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French Legal Origins: A Tocquevilian View[*]

Bertrand Crettez[†]*, Bruno Deffains*[‡]*, Olivier Musy*[§]

Abstract

We provide an alternative explanation of French legal centralization. To do this we develop a rational choice model of the legal architecture around 1789 and the French Revolution. Following Tocqueville we propose to analyze the French movement towards legal centralization as the result of an increase in the aversion to inequality before the law. We show that legal centralization can be preferred to the "Ancien Régime" situation or intermediate legal decentralization if the aversion to legal differences is sufficiently strong. In addition, we show that when the legal system is centralized it is always optimal to allow some degree of judicial discretion. This result is consistent with the historical evidence that the Napoleonic codification, *i.e.*, the culmination of French legal centralization, was associated with a higher degree of judicial discretion than at the beginning of the Revolution.

This view contrasts with the interpretation of the Napoleonic codification as a means of transforming judges into automata.

JEL Classification: K40, N40.

Keywords : Aversion to inequality before the law, Codification, Legal origins, Legal centralization, French Revolution

1 Introduction

Common law and civil laws differ along their principles and their applications. Some scholars claim that the differences between these legal systems are negligible or that they vanish over time (Armour et al., 2009; Crettez, Deffains, and Musy, 2014). On the contrary other authors claim that the disparities between laws in different countries are persistent and that legal origins matter since they correlate strongly with current economic outcomes (La Porta et al., 2008; Balas et al., 2008).

An important feature of legal divergence is the high degree of legal centralization in civil law countries like France, as opposed to common law countries like England. There are several explanations for the origins of this disparity. Glaeser and Shleifer (2002) argue that legal divergence between England and France started around the XIIIth and XIVth centuries. At that time, England chose a system of juries (leading later to a judge-made legal system) to counter balance the strong power of the king. By contrast France chose to let royal judges make judicial decisions (leading later to a centralized legal system) because local lords feared more their neighbors more than the king. Arruñada and Andonova (2005) date the beginning of legal centralization to the First French Empire when judges were still often noblemen and opponents of liberal reforms. Paradoxically, the only way to spur a free market economy was to promote a fully centralized legal system, in which the State was the source of the law. Johnson and Koyama (2014) propose yet another explanation of legal centralization. In their view, the rise of centralization took place during the XVIIth century to address the growing fiscal needs of the French Kingdom.

In this paper, we provide an alternative explanation of French legal origins.[1] We develop a rational choice model of the legal architecture around 1789 and the Revolution. At this time, the National Assembly chose to implement a fully centralized and uniform legal system in order to impose the same set of legal rules for all citizens in the country. This legal equality was reached by abolishing the privileges granted to the nobility and the clergy, but also by removing local disparities in the production and application of legal rules.

A driving force in this evolution was the development of the philosophy of the Enlightenment during the XVIII century. Philosophers of the Enlightenment like Voltaire saw inequality before the law as one of the most significant weaknesses of the Ancient Regime. On the one hand, legal diversity was costly because it prevented the creation of a national market. On the other hand, legal diversity contradicted the principles of logic that had to be at the heart of any modern legal system. While in old legal regimes like Roman law legal rules had to be discovered, in a modern state these rules had to be rationally chosen. Since French legal diversity was the product of local customs from the past, it could hardly be the result of a rational choice. According to the main commentators of the period, notably Tocqueville, the desire for equality was particularly strong in France (Tocqueville, 1856). This strong desire for legal equality was certainly due to the legal differences between citizens, unlike in the United States. Legal uniformization and the control of the judiciary were among the first and most important decisions of the French National Assembly. Our model explains why a centralized legal system can be preferred to a decentralized one when

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[1] Our paper belongs mostly to the genre called "law as the dependent variable" by Klerman (2015).

the preference for legal equality arises.

Some revolutionary lawmakers, however, favored a few disparities in local laws. Among the alternative constructions considered the main one was proposed by a majoritary group of deputies called the "Girondins". Composed mainly of local dignitaries, the Girondins proposed a more decentralized political and judicial system and were described as "federalists" by their opponents (notably the "Montagnards", who came mainly from the Club of Jacobins).[2] Their proposals were ruled out and the whole faction was eliminated by their opponents. We propose an extension of our base model to take account of the case where laws can be made at an intermediate level. We show that this intermediate level of law-making is not preferred to the centralized solution when the taste for legal equality is sufficiently high.

The last step toward centralization was conducted during the Napoleonic era and culminated with the introduction of the Civil Code in 1804. A notable point was that despite the introduction of the Code Civil, judges' control weakened during the First French Empire compared to the beginning of the Revolution. To study this evolution we introduce judicial discretion in our model. We show that exercising full control over local judges' decisions is not optimal. In other words, the code does not need to be too precise. This conclusion contrasts with the view developed notably by Glaeser and Shleifer (2002) and Arruñada and Andonova (2005), who consider that the Napoleonic regime aimed at controlling all legal decisions and removing judges' discretionary power.

The paper unfolds as follows. In section 2, we give an account of French legal history

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[2] The term Jacobin still describes a person who supports state centralization.

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before and after the French Revolution. Section 3 briefly reviews recent works on French legal origins. In section 4, we propose a model of the French legal system around the Revolution (this version of the model accounts both for the Ancient Regime and the aftermath of the Revolution). We consider the Girondins' approach for reforming the legal system in section 5, and judicial discretion in section 6. We offer a brief conclusion in section 7. All the proofs are gathered in an appendix.

2 French Legal History from the End of the Ancien Régime up to 1804

In this section, we begin by presenting the Ancien Régime legal organization and we end with the codification of 1804, which illustrates the prominence of legislation as the new source of legal rules.

2.1 The French legal system around the end of the Ancien Régime

Throughout the whole Ancien Régime the French legal system was characterized by significant legal disparities within the country. A first type of disparity was the *privilèges*, giving specific rights and duties to three social groups (*i.e.*, the nobility, the clergy and the rest of the population, called the *Tiers Etat*, or the *Tiers*). Duties differed notably from a fiscal viewpoint since taxes were mainly borne by the Tiers (although the sharing of the tax burden among the three different groups differed depending on the areas). We can refer to these differences as vertical since the specific

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rights of the nobility and the clergy unambiguously gave them a better situation than the Tiers.

The second type of disparity resulted from the application of different legal rules from one administrative area to another. The main disparity was the splitting of the Kingdom between two legal families.[3] Roman law was the legal inspiration in the southern part of the country (*pays de droit écrit*), while customary laws were the basis of legal decisions in the northern part (*pays de coutumes*). In addition, as the French kingdom continued to grow, each new province entering the kingdom was given the possibility to keep some of its previous laws and institutions. Local parliaments (whose number was fourteen in the second part of the XVIIth century) brought justice at an intermediate level, formally in the name of the king but in practice independently of him. Moreover, a decision taken by a given parliament applied to its own jurisdiction and did not have legal effect in the other provinces.

The legal system of the Ancien Régime was also characterized by the co-existence of different sources of law. At the national level, the major source of law was the royal ordinances (*ordonnance royales*). At the provincial level, the major source of law was the lawmaking and adjudication from parliaments (using the procedure of *arrêts de réglements*). At the local level it was customary law (Carbasse, 2014). According to Le Bris (2015), about 80 general customs and 380 local customs were in application in the France of the Ancien Régime France.

This diversity of laws had long been recognized and accepted. Montaigne observed

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[3] Figure 1 in Le Bris (2015) illustrates the spread of legal families across France before the Revolution.

that each specific case would give rise to a specific law, leading to legal inflation: "We have more laws in France than in the rest of the world put together" (Montaigne, 1595 (2009)). Legal diversity touched every aspect of life, such as the age of majority. It went along with (or was the result of) a great variety in the organization of social life and even the languages used, many regions having a specific regional language and various local dialects (*patois*). In 1789, Mirabeau remarked that France was an "aggregate of divided people".

2.2 Legal transformations during the French Revolution (1789-1804)

The revolution that began in 1789 allowed a whole body of new legal rules to be built, rationally determined by the National Assembly, which, according to Emmanuel Sieyès (one of the main political thinkers of the French Revolution), perfectly represented the will of the nation. This was a break with the absolute monarchy, even if in practice the power of the king had already dwindled over time.

Among the first decisions taken by the National Assembly during the night of August 4th 1789, was the abolition of the old orders, rules, taxes, courts and privileges left over from the age of feudalism.[4] This abolition was not decided on pure economic ground, but rather on philosophical ground. It was soon followed by the proclamation of the Declaration of the Rights of Man and of the Citizen, another founding act of the French Revolution, which begins with the assertion that "Men are born and remain

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[4] The complete abolition of feudalism, however, was not made in a single step. This abolition actually took place in 1793 (see Clere, 2005, for a historical description of the process).

free and equal in rights". Thus all "vertical" legal differences between citizens were abolished.

To ensure equality before the law, legal production was fully centralized and any discretionary power granted to judges was withdrawn. The creation of a Civil Code containing all the civil laws applicable to the whole nation was stated in the Constitution of 1791. This Civil Code, however, was not implemented during the Revolution despite three attempts by Cambacéres.[5]

A less ambitious but more successful attempt was realized in September 1791 with the creation of a Penal Code. This attempt aimed at correcting the inequalities of treatment observed in penal cases. The codification was notably influenced by Bentham.[6] The main point of the code was the statement that sentences had to be prescribed to all who committed the same offense, whatever their rank or condition, and proportioned to the offenses (Lovisi, 2011, p. 281). Fixed sentences (with a fixed basis and contingent possibilities to raise the sentence) were also established in order to constrain the discretionary power of judges. After the fall of Robespierre in 1794, the Convention replaced this Penal Code with a Code of offenses and sentences.

The failure of the attempts made at codification resulted mainly from sharp internal

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[5] The first attempt of Cambacéres in 1791 was stopped after three months because France began a decisive war against the European monarchies. Expecting not a prolonged war, the government postponed the enforcement of the Code to avoid adding internal dissent to external threat. However, a bill on full equality of children in matters of inheritance was passed by the National Assembly. A second attempt to implement a Civil Code was made in 1794, with no success. The last attempt, in 1796, was less ambitious with regard to the egalitarian ideas of the revolution. This attempt was made at a time where the royalist faction, which regained power, rejected any codification (Lovisi, 2011).

[6] As noted by many commentators (see, *e.g.*, Alfange Jr, 1969), Bentham clearly saw in the French Revolution an exceptional opportunity to advance the cause of utilitarism.

dissension among French representatives, as well as external threat and the absence of a sufficiently strong government to impose a new body of law. The rise of Napoleon Bonaparte's political power at the end of the 1790's brought about more favorable conditions towards codification. The Civil Code was successfully enacted on March 12, 1804, a date which can be considered as the culminating part of the process engaged in 1789. This Civil Code fulfilled the egalitarian aspirations of the Revolution by consolidating previous laws and creating new ones. Every local area in France was ruled by the same set of legal rules. As stated by Allison (2000): "Codification of the law was a demand of the revolution answered by Napoleon" and "the logic inspiring it is a clear body of law for all Frenchmen". The distance between the French legal system and the English one increased much more during this period than at any other time in history.

One important feature associated to the introduction of the Napoleonic Code was the decrease in the will to control judges compared to the early revolutionary period. This pragmatic approach was taken because a full control of judges was too difficult to realize (Carbasse, 2014). What remained durably was a combination of statutes and a light control over the judiciary (notably via the appeal courts).

3 The Law and Economics Literature on French Legal Origins

In this section we summarize the results of several studies on the Law-and-Economics of French legal origins. None of these studies reaches the same conclusion regarding the mechanism of legal change, or the date of this change. According to these studies; however, legal centralization resulted from the will of an authoritarian central

authority (the French kings or Napoleon), and had long-term economic consequences (La Porta et al., 2008).

3.1   Coasean bargaining in the medieval kingdoms: Glaeser and Shleifer (2002)

Glaeser and Shleifer (2002) agree with Dawson (Dawson, 1960), according to whom the choice between a system where judges are controlled by the sovereign (royal judges) and judicial independence (juries) "is central for the initial divergence between the French and English legal systems in the XIIth and XIIIth centuries and explains many persistent differences between civil and common law".

Glaeser and Shleifer consider that France and England have common legal roots, built on customs and natural law, and that their legal systems began to diverge around the XIIIth century. The common roots notably comprised the Frankish inquest, which can be considered as the ancestor of the jury system. In England the legal system took on a more modern form during the reign of Henry II, and was later strengthened by King John with the Magna Carta (1215).[7] Over time, the jury system, together with judicial independence, has functioned as a check on the royal power (Glaeser and Shleifer, 2002). By contrast, France around the XIIIth century moved towards a system of judge-inquisitor controlled by the king. The subordination of the judiciary to the French king was later strengthened by Louis XIV. The same policy was pursued by Napoleon, who aimed at transforming judges into automata.

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[7] "No free man shall be seized or imprisoned, or stripped of his rights or possessions, or outlawed or exiled, or deprived of his standing in any other way, nor will we proceed with force against him, or send others to do so, except by the lawful judgement of his equals or by the law of the land".

To explain the divergence between the English and French legal systems, Glaeser and Shleifer propose a model of Coasean bargaining between the King and the nobles, who must choose between a jury system (judicial independence) and a system of royal judges. Each system has a flaw. In the jury system, local lords can use violence and corruption to influence jurors' decisions. In a system of royal judges, the decisions made by the courts may depend on the King's will. Centralized justice is chosen when the cost of royal arbitrariness is lower than the costs of local violence and corruption. For lower levels of local violence and corruption, decentralized justice is a better choice. Since local violence was more limited in England than in France (because there were fewer wars and local lords were weaker than the King), decentralized justice was preferred to centralization. In France, local lords were at least as powerful as the King and could easily manipulate or coerce juries. Consequently, royal justice was perceived as a lesser evil than a system of jury.

The story proposed by Glaeser and Shleifer (2002) has some historical relevance in the sense that it describes the first attempt at legal centralization in France. From historical perspective, however, this attempt did not go very far, notably because of the weakness of the French Crown. As stated (also) by Dawson (1968), "the royal judiciary that was organized in France during the course of the XIIIth century lacked the means for attempting a large-scale unification of French private law. The king's writ did not run in some of the great lordships that owed allegiance to the king and even in the royal domain, powers of adjudication in both civil and criminal cases had been acquired by seigneurial courts.[...] These courts were gradually undermined by indirect means, but many were to survive until the Revolution". The approach of

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Glaeser and Shleifer (2002) is thus only partially supported by the facts. As was seen in Section 2, the French legal system was neither centralized nor uniform until the French Revolution. Moreover, Klerman and Mahoney (2007) show that the French legal system was even *less* centralized than the English one.[8]

3.2   The road to a market economy: Arruñada and Andonova (2005)

Arruñada and Andonova (2005) propose a different explanation of French legal centralization. For them, the divergence between France and England began around the turn of the XVIIIth century with the French Revolution and the Napoleonic Empire. At that time, one of the French authorities' aims was to implement a new economic and legal environment ensuring a well-functioning market economy. The Civil Code introduced by Napoleon in 1804 was one of the means used to realize these goals.[9] Arruñada and Andonova recall that "the proper functioning of a market economy requires that freedom of contract be protected effectively". Yet, French judges were considered as the product and the defenders of the Ancien Régime and as opponents of the principles of free market and equality of contractors. Therefore, granting them judicial discretion would have represented a threat for the development of a modern market economy. On the contrary, legal centralization and control over the judiciary

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[8]   La Porta et al. (2008) recognize the criticism on this point but conclude that it is not so important, since "regardless of whether the revolutionary or the medieval story is correct, they have very similar empirical predictions", notably that in both cases, a civil law system exhibits lesser judicial independence than a common law one. We discuss this point in the section 7.

[9] The approach followed by Arruñada and Andonova is consistent with the interpretation of the French revolution as a "revolution bourgeoise", in which the bourgeoisie was the main agent of change.

allowed freedom of contract to be protected.

While the story told by Arruñada and Andonova has some relevance, it fits historical evidence only partially. Concerning the Napoleonic centralization and the will to transform judges into automata, it is important to note that French legal centralization and the will to remove discretionary power from judges were clearly decided in the early days of the Revolution, and not by Napoleon, who indeed softened this control. In 1790, the laws on judicial organization stipulated that the courts no longer had the right to build and interpret the law. Courts had to refer to the legislative body each time they had to interpret the law, or recognized the need for a new law. Moreover, it is difficult to assess whether French judges were or were not market friendly. Markets certainly existed in France before the Revolution, as well as State intervention in the economy. Nobles were doing business. Further, according to Lagarde (2009), the French Civil Code was not aimed at ruling business relations, but rather at restoring a durable civil peace. In practice, the Code did not rule business relations and risky activities were not concerned by the Civil Code. Before and after the revolution, business activities were ruled by commercial laws, which were special laws concerning only merchants. There were special courts for commercial matters, in which judges were chosen from businessmen. By contrast, the Code Civil advocated models of contracts involving low risk, with a political objective of ensuring social stability. Portalis, one of the writers of the code, made the distinction between the civil laws and commercial laws. Referring to these commercial laws, he wrote that "the spirit of these rules differs essentially from the spirit of civil laws" (see Crettez, Deffains, Leyte, et al., 2011).

In sum, each of the two previous explanations of French legal origins is historically relevant and can be associated with an episode of legal change.[10]

But they tell only a small part of the story. Our aim in the next section is to provide a model of French legal origins that takes into account another explanation proposed notably by Tocqueville.

4 Legal Centralization at the Beginning of the Revolution (1789-1791)

We now build a simple model to explain the transition from the Ancien Régime legal system, characterized by legal decentralization, to the centralized legal system which was set out at the eve of the French Revolution. We take our inspiration from Tocqueville's *Democracy in America* (Tocqueville, 1835). According to Tocqueville, one of the driving forces shaping institutions is the continuous increase in the desire for equality among citizens. In this respect, legal equality was difficult to implement in a fragmented country like Ancien Régime France. Legal uniformity was then seen as the only means to ensure legal equality before the law.

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[10] Johnson and Koyama (2014) also relates to French legal centralization. They rely on the idea of Besley and Persson (2011) that legal capacity can come alongside fiscal capacity. They argue that to finance wars, the French monarchy began to centralize its fiscal system at the beginning of the XVIIth century. To perform this fiscal centralization, the King had to reorganize and harmonize legal rules across French provinces. A small rise in legal centralization certainly occurred during the XVIIth century, but even if the King favored legal centralization, this process didn't go very far. In addition, if legal centralization did increase, the legal system did not become more uniform. (Barbiche, 2001).

4.1 A Simple model of the degree of legal centralization

We assume that France comprises n local regions, $i = 1, \ldots, n$, with $2 < n$. A local region is described by its ideal law x_i (*i.e.*, its legal preferences). We denote by ℓ_i the actual law in region i.[11] Each region i is inhabited by a representative agent whose utility function is

$$\mathcal{U}_i(\boldsymbol{\ell}) = -\frac{1}{2}(\ell_i - x_i)^2 - \frac{\alpha}{2}\frac{1}{n}\sum_{j=1}^{n}(\ell_j - \overline{\ell})^2, \tag{1}$$

where $\overline{\ell}$ is the mean value of the actual laws across regions, $\boldsymbol{\ell} = (\ell_1, \ldots, \ell_n)$ and α is a positive real number.

This utility function comprises two terms. The first one, $-\frac{1}{2}(\ell_i - x_i)^2$, represents the cost of the divergence of region i's laws from region i's own legal preference. The second one, $-\frac{\alpha}{2}\frac{1}{n}\sum_{j=1}^{n}(\ell_j - \overline{\ell})^2$, represents agent i's aversion to inequality before the law. We capture this aversion by assuming that the utility function of each representative agent decreases with respect to the variance $(\frac{1}{n}\sum_{j=1}^{n}(\ell_j - \overline{\ell})^2)$ of the actual laws. The parameter α measures the intensity of the aversion to legal inequality. The higher α is, the more agents become concerned about legal inequality.[12]

We further assume that the choice between the different degrees of legal centralization relies on the comparison of the values taken by the sum of the representative

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[11] Both the actual and ideal laws are associated to points of the real line. We may interpret these points as being the values of an aggregate index of specific legal rules. The construction of aggregate indexes of legal rules is a current practice in the empirical law-and-economic literature (see, *e.g.*, Siems, 2011).

[12] To ease the analyse, we also assume that the parameter α describing the intensity of the aversion to legal inequality is the same across regions.

agent's utility functions across regions. Following Glaeser and Shleifer (2002), we will compare two degrees of legal centralization. In the first degree, each region chooses its own law ℓ_i^d, without cooperating with the other regions. By contrast, in the second degree, regions cooperate in the sense that they all adopt the same law. The first case corresponds to what we call the Ancien Régime equilibrium. The second one corresponds to the legal centralization turn taken at the beginning of the Revolution.

4.2 The Ancien Régime equilibrium

We interpret the Ancien Régime as the Nash equilibrium $\boldsymbol{\ell}^d$ of the game where each region chooses its actual legal rules ℓ_i^d, taking the choices of the other regions as given. We assume that each region i is sufficiently small that its considers it has no influence on the average decision $(\overline{\ell}^d)$. We call this Nash equilibrium the *Ancien Régime Equilibrium.* In this equilibrium, the actual laws satisfy the following conditions

$$-(\ell_i^d - x_i) - \frac{\alpha}{n}(\ell_i^d - \overline{\ell}^d) = 0. \tag{2}$$

Thus for each region i the marginal benefit of a decrease in the distance between the local law and the local preferences is equal to the marginal cost of the distance between the local law and the average laws (*e.g.*, a marginal increase in inequality before the law).

From equation (2) we can compute the mean of the local decisions ℓ_i^d and we find

that

$$\overline{\ell}^d = \overline{x}, \tag{3}$$

where $\overline{x} = (\sum_i x_i)/n$ is the mean value of the local ideal laws x_i. Using equations (2) and (3), we find that the equilibrium value of the actual law in region i is

$$\ell_i^d = \frac{x_i + \frac{\alpha}{n}\overline{x}}{1 + \frac{\alpha}{n}}. \tag{4}$$

The equilibrium value of the actual law in region i is itself an average between the ideal law of this region and the mean value of the local ideal laws.[13]

Computing the equilibrium value of legal heterogeneity (the variance of the ℓ_i^d), we obtain

$$\sigma_{\ell^d}^2 = \frac{\sigma_x^2}{(1 + \frac{\alpha}{n})^2}, \tag{5}$$

where σ_x^2 is the variance of the ideal laws x_i. We see that the equilibrium value of legal heterogeneity *decreases* with respect to α, the parameter which measures the intensity of the aversion to inequality before the law. When α goes to infinity, legal uniformity is achieved, since all the equilibrium values of the actual laws converge to $\overline{l}$ (see equation (4)).

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[13] Loeper (2011) shares some concerns and results with our model. In his paper, the preferences of region's i representative agent are as follows: $U_i(\boldsymbol{\ell}) = -(\ell_i - x_i)^2 - \frac{\beta}{N}\sum_{j\neq i}(\ell_i - \ell_j)^2$. The utility of agent i depends on the average distance between its region's choice (ℓ_i) and other regions' choices. Therefore, agents do not care about the distance between the choices of two arbitrary regions. Thus agents do no care about inequality before the law.

The equilibrium value of agent's i utility is

$$\mathcal{U}_i(\boldsymbol{\ell}^d) = -\frac{1}{2}\frac{(\frac{\alpha}{n})^2}{(1+\frac{\alpha}{n})^2}(x_i - \overline{x})^2 - \frac{\alpha}{2}\frac{\sigma_x^2}{(1+\frac{\alpha}{n})^2}. \tag{6}$$

From the preceding expression we obtain the equilibrium value of the sum of the utility functions

$$\sum_{i=1}^{n}\mathcal{U}_i(\boldsymbol{\ell}^d) = -\frac{n\sigma_x^2}{2}\frac{(\frac{\alpha}{n})^2 + \alpha}{(1+\frac{\alpha}{n})^2}. \tag{7}$$

We shall next compare this value to the corresponding value obtained with legal centralization.

4.3   The Tocqueville equilibrium

To analyze legal centralization, we now assume that the actual value of the law is the same across regions. This value is supposed to be chosen by a decision maker who maximizes the sum of the agents' utility function (in the spirit of Glaeser and Shleifer, 2002). Formally, the decision-maker problem is

$$\max_{\ell^t} -\frac{1}{2}\sum_{i=1}^{n}(\ell^c - x_i)^2, \tag{8}$$

where ℓ^c is the value of the law that is applied in all the regions. We notice that by construction the variance of the actual laws is nil, which implies that the cost of legal heterogeneity is nil as well. To pay tribute to the work of Tocqueville on the French Revolution we call the solution ℓ^c of this problem the *Tocqueville Equilibrium.*

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The first order (necessary and sufficient) condition for the choice of ℓ^t is

$$-\sum_{j=1}^{n}(\ell^c - x_i) = 0. \tag{9}$$

From the above equation we deduce the value of the Tocqueville equilibrium

$$\ell^c = \overline{x}. \tag{10}$$

Therefore, the value of the actual law is equal to the mean value of the ideal laws. Agent i's utility is

$$\mathcal{U}_i(\boldsymbol{\ell}^c) = -\frac{1}{2}(x_i - \overline{x})^2, \tag{11}$$

where $\boldsymbol{\ell}^c = (\ell^c, \ldots, \ell^c)$ and the equilibrium value of the social objective function is therefore

$$\sum_{i=1}^{n}\mathcal{U}_i(\boldsymbol{\ell}^c) = -\frac{n}{2}\sigma_x^2. \tag{12}$$

The Tocqueville equilibrium does not depend on α since the variance of the actual laws is nil.

4.4 Comparing the Ancien Régime and the Tocqueville equilibria

We now compare the equilibrium value of the social objective functions in the Ancien Régime (corresponding to the legal decentralization option) and the Tocqueville equilibria (corresponding to the legal centralization option). Using equations (7) and (12), we obtain the following Proposition

Proposition 1. *Legal centralization is preferred to legal decentralization if and only if the degree α of aversion to inequality before the law is higher than $\frac{n}{n-2}$.*

We rely on the previous Proposition to interpret the change in the preferred level of law-making that occurred during the Revolution.

Before the Enlightenment, legal diversity was generally accepted since for the thinkers of the XVIth century (Montaigne, 1595 (2009) for exemple) actual legal rules were considered as natural laws. Even when law differed from the ideal one, a change in existing rules wasn't always considered as necessary (Ubrecht, 1933 (1969)).

Things began to change with the Enlightenment. Actual laws were no longer considered as natural (in the sense of exogenous). Rather, law had to express the will of the nation. Philosophers made strong statements against all forms of legal inequality in the Ancien Régime, be they horizontal or vertical. The most important opposition concerned the so called *privilèges*. Local differences were also contested because they mostly reflected the inheritance of the past and lacked any rational basis. As Voltaire (1819) put it

Is it not an absurd and terrible thing that what is true in one village is false in another? What kind of barbarism is it that citizens must live under different laws? When you travel in this kingdom you change legal systems as often as you change horses.

Philosophers of the Enlightenment advanced the idea that every set of rules had to be rationally decided and that these rules should not differ across local areas, excepted for well-specified reasons. To ensure equality of treatment between citizens, sentences and incriminations had to be determined by a uniform national law, not by local judges. Voltaire summarized these views in his article on Civil and Ecclesiastical Laws (Voltaire, 1765): *"One weight, one measure, one custom.... Every law should be clear, uniform and precise."* Laws had to be thought of as unique rules applying to everyone, even if individuals' preferences were diverse (Carbasse, 2014). In that case, uniformization of law had to precede uniformization of preferences.

Tocqueville discusses the influence of the Enlightenment in Chapter 1 of Part III of the *Ancien Régime and the Revolution* (this chapter is entitled "How towards the middle of the XVIII century men of letters took the lead in politics and the consequences of this new development").[14] Tocqueville also considers that administrative centralization before the Revolution had already slightly increased legal equality (this is the topic of Book 2 of the *Ancient Regime*) and transformed mores by inculcated sentiments of equality (see Pittz, 2011). When legal equality becomes the rule of society, the slightest traces of inequality becomes unbearable to the people. This is

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[14] This idea of the influence of the Enlightenment on the Revolution was also proposed, *inter alia*, by Portalis (1820). A turning point of the Enlightenment was the publication of the *Encylopedie*, which spread the enlightened ideas throughout France (Darnton, 1973).

notably spelled out in Chapter I of Book II of the *Ancient Regime*, which is entitled "Why the feudal rights were more odious to the people in France than any where else". The conclusion of this chapter is as follows: "The feudal system, though stripped of its political attributes, was still the greatest of our civil institutions; but its very curtailment was the source of its unpopularity. It may be said, with perfect truth, that the destruction of a part of that system rendered the remainder a hundred-fold more odious than the whole had ever appeared". In sum, aversion to inequality before the law grew steadily and was therefore conducive to legal uniformity when the Revolution occurred.[15]

Proposition 1 captures Tocqueville's insight regarding the rise in aversion to inequality before the law. We consider that before the Enlightenment the degree α of aversion to legal inequality was lower than $\frac{n}{n-2}$. In that case legal decentralization was indeed better than legal centralization because legal diversity was not a matter of concern. By contrast, during the Enlightenment and the Revolution aversion to inequality grew so much that the degree of aversion α became higher than $\frac{n}{n-2} < \alpha$. In this case, legal centralization was the best choice.

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[15] Tocqueville clearly illustrated this evolution in the next passage (Chapter II, Book IV, Second Volume of *Democracy in America*): "*The very next notion to that of a sole and central power, which presents itself to the minds of men in the ages of equality, is the notion of uniformity of legislation. As every man sees that he differs but little from those about him, he cannot understand why a rule which is applicable to one man should not be equally applicable to all others. Hence the slightest privileges are repugnant to his reason; the faintest dissimilarities in the political institutions of the same people offend him, and uniformity of legislation appears to him to be the first condition of good government... Notwithstanding the immense variety of conditions in the Middle Ages, a certain number of persons existed at that period in precisely similar circumstances; but this did not prevent the laws then in force from assigning to each of them distinct duties and different rights. On the contrary, at the present time all the powers of government are exerted to impose the same customs and the same laws on populations which have as yet but few points of resemblance.*"

Interestingly, when the degree α of aversion to inequality before the law increases from $n/(n-2)$ to $n^2/(n-2)$, the difference in the values of the social objectives under the two regimes increases.[16] When $\alpha = n^2/(n-2)$, the advantage derived from implementing legal centralization instead of legal decentralization is maximal. When α further increases from $n^2/(n-2)$, however, this advantage starts to diminish. And when α goes to infinity, the difference in the values of the social objectives tends to zero. This is because, in the Ancien Régime equilibrium, as α goes to infinity the law chosen by each region moves closer and closer to ℓ^c. An implication of this remarks is that, without the Revolution, legal uniformity would have almost been achieved if aversion to legal inequality had continued to grow ever. But other paths towards legal uniformity could have been followed. For instance, legal convergence could have been achieved by reducing legal diversity *within* the provinces. This kind of option was briefly considered in 1792 and 1793, before the Reign of Terror. We address this issue in the next section.

5   Legal Centralization in the Second Period of the Revolution (1792-1793): Was a Girondin Equilibrium Possible ?

By implementing legal centralization at the begining of the French Revolution (1789-1791), the National Assembly ended many Ancien Régime legal inequalities. This evolution was contested since local identities remained strong and several provinces were still seeing themselves as specific nations within the whole nation (see Ozouf,

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[16]   Indeed, we can check that the difference $\sum_i \mathcal{U}_i^d - \sum_i \mathcal{U}_i^c$ is proportional to the function $g(\alpha) = \frac{1-\alpha(\frac{n-2}{n})}{(1+\frac{\alpha}{n})^2}$.

1984). To weaken these local identities and specificities inherited from history, the local administration was reorganized. The new administrative system was built around three levels: *dpartement*, district, municipality. Initially, each of the 83 *dpartements* was conceived as a 70km × 70 km square. While the final design of departments was different, the geometric approach of the initial design illustrates the will to break references to past local entities and specificities and replace them with national unity (Biard, 2010). All the new administrative levels were deprived of any judicial power and were bound to execute the decisions taken by the legislative power in Paris. The previous role of parliaments in the making of laws was completely eliminated.

The second step of the Revolution began with the fall of the king in 1791-1792, necessitating a new constitution. Published in 1793, this this new constitution was written by the leaders of the political faction "La Montagne". The "Montagnards" favored strict supervision of local application of national laws, notably by sending commissars from Paris to monitor and control *dpartemental* offices and municipal authorities.

The main political opponent of la "Montagne" was another political faction called "La Gironde". The members of this group, the "Girondins", kept the idea of legal equality but supported more legal decentralization, as well as giving more powers to *dpartements* (Amson, 2010). The Girondins were strongly opposed to the growing and now exclusive influence of Paris in the making of political and legal decisions. In 1792, the Girondin deputy Lasource argued that "The influence of Paris should be reduced to 1/83th, as for any other *dpartement*" (Biard and Dupuy, 2014). While the

Girondins did not explicitly present themselves as federalists[17], they were accused by the Montagnards, such as Camille Desmoulins, of wanting to transform France into a "juxtaposition of small republics" (Chevallier, 2001). To prevent any partition of the country, the National Assembly adopted on September 25, 1792, a declaration stating that the French republic was one and indivisible. The Girondins were then eliminated in a few months. This elimination modified the national representation greatly. A constitution written in 7 days by the Montagnards, in which any attempt to decentralize power was ruled out, was then approved by the National Assembly on June 24, 1793. The concentration of legal and political powers in France became more important thereafter than in any other period (Chevallier, 2001).

We now extend the model of the previous section by assuming that law-making can be decided at an intermediate level between the local regions and the nation. We then compare the resulting equilibrium, *i.e.*, the Girondin equilibrium, with both the Ancien Régime and the Tocqueville equilibria.

5.1   The Girondin model

Let us assume that France is divided into $\mathbb{P}$ different administrative provinces.[18] The set of these provinces is denoted $\mathcal{P}$. A province P is comprised of n_P local regions.

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[17] The idea that the Montagnards favored centralization whereas the Girondins favored decentralization is disputed by some historians (see, *i.e.*, Biard, 2010 or Ozouf, 1984). Girondins did not explicitly require a federalist organization. The term "federalists" was used by their political adversaries in order to discredit them. Gironde's leaders needed to be very careful in their public positions since in France, as stated by Ozouf (1984), the epithet "federalist" sent men to the guillotine.

[18] These provinces can be the Ancien Régime provinces, but they can also correspond to other intermediate administrative levels, like the *dpartements*.

Each province P chooses its law ℓ_P (that is, the law ℓ_P applies in all the regions i contained in P).

Given these assumptions, the preferences of agent i given in (1) can be written as follows

$$\mathcal{U}_i(\boldsymbol{\ell}_P) = -\frac{1}{2}(\ell_P - x_i)^2 - \frac{\alpha}{2n}\sum_{P'\in\mathcal{P}} n_{P'}(\ell_{P'} - \overline{\ell})^2, \tag{13}$$

where $\overline{\ell}$ is the average value of the law across the different provinces. That is

$$\overline{\ell} = \sum_{P\in\mathcal{P}}\sum_{i\in P}\frac{\ell_P}{n} = \sum_{P\in\mathcal{P}}\frac{n_P}{n}\ell_P. \tag{14}$$

5.2   The Girondin equilibrium

We assume that the law-makers of province P choose the actual law ℓ_P of the province by maximizing the sum of the objective function of the region's representative agents (14). This contrasts with the Tocqueville equilibrium where the law-makers choose the law so as to maximize the sum of *all* the region's objective functions. We further assume that the law-makers of province P consider the other provinces' decisions as given. A Girondin equilibrium is a Nash equilibrium of the corresponding non-cooperative game. To study this equilibrium we first consider the provinces' choices.

Taking the other provinces' decisions $\ell_{P'}$ and the average decision $\overline{\ell}$ as given, province

P solves the following problem

$$\max_{\ell_P} \sum_{i \in P} \mathcal{U}_i(\boldsymbol{\ell}) = \max_{\ell_P} \sum_{i \in P} \left\{ -\frac{1}{2}(\ell_P - x_i)^2 - \frac{\alpha}{2n} \sum_{P' \in \mathcal{P}} n_{P'}(\ell_{P'} - \bar{\ell})^2 \right\}. \qquad (15)$$

The optimal decision of province P satisfies the following condition

$$\sum_{i \in P}(\ell_P - x_i) + \frac{\alpha}{n}n_P^2(\ell_P - \bar{\ell}) = 0. \qquad (16)$$

Solving for ℓ_P we get

$$\ell_P = \frac{\overline{x}_P + \alpha\frac{n_P}{n}\bar{\ell}}{1 + \alpha\frac{n_P}{n}}, \qquad (17)$$

where $\overline{x}_P$ is the mean value of the regions ideal legal laws

$$\overline{x}_P = \sum_{i \in P} \frac{x_i}{n_P}. \qquad (18)$$

Equation (17) expresses the optimal law of province P given the average value of the laws across provinces. In equilibrium, this average value must be equal to the actual average value. We now determine this equilibrium.

Summing equations (17) across provinces and solving for $\bar{\ell}$, we find that

$$\bar{\ell} = \frac{\displaystyle\sum_{P \in \mathcal{P}} \frac{\frac{n_P}{n}\overline{x}_P}{1 + \alpha\frac{n_P}{n}}}{1 - \alpha\displaystyle\sum_{P \in \mathcal{P}} \frac{\left(\frac{n_P}{n}\right)^2}{\left(1 + \alpha\frac{n_P}{n}\right)}}. \qquad (19)$$

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Substituting (19) into (17), we get the equilibrium value of province P's decision

$$\ell_P = \frac{\overline{x}_P + \alpha \left\{ \dfrac{\sum_{P'\in\mathcal{P}} \dfrac{\frac{n_{P'}}{n}\overline{x}_{P'}}{1+\alpha\frac{n_{P'}}{n}}}{1 - \alpha \sum_{P'\in\mathcal{P}} \dfrac{\left(\frac{n_{P'}}{n}\right)^2}{\left(1+\alpha\frac{n_{P'}}{n}\right)}} \right\}}{1 + \alpha\frac{n_P}{n}}. \tag{20}$$

5.3 Comparison of the Girondin and the Tocqueville equilibria

Comparing the Girondin and the Tocqueville equilibria does not yield clear-cut results. We do have, however, a result when the aversion to inequality before the law α goes to infinity. This result, which is proven in an appendix, is given by the following Proposition.

Proposition 2. *When aversion to inequality before the law is very high (i.e., when α approaches infinity), legal centralization is always preferred to intermediate legal decentralization.*

When aversion to inequality before the law is extremely high (*i.e.*, when α goes to ∞), all the provinces tend to choose the same law: $\lim_{\alpha\to\infty} \ell_P = \lim_{\alpha\to\infty} \overline{\ell}$ for all P, where

$$\lim_{\alpha\to+\infty} \overline{\ell} = \sum_{P\in\mathcal{P}} \frac{\overline{x}_P}{\mathbb{P}}. \tag{21}$$

In this limit case, each province is better off by choosing a law close to the average one. This is why the provinces' equilibrium choices tend to be similar. Therefore,

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legal uniformity is achieved when the aversion to inequality before the law is very high. We notice that the Ancien Régime equilibrium coincides with the Girondin equilibrium when each province corresponds to one region. In this case, we have $\lim_{\alpha \to +\infty} \bar{\ell} = \bar{l}$, and the limit equilibrium is equal to the Tocqueville equilibrium. But in the other cases, $\lim_{\alpha \to +\infty} \bar{\ell}$ is different from $\bar{l}$. Since $\bar{l}$ is the uniform value of the actual law which maximizes the sum of the regions' objectives, it follows that the Girondin equilibrium can never dominate the Tocqueville equilibrium. This conclusion, however, only applies to the limit case where aversion to legal inequality is very high.

As we have seen in the previous section, a high level of legal centralization was implemented at the beginning of the Revolution. The last step toward centralization was made during the Napoleonic era, and culminated with the introduction of the Civil Code of 1804. Despite the introduction of the Civil Code, however, judicial control softened during the Napoleonic era compared to the initial revolutionary decisions. We address this relaxation of judges' control in the next section.

6 Legal Centralization and Judges' Discretion: Understanding the Napoleonic Phase

The complementarity between civil law and codification of the law is an important thesis in legal studies. As Von Mehren (1957) put it: "In the civil law, large areas of private law are codified. Codification is not typical of the common law". For Glaeser and Shleifer (2002), the first aim of codification is to control judges, transforming

them into automata. The higher the desire of the central authority to impose its will, the more precise the code has to be (in the sense of giving less room for judges' interpretation of the law).[19] According to these authors: "It is not surprising, in that regard, that centralized civil law systems were often championed by the great autocrats, like Napoleon." A second, but less important aim of codification, is to make adjudication more transparent.

Yet this analysis of codification is not really supported by the facts. While the Civil code appeared in France in 1804, the will to control judges was already present at the beginning of the Revolution. As we have seen, at that time judges' decisions were tightly controlled and adjudication was almost forbidden. Whenever an interpretation of a law or a new law was needed, judges had to consult the National Assembly, which had the monopoly of legal interpretation. It was soon realized, however, that a workable legal system required a certain level of judicial adjudication (Carbasse, 2014, p. 243). As a result, at the end of the Revolution and under the Napoleonic Empire, adjudication and legal interpretation were tolerated again. To account for this evolution we now enrich the model of subsection 4.3 by introducing judicial discretion. This enables us to study the interaction between a law-maker who chooses the law that applies nationwide, and judges who adapt this law to local needs. Furthermore, we consider the optimal degree of judicial discretion.

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[19] Glaeser and Shleifer propose an interesting model of codification as a means to control judicial behavior. In their model, codification is considered as a set of "bright line rules" that trigger automatic judicial decision-making when offenses reach a given level.

6.1 A Model of legal centralization with regional judicial discretion

We assume that in each region i a judge maximizes the following objective function

$$\mathcal{U}_i^j(l^c, \mathbf{a}) = -\frac{1}{2}(\ell^c + a_i - x_i)^2 - \frac{\theta}{2}a_i^2 - \frac{\alpha}{2n}\sum_{j=1}^{n}(a_j - \bar{a})^2. \tag{22}$$

In this function, the actual value of the law in region i is $\ell^c + a_i$. The first term ℓ^c of this sum is the law decided in a centralized way (*i.e.*, statute). We interpret the second term a_i as the adjudication decision made by the judge. To wit, the term a_i represents the change in the legislation ℓ^c decided by the judge to adapt the law to the needs of region i. We denote by $\mathbf{a}$ the vector of the judge's decisions, and by $\bar{a}$ the mean of these decisions.

Since the actual law in region i is $\ell^c + a_i$, the variance of the actual laws over the regions is equal to the variance of the judges' adjudication decisions

$$\frac{1}{n}\sum_{j=1}^{n}\left(\ell^c + a_i - (\ell^c + \bar{a})\right)^2 = \frac{1}{n}\sum_{j=1}^{n}(a_j - \bar{a})^2. \tag{23}$$

We observe that the objective function of the judge in region i is equal to the objective function of the regional representative agent up to the term $(\theta/2)(a^i)^2$. This term captures the cost borne by the judge to adapt the law to local conditions. We consider that judges are benevolent, but departing from the law ℓ^c is costly for them. The parameter θ describes how discretion is costly. The higher θ, the higher the cost borne by judge i to adapt the law to local conditions.

6.2 Equilibrium with legal centralization and judicial discretion

We now study the equilibrium of the model with legal centralization and judicial discretion. We assume that the law-maker (be it the Emperor or the National Assembly) first chooses the law ℓ^c that applies to the whole country. Then judges make their adjudication decisions without consultation. To solve for the subgame perfect equilibrium, we work backward. We first study the Nash equilibrium of the game between the judges assuming that they take the value of the legislation ℓ^c as given. Next, we study the law-maker's problem. The law-maker acts as a Stackelberg leader: it takes into account the fact that the equilibrium adjudication decisions depend on ℓ^c.

6.2.1 The Nash equilibrium of the games between the judges

In any Nash equilibrium the region i judge's decision a_i must satisfy the following first-order condition

$$-(\ell^c + a_i - x_i) - \theta a_i - \frac{\alpha}{n}(a_i - \bar{a}) = 0, \tag{24}$$

from which we deduce that

$$a_i = \frac{(x_i - \ell^c) + \frac{\alpha \bar{a}}{n}}{1 + \theta + \frac{\alpha}{n}}. \tag{25}$$

To compute the equilibrium value of the mean $\overline{a}$, we sum the above equation across regions which yields

$$\overline{a} = \frac{\overline{x} - \ell^c}{1 + \theta}. \tag{26}$$

After a little algebra, we find that the utility of agent's i is given by

$$\mathcal{U}_i(\ell^c, \mathbf{a}) = -\frac{1}{2} \frac{1}{(1 + \theta + \frac{\alpha}{n})^2} \left(\left((\theta + \frac{\alpha}{n})(\ell^c - x_i) - \frac{\alpha}{n} \frac{\ell^c - \overline{x}}{1 + \theta} \right)^2 + \alpha \sigma_x^2 \right), \tag{27}$$

and the variance of the judges's decisions is equal to

$$\sigma_a^2 = \frac{1}{(1 + \theta + \frac{\alpha}{n})^2} \sigma_x^2. \tag{28}$$

6.2.2 The equilibrium value of the law ℓ^c

We now determine the equilibrium value of the law ℓ^c. Recall that we assume that the law-maker (*e.g.*, the Emperor) maximizes the sum of the representative agents' objective functions $\mathcal{U}_i$ with respect to ℓ^c

$$\max_{\ell^c} \sum_{i=1}^{n} \mathcal{U}_i(\ell^c, \mathbf{a}) = \max_{\ell^c} -\frac{1}{2} \frac{1}{(1 + \theta + \frac{\alpha}{n})^2} \sum_{i=1}^{n} \left((\theta + \frac{\alpha}{n})(\ell^c - x_i) - \frac{\alpha}{n} \frac{\ell^c - \overline{x}}{1 + \theta} \right)^2$$

$$- \frac{n\alpha}{2} \frac{1}{(1 + \theta + \frac{\alpha}{n})^2} \sigma_x^2 \tag{29}$$

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The first-order condition is

$$-\sum_{i=1}^{n}\left((\theta+\frac{\alpha}{n})(\ell^c-x_i)-\frac{\alpha}{n}\frac{\ell^c-\overline{x}}{1+\theta}\right)(\theta+\frac{\alpha}{n}-\frac{\alpha}{n(1+\theta)})=0, \qquad (30)$$

$$\Longleftrightarrow (\theta+\frac{\alpha}{n})(\ell^c-\overline{x})-\frac{\alpha(\ell^c-\overline{x})}{n(1+\theta)}=0. \qquad (31)$$

We deduce from the last equation that

$$\ell^c=\overline{x}, \qquad (32)$$

and that the equilibrium value of region i judge's decision is

$$a_i=\frac{x_i-\overline{x}}{1+\theta+\frac{\alpha}{n}}, \qquad (33)$$

The equilibrium value of the region i representative agent's objective function is

$$\mathcal{U}_i^{c,d}=-\frac{1}{2}\frac{(\theta+\frac{\alpha}{n})^2}{(1+\theta+\frac{\alpha}{n})^2}(x_i-\overline{x})^2-\frac{\alpha}{2}\frac{1}{(1+\theta+\frac{\alpha}{n})^2}\sigma_x^2. \qquad (34)$$

If we sum equation (34) across regions, we find that the equilibrium value of the sum of the representative agents' objective functions is

$$\sum_{i=1}^{n}\mathcal{U}_i^{c,d}=-\frac{1}{2}n\sigma_x^2\frac{\alpha+(\theta+\frac{\alpha}{n})^2}{(1+\theta+\frac{\alpha}{n})^2}. \qquad (35)$$

6.3   The optimal value of judicial's discretion

We now study the optimal value of judges' discretion. In the Ancien Régime version of the model, the judge's discretion is maximal. This corresponds to the case where $\theta = 0$. Adapting the law to local conditions is not costly. In the version of the model describing the aftermath of the Revolution, the judge's discretion is nil ($\theta = +\infty$). In this case, adapting the law to local conditions is too costly (the higher θ, the lower the value of judges' discretion). We determine the optimal degree of control over judges' decisions by finding the values of θ which maximize the social objective (35). These values minimize the following function of θ

$$\Gamma(\theta) = \frac{(\theta + \frac{\alpha}{n})^2 + \alpha}{(1 + \theta + \frac{\alpha}{n})^2}. \tag{36}$$

Using this function we obtain the next result[20]

Proposition 3. *There is a unique optimal value of the judges' discretion. This level is given by:*

$$\theta = \alpha(1 - \frac{1}{n}). \tag{37}$$

Moreover, the higher the degree of aversion to legal inequality (i.e., the higher α), the lower the optimal value of judges' discretion (i.e., the higher θ).

The optimal value of judges' discretion results from a trade-off. To understand this trade-off, let us consider the equilibrium value of the representative agent of region

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[20]   The Proposition results from the fact that $\Gamma'(\theta) = 2\frac{\left(\theta - \alpha(1 - \frac{1}{n})\right)}{(1 + \theta + \frac{\alpha}{n})^3}$.

i's utility function

$$\mathcal{U}_i^{c,d} = -\frac{1}{2} \frac{(\theta + \frac{\alpha}{n})^2}{(1 + \theta + \frac{\alpha}{n})^2} (x_i - \overline{x})^2 - \frac{\alpha}{2} \frac{1}{(1 + \theta + \frac{\alpha}{n})^2} \sigma_x^2.$$

The first term in the right-hand side of the above equation expresses the loss incurred by agent's i, which results from the divergence between his legal preferences and the equilibrium value of the local law. As we have seen, when $\theta = 0$ judges' discretion is maximal and the regional judge maximizes agent i's objective function by choosing $\ell^c + a_i = x_i$. On the other hand, when θ goes to infinity, the actual equilibrium value of the law goes to $\overline{x}$ which is the value of the law ℓ^c chosen by the central law-maker (for example, the National Assembly). We see that the first part of agent's i loss increases with θ. The smaller the judges' discretion, the greater the region's loss. The second part of the above expression correspond to the loss due to legal heterogeneity. This part always decreases with θ. Indeed, the higher θ is, the lower judges' discretion, and the lower legal heterogeneity.

When θ increases from 0, the gain resulting from the decrease in legal heterogeneity more than compensates for the increase in the divergence between the law and legal preferences. This happens until θ reaches its optimal level $\alpha(1 - \frac{1}{n})$. When θ increases from this level, the gain from the decrease in legal heterogeneity is lower than the increase in the additional loss resulting from the divergence between the actual law and legal preferences. Proposition 3 shows that is is never optimal to eliminate judges' discretion (*i.e.*, $\theta = \infty$), nor is it optimal to allow complete discretion (*i.e.*, $\theta = 0$). The Proposition also shows how the optimal degree of discretion changes

with α, the degree of aversion to legal inequality. The higher α, the higher the weight given to the loss due to legal heterogeneity, and the higher the need to control judges' decisions.

We can rely on Proposition 3 to interpret the decisions made during the Revolution and the First French Empire. At the beginning of the Revolution, the National Assembly sought to control judges' decision. As we have mentioned, the National Assembly went so far as to forbid any adjudication. But forbidding judicial adjudication turned out to be unworkable. Formally, choosing $\theta = +\infty$ was not the best decision. After the Revolution, and the introduction of the Civil and Penal Codes, judges' discretion was tolerated again. Choosing a finite positive value of θ was indeed a better decision.

7 Conclusion

We have proposed a model of French legal centralization in which the evolution of aversion to legal inequality plays a key role. We believe that legal centralization began a decisive phase with the French Revolution and was triggered by a sharp increase in the aversion to legal inequality. This approach completes the view according to which the Revolution and the Empire were just the continuation of an older process. For sure, there was a sustained policy of legal centralization during the Ancien Régime. Little by little, the feudal order was diminished and the nobility deprived of political and judicial powers. In this perspective, however legal centralization was a means to impose the King's will on the whole Kingdom; it was not a means to achieve legal equality.

An important implication of our analysis is that it does not support the argument of La Porta et al. (2008) that "regardless of whether the revolutionary or the medieval story is correct, they have very similar empirical predictions." If our analysis is correct, wealth measures such as GDP per capita should not be the only criteria used to compare the virtues of alternative legal organizations. Qualitative measures such as the degree of inequality before the law should also be taken into account. Focusing only on economic outcomes can bring about misleading conclusions on the costs and benefits of each legal system, and erroneous policy recommendations as well.

We found that a centralized legal system works better with a moderate judicial control. Judges should not behave as automata and codes must not be too precise. Statutory interpretation is key to adapt the law to local conditions. In our view this explains why the will to control judges was lesser under the Napoleonic era than under the revolutionary one (Carbasse, 2014). But in contrast to Glaeser and Shleifer (2002), the motivation to control judges did not stem from the wish to impose the will of the sovereign, but rather to limit the legal inequalities resulting from legal decentralization. When citizens value legal equality, centralization and codification can be optimal for the society as a whole, and not only for the political rulers.

Two important points deserve further research. First, to model aversion to legal inequality we have assumed that individual preferences are decreasing with the variance of the actual laws. It would be interesting to look for alternative measures of aversion to legal inequality and to allow for individual heterogeneity in the degree of this aversion as well. Second, we have relied on a static analysis of the relationships

between legal centralization and aversion to legal inequality. Since the demand for legal equality is self perpetuating (as Tocqueville noticed), a dynamic analysis of the long-run consequences of a one-time shift in favor of egalitarian institutions could better our understanding of the origins of French legal centralization.

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A   Proof of Proposition 2

Proof of Proposition 2.

• Step 1

We first prove the following Lemma:

Lemma 1. *We have:* $\lim_{\alpha \to +\infty} \overline{\ell} = \sum_{P \in \mathcal{P}} \frac{\overline{x}_P}{\mathbb{P}}$.

Proof. Let us defined $u = 1/\alpha$. We can then rewrite equation (19) as follows:

$$\overline{\ell} = \frac{u \left(\sum_{P \in \mathcal{P}} \frac{\frac{n_P}{n} \overline{x}_P}{u + \frac{n_P}{n}} \right)}{1 - \sum_{P \in \mathcal{P}} \frac{\left(\frac{n_P}{n} \right)^2}{\left(u + \frac{n_P}{n} \right)}} \tag{38}$$

Using L'Hospital's rule, we have:

$$\lim_{u \to 0} \overline{\ell} = \lim_{u \to 0} \frac{\sum_{P \in \mathcal{P}} \frac{\frac{n_P}{n} \overline{x}_P}{u + \frac{n_P}{n}} - u \left(\sum_{P \in \mathcal{P}} \frac{\frac{n_P}{n} \overline{x}_P}{\left(u + \frac{n_P}{n} \right)^2} \right)}{\sum_{P \in \mathcal{P}} \frac{\left(\frac{n_P}{n} \right)^2}{\left(u + \frac{n_P}{n} \right)^2}} \tag{39}$$

$$= \sum_{P \in \mathcal{P}} \frac{\overline{x}_P}{\mathbb{P}} \tag{40}$$

$\square$

• Step 2

Recall that the equilibrium value of the social objective in the Tocqueville equilibrium

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given (12) is:

$$\sum_{i=1}^{n} \mathcal{U}_i = -\frac{1}{2} \sum_{i=1}^{n} (x_i - \bar{x})^2 \tag{41}$$

The value of the social objective associated to a girondin equilibrium (associated to a set of $\mathcal{P}$ provinces) is:

$$\sum_{i=1}^{n} \mathcal{U}_i = -\frac{1}{2} \sum_{P \in \mathcal{P}} \sum_{i \in P} (\ell_P - x_i)^2 - \frac{\alpha}{2} \sum_{P' \in \mathcal{P}} n_{P'} (\ell_{P'} - \bar{\ell})^2 \tag{42}$$

where ℓ_P and $\bar{\ell}$ are given respectively by equations (17) and (19).

We now compare the values of the social objectives given in equations (41) and (42). To do this, we first study the difference:

$$\triangle = \sum_{i=1}^{n} (x_i - \bar{x})^2 - \sum_{P \in \mathcal{P}} \sum_{i \in P} (\ell_P - x_i)^2 \tag{43}$$

We have:

$$\triangle = \sum_{P \in \mathcal{P}} \sum_{i \in P} \left\{ (x_i - \bar{x})^2 - \left(x_i - \frac{\bar{x}_P + \alpha \frac{n_P}{n} \bar{\ell}}{1 + \alpha \frac{n_P}{n}} \right)^2 \right\} \tag{44}$$

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$$= \sum_{P \in \mathcal{P}} \sum_{i \in P} \left\{ x_i^2 - 2x_i \overline{x} + \overline{x}^2 - \left[x_i^2 - 2x_i \left(\frac{\overline{x}_P + \alpha \frac{n_P}{n} \overline{\ell}}{1 + \alpha \frac{n_P}{n}} \right) + \frac{\overline{x}_P^2 + 2\alpha \overline{x}_P \overline{\ell} \frac{n_P}{n} + \alpha^2 (\frac{n_P}{n})^2 (\overline{\ell})^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2} \right] \right\}$$

(45)

$$= \sum_{P \in \mathcal{P}} \left\{ -2n_P \overline{x}_P \overline{x} + n_P \overline{x}^2 + 2n_P \overline{x}_P \left(\frac{\overline{x}_P + \alpha \frac{n_P}{n} \overline{\ell}}{1 + \alpha \frac{n_P}{n}} \right) - n_P \left(\frac{\overline{x}_P^2 + 2\alpha \overline{x}_P \overline{\ell} \frac{n_P}{n} + \alpha^2 (\frac{n_P}{n})^2 (\overline{\ell})^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2} \right) \right\}$$

(46)

$$= -2n\overline{x}^2 + n\overline{x}^2 + 2 \left(\sum_{P \in \mathcal{P}} \frac{n_P \overline{x}_P^2}{1 + \alpha \frac{n_P}{n}} + \overline{\ell} \sum_{P \in \mathcal{P}} n_P \overline{x}_P \alpha \frac{\frac{n_P}{n}}{1 + \alpha \frac{n_P}{n}} \right)$$

(47)

$$- \sum_{P \in \mathcal{P}} \frac{n_P \overline{x}_P^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2} - 2\overline{\ell} \sum_{P \in \mathcal{P}} \frac{n_P \overline{x}_P \alpha \frac{n_P}{n}}{\left(1 + \alpha \frac{n_P}{n} \right)^2} - (\overline{\ell})^2 \sum_{P \in \mathcal{P}} \frac{n_P \left(\alpha \frac{n_P}{n} \right)^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2}$$

(48)

$$= -n\overline{x}^2 + \sum_{P \in} \frac{n_p \overline{x}_P^2}{1 + \alpha \frac{n_P}{n}} \left(2 - \frac{1}{1 + \alpha \frac{n_P}{n}} \right) + 2\overline{\ell} \sum_{P \in \mathcal{P}} \alpha \frac{n_P}{n} n_P \overline{x}_P \left(\frac{1}{1 + \alpha \frac{n_P}{n}} - \frac{1}{(1 + \alpha \frac{n_P}{n})^2} \right)$$

(49)

$$- (\overline{\ell})^2 \sum_{P \in \mathcal{P}} \frac{n_P \alpha^2 (\frac{n_P}{n})^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2}$$

(50)

$$= -n\overline{x}^2 + \sum_{P \in} \frac{n_p \overline{x}_P^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2} \left(1 + 2\alpha \frac{n_P}{n} \right) + 2\overline{\ell} \sum_{P \in \mathcal{P}} \alpha \frac{n_P}{n} n_P \overline{x}_P \left(\frac{1}{1 + \alpha \frac{n_P}{n}} - \frac{1}{(1 + \alpha \frac{n_P}{n})^2} \right)$$

(51)

$$- (\overline{\ell})^2 \sum_{P \in \mathcal{P}} \frac{n_P \alpha^2 (\frac{n_P}{n})^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2}$$

(52)

$$= -n\overline{x}^2 + \sum_{P \in} \frac{n_p \overline{x}_P^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2} \left(1 + 2\alpha \frac{n_P}{n} \right) + 2\overline{\ell} \sum_{P \in \mathcal{P}} n_P \overline{x}_P \frac{\alpha \frac{n_P}{n}}{(1 + \alpha \frac{n_P}{n})} \left(1 - \frac{1}{(1 + \alpha \frac{n_P}{n})} \right)$$

(53)

$$- (\overline{\ell})^2 \sum_{P \in \mathcal{P}} \frac{n_P \alpha^2 (\frac{n_P}{n})^2}{\left(1 + \alpha \frac{n_P}{n} \right)^2}$$

(54)

Moreover, we have:

$$\alpha \sum_{P \in \mathcal{P}} n_P (\ell_P - \overline{\ell})^2 = \alpha \sum_{P \in \mathcal{P}} n_P \Big(\frac{\overline{x}_P - \overline{\ell}}{1 + \alpha \frac{n_P}{n}} \Big)^2 \tag{55}$$

$$= \alpha \sum_{P \in \mathcal{P}} n_P \frac{\overline{x}_P^2 - 2\overline{x}_P^c \ell + (\overline{\ell})^2}{\big(1 + \alpha \frac{n_P}{n}\big)^2} \tag{56}$$

Using (54) and (56) we find that the differences of the objective values (up to a scalar $1/2$) is as follows:

$$\lim_{\alpha \to +\infty} \left\{ \triangle(\alpha) - \alpha \sum_{P \in \mathcal{P}} n_P (\ell_P - \overline{\ell})^2 \right\} = -n\overline{x}^2 + 2n\overline{x} \sum_{P \in \mathcal{P}} \frac{\overline{x}_P}{\mathbb{P}} - n \Big(\sum_{P \in \mathcal{P}} \frac{\overline{x}_P}{\mathbb{P}} \Big)^2 \tag{57}$$

$$= -n \big(\overline{x} - \sum_{P \in \mathcal{P}} \frac{\overline{x}_P}{\mathbb{P}} \big)^2 \tag{58}$$

$$< 0. \tag{59}$$

$\square$