$, with $K, W > 0$, $g \in (0, 1)$ and $v > g$. And we focus on two types of distribution, which are particularly relevant to our historical examples.

The first one is the case where the density function, $f(\theta)$, is U-shaped, so that $F(\theta)$ is first concave and then convex. It corresponds to our distinction between high and low Islam discussed above. With this type of bimodal distribution, depending on the value of $\frac{w}{V(\alpha)}$, there will be one or two stable

equilibria. If $\frac{w}{V(\alpha)}$ is too low, the only stable equilibrium is $\theta^d = 0$. If $\frac{w}{V(\alpha)}$ is large enough, there is an interior stable equilibrium so that: $F(\theta^d)\frac{w}{V(\alpha)} = \theta^d$. If $\frac{w}{V(\alpha)}$ is very large, there are two stable equilibria, the interior solution θ^d so that (4) holds, and $\theta^d = 1$. Finally, for the extreme values of $\frac{w}{V(\alpha)}$ the only stable equilibrium is $\theta^d = 1$. The autocrat compare his utility levels obtained with the optimal interior and corner solutions, and picks the best one.

The second example corresponds to a case of convergence of values and purpose between political power and religion as in the case of Shi'ism, which was largely conceived by Iranian rulers as a convenient ideology of nation-building vis-à-vis the rival Ottoman Empire. It is represented formally by a decreasing density function (i.e., the preference of the clerical members are close to the preference of the autocrat). In this case, $F(\theta)$ is concave. There are at most two equilibria and only one of them is stable. If $f(0)\frac{w}{V(\alpha)} < 1$, so that the slope of the $F(\theta)w/V(\alpha)$ function is smaller than that of the identity function at $\theta = 0$ and, a fortiori, everywhere (since $F(\theta)$ is concave), the only equilibrium is 0 and it is stable. If $\frac{w}{V(\alpha)} \geq 1$, so that the slope of the $F(\theta)w/V(\alpha)$ function exceeds that of the identity function at $\theta = 1$ and, a fortiori, everywhere (since $F(\theta)$ is concave), the only stable equilibrium is 1 (and 0 is unstable) so that the optimal level of reform for the autocrat, α_1^* , is such that $G'(\alpha) = V'(\alpha)$, and the optimal wage for the clerics is $w_1^* = V(\alpha_1^*)$ by virtue of (13). If $\frac{1}{f(0)} \leq \frac{w}{V(\alpha)} < 1$, so that the slope of the $F(\theta)w/V(\alpha)$ function is first larger, and then smaller than that of the identity function, the only stable equilibrium is the interior one: $F(\theta^d)\frac{w}{V(\alpha)} = \theta^d$.

Proposition 2 *Assume that $G(\alpha) = K\frac{\alpha^g}{g}$, and $V(\alpha) = W\frac{\alpha^v}{v}$, with $v > g$, $g \in (0, 1)$ and $K, W > 0$. Assume the density function $f(\theta)$ is either decreasing or U-shaped on $[0, 1]$. Then it exists a threshold value $\nu_f > 0$ so that the autocrat chooses the interior equilibrium if and only if $v < (1 + \nu_f)g$.*

Proof. See the appendix 6.2. ■

In the examples above, when v is much larger than g , the autocrat prefers stability over reforms (he picks the corner equilibrium), while when

the difference between v and g is small, he prefers reforms over stability (he picks the interior equilibrium). This implies that an increase in the return of the reforms, for instance an increase in g resulting from technological progress, will tend to cause more instability.¹⁰ Symmetrically, a radicalization of the cleric in the form of an increase of v (i.e., an increase of the marginal cost imposed on them by the reforms) will tend to lead to more inertia and cause a sharp decrease in reforms. The autocrat will adopt conservative policies and stability will increase. This result may seem intuitive. Its meaning is nevertheless to be taken seriously since the autocrat never chooses to make up for a higher cost or a smaller benefit of reforms by raising the material privileges of the clerics to such an extent that reforms are adopted. In fact, he may even choose to decrease these privileges at the new equilibrium. Finally it is worth noticing that the transition between the stable and the reformist equilibrium is never smooth: at the threshold, a marginal increase of g implies a jump from the full support equilibrium to the interior equilibrium, and symmetrically for a marginal increase of v (i.e., a jump from a reformist equilibrium to a conservative one).

3.2 Centralized religion

In the centralized religion there is a hierarchy, and a chain of command. The cleric members belong to a "church" and have to be obedient to their hierarchy. We denote the cleric member who is at the head of the church by $\theta^c \in [0, 1]$. This leader will be the one to decide whether the church supports the autocrat or not. If the leader chooses to support the autocrat he will also have to compensate inside his church the cleric members who dislike the reforms implemented so that in equilibrium they all get a positive utility. Such fine tuning of compensation is possible because each member of the religious organization is scrutinized and trained by the church hierarchy before he/she is allowed to join. For instance Catholic priests go through a lengthy formation process before their ordination. During this process they live in closed communities and learn a great deal about each other.

¹⁰For instance with the U-shape density $f(\theta) = 2 - 6\theta + 6\theta^2$, an increase in g from $0.5v$ to $0.9v$ implies that the autocrat will push more reforms and will loose half of the clerical support in the process (see the appendix 6.2.2).

They are also obliged to confess their sins and controversial thoughts on a regular basis. This type of organization, which stresses the importance of obedience and rely on confession, knows very well each of its members ideas and ideology. With such a knowledge it is possible to design and fine tune a compensation scheme such that the clerical body in the centralized structure will behave in a consistent way and will support fully the autocrat, if the hierarchy chooses so. In other words, the centralized structure helps the members of the cleric to overcome their collective action problem.¹¹

It implies that with a centralized church the autocrat will have to give away in rents a minimum of $w = EOV(\alpha)$. This minimum ensures that the church members can be compensated for the disutility of the reforms, but it does not warrantee that the head of the church will be willing to support the autocrat. The head of the church and the autocrat bargain over the rents generated by the reforms. We focus on Nash bargaining solution.¹² We let the bargaining power of the head of the church denoted by $c \in [0, 1]$, be exogenously given. The bargaining power of the autocrat is $1 - c \in [0, 1]$. In case of disagreement the autocrat and the head of the church get their status quo utility so that their disagreement point is 0.¹³ The problem to be solved therefore is as follows:

$$\begin{aligned} \max_{w, \alpha} & \left(G(\alpha) - w \right)^{1-c} \left(w - \theta^c V(\alpha) \right)^c & (16) \\ \text{s.t.} & \quad w \geq E\theta V(\alpha) \end{aligned}$$

Solving this problem, we are able to establish the following result.

Proposition 3 *Let $\theta^c \in [0, 1]$ be the head of the organization representing the centralized religion. The level of reforms, α^c , and the monetary transfers, w^c , received by the religious organisation are*

¹¹We are extremely grateful to Joan Esteban and Jean-Marie Baland for helping us clarify this important point.

¹²The bargaining model presented by Nash (1950) can be formulated as a Nash Bargaining Product (see Binmore et al. 1986).

¹³In our simple bargaining problem the disagreement payoffs are the outside options of the parties. However there are many other relevant economic situations where the disagreement game is richer. For an analysis of how endogenously determined threat point in the disagreement game impacts the equilibrium see Esteban and Sakovics (2008).

1. α^c so that $G'(\alpha) = \theta^c V'(\alpha)$ and $w^c = (1 - c)\theta^c V(\alpha^c) + cG(\alpha^c)$ if $E\theta < c \frac{G'(\alpha^c)}{V'(\alpha^c)} + (1 - c) \frac{G'(\alpha)}{V'(\alpha)}$
2. α^c so that $c \frac{G'(\alpha)}{V'(\alpha)} + (1 - c) \frac{G'(\alpha)}{V'(\alpha)} = E\theta$ and $w^c = E\theta V(\alpha^c)$ otherwise.

Proof. See the appendix 6.4. ■

Condition 1 holds when θ^c is relatively large (i.e., when the head of the church is hostile to the autocrat). In this case the autocrat has to abandon large rents to the church to win its support. The monetary transfer is large so that the individual rationality constraint of the members of the church is easily met (i.e., $w^c \geq E\theta V(\alpha^c)$ so that the constraint is not binding). Condition 2 holds when the head of the church is close to the autocrat so that θ^c is small. In this case the problem of the autocrat is to transfer enough resources to the church so that it can buy the support of the other clerical members (i.e., the individual rationality constraint of the clerical body is binding). Case 1 corresponds to the medieval struggle between secular and religious power. This struggle came to a climax in the 14th century with the rise of nationalism and the increased prominence of lawyers, both royalist and canon. Numerous theorists contributed to the atmosphere of controversy. The papacy finally met with disaster when the Great Schism occurred, which resulted from the effort to bring back to Rome the popes who had been installed by the French in Avignon. Discipline was relaxed and church prestige fell in all parts of Europe.

In the sixteenth century, the central power of Rome was replaced by national churches which began to resist the claims of the pope in favor of supporting their own monarchies.¹⁴ Moreover, as a result of the Reformation, Protestant churches emerged in some European countries such as England, Sweden and German states. This process of power concentration culminated in the seventeen and eighteen centuries with the age of absolutism. Absolutism was characterized by the ending of feudal partitioning, consolidation of power in the hands of the monarch, the rise of the state along with its professional standing army and rationalized bureaucracy,

¹⁴In the nobility the eldest son would inherit the title while younger siblings often found careers in the church. Many bishops and abbots were themselves part of the ruling nobility and hence very close to the autocrat.

the codification of state laws, and the emergence of ideologies justifying absolutist monarchies. This situation of closeness between the autocrat and the head of the church, which was a phenomenon of early modern Europe rather than of the Middle Ages, is captured by case 2. With national churches, the autocrat decisions are driven by the *average* cleric members. In contrast in the case of a decentralized religion, they are driven by the *marginal* cleric member. As we will see next, this difference matters.

3.3 Comparison of centralized vs decentralized religions: reforms and stability

In this section we would like to compare how the optimal mix of reforms and bribes chosen by the autocrat to maximise his utility differs depending on whether the religion is centralized or decentralized. In particular is one structure more conducive of reforms than the other? The other issue is which one leads to more political stability. In order to conduct our comparisons of equilibria we start from a situation where the only difference between the two autocracies is the structure of their religion. In other words, the cost and benefit of the reforms and the distribution of the clerical body are the same in the different economies.

Lets first compare the stability of the two regimes. With a centralized religion the autocrat negotiates directly with the head of the church. He needs to transfer enough resources to compensate on average its members for the reforms and to seduce the head of the church. In exchange of these rents he gets the support of the hierarchy of the church and of the full clerical body. So in equilibrium the system is fairly stable. In contrast with a decentralized religion, the autocrat has to gain the support of each cleric members individually. Since it is costly to enroll the whole clerical body (i.e., the transfer must be large enough to seduce the most extreme type) the autocrat often chooses to seduce only a fraction of them. In equilibrium the fraction of religious members who support the autocrat is therefore generally smaller with a decentralized religion than with a centralized one. The next proposition collects this result.

Proposition 4 *Everything else being equal, centralized religions lead to more stability than decentralized religions.*

A prediction of the theory is therefore that, everything else being equal, the tenure of autocrat in Catholic countries should be on average longer than the tenure of autocrat in Muslim countries. Blaydes and Chaney (2013) provides empirical evidences that are consistent with this prediction. Studying the durations of rulers in the Christian West and Islamic Worlds from 800 to 1600, they show that on average the former had significantly longer tenure than the later, and the duration gap is widening as time pass. Duration for Catholic kings is the longest when they start creating national churches and move towards absolutism.

We next aim to compare the level of reforms implemented by the autocrat in period of political stability. We compare the level of reforms chosen by the autocrat in the case of decentralized religion when he chooses stability, $\theta^d = 1$, with the level implemented in case of centralized religion. As analyzed in section 3.1 there are cases where, indeed, the autocrat will favor $\theta^d = 1$.¹⁵

Proposition 5 *In period of stability, the level of reforms with a decentralized religion, α^d , is always smaller than the level of reforms with a centralized one, α^c .*

$$\theta^d = 1 \Leftrightarrow \alpha^d \leq \alpha^c \quad (17)$$

Proof. See section 6.5 ■

One important result of the paper is that decentralized religions are less conducive of reforms than centralized ones in time of political stability. It is worth shortly mentioning a study by Blaydes et al. (2015) which directly illustrates the fact that progressive reforms are easier to achieve with a centralized church structure than with a decentralized one. This study aims at identifying the factors responsible for recent changes in the prevalence of

¹⁵For instance when $G(\alpha) = K\frac{\alpha^g}{g}$, and $V(\alpha) = W\frac{\alpha^v}{v}$, with $K, W > 0$, $g \in (0, 1)$ and $v = 2g$, we know from the proof of Proposition 2 that the autocrat will choose the equilibrium $\theta^d = 1$ both with density $f(\theta) = 2 - 6\theta + 6\theta^2$ and $f(\theta) = \frac{2}{(\theta+1)^2}$.

female genital mutilation in Egypt, where this practice is forbidden by law. Especially interesting is the contrast observed between the perceptible decrease of the practice among the Christian Copts and the rather unchanged situation among the Muslims. The authors tentatively explain this situation by the different religious authority structures prevailing in the two communities: whereas a hierarchical order prevails among the Copts, the Muslims are used to a much more decentralized system. More precisely, there exists a centralized Coptic Church that exerts a significant influence on the believers and its leaders have chosen to take a clear stand against the cutting of girls. Muslims, on the other hand, go to mosques that are run by different imams who have themselves varying opinions about the practice.

Proposition 5 is quite general. It does not depend on the specific shape of $G(\alpha)$ or $V(\alpha)$, nor $F(\theta)$. It shows that in periods of stability (when all the clerics are seduced or co-opted by the autocrat in both cases), centralized religions lead to more reforms than decentralized ones. This result seems intuitive when the religious authority is close to the autocrat. More surprisingly, however, it is also true, when the clerical authority is antagonistic to the monarch. Indeed buying stability with a decentralized cleric is very costly because the autocrat has to seduce the most extremist of them, while with a centralized religion, he has to convince the head of the church only and transfer enough resources to buy the average cleric. Since the cost to pay increase with the volume of reform, in the decentralized case the stability comes with a lot of inertia. A decentralized cleric is not easy to seduce and its structural heterogeneity is an obstacle to the autocrat's reforms. In order to gain the full support of the religious leaders, the autocrat must adopt more conservative policies than in the case of a centralized religious authority, where having everybody on board is cheaper and easier.

4 Illustrative Examples

4.1 Centralized Religions

A striking result of the model is that, *ceteris paribus*, and when the whole clerical body is enlisted in support of the autocrat (i.e., in periods of stability), the optimal level of reforms is higher with a centralised than with a decentralised religion. Moreover, autocratic rulers obviously prefer to have a centralised church close to their views, that is, a national church, rather than having to deal with a distant church, especially if it obeys a foreign religious authority (e.g., the pope). Their rents are indeed larger in the former situation. Below, we provide two remarkable examples of countries where autocrats took active steps to favor the emergence of a national church strongly identified with political leadership. The first country, England, belongs to the group of now developed Western countries while the second one, Iran, belongs to the group of developing countries. In both cases, evidence takes us back to a few centuries, to the reign of Henry VIII for England, and to the Safavid rule for Iran. When we turn to the latter, we will not only describe the successful cooperation between state and religion during Safavid times but also elucidate the reasons behind its collapse thereafter, under the Qajar shahs in particular.

4.1.1 England

In England, paradoxically, the Protestant Reformation was initially a conservative movement driven by a despotic king, Henry VIII (1491-1547), in order to satisfy his sexual lusts and dynastic desires. As pointed out by William Naphy (2007), "had the king Henry VIII been able to gain some measure of direct national control of the Catholic Church within his realms, as had the kings of France and Spain, and the rulers of many Italian states, there would not have been a Reformation" (92-93). The passing by the parliament (guided by Thomas Cromwell) of the Act of Supremacy (1534), which made the king Supreme Head of the newly established Church of England, and repudiated papal supremacy, sealed the break with Rome. Iconoclasm was almost always sanctioned if not orchestrated by the state,

and the ordination of priests was replaced by a government-controlled system of appointments, thus establishing secular legal sovereignty over ecclesiastical affairs (98-99).

It is important to stress that it had never been Henry's intention to found a Protestant church: its major objective was just to reverse the historic increase of power that the Catholic pope in Rome exerted over the secular rulers in England since the early 13th century when Angevin King John (better known as Landless John) was twice humiliated by pope Innocent III. He was thus "deeply conscious of the traditional French argument that England was subject to the pope, whereas the crown of France was subject to no one" (Simms, 2013: 18). There were antecedents of this reaction, and they can actually be traced back to Edward I who acceded to the throne in 1272: conscious of the corporate and national feelings of his country, he was determined to channel these attitudes toward the reconstruction of royal authority both vis-à-vis the pope and the local magnates (Cantor, 1993: 422-3, 452-7; see also Duby, 1987). But it is only under the son of Henry VIII, Edward, that "a true princely Reformation" occurred, which was to be subsequently strengthened under Elizabeth who permitted the Church of England to take a more explicitly Protestant line. The active involvement of Spain and the pope in various attempts to remove the queen from power in order to re-establish Catholicism, albeit unsuccessful, had the effect of linking Anglicanism with the identity of the English nation: 'popery' soon became the imagined foe against which the country defined itself as a nation. Fear of Catholicism has, therefore, to be seen in the context of the continuous threat posed by the country's inveterate enemies, Spain or France, which were identified with that particular religion. There prevailed a constant fear, real or imagined, of a Catholic restoration, at least as long as people suspected their own king of Catholicism (and as long as there lived in the country a Catholic Stuart with a claim to the throne). Revealingly, religious violence tended to erupt in times of specific crises which always coincided with threats of foreign invasion (Kaplan, 2007: 115-18; Naphy, 2007: 102-3; Vallance, 2007; Harris, 2007).

The Anglican schism entailed considerable damages for England which

became involved in costly wars of religion from the sixteenth to the eighteenth centuries. At the same time, it allowed the country to gradually construct its nationhood. When, after having been provoked into war by James II (a Stuart king strongly contested by the parliament),¹⁶ the (foreign) dynasty of Orange came to occupy the supreme power position on the occasion of the Glorious Revolution of 1688-1689, it could safely rely on the Anglican Church. The latter, indeed, acted as a loyal and true supporter of the new Protestant king, William of Orange, who came from a nation (the Netherlands) which was all the more easily considered as a friend of the English nation as it was threatened by the same main enemy (France). In the words of Steve Pincus (2009):

"The Revolution of 1688-89 was a successful act by the English political nation to replace a government that they increasingly perceived to be ruling in the French style with an English government. It was a Protestant revolution in the sense that the English national religion was explicitly defended and celebrated as one of the elements -arguably one of the most important elements- of English national identity threatened by James. It was not, however, a war of religion, a war in defense of universal religious truth... The English -including William's own propagandists- understood the war against France as a war to protect national integrities against an aspiring universal monarch, not as a war of religion" (338-39).

William, who was a remarkably progressive ruler, could then proceed with important reforms, foremost among which was the establishment of a sound parliamentary regime, which later turned out to be decisive for the long-term economic development of England (North and Weingast, 1989). The revolution, which involved a wide spectrum of English society, aimed at transforming England into a commercial society based on free trade. It condoned the growing role of urban middle classes, urban culture and the associated view that labor, not land, creates property and value, and that manufactures, not land, was the key to wealth and power. It was also to

¹⁶James II, strongly influenced by the French model of Louis XIV and Colbert, took an absolutist path to modernization that was characteristic of many countries during those times. He thus believed that the best way to achieve the modernization of England was "through a more monarchical and bureaucratic form of governance" (Simms, 2013: 60).

be based on civil and political rights, implying the existence of an effective parliamentary system. The economic legislation in the House of Commons was dramatically increased and the influence of merchant associations on parliamentary activity was considerable, in any event much more important than what the proportion of merchants in the general population could suggest (Pincus, 2009: 371, 485). New institutions emerged, such as the Bank of England (1694) and money markets, which would exert a major influence on the long-term economic destiny of the country (North and Weingast, 1989). Forces of progress and creativity were therefore freed like they had never been before, and this would not have been possible if the rule of James II had not been terminated and if England had not become a strong nation rid of the open meddling of a foreign Church in internal political affairs. In short, once the ruler was rid of the tensions and conflicts inherent in the open meddling of a foreign Church in internal political affairs, the British sovereign was given freer rein to adopt policies more consonant with national interests.

4.2 Decentralized Religions

4.2.1 Iran: cooperation between state and religion

In addressing the case of Iran, we first describe the successful cooperation between state and religion during the Safavid rule, which established the first modern centralised state in Iran. We then attempt to explain the collapse of that cooperation during post-Safavid times.

Iran I: Successful cooperation between state and religion during the Safavid rule

The Safavids largely succeeded in building a strong and centralized state that created political stability and economic prosperity in a country where a large part of the population was made of nomadic tribes equipped with powerful militia. Success was epitomized by the splendours of Isfahan, designated as the new imperial capital by Shah Abbas (1598) whose reign marked the apogee of the Safavid state. One important feature of the Safavid rule was that religion was made subservient to the objective of building and consolidating a strong, prosperous state.

In a striking parallel with what happened in 17th century Europe, Shi'ism in its present form (Twelver Shi'ism, in particular) was largely conceived by Iranian rulers as a convenient ideology of nation-building vis-à-vis the rival Ottoman Empire. From Abbasid times and up until 1501 (the beginning of the Safavid dynasty), Twelvers had by and large cooperated politically with the Sunnis, and numerous religious movements actually combined Shi'i and Sunni ideas, expressing popular grievances, and providing justification for peasant or nomad revolts.¹⁷ Yet, soon after they conquered power in Tabriz, the Safavid rulers began to moderate their views, turning their doctrine "from one suitable for popular, enthusiastic, egalitarian revolt and conquest into one suitable for stable, conservative rule", and concomitantly ignoring their tribal followers, justifiably considered to be too anarchic (Keddie, 2003: 10).

In reality, the Safavids were keen to enlist members of the old Persian-speaking bureaucracy who had gained a lot of experience in administration and tax collection under the previous dynasties, as well as Persian landlords and merchants. At the same time, they decided to import some official Twelver theologians from nearby Arabic-speaking lands. Having few ties with the local population and benefiting from the financial and political largesse of the ruler, these learned men quickly became a strong pillar of political support for the new regime. As a consequence of such strategic choices, the egalitarianism of their early tribal followers was gradually abandoned, and extremist ideas were banned to leave room for a strictly enforced Shia Twelver orthodoxy. As part of this ideology, the Safavids cursed the first three caliphs considered holy by the Sunnis, and they claimed descent from the Seventh imam which gave them impeccable religious credentials (10-15).

As pointed out by Keddie (2003), one of the main reasons why Isma'il and his followers chose to cause a split between Sunnis and Twelver Shi'is

¹⁷Interestingly, the Safavids were originally a quietist Sunni order from Azerbaijan, and it is only after they travelled among the Anatolian nomadic tribes that they became militant warriors following a kind of Twelver Shi'ism in the mid-fifteenth century. Their brand of Shi'ism was radical, reminiscent of Shias of the earliest times: believing in divine reincarnation, they considered their leaders to be divine, and their egalitarianism was strong (Keddie, 2003, pp. 10, 13).

was to endow Iran with a specific ideological distinction and national identity vis-à-vis its (Sunni) military-political enemies, the Ottoman Empire and, for a time, the Central Asian Uzbeks (p. 11). In the words of Robert Lee (2014), "Political decisions and opportunities have recast a version of Islam (Twelver Shiism) from a passivist, minority stance into a badge of national identity, a religious establishment like no other in the Muslim world, ... and an authoritarian effort to promote religion" (169). The consequences of the split between two main strands of Islam now viewed by each other as heretics and enemies, have been carried over into the present time.

The establishment of the Safavid state owed much to the military prowess of the Qizilbash tribesmen (from Anatolia), who were duly rewarded by Isma'il after he proclaimed himself shah (king) in 1501.¹⁸ But the role of the organised ulama establishment should not be under-estimated, since it was strongly committed to the regime. In return for their compliance and their acquiescence in the fact that the state directly organized or controlled Muslim judicial, educational, and social functions, thus transforming Muslim associations into "virtual departments of the state", the religious clerics received ample material privileges from the Safavid ruler (Lapidus, 1988: 882).

Iran II: The post-Safavid collapse of state-religion cooperation

A rebellion of an Afghan chieftain in 1722 led to the sudden demise of the Safavid state, following the misrule of a number of sovereigns who lost interest in running an effective state. In the aftermath of the demise of the Safavids, while chaos predominated owing to continuous warfare between contending tribal confederations, the ulama fell from their previous position of privilege and wealth mainly because their religious endowments (tax-free grants of wealth and land to mosques, religious schools and shrines) were often confiscated or plundered. As a consequence, many of them emigrated to southern Iraq and India or elsewhere (Axworthy, 2013: 20). This was

¹⁸However, a recurring problem for his successors was their fractiousness and their continuous resistance to the imposition of state control. It is not a small feat that Abbas managed to control the unruly Qizilbash leaders by building up a standing royal army directly financed by the shah and directly responsible to him.

the end of the unrestricted cooperation between the Iranian autocrats and the religious authorities.

The Qajar dynasty was eventually consolidated (1794) to remain (nominally) in power until the 1920s (Katouzian, 2009: Chap. 6). During the times of the Qajars, a modicum of order had been re-established yet the Qajar Shahs never succeeded in recreating a strong centralised state as epitomised by the royal absolutism or the bureaucratic centralism of the Safavids (Katouzian, 2009: 129; Cleveland, 2004: 55). Administrative instability, insecurity and low legitimacy resulting from widespread corruption and little concern for the people's welfare were the hallmarks of most of their rule.¹⁹

It is in this specific context that the ulama began to function independently of the government and, backed by a population which granted them extensive authority in religious and legal matters, they constituted a powerful force of support of, or opposition to, the policies of the shahs. A new arrangement gradually developed whereby ordinary Muslims gave their allegiance, as well as a portion of their earnings, to the mujtahid, a class of ulama specially qualified to perform *ijtihad*.²⁰ In each generation, among the whole body of mujtahids, one or two clerics (called *marja-e taqlid*) emerged to serve as a supreme guide to other ulama, and to ordinary Muslims in religious matters (Axworthy, 2013: 21). In this way, a ground was also laid down which justified awarding the mujtahid far more power than that granted to Sunni ulama in other parts of the Muslim world. Even more importantly, "there was now a clear doctrinal basis for appeals to the ulama over the head of a ruler, and for claims by the leading mujtahid to make political decisions, provided they touched on Islamic principles,

¹⁹A particular problem arose out of the important powers (including prerogatives in matters of foreign policy) wielded by provincial governors: recruited from the Qajar nobility, they acted as great potentates who resisted all efforts to strengthen the central government at the expenses of the provinces (Yapp, 1987, p. 170).

²⁰Popular belief held that the rulings of mujtahid (learned individuals qualified to exercise *ijtihad* to give new interpretations of law and doctrine in response to new questions) were more authoritative statements of the will of the Hidden Imam than the proclamations of the shahs who made no claims to divinity. Thus, "if a mujtahid denounced a royal decree as incompatible with the teachings of Islam, then believers were enjoined to accept the mujtahid's decision. In this way, the ulama gained a powerful voice in Iranian political life" (Cleveland, 2004, p. 111; Keddie, 2003, p. 28).

independently of temporal rulers" (Keddie, 2003: 20). These powers were increasingly used from the early nineteenth century on.

Especially worth stressing is the role played by several unfortunate acts of foreign economic policy, which gave the ulama the opportunity to act as effective leaders of the opposition against an unpopular regime. The first event came in 1872 when the reformist government of Mirza Hosain Khan granted to a British baron, Julius De Reuter, an extensive concession involving exclusive rights for an impressive array of economic activities.²¹ This concession was granted in return of a modest royalty, but the prime minister Khan personally profited from it. Following protests by a mixed group of patriotic officials, ulama, and economic agents hurt by Khan's reforms, the shah felt eventually compelled to annul the Reuter concession and to dismiss his prime minister. However, a new series of economic concessions of a similar kind were soon to follow, testifying that Iran continued to fall prey to British and Russian interests. Since they brought only small returns to the government, while bribes to the shah and officials to promote them were quite large, tensions between the state and society remained high.

In 1890 the corrupt and inefficient government of Nasir al-Din awarded a British capitalist (G.F. Talbot) the exclusive right to produce, sell and export the country's entire tobacco crop. Since tobacco was such a vital commodity in the economy, this decision immediately aroused tumultuous mass protests (Keddie, 1966; Rodinson, 1966: 166; Lapidus, 1988: 576-77; Cleveland, 2004; Gleave, 2005; Katouzian, 2009: 163-64). A noteworthy feature of the popular demonstrations is that they were organized by members of the Shi'a ulama who "urged the population to join them in preserving the dignity of Islam in the face of growing foreign influences; they portrayed the shah's concession as a transgression of the laws of Islam and used their independent power base to denounce the government" (Cleveland, 2004: 115). This was a significant moment in modern Iran's history not only because the Tobacco Protest was the first successful mass protest

²¹Lord Curzon called it "the most complete and extraordinary surrender of the entire industrial resources of a kingdom into foreign hands that had probably ever been dreamed of" (cited from Keddie, 2003, p. 54).

against government policy, but also because it rested on the coordinated actions of ulama, secular or modernist reformers, bazaaris (especially merchants), and ordinary townspeople.²² What Nikki Keddie (2003) calls "the religious-radical alliance" had shown its potential for changing the course of Iranian policy (61-62). It was to remain effective during the subsequent decades and even during the following century.

Clearly, unlike what was observed under the Safavids, when the Qajars decided to bring reforms, these reached only a small elite but did not touch the mass of the population. Moreover, in many instances the reforms were simply ineffective, inadequate for the centralisation of state power, and insufficient to oppose foreign encroachment (Lapidus, 1988: 575). As a result, the (centralised) religious establishment was not co-opted and there was a rather high risk of political upheaval. In particular, the proof had been made that a religious authority could use its power of interpretation to confront a government's economic policy, and to the class of the ulama, it had become clear that "the Iranian people were receptive to calls for political activity based on Islamic frames of reference" (Cleveland, 2004: 115).

4.2.2 Saudi Arabia: Rent-Based Economies

One polar case suggested by our model arises when the structure of the economy is such that economic performance is hardly affected by reform efforts. The clearest example is provided by rent-based economies whose prosperity is almost entirely based on the exploitation of abundant and highly priced natural resources. In these conditions, it is reasonable to assume that the function $G(\alpha)$ has a weak slope (e.g., g is small). When this is the case, a simple look at the ruler's objective function (7) shows that, since reform efforts are unproductive while they will cause a loss of clerical support (for a given value of w), α will be set to zero. As for w , it will be small because clerics are not antagonistic to a ruler when he does

²²hereas before most secularist reformists, typically educated people influenced by Western ideas, had been rather hostile to the ulama, -which contrasts with the traditionally close ties between ulama and the bazaar classes-, from 1890 onwards they started to reconcile with the clerics willing to fight against the regime's policies, particularly against the sale of Iran's resources to foreigners.

not undertake reforms. In spite of the relatively low w , the entire clerical class can therefore be mobilized in support of the ruler with the direct consequence that the probability of the ruler's survival is one (survival is certain).

The example that comes to mind here is Saudi Arabia, a country blessed with huge oil resources and led by a clique of authoritarian rent-carriers (the Saud family) who rule over a deeply conservative society. The religious establishment of Wahhabite Sunnis is entirely allied with the Saud regime and has been so since the foundation of the modern Saudi state. The founder of the creed, Muhammad Ibn Abd al-Wahhab (1703-1792), had developed a puritanical and ultra-conservative doctrine which rejected all that could be regarded as illegitimate innovations, including reverence to dead saints as intercessors with God, and the special devotion of the Sufi orders. It gained significant influence only when the Saud tribe decided to espouse it as the national ideology of their newly formed kingdom in 1932 (Hourani, 1991, pp. 257-58; Al-Rasheed, 1996, 2002, 2006; Nevo, 1998; Feldman, 2008, pp. 93-4; Saint-Prot, 2008, pp. 271-316). Wahhabism was a state ideology that delivered to the ruler and his clique "undisputed authority, social mobilization and a legitimizing discourse" (Filiu, 2015: 39). That political expediency is the major driver of the sovereign's attitude toward religious forces was manifested early on, in 1927 and again in 1928, when Ibn Saud held a conference with leading ulama who eventually sanctioned the use of arms against the insubordinate Ikhwan (the Brothers) whom they deemed "overly zealous in proclaiming jihad without the permission of the emir" (Loc, 2014: 243). Their repression was somewhat delicate because they were religious Bedouins who had helped the Sauds in conquering the Arab peninsula in the name of the faith, and they wanted to pursue the conquest by subordinating Transjordan, Iraq, and the shaykhdoms of the Persian Gulf. This was more than what the British could accept. The same sort of political expediency was again observed on the occasion of the occupation of the Grand Mosque in 1979 (when Juhayman al-Utaibi and hundreds of armed followers denounced the Saudi monarchy for corruption and promoting Westernization), and in the 1990s when the Saudi regime

was threatened by Islamist protests and jihadi attacks. In both cases, the state sought authorization of the Council of Senior Ulama to use force to put down the rebellion (228, 233).

Finally, it deserves to be emphasised that, although strongly puritanical, al-Wahhab followed a well-established Muslim tradition when he came to define the proper attitude of Muslims vis-à-vis political power. He indeed proclaimed that, in order to avoid chaos and anarchy, all Muslims should obey a secular ruler, even if demonstrably corrupt. This attitude has been dutifully followed by the Wahhabite clerics who have supported the Saudi regime across all winds. Their puritanical opposition against innovations did not matter much for the Saudis since economic growth could be achieved with little or no major reform. And when an innovation is deemed necessary by the regime, acquiescence of the religious clerics can be obtained after the required justifications, however far-fetched, have been found. Thus, it is upon the request of king Abdul Aziz, that ulama close to him had to exert themselves to find in the sacred texts a proper justification for an innovation as fundamental as photography. This innovation was eventually accepted, despite the idolatry of pictorial art, on the ground that it brings together light and shadow, which are both divine creations (Nomani and Rahnama, 1994, p. 139). Similar efforts were deployed to allow the introduction of the wireless into the kingdom (Feldman, 2008, p. 97). By contrast, the prohibition of driving for women in Saudi Arabia forces their husbands to spend hours every day ferrying wives to and from work, and it is only very recently (February 2012) that a royal order stipulated that women who drive should not be prosecuted by the courts (Economist, March 3-9, 2012, p. 56).

4.2.3 Turkey: Reformist Autocratic Leadership and Cleric Polarization

Our second example, which is in complete contrast to the first one, is obtained when political power belongs to a dynamic ruler who is eager to reform the country's institutions and to promote modern economic growth. In terms of our model, this means that the ruler derives a high utility, or

a large rent, $G(\alpha)$ from a given level of reform α (e.g., the constant K is large). Under reasonable conditions, accession to power of a more reformist leader is predicted not only to yield more reforms at equilibrium, but also to increase political instability as a result of a reduced mass of co-opted clerics. The Kemalist republic of Turkey provides an apt illustration of this case. The movement of the Young Turks and the regime of Atatürk were determined to bring radical reforms with a view to modernizing the country. In retrospect, these reforms marked a major turning point in the modern history of Turkey, ending her relative stagnation vis-à-vis the Western world and laying the basis for long-term economic growth (Kuran, 2011). Thus, unlike the Tanzimat reforms of the late Ottoman Empire which resulted in the coexistence of secular and Islamic schools, courts, and laws, institutional change under Kemalism was about suppressing autonomous Islamic institutions.

Started in the years 1820s and 1830s under sultan Mahmut II, the reform movement continued during the succeeding decades and was almost completed between 1913 and 1918 under the rule of the Young Turks and their Committee of Union and Progress (CUP). Thus, even before the proclamation of the Republic of Turkey in October 1923, major changes had been brought to key institutions. Most noticeably, in spite of the strong resistance of the ulama, the role of Islam had been limited almost exclusively to the realm of family law. When the Swiss civil code and the Italian penal code were eventually adopted in 1926, this restricted domain of the law was taken away from the jurisdiction of the ulama, and religious associations were banned.

Under the presidency of Mustapha Kemal, the educational system became completely secularised in 1924, implying the abolition of the madrasas, or religious colleges. Also abolished was the Ministry of Religious Affairs and Pious Foundations which was replaced by two directorates, one for religious affairs (the Diyanet) and the other for pious foundations (the Evkaf), both attached directly to the prime minister's office. All imams and muftis became civil servants while the Diyanet was given sole responsibility for religious guidance. This implied that the contents of Friday sermons (preaches

before Friday prayer and sermons during the prayer) became centrally determined and that muftis received precise instructions about how to advise believers. Moreover, the state would define the contents of mandatory religious instruction in public schools and of the Imam-Hatip schools created for the purpose of training imams. Also, organised prayer was forbidden in public or private schools. These changes amounted to the greatest transformation of the state bureaucracy brought under the Kemalist republic. They resulted not in a separation of state and religion but in an official control of religion by the state (Zürcher, 2004, p. 187; 2010, p. 145, 279-80; Kuru, 2009, pp. 165-67, 205-211, 220; Inalcik, 1964).

Also noticeable as a dramatic step taken by the regime to bring religion under control was the outright suppression in 1925 of the dervish (Sufi) orders, or mystical fraternities (the *tarikats*), and the widespread network of convents and shrines associated with them (Zürcher, 2004, pp. 191-92; 2010, p. 136; Göle, 2004; Kinross, 2001, pp. 397-404). Based on closed and secretive networks, these religious fraternities were perceived as the hallmark of a traditional and obscurantist culture, and as loci of local power lying beyond the reach of a centralized government (Kinross, 2001, pp. 397-404). Being excluded from the administrative integration process, the Sufi masters were far away from the official ulama who traded-off their economic security inside the state apparatus against their silence on all the frontal attacks against erstwhile religious institutions. The dual nature of the religious body was therefore reinforced and institutionalized by the modernization process imposed by Mustapha Kemal.

To sum up, the Kemalist regime succeeded in subjugating urban, educated religious clerics and pushing through radical reforms conducive to long-term economic growth. At the same time, it created the ground for more political instability since, albeit officially suppressed, religious voices were not dead and popular Islam turned into a vehicle for opposition (Zürcher, 2004: 192). When the regime started to democratize, the opposition came into the open and won a landslide victory. Indeed, after several renewed attempts to organize democratic elections under the close watch of the army (particularly during the 1950s, when the Democratic

Party rose to prominence, backed by a new elite with no foot in the bureaucracy and the army), attempts themselves punctuated by state coups, a genuinely free democratic election took place for the first time in March 1994.

The resounding success of the Islamic Welfare Party (WP) of Erbakan at these elections marked a turning point in the history of the republic of Turkey. The WP's success followed both from its emphasis on issues like social justice, unemployment, poverty, social security, and corruption in high circles, and from its respect for the more conservative lifestyle of the masses. Regarding the latter aspect, its main role was to have opened the way for a 'Muslim cultural renaissance' that dares express itself publicly, and for a restored dignity of the Black Turks in the face of senior military officers and traditional Republican elites entrenched in state institutions and monopolies (White, 2013, p. 47). The regime made several attempts to ban the Welfare Party which was succeeded by the Virtue Party, itself banned in June 2001. The leader of the reformist faction of the Virtue Party, Recep Tayyip Erdogan, then founded the Justice and Development Party (AKP) which in no time shed its Islamic identity and styled itself as a conservative democratic party. Its success was immediate: in the 2007 elections, AKP did well in every region of the country, and it won 47 percent of the votes overall. It thus received a stunning mandate to run Turkey along entirely new lines (Kuru, 2009, p. 187).

4.2.4 Religious Radicalization

An interesting static-comparative result from the theory is about the evolution of the autocrat policy when the clerics become harder to seduce. As a result of a shock, there is an upward shift of the function $V(\alpha)$ (e.g., a rise of the parameters W or v). Other things being equal, the clerics are therefore more expensive to co-opt and the probability for the autocrat to stay in power decreases. The theory predicts that the autocrat will reduce the pace of reforms (and simultaneously increase or decrease the 'wage' of the clerics) to the effect that the fraction of clerics supporting him becomes higher. It is even possible (e.g., if v becomes sufficiently large relative to

g), that his response to radicalization is to co-opt the whole clerical body. Reforms are then sacrificed in the name of political stability. We look at the evolution of a specific country that is hit by a shock, or what may be interpreted as a shock, and then we assess the consequences of the shock on the basis of the theory.

In the first example below, which concerns modern Iraq, an external shock (or, more exactly, a series of shocks) occurred that created more political instability. This is because it had the effect of increasing people's frustrations and dissatisfaction with the regime which, in turn, induced the religious clerics to become more critical of the autocratic ruler. As we show below, the ruler reacted by compromising with the men of religion (barring extremist religious movements) and adopting regressive policies intended to placate them. The second example, Algeria, will be interpreted in the same manner, that is, in terms of an initial situation followed by a shock and the autocrat's response.

Iraq

Iraq I: The initial situation

Post-independent Iraq quickly adopted an authoritarian model of governance justified by a romantic view of pan-Arabic unity and a sort of socialist approach to development (Makiya, 1998: 208-9). General Abd al-Karim Qasim, who led the 1958 revolution against the Hashemite monarchy established by the British colonial power, imposed state control over all the Islamic institutions in the country. This meant keeping the ulama out of dissident politics, and keeping Islam out of regime ideology and, as much as possible, out of state education, culture, the legal system, and state symbolism (Baran, 2014, p. 47). In order to persuade the religious establishment to lend religious legitimacy to the regime's policies when such support was necessary, some limited and unavoidable concessions were nevertheless made that allowed the Baath party and the regime to avoid head-on confrontation with public religiosity. A genuine progressive leader, Qasim introduced a Law of Personal Status that, while based on the sharia for the most part, drew inspiration from the European law on some key aspects (polygamy was banned and complete gender equality was proclaimed

in respect of inheritance). He did not bend in front of the pressures of the highest religious authority. Under Saddam Husayn, who seized power through brutal force, the regime oscillated between progressive moves, for example, the new provisions of the law forbidding forced marriage, and reactionary steps, such as when the minimum age of marriage was lowered from sixteen to fifteen years in order to placate the conservative (mainly tribal) circles (Baran, 2014: 57). Saddam was eager not to antagonise the official clergy and, besides appointing to positions of responsibility Shi'i clerics whom he wanted to draw into the network of his patronage, he paid lip service to Islamic values whenever the opportunity arose (Tripp, 2000: 209-11).

Iraq II: The shocks and its aftermath

An important turning point was reached toward the end of the seventies and the early eighties when major changes occurred in the international environment of the country, namely the rise of Ayatollah Khomeini to power in Iran (1979), the stirrings of a Shi'i revolt in Iraq, Saddam's catastrophic miscalculation in the war with Iran, and the invasion of Kuwait. Some of these events were of Saddam's own making and were therefore endogenous to the regime's choice behaviour, while others were largely exogenous. However, even regarding his own decisions, there is strong evidence that Saddam badly anticipated the effects of the choices he made.²³

The response of Saddam Husayn to the ominous circumstances described above is what Baran (2014) calls "a revised, 'Shi'ified' version of his earlier blood-and-soil nationalism adapted to the political necessity of the time" (63). The central motivation behind this metamorphosis was a strategic and cynical calculation aimed at regaining lost legitimacy through continuous appeals to religion.²⁴ A major step in Saddam's about-face co-

²³He was thus persuaded that Iran had been considerably weakened by the revolution of the ayatollahs and its army would therefore be easily quashed in a head-on confrontation with the well-trained and well-equipped Iraqi army. He also thought erroneously (perhaps because he was lured into a trap) that the United States would not react to the invasion of Kuwait by the Iraqi troops, and he did not expect the harsh embargo that Western powers would impose on his country in retaliation for his adventurous expansionism in the region and the way he crushed Kurdish rebellions at home.

²⁴At the same time, faithful to his practice of combining intimidation with seduction, he never stopped clamping down in the fiercest manner on the members of underground

incided with the 9th Congress of the Regional Command of the Bath (1982) on the occasion of which the significance of religion, together with the primacy of Iraq, was stressed with special vigour (Tripp, 2000: 228). His fear of the allegiances of the Shi'i footsoldiers who formed the bulk of Iraq's conscript army prompted him to stress the Arab identity of the Iraqi Shi'a and the Islamic credentials of the regime. In January 1991, in an act that was clearly unconstitutional, he requested that the words Allah Akbar ('God is great') be written on the Iraqi flag, and publicly declared that the Iraqi flag had become "the banner of jihad and faith ... against the infidel horde" (Baram, 2014: 207-208). His seductive tactics now included the rebuilding of Shi'i mosques and places of pilgrimage, the declaring of Iraqi territory as sacred because it contained the soil of Najaf and Karbala (the two Shi'i holy cities), the imposition of the birthday of the fourth caliph, the imam Ali, as a national holiday, and the extravagant proclamation that he, Saddam, was a descendant of this central figure for all Shi'i Muslim believers (Tripp, 2000: 238; Polk, 2005: 12; Baram, 2014: 63; Benraad, 2015: 76-77).

New laws sometimes providing for barbaric penalties were enacted. Thus, in March 1992, the regime cracked down on nightclubs and discothèques, imposed Ramadan fasting, outlawed prostitution (punishable by death) and banned public alcohol consumption, allowing only non-Muslims to sell spirits. More ominously, as per RCC Decree N^o 59 of June 4, 1994, amputation of the hand at the wrist was introduced to punish theft and robbery -which had become widespread as a result of the deepening economic crisis-, and amputation of the left foot at the ankle was to sanction second offenses. Subsequent decrees enlarged the definition of theft and robbery to make the draconic punishments applicable to unauthorised money changers, forgers of official documents, merchants, and profiteering bakers (Davisha, 2009: 238; Baram, 2014: 265-67, 321).

The Islamisation of the regime's rhetoric gradually intensified and culminated in the so-called "campaign for the faith" (1993-2003) which did seriously affect the legal and educational system. In the first stage of his faith campaign, Saddam embarked upon a massive educational effort to

(Shi'i) Islamist organisations, such as al-Dawa (Tripp, 2000: 208).

impose the study of the Quran and the Hadith, starting from the first grade of primary school and doubling or tripling the amount of time devoted to it in all Iraqi schools. Concomitantly, separation between boys and girls at school was imposed from the same first grade. Saddam even forced the senior party members to take Quran classes lasting up to two years, and he exerted strong pressures on adults, especially the big merchants, to the same effect. Then, he proceeded by giving the reciting of the Quran a dominant place in the educational system, placing students (at the expense of their school holidays) for months every year in the mosques, and instructing the Ministry of Education to impose new examinations to test every teacher's knowledge of Islam. Religion teachers were offered a bonus over their ordinary salary, and knowledge of the Quran was made a required subject on the general matriculation examination (Baram, 2014: 220-1, 254-58).

Finally, women's status, which had improved remarkably during the first decades of the Ba'ath revolution (especially under Quasim), suffered a frontal attack at the height of the faith campaign: they were thus prohibited from travelling abroad unless accompanied by a male relative from the paternal side of their immediate family. Saddam Husayn also declared that women should give up paid employment and stay home, arguing (in 2000) that "keeping women at home gives the highest meaning to humanistic values". As pointed out by Adeed Dawisha (2009), "All this was done to a chorus of mounting emphasis on religious symbolism, which in itself constituted a repudiation of the modernism and secularism of city attitudes, so alien to tribal sensitivities" (238). If threats against women's rights were not executed, and the Law of Personal Status, one the great achievements of the Ba'ath revolution, was not Islamised, it was perhaps just a matter of time.

All the above drastic steps, unheard of in Iraqi history, had the calculated advantage of pleasing senior Sunni and less senior Shi'i clerics whose prestige and material status were given a major boost. In the words of Baram (2014): "by upgrading their socioeconomic status, he [Saddam] could hope to buy off the clerics, and through them gain much-needed

public support. In light of his expressed dislike of any and all clerics, this policy can only be seen as a cynical step..." (257; see also 323).²⁵

In the successive crisis situations born of the above disasters, people increasingly turned to religion, and religious clerics became more sensitive to their ordeals and less reluctant to assert their views, including criticisms against the regime. To this rising threat, Saddam's response was in conformity with the prediction of the model. He paid utmost attention to the stability of his regime to the point of betraying his identity. In complete contradiction with his 1977 declaration that the sharia was irrelevant to modern life, and with his early commitment to the ideal of a national, secular, united Arab mega-state, he agreed that Islam, rather than Arabism and the Arab culture, could be the cement holding the future state together. He thus increased his efforts to seduce the clerics and to posture himself as an absolute leader with strong religious credentials.²⁶ On the policy level, he adopted regressive measures that, given his previous commitment to the Baathist ideology with its emphasis on secularism and Arabism rather than Islam, appear almost unthinkable. As usual in this type of context,

²⁵Note that the regime's persisting suspicion of all clerics was reflected in the tight monitoring of all religious activities and the systematic spying on religious functionaries. Not only were all Friday sermons in all mosques carefully screened, but every appointment by the Ministry of Endowments to any religious institution had to be approved by the Ba'ath party's security men. As usual, seduction was mixed with intimidation to tame opposition, and people deemed to be harsh opponents, particularly Islamists, were banned, arrested, tortured, and killed (319).

²⁶To justify the annexation of Kuwait, defeat the (mainly Shi'i) Islamist opposition and other religious activists inside Iraq, as well as legitimate his increasing reliance on his cousins at the expense of the party's old-timers within his close circle of power, Saddam reinvented himself as the supreme religious authority -the only one able to interpret God's will- for all Sunni Iraqis, and later for the entire Sunni Muslim world. He was "the Commander of the Congregation of the Believers" and presented himself as "the sword that would end Kuwaiti and Saudi moral corruption, and as the solution to the crisis of Islam. He did not hesitate to claim a Prophetic pedigree (he was a sayyid, an offspring of the Prophet), and to encourage the National Assembly to equate him with the Prophet (Baram, 2014: 221, 261, 329). When, on the occasion of the Gulf War, the possibility of war with the United States became manifest, he justified his invasion of Kuwait by saying that "it was God who showed us [read me] the path" and, for the first time, he claimed a direct line to God (Baram, 2014: 214). Adopting the language of Islamists, he even called for a jihad against the infidels (the kuffar) and the hypocrites (the munafiqun) who try to "extinguish the flames of Islam" (220). The parallel with Islamic fundamentalism is not fortuitous since, in his fight against Saudi Arabia and the Gulf countries, Saddam was seeking the support of Egypt's Muslim Brotherhood.

the measures touching on education and on women's role, were probably those which produced the most adverse effects on the long-term growth potential of the country.

Algeria

Algeria I: The initial situation

The new independent state of Algeria quickly asserted its socialist approach to national construction and its adherence to the Arab world reflected in the choice of the Arabic language as the official language of the state. At the same time, it sought to control the expression of Islam by controlling appointments to religious offices, absorbing independent Quranic schools, sponsoring Islamic propaganda, and supervising schools, mosques, religious endowments, and the training of the clerics through a Ministry of Religious Affairs (Lapidus, 1988: 694, 697). The authoritarian nature of the regime was also manifested in the imposition of a single party rule and the purging of the ruling party (the FLN, or Front de Libération Nationale) of all the opponents to Ben Bella, the first president. The outcome was personalised leadership, and bureaucratic-military dictatorship (Laabas and Bouhouche, 2011: 202). Through a state coup, General Houari Boumedienne seized power from Ben Bella in June 1965, and the army quickly succeeded in taking control of the Algerian state, a move which was supported by left-wing groups in and outside the FLN. However, he soon lost that support owing to his unpopular policies based on state control of the economy, his strong-arm tactics and the corrupt practices which he and the clique around him systematically followed in order to build up a rent-seeking political clientele.

Unlike in Saudi Arabia where the ruler has been wise enough to widely redistribute the immense oil wealth under his control, in Algeria, the oil rents were to a large extent redistributed inside a narrow clique that behaved in an arrogant and distant manner. Perceived as a betrayal of the independence revolutionary movement, the appropriation of the national wealth by a cynical political elite gave rise to strong resentments among the population, and created a fertile ground for the development of an active opposition against the regime. Intellectuals, students and trade unions

occupied centre stage in the opposition movement. Represented, in particular, by the UGTA (Union Générale des Travailleurs Algériens) and the UNEA (Union Nationale des Etudiants Algériens), these forces seriously challenged Boumedienne's hold on political power during the year 1968.

Algeria II: The aftermath of the 1968 shock

Boumedienne used Islam to counteract any oppositional movement and to lock up the entire civil society.²⁷ He thus gave freer rein to the ulama and the more reactionary clerics among them. In particular, he granted them the right to lead the Arabisation of the country and to manage the education system (including the right to rewrite the school textbooks). In a more ominous move, still, he encouraged the rise of the FIS (the Front Islamique du Salut, or Islamic Salvation Front) the more radical strand of which was headed by Ali Belhadj, a puritan cleric who called for the formation of an Islamic state, by violent means if necessary (Bouannama, 2000, Chap. 3; Lapidus, 2002, pp. 599-600).

As a result, a series of regressive policies were adopted and the discourse of reformist Islam started to infiltrate all political language. In no time, indeed, the more conservative members of the religious establishment began to assert their views more aggressively and to meddle openly in matters of social policy (such as dressing codes, amount of bride prices, etc.). Moreover, they exerted considerable effort to implement the Arabisation programme and, toward the late seventies, all education levels were completely Arabised. With the full support of the regime, the religious dignitaries started to spread the message of a conservative Islam through the creation of a wide network of Islamist institutes directly governed by the Ministry of Religious Affairs. Radical views inspired by the writings of Taymiyya, Qutb and Mâwdudi (see *infra*) were diffused in all legality (Chachoua, 2001, pp. 271-72).

The Arabisation policy was a disastrous move not only because it denied

²⁷In order to break the students' movement, Boumedienne did not hesitate to mobilise Islamist students ('talabs') of the El Hamel brotherhood, inciting them to infiltrate the university of Alger and to demonstrate their strength assured of total impunity. In 1971, the UNEA was dissolved and transformed into the Student Youth wing of the FLN after all its leaders had been arrested and exiled to the harsh prison of the South (Tamzali, 2007, pp. 199-202).

the existence of non-Arabic cultures in Algeria (particularly the amazighe language of Kabylia) and because, by allowing the interference of religion into the educational sphere, it led to an excessive moralisation of school teachings, but also because it destroyed precious human capital. As a matter of fact, Arabisation caused the sudden rise of under-qualified teachers coming from the Koranic schools (in Algeria itself or in neighbouring Egypt) while simultaneously pushing many members of the intelligentsia to leave the country (Grandguillaume, 1983). By imposing Arabic as the only language taught in official schools, it also caused considerable frustration among the newly educated people who quickly found that they could not effectively compete with the Francophone elites for access to the highest positions in the state system. A fertile ground for future recruitment by Muslim extremists was thereby created which established an additional indirect link between Algeria's Arabisation policy and its Islamisation at the behest of the FIS.

The growing expression of puritanical views was part and parcel of the above Islamic drift. The idea of a "renaissance" of the country based on the Islamic tradition and culture was explicitly taken over by the government (Chachoua, 2001: 271-72). If Algeria succumbed to French colonisation, it is because the original message of pure Islam had been perverted by Mediterranean, dynastic, nomadic and other obnoxious influences (Bouamama, 2000: 225; Hadjadj, 2007: 439-41). This revisionist view of Algerian history gained the highest official recognition when the Islamic character of the Algerian state was embedded most explicitly into the National Charter considered as the ideological and political programme of revolutionary Algeria.²⁸

It is revealing that such explicit references to Islam in the 1976 version of the Charter have not been amended in 1986 when the liberal regime of President Chadli decided to revise it, mainly to suppress all references to socialism (Bouamama, 2000: 161-62). This was no coincidence since

²⁸It contains the statement that "It is to Islam, the religion of militant endeavour, of rigour, justice and equality, that the Algerian people returned to in the darkest times of the Crusades and colonial domination, and it is from Islam that they draw the moral force and spiritual energy required to sustain hope and achieve eventual victory" (cited from Bouamama, 2000: 161 -author translation).

President Chadli, like his predecessor, deliberately chose to use Islamist forces to defeat the left opposition against his neo-liberal policies. Thus, when during the year 1986 and under the impulse of the students popular anger burst into the open and quickly took on an insurrectionary character, the Islamists tried to hijack the movement by themselves descending into the streets and clamouring for the establishment of an Islamist Republic in Algeria. Against all expectations, Chadli negotiated with their leaders as though they were the key actors behind these ominous events, therefore supplying a true 'launching ramp' for the FIS. Even though the new 1989 constitution is quite liberal in its terms, and explicitly banned the creation of political parties based on religion, the FIS was officially recognised on September 5, 1989. The fact of the matter is that the ideology of the FIS included the defence of private property and the recourse to the intervention of the IMF to help rescue Algeria from her economic and financial crisis, and this provided a badly needed support for Chadli's unpopular policies (Bouamama, 2000: 214-18). In addition (and much like in Egypt), the government relied heavily upon the Algerian strand of the Muslim Brotherhood to counterbalance the influence of leftist and secular views on university campuses (229).

The enactment of a rather reactionary Family Code in 1984 and the appointment as President of the University of Islamic Sciences (Constantine) of the Egyptian imam El Ghazali who had belonged to the Muslim Brothers and justified violence against miscreants bore witness to the tacit condonation of the Islamists's extreme positions by the Chadli's regime. This happened in conditions where the regime was considerably weakened by serious infighting among the various wings of the FLN that literally broke the party apart (Laabas and Bouhouche, 2011, p. 203). The outcome is well-known: the rise into prominence of the FIS through the ballot box and the increasing recourse to violent means, whether overt or covert, by its more militant factions (such as the so-called Afghans) and its military arm (the GIA, or Groupe Islamiste Armé).

Eventually, the Algerian army reacted by staging a state coup that overthrew President Chadli in September 1992, but Algeria fell into a nasty civil

war which was "perhaps more extreme and bitter than anything hitherto seen in the Muslim world" (Lapidus, 2002, p. 600). War-weariness and a gradual reaction against the excesses of the Islamic movements helped secure growing support for the government (first under general Liamine Zeroual, who came to power in 1994, and then under Abdelaziz Bouteflika, who succeeded him in 2001). Not only middle-class bureaucrats and businessmen, but also moderate Muslim groups such as the Movement for an Islamic Society (HAMAS) rallied the cause of the military to rescue the country from chaos.

To sum up, the autocratic power in Algeria has chosen the path of political stability in preference to the path of reforms. In order to deflect criticisms against the regime's social and economic policies, the successive rulers decided to ally themselves with the religious clerics, providing them with ample opportunities to exert influence in critical sectors of the society. The result was retrograde social policies. In addition, necessary economic reforms were postponed, particularly under Boumediene who could rely on the proceeds of large hydrocarbon resources, especially after the 1973 oil shock, to finance his costly "socialist" policies. It must be noted that in their efforts to crush the opposition forces from the left, Algerian autocrats did not hesitate to establish links with the most radical religious forces in the country, including those preaching violence. This extreme step later proved to be suicidal and, most likely, its consequences were badly anticipated by political authorities working with a limited time horizon. This explains why, although their predominant objective was to consolidate their hold on power, the Algerian upper political elite eventually reached a political deadlock and imposed immense suffering on the people (see Filii, 2015: 94-112).

5 Conclusion

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6 Appendix

6.1 Proof of Proposition 1

To complete the proof, we need to determine whether the autocrat chooses the corner solution $\theta^d = 1$ or the interior solution $\theta^d \in (0, 1)$ at the optimum $w = \frac{V(\alpha)}{V'(\alpha)}G'(\alpha)$.

As we have seen above, if the autocrat chooses the corner solution $\theta^d = 1$, he maximizes $\max G(\alpha) - aV(\alpha)$ with respect to α , where $a > 1$. Since $V''(\alpha) \geq 0$ and $G''(\alpha) \leq 0$ the autocrat's objective function is concave. The first-order condition is therefore sufficient. The optimal solution then is α_a^* so that $\frac{G'(\alpha)}{V'(\alpha)} = \frac{1}{a}$, where a is the minimum value of $w/V(\alpha)$ ensuring that the corner solution holds. We deduce that $w = \frac{V(\alpha)}{V'(\alpha)}G'(\alpha)$, which is identical to (13). In words, the autocrat chooses the same level of wage whether he decides to enlist the full or the partial support of the clerical class.

Let us now look at the interior solution, where α is conjointly determined with θ in (10) and (11). We need to check the second-order conditions in order to prove the result. Deriving $\frac{\partial U^p}{\partial \alpha}$ in (11) with respect to α yields:

$$\frac{\partial^2 U^p}{\partial \alpha^2} = F(\theta^d)G''(\alpha) - V''(\alpha)\theta^d \quad (18)$$

Since $G(\alpha)$ is concave and $V(\alpha)$ convex, we deduce that $\frac{\partial^2 U^p}{\partial \alpha^2} \leq 0$.

Deriving $\frac{\partial U^p}{\partial \theta}$ in (10) with respect to θ yields:

$$\frac{\partial^2 U^p}{\partial \theta^2} = G(\alpha)f'(\theta^d). \quad (19)$$

The local second-order condition holds if and only if $f'(\theta^d) \leq 0$. With a decreasing density function, this is always true. With a U-shaped density function, we will have $\frac{\partial^2 U^p}{\partial \theta^2} \leq 0$ as long as $\theta^d \leq \underline{\theta}$, where $\underline{\theta}$ is the minimum point of $f(\theta)$ (i.e., $\underline{\theta}$ is such that $f'(\underline{\theta}) = 0$). On the other hand, it is straightforward that, with a J-distribution (i.e., an increasing density function) the condition will never hold. As Section 7.1.1 shows, with a J-distribution the interior equilibrium is always unstable: this is a case where the autocrat will try to get the support of the whole clerical group.

Finally, in order to get an interior solution we also need to check that $w < G(\alpha)$, which is equivalent to $\frac{V(\alpha)}{V'(\alpha)} < \frac{G(\alpha)}{G'(\alpha)}$. For instance this condition holds if $G(\alpha) = K \frac{\alpha^g}{g}$, and $V(\alpha) = W \frac{\alpha^v}{v}$, with $K, W > 0$ and $0 < g < 1 \leq v$.

6.2 Proof of Proposition 2

Assume that $G(\alpha) = K \frac{\alpha^g}{g}$, and $V(\alpha) = W \frac{\alpha^v}{v}$, with $v > g$, $g \in (0, 1)$ and $K, W > 0$. We deduce that (13) is equivalent to

$$w = \frac{K}{v} \alpha^g. \quad (20)$$

Substituting this value in the autocrat utility function as well as the value of $G(\alpha)$ yields

$$U^P = F(\theta^d) \frac{v-g}{vg} K \alpha^g. \quad (21)$$

The autocrat needs to choose α to optimize his utility function. He needs to compare different regimes. In the first one he chooses a relatively low level of reform so that stability is maximal, $\theta^d = 1$. In the second regime he chooses to implement more reforms (a larger level of α) at the cost of a higher instability: $\theta^d < 1$. We next show that we can get an interior solution or a corner solution depending on the value of the parameters v and g .

6.2.1 U-shape distributions

We first prove the result for U-shaped density function. The density function has two peaks for $\theta \in [0, 1]$, one at $\theta = 0$ and the other one at $\theta = 1$, and it reaches its minimum value at $\underline{\theta} \in (0, 1)$ so that $f'(\underline{\theta}) = 0$.

Let focus first on the corner solution. There is a threshold value $a > 1$ so that the only stable equilibrium is $\theta^d = 1$ whenever $\frac{w}{V'(\alpha)} \geq a$. For instance with the density function $f(\theta) = 2 - 6\theta + 6\theta^2$ defined over $\theta \in [0, 1]$ and c.d.f. $F(\theta) = 2\theta - 3\theta^2 + 2\theta^3$,²⁹ the threshold is $a = \frac{8}{7}$. The optimal solution $\alpha_{\theta^d=1}$ is so that $\frac{G'(\alpha)}{V'(\alpha)} = a$. We deduce that $\alpha_{\theta^d=1} = \left(\frac{1}{a} \frac{K}{W}\right)^{\frac{1}{v-g}}$ and

$$U_{\theta^d=1}^P = \frac{v-g}{vg} K \left(\frac{1}{a} \frac{K}{W}\right)^{\frac{g}{v-g}}. \quad (22)$$

²⁹The density function has two peaks for $\theta \in [0, 1]$, one at $\theta = 0$ and the other one at $\theta = 1$, and it reaches its minimum value at $\underline{\theta} = 0.5$.

Second, the autocrat might choose α so that he obtains an interior solution for $\theta^d \in [0, 1)$ so that $F(\theta^d) \in [0, 1)$. The principal will accept a lower probability of staying in power only if it comes with a higher payoff. That is, he chooses the interior solution over the corner solution only if the payoff $G(\alpha) - w = \frac{v-g}{vg} K \alpha^g$ is higher under the former regime. Since it is impossible to find closed form solutions of the autocrat's optimization problem, we show that for some value of the parameters, the arbitrarily chosen interior value $\bar{\theta} \in (0, 1)$ so that $\bar{\theta} = F(\bar{\theta})$ dominates the corner solution. For instance with the density function $f(\theta) = 2 - 6\theta + 6\theta^2$, we have $\bar{\theta} = 0.5$. It implies that when the principal actually optimizes, he will do better than for $\bar{\theta}$, and hence will always prefer the interior solution.

If the autocrat wants to seduce $F(\bar{\theta})$ of the clerics, he must offer a ratio "cost of reforms/wage" equal to $\frac{V(\alpha)}{w} = 1$. The solution α^{**} to this constrained problem is such that $\frac{G'(\alpha)}{V'(\alpha)} = 1$. We deduce that $\alpha^{**} = \left(\frac{K}{W}\right)^{\frac{1}{v-g}}$ and

$$U_{\bar{\theta}}^P = F(\bar{\theta}) \frac{v-g}{vg} K \left(\frac{K}{W}\right)^{\frac{g}{v-g}}. \quad (23)$$

Comparing (27) and (28), it is easy to check that

$$U_{\bar{\theta}}^P > U_{\theta^{d-1}}^P \Leftrightarrow F(\bar{\theta})^{\frac{v-g}{g}} > \frac{1}{a}. \quad (24)$$

Condition (24) is equivalent to $\frac{g}{v} < 1 + \frac{\ln a}{-\ln(F(\bar{\theta}))}$. Since $\frac{\ln a}{-\ln(F(\bar{\theta}))} > 0$, this inequality holds if g is sufficiently close to v so that $0 < g < 1 \leq v$. We deduce that, for g and v sufficiently close to each other, the interior solution dominates the corner solution. For instance with the density function $f(\theta) = 2 - 6\theta + 6\theta^2$ condition (24) is equivalent to $\frac{1}{2} > \left(\frac{7}{8}\right)^{\frac{g}{v-g}}$, which for instance holds if $g = 0.9$ and $v = 1$.

To complete the analysis, we need to show that the corner solution may dominate the interior solution. We focus on the case where $\theta^d = \frac{3 - \sqrt{8 \frac{V(\alpha^*)}{w^*} - 7}}{4} = \frac{3 - \sqrt{8 \frac{V'(\alpha^*)}{G'(\alpha^*)} - 7}}{4} = \frac{1}{2}$, is actually the optimal interior solution. OR which actually corresponds to the optimal interior solution. This requires that α^* is such that $\frac{V'(\alpha^*)}{G'(\alpha^*)} = 1$, implying from (13) that $w^* = V(\alpha^*)$. Moreover, if $\theta^d = 0.5$, it follows that $F(\theta^d) = f(\theta^d) = 0.5$. From (6), we

can then infer that $\frac{d\theta^d}{d\alpha} = -\frac{V'(\alpha^*)}{V(\alpha^*)}$.³⁰ We deduce that, if $\theta^d = 0.5$ is to be the optimal interior solution, we must have that $G(\alpha^*) = 2V(\alpha^*)$ from (12), and that $V'(\alpha^*) = G'(\alpha^*)$. Using the explicit functions chosen and solving these two equations simultaneously, we get that $v = 2g \geq 1$ and that $\alpha^* = \left(\frac{K}{W}\right)^{\frac{1}{g}}$. Therefore $w^* = \frac{K^2}{vW}$.

We then need to compare the autocrat's utility at the interior solution $\theta^{d*} = 0.5$ with the autocrat utility at the corner solution $\theta^{d*} = 1$ defined in (27) for $v = 2g$: $U_{\theta^d=1}^* = K \left(\frac{7}{8} \frac{K}{W}\right)^{\frac{v-g}{g}} \frac{v-g}{vg} = \frac{7K^2}{8vW}$. One can easily check that $U_{\theta^d=1}^* = \frac{7K^2}{8vW} > \frac{K^2}{4vW} = U_{\theta^d=\frac{1}{2}}^*$.

6.2.2 U-shape distribution

We first prove the result with the density function $f(\theta) = 2 - 6\theta + 6\theta^2$ defined over $\theta \in [0, 1]$ and c.d.f. $F(\theta) = 2\theta - 3\theta^2 + 2\theta^3$. The density function has two peaks for $\theta \in [0, 1]$, one at $\theta = 0$ and the other one at $\theta = 1$, and it reaches its minimum value at $\theta = 0.5$. It implies that θ^d defined in (4) is such that:

$$2 - 3\theta + 2\theta^2 = \frac{V(\alpha)}{w} \quad (25)$$

- If $\frac{V(\alpha)}{w} < \frac{7}{8}$, this second degree equation does not admit a real solution. It is easy to check that the only stable equilibrium is $\theta^d = 1$ if $\frac{V(\alpha)}{w} \leq \frac{7}{8}$.³¹
- If $\frac{V(\alpha)}{w} > \frac{7}{8}$, (25) has two roots: $\theta^{\pm} = \frac{3 \pm \sqrt{9 - 4\left(\frac{V(\alpha)}{w} - 2\right)}}{4}$. The smallest root is such that $\theta^- \leq 0$ if $\frac{V(\alpha)}{w} \geq 2$, while the largest one is such that $\theta^+ > 1$ if $\frac{V(\alpha)}{w} > 1$. We deduce that the only stable equilibrium is $\theta^d = 0$ when $\frac{V(\alpha)}{w} \geq 2$.

³⁰Indeed we have $\frac{d\theta^d}{d\alpha} = \frac{-V'(\alpha^*)\theta^d}{V(\alpha^*) - f(\theta^d)w} = \frac{-V'(\alpha^*)0.5}{V(\alpha^*) - 0.5V(\alpha^*)} = -\frac{V'(\alpha^*)}{V(\alpha^*)}$.

³¹When $\frac{V(\alpha)}{w} < \frac{7}{8}$ there are two equilibria 0 and 1. The only stable equilibrium is $\theta^d = 1$. When $\frac{V(\alpha)}{w} = \frac{7}{8}$ there is an additional unstable equilibrium, which is $\theta = \frac{3}{4}$.

- Finally for $\frac{7}{8} < \frac{V(\alpha)}{w} \leq 2$ the only stable equilibrium is³²

$$\theta^d = \frac{3 - \sqrt{8\frac{V(\alpha)}{w} - 7}}{4}. \quad (26)$$

We next show that we can get an interior solution or a corner solution depending on the value of the parameters. The autocrat needs to choose α and w to optimize his utility function. He needs to compare different regimes.

First, he might choose (α, w) so that $\frac{V(\alpha)}{w} \leq \frac{7}{8}$, in which case $F(\theta^d) = 1$. The principal maximizes $U^p(\alpha, w) = G(\alpha) - w$ so that $\frac{V(\alpha)}{w} \leq \frac{7}{8}$ (i.e., $a = \frac{8}{7}$). Since the utility of the principal decreases with w , he chooses the minimal value of w which is compatible with the constraint: $w = \frac{8}{7}V(\alpha)$. He then solves: $\max G(\alpha) - w = G(\alpha) - \frac{8}{7}V(\alpha)$. The optimal solution α^* is so that $\frac{G'(\alpha)}{V'(\alpha)} = \frac{8}{7}$. In this case, $\alpha^* = \left(\frac{7K}{8W}\right)^{\frac{1}{\sigma-1}}$ and

$$U_{\theta^d=1}^* = K \left(\frac{7K}{8W}\right)^{\frac{\sigma}{\sigma-1}} \frac{v-g}{vg}. \quad (27)$$

Second, the autocrat might choose (α, w) so that $2 \geq \frac{V(\alpha)}{w} > \frac{7}{8}$, in which case he obtains an interior solution for $\theta^d = \frac{3 - \sqrt{8\frac{V(\alpha)}{w} - 7}}{4} \in [0, \frac{3}{4})$ so that $F(\theta^d) \in [0, \frac{21}{32})$. The principal will accept a lower probability of staying in power only if it comes with a higher payoff. That is, he chooses the interior solution over the corner solution only if the payoff $G(\alpha) - w$ is higher under the former regime. We deduce that the principal will never choose $\theta^d = 0$ as he will get 0 utility, nor $\theta^d = \frac{3}{4}$, as he will get a lower utility with this solution than in the case where $\theta^d = 1$ (i.e. the payoff $G(\alpha) - w$ is the same in both cases but the probability of getting it is lower with the interior solution). The autocrat, who chooses to implement an interior solution, will necessarily choose an intermediate value in $[0, \frac{3}{4})$ for θ^d .

Since it is impossible to find closed form solutions of the autocrat's optimization problem, we show that for some value of the parameters, the

³²When $\frac{7}{8} < \frac{V(\alpha)}{w} < 1$ there is another equilibrium $\theta^d = \frac{3 + \sqrt{8\frac{V(\alpha)}{w} - 7}}{4}$. However this equilibrium is unstable.

arbitrarily chosen interior value $\underline{\theta} = \frac{1}{2}$ dominates the corner solution. It implies that when the principal actually optimizes, he will do better than for $\underline{\theta} = \frac{1}{2}$, and hence will always prefer the interior solution.

Remark that $F(\underline{\theta}) = \frac{1}{2}$. If the autocrat wants to seduce half of the clerics, he needs to choose $\frac{V(\alpha)}{w}$ so that $\theta^d = \frac{3 \cdot \sqrt{8 \frac{V(\alpha)}{w} - 7}}{4} = \frac{1}{2}$. We deduce that he must offer a ratio "cost of reforms/wage" equal to $\frac{V(\alpha)}{w} = 1$. The principal then maximizes $\frac{1}{2}(G(\alpha) - V(\alpha))$. The solution α^{**} to this constrained problem is such that $\frac{G'(\alpha)}{V'(\alpha)} = 1$. If $G(\alpha) = K \frac{\alpha^g}{g}$, and $V(\alpha) = W \frac{\alpha^v}{v}$, with $K, W > 0$ and $0 < g < 1 \leq v$, then $\alpha^{**} = \left(\frac{K}{W}\right)^{\frac{1}{v-g}}$ and

$$U_{\theta^d=\frac{1}{2}}^{**} = \frac{1}{2} K \left(\frac{K}{W}\right)^{\frac{g}{v-g}} \frac{v-g}{vg}. \quad (28)$$

Comparing (27) and (28), it is easy to check that

$$U_{\theta^d=\frac{1}{2}}^{**} > U_{\theta^d=1}^* \Leftrightarrow \frac{1}{2} > \left(\frac{7}{8}\right)^{\frac{1}{v-g}}.$$

This inequality holds, for instance, if $g = 0.9$ and $v = 1$ so that $0 < g < 1 \leq v$. We deduce that, for g and v sufficiently close to each other, the interior solution dominates the corner solution.

To complete the analysis, we need to show that the corner solution may dominate the interior solution. We focus on the case where $\theta^d = \frac{3 \cdot \sqrt{8 \frac{V(\alpha^*)}{w^*} - 7}}{4} = \frac{3 \cdot \sqrt{8 \frac{V'(\alpha^*)}{G'(\alpha^*)} - 7}}{4} = \frac{1}{2}$, is actually the optimal interior solution. OR which actually corresponds to the optimal interior solution. This requires that α^* is such that $\frac{V'(\alpha^*)}{G'(\alpha^*)} = 1$, implying from (13) that $w^* = V(\alpha^*)$. Moreover, if $\theta^d = 0.5$, it follows that $F(\theta^d) = f(\theta^d) = 0.5$. From (6), we can then infer that $\frac{d\theta^d}{d\alpha} = -\frac{V'(\alpha^*)}{V(\alpha^*)}$.³³ We deduce that, if $\theta^d = 0.5$ is to be the optimal interior solution, we must have that $G(\alpha^*) = 2V(\alpha^*)$ from (12), and that $V'(\alpha^*) = G'(\alpha^*)$. Using the explicit functions chosen and solving these two equations simultaneously, we get that $v = 2g > 1$ and that $\alpha^* = \left(\frac{K}{W}\right)^{\frac{1}{g}}$. Therefore $w^* = \frac{K^2}{vW}$.

We then need to compare the autocrat's utility at the interior solution $\theta^{I*} = 0.5$ with the autocrat utility at the corner solution $\theta^{C*} = 1$ defined in

³³Indeed we have $\frac{d\theta^d}{d\alpha} = \frac{-V'(\alpha^*)\theta^d}{V(\alpha^*)f(\theta^d)w^*} = \frac{-V'(\alpha^*)0.5}{V(\alpha^*)-0.5V(\alpha^*)} = -\frac{V'(\alpha^*)}{V(\alpha^*)}$.

(27) for $v = 2g$: $U_{\theta^d=1}^* = K \left(\frac{7K}{8W}\right)^{\frac{2}{v-g}} \frac{v-g}{vg} = \frac{7K^2}{8vW}$. One can easily check that $U_{\theta^d=1}^* = \frac{7K^2}{8vW} > \frac{K^2}{4vW} = U_{\theta^d=\frac{1}{2}}^*$.

6.2.3 Decreasing distribution

Let $F(\theta) = \frac{2\theta}{\theta+1}$ for $\theta \in [0, 1]$ so that $f(\theta) = \frac{2}{(\theta+1)^2}$. The stable equilibrium is either interior or 1. If the autocrat picks up the interior solution, equations (10) and (11) are equivalent to $\frac{2}{1+\theta} = \frac{W}{K} \alpha^{v-g}$ and $\frac{2}{(1+\theta)^2} = \frac{vW}{vK} \alpha^{v-g}$. There is an interior solution in θ if and only if $g < v \leq 2g$. In this case $\theta^d = \frac{v-g}{g}$ and $\alpha^* = \left(\frac{2gK}{vW}\right)^{\frac{1}{v-g}}$. Also, $U_{\theta^d=\frac{v-g}{g}}^{p*} = \frac{2g-v}{vg} W \left(\frac{2gK}{vW}\right)^{\frac{v}{v-g}}$. When $v \geq 2g$, the autocrat always picks the corner solution $\theta^d = 1$ (i.e., he chooses stability over reforms).

If the autocrat chooses the corner solution, $\alpha_1^* = \left(\frac{K}{W}\right)^{\frac{1}{v-g}}$ and $w_1^* = \frac{W}{v} \left(\frac{K}{W}\right)^{\frac{v}{v-g}}$, so that the autocrat's utility is $U_{\theta^d=1}^{p*} = \frac{v-g}{vg} W \left(\frac{K}{W}\right)^{\frac{v}{v-g}}$.

Comparing the latter with the utility of the autocrat when both the interior and the corner solutions are available (i.e., when $v \leq 2g$), one can check that $U_{\theta^d=\frac{v-g}{g}}^{p*} > U_{\theta^d=1}^{p*} \Leftrightarrow (2g-v) \left(\frac{2g}{v}\right)^{\frac{v}{v-g}} > v-g$. This inequality is equivalent to $\left(\frac{1}{v} - 1\right)^{\frac{v}{1+v}} > \frac{v+1}{2}$ where $v = (1+\nu)g$ and $\nu \in (0, 1]$. The left-hand side is decreasing in ν and the right-hand side is increasing in ν . Moreover the left-hand side goes to infinity when ν goes to 0 while the right-hand side is then equal to 0.5. Finally, the left-hand side is equal to 0 when $\nu = 1$ while the right-hand side is then equal to 1. We conclude that the functions $\left(\frac{1}{v} - 1\right)^{\frac{v}{1+v}}$ and $\frac{v+1}{2}$ cross once and only once when $\nu \in (0, 1]$. We deduce the result.

6.3 Other example of increasing density function

Let $F(\theta) = 2\sqrt{\theta} - \theta$ for $\theta \in [0, 1]$ so that $f(\theta) = \frac{1}{\sqrt{\theta}} - 1$. We deduce that $\lim_{\theta \rightarrow 0} f(\theta) = +\infty$ so that $\lim_{\theta \rightarrow 0} \frac{1}{f(\theta)} = 0$. The stable equilibrium is either interior or 1. The interior solution θ^d solves: $(2\sqrt{\theta} - \theta) \frac{w}{V(\alpha)} = \theta$. It is easy to check that $\theta^d = \left(\frac{2w}{V(\alpha)+w}\right)^2$, which is smaller than 1 if $w \leq V(\alpha)$. Substituting θ^d in $F(\theta)$, the autocrat solves:

$$\max \frac{4wV(\alpha)}{(V(\alpha)+w)^2} (G(\alpha) - w).$$

Optimizing this function with respect to w and α yields:

$$w = \frac{G(\alpha)V(\alpha)}{2V(\alpha) + G(\alpha)} \quad (29)$$

Substituting this value in θ^d implies that:

$$\theta^d = \left(\frac{G(\alpha)}{V(\alpha) + G(\alpha)} \right)^2 \leq 1 \quad (30)$$

The autocrat maximizes with respect to α the function: $U(\alpha) = F(\theta^d)(G(\alpha) - w) = \frac{G(\alpha)}{V(\alpha) + G(\alpha)} \left(2 - \frac{G(\alpha)}{V(\alpha) + G(\alpha)} \right) \left(G(\alpha) - \frac{G(\alpha)V(\alpha)}{2V(\alpha) + G(\alpha)} \right)$. After some simplification this is equivalent to $U(\alpha) = \frac{G(\alpha)^2}{V(\alpha) + G(\alpha)}$. Deriving this function with respect to α yields: $\frac{dU(\alpha)}{d\alpha} = \left(\frac{G(\alpha)}{V(\alpha) + G(\alpha)} \right)^2 G'(\alpha) \left[2\frac{V(\alpha)}{G(\alpha)} + 1 - \frac{V'(\alpha)}{G'(\alpha)} \right]$.

Let $G(\alpha) = K\frac{\alpha^g}{g}$, and $V(\alpha) = W\frac{\alpha^v}{v}$, with $K, W > 0$ and $0 < g < 1 \leq v$. If $v \leq 2g$ there is no interior solution to the autocrat optimization program. He chooses an unbounded value to α . The probability that he stays in power is 0 while his payoff goes to infinity. If $v > 2g$ there is an interior solution, which is:

$$\alpha^* = \left(\frac{K}{W} \frac{v}{v - 2g} \right)^{\frac{1}{v-g}} \quad (31)$$

It implies that **(A VERIFIER)**

$$U(\alpha^*) = \left(\frac{K}{W} \frac{v}{v - 2g} \right)^{\frac{2g}{v-g}} \frac{K(v - 2g)}{g(v - g)} \quad (32)$$

To get a closed form solution we consider that $G(\alpha) = 2K\alpha^{\frac{1}{2}}$ and $V(\alpha) = W\frac{\alpha^2}{2}$.

6.4 Proof of Proposition 3

We need to solve

$$\begin{aligned} \max_{w, \alpha} & \left(G(\alpha) - w \right)^{1-c} \left(w - \theta^c V(\alpha) \right)^c \\ \text{s.t.} & \quad w \geq F\theta V(\alpha) \end{aligned}$$

The Lagrangian associated to this problem is

$$L = \left(G(\alpha) - w \right)^{1-c} \left(w - \theta^c V(\alpha) \right)^c + \lambda \left(w - F\theta V(\alpha) \right)$$

It yields

$$\frac{\partial L}{\partial \alpha} = (1 - c)G'(\alpha) \left(\frac{w - \theta^c V(\alpha)}{G(\alpha) - w} \right)^c - c\theta^c V'(\alpha) \left(\frac{G(\alpha) - w}{w - \theta^c V(\alpha)} \right)^{1-c} - \lambda E\theta V'(\alpha) = 0$$

$$\frac{\partial L}{\partial w} = -(1 - c) \left(\frac{w - \theta^c V(\alpha)}{G(\alpha) - w} \right)^c + c \left(\frac{G(\alpha) - w}{w - \theta^c V(\alpha)} \right)^{1-c} + \lambda = 0$$

Moreover we have that $\lambda(w - E\theta V(\alpha)) = 0$. Two cases are possible.

1. If $w > E\theta V(\alpha)$ then $\lambda = 0$ so that the solution to this problem is $w^c = (1 - c)\theta^c V(\alpha) + cG(\alpha)$ and α^c so that $G'(\alpha) = \theta^c V'(\alpha)$. The condition $w > E\theta V(\alpha)$ is then equivalent to $(1 - c)\theta^c V(\alpha^c) + cG(\alpha^c) > E\theta V(\alpha^c)$. Substituting $\theta^c = \frac{G'(\alpha)}{V'(\alpha)}$ and dividing right and left by $V(\alpha^c)$ yields $E\theta < c \frac{G(\alpha^c)}{V(\alpha^c)} + (1 - c) \frac{G'(\alpha^c)}{V'(\alpha^c)}$. We deduce condition 1.
2. If $\lambda > 0$ then $w = E\theta V(\alpha)$. We deduce from $\frac{\partial L}{\partial w} = 0$ that $\lambda = (1 - c) \left(\frac{(E\theta - \theta^c)V(\alpha)}{G(\alpha) - E\theta V(\alpha)} \right)^c - c \left(\frac{G(\alpha) - E\theta V(\alpha)}{(E\theta - \theta^c)V(\alpha)} \right)^{1-c}$. Substituting this value in $\frac{\partial L}{\partial \alpha} = 0$ yields $(1 - c)(G'(\alpha) - E\theta V'(\alpha)) + cV'(\alpha) \frac{G(\alpha) - E\theta V(\alpha)}{V(\alpha)} = 0$. Dividing right and left by $V'(\alpha)$ and simplifying yields condition 2.

Q.E.D

6.5 Proof of Proposition 5

The autocrat who wants the full support of the clerical body in the decentralized case will implement a level of reforms $\alpha^d = \alpha_a^*$ so that $\frac{G'(\alpha)}{V'(\alpha)} = a$, where $a > 1$ is the minimum value so that the corner solution holds.

According to proposition 3 in the centralized religion framework two cases are possible. In case 1, the head of the church is antagonist to the autocrat (i.e., $\theta^c \in [0, 1]$ is relatively large), then α^c is so that $G'(\alpha) = \theta^c V'(\alpha)$. Since under the assumptions that $G(\alpha)$ is concave and $V(\alpha)$ is convex, the function $\frac{G'(\alpha)}{V'(\alpha)}$ is decreasing in α , and since $a > 1 \geq \theta^c$ we deduce that $\alpha^c > \alpha_a^*$.

In case 2, θ^c is relatively small (i.e., the head of the church is relatively close to the autocrat) and the participation constraint of the average cleric is binding: α^c is so that $c \frac{G(\alpha)}{V(\alpha)} + (1 - c) \frac{G'(\alpha)}{V'(\alpha)} = E\theta$. Since in case 2 $w^c = E\theta V(\alpha^c) < G(\alpha^c)$, it yields that $\frac{G(\alpha^c)}{V(\alpha^c)} > E\theta$. We deduce that necessarily $\frac{G'(\alpha^c)}{V'(\alpha^c)} < E\theta$ as the convex combination of two numbers larger than $E\theta$

could no be equal to $E\theta$. By the same reasoning as before it yields that $\alpha^c > \alpha_a^*$. QED

Figure 1: Decentralized Religion - U-shaped density

Figure 2: Centralized Religion - Increasing density

Figure 3: Centralized Religion - Decreasing density

7 Miscellaneous

7.1 Centralized religion: unimodal distributions

We now study the case where the density function, $f(\theta)$, is single peaked. We focus on two cases that are relevant empirically: $f(\theta)$ is decreasing, which corresponds to a L-distribution (i.e., the peak is at $\theta = 0$), and $f(\theta)$ is increasing, which corresponds to a J-distribution (i.e., the peak is at $\theta = 1$).

(e.g., a national church with a centralized cleric, an official dogma and a hierarchy).

It represents the case where the hierarchy of the church is out of the control of the autocrat (e.g., the king of a foreign country and the church of Rome). In other words, with a centralized clerical body, it might be hard to obtain the official support from the religious hierarchy (i.e., depending on the distribution it requires sometimes a big push to jump from no support to a large support), but once this support is acquired it is wide and stable.

Following a classification proposed by Galtung (1969) we distinguish between two main types of distributions: unimodal and bimodal. In what follows, we represent centralized religions with the help of unimodal distributions (either with the peak on the right, referred to as J-distribution, or on the left, referred to as L-distribution), and decentralized religions with the help of bimodal distributions with the peaks at both ends (U-shaped).³⁴

³⁴Galtung (1969) introduced the classification system "AJUS" for distributions, where A stands for unimodal distribution with the peak in the middle, J for unimodal with peak

7.1.1 Central ecclesiastical power: J-distribution

After the fall of the Roman Empire in the 5th century, there emerged no single powerful secular government in the West, but there was a central ecclesiastical power in Rome, the Catholic Church. The Catholic doctrine was that the Pope should have the ultimate authority over the Church, and indirectly over the state. Throughout the Middle Ages the Pope claimed the right to depose the Catholic kings of Western Europe and tried to exercise it. When the Holy Roman Empire developed as a force from the tenth century, it was the first real non-barbarian challenge to the authority of the Church. A dispute between the secular and ecclesiastical powers emerged known as the Investiture Controversy (see, for example, Bonney, 1991: Chaps 3-5; Cantor, 1993: Chaps 16-19; Armstrong, 2014: Chaps 8-12).³⁵

We model the situation of a central religious power in Rome with an increasing density function indicating that the centralized cleric's preference is far from the preference of the autocrat. This corresponds to the case where the head of the church is antagonistic to the autocrat, as during the medieval struggle between secular and religious power. In this case $F(\theta)$ is convex (see figure 2 for an illustration). If $\frac{w}{v(\alpha)} \leq 1$, the only stable equilibrium is 0. If $\frac{w}{v(\alpha)} > 1$, there are two stable equilibria 0 and 1, and an unstable interior equilibrium. If the autocrat starts with a very low base

at either end, U for bimodal with peaks at both ends and S for bimodal or multimodal. This classification has since been slightly modified into "AJLFUS", where J stands now for unimodal distribution with the peak on right, L for unimodal with peak on left, and F for no peak (flat). Following this classification we represent centralized religions with J or L distributions and decentralized religions with U distribution.

³⁵While on the surface it was over a matter of official procedures regarding the appointments of offices, underneath was a fierce struggle for control over who held ultimate authority, the King or the Pope. In 998, Robert II of France, who had been insisting on his right to appoint bishops, was excommunicated and ultimately forced to back down. The dispute was resolved with the Concordat of Worms in 1122. Many other excommunications of kings followed often triggered by conflicts over public policies. Pope Gregory VII excommunicated Emperor Henry IV and tried to depose him, Pope Alexander II excommunicated Harold II, King of England, Pope Urban II excommunicated king Philip I of France, Pope Paschal II excommunicated Henry V, Holy Roman Emperor, Pope Adrian IV excommunicated William I of Sicily, Pope Innocent III excommunicated King John of England, Pope Honorius III excommunicated King Afonso II of Portugal, etc.

of supporters, he will never be able to get the support of the hierarchy. This is a situation where he needs a big push to move from equilibrium 0 to equilibrium 1. The maximum amount the autocrat is willing to pay to make the jump to full clerical support is his total rent: $\bar{w} = G(\alpha)$. If he wants to maximize the support from the centralized clerical body, he will have to maximize $\bar{w} - V(\alpha) = G(\alpha) - V(\alpha)$. We easily deduce the next proposition.

Proposition 6 *Assume the distribution of the clerics is strictly increasing. The autocrat chooses α^* so that $\frac{G'(\alpha^*)}{V'(\alpha^*)} = 1$, and $w^* = G(\alpha^*)$.*

In other words, a monarch who is confronted with a powerful antagonist cleric will simply subdue its power to it. He will implement the decisions and monetary transfers that maximize the welfare of the head of the Church in whose hands the real power of decision lies.

More challenging still is the issue as to how the clerical structure affects the intensity of reforms. In particular, we want to determine which of the centralized or decentralized structures is more conducive to reforms.