

A Great Political Divergence

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(very preliminary. comments welcome.)

- Document an interesting historical phenomenon between East and West: the timing of institutional change and political stability around the same historical time
- Key insight: Very different institutions—meritocracy and parliament—served a functional equivalence of enhancing stability
- Contributions: a unified theory, formalizes **meritocratic bureaucracy**.

- Observation I: Historically, coup d'état and other forms of within-elite conflicts were the major threat to political stability in autocracies (Svolik, 2009).
- Observation II: Many regions, esp. Western Europe and China, achieved significant improvements in political stability during the medieval time
- The Parliamentary System in W. Europe
 - Strayer, 1970; Downing, 1989; Van Zanden et al., 2012; Blaydes and Chaney, 2013; among others
 - However, China never developed a parliamentary system nor any of the executive constraints
 - the co-emergence of political stability and consolidated absolutism in imperial China (Fukuyama, 2011; Fu, 1993)
 - multiple equilibria in the path to political stability?

- State Bureaucracy and exam-based meritocracy in China
 - The Civil Service Examination (CSE) started during the Sui dynasty (581-618), expanded and institutionalized during the Song dynasty (960-1279), and continued for 1200+ years
 - For thirteen centuries, the CSE was the major path to office. For example, during the Ming dynasty, it produced about 50% to 70% of government officials depending on the year. In comparison, purchase made up 20% to 40% and inheritance only 1% (Ho, 1962).
 - To truly operationalize open access, the governments set up free public schools down to the prefecture level during the Song and to the county level during the Ming.
- Social and political implications
 - Social transition: a society dominated by landed aristocracy (similar to Western Europe) to one by bureaucratic literati (Robert Halrtwell; Rober Hymes; Peter Bol; Tackett, 2014, etc)
 - Improved social mobility (Ho, 1962; Jiang and Kung, 2015) and stability (Bai and Jia, 2016; Huang and Yang, forthcoming)

- CSE was introduced to other East Asian countries as early as the 8th century
- Korea (from 958 till 1894), Vietnam (from 1075 till 1919)
- However, not in Japan. It faced opposition from hereditary aristocratic families in Japan
- Aristocracy in Japan pushed for feudalism. And medieval Japan evolved into federalism (Duus, 1969; Lewis, 1974)
 - And the introduction of feudal institutions in Japan was associated with improvement in political stability.
 - Blaydes and Chaney (2013) finds a break in the Japanese stability trend around the 12th century, a date quite close to when historians argue Japanese feudalism emerged.

■ Persian Empire

- Administrative traditions flourished during the Achaemenid Empire (550 BC – 330 BC)
- Professionally trained bureaucrats, important government functions and large public projects
- A “guild system”, a strong civil service system based on examination and performance, open access (Farazmand, 1998)

■ Muslim world

- Inherited capable bureaucrats from conquered Byzantine and Sassanid lands
- Mamlukism— or the use of slave soldiers imported from non-Muslim lands— as the primary means of elite military recruitment.
- Local elites did not serve as the source of military recruitment and, thus, could not impose executive constraints on the rulers (Blaydes and Chaney, 2013)

- Most bureaucratic institutions were set up much later than East and Central Asia and long after democracy was consolidated.
- Bureaucracies had a less prominent role in European history, but not because of a lack of idea.
- Two examples in Europe:
 - Prussia. Fukuyama (2014), "When Max Weber wrote his famous description of modern bureaucracy early in the 20th century, he was not thinking of America... Weber was thinking, rather, of the bureaucracy of his native Germany... In Brandenburg-Prussia, the opposite happened (England model: parliament and constitutional monarchy): the estates were weak and divided, and a series of resourceful and strong-minded rulers – the Great Elector Frederick William, King Frederick William I of Prussia, and Frederick II – succeeded in progressively stripping them of political power and concentrating it in the hands of a centralized royal administration... The shift from a patrimonial to a modern bureaucracy in Prussia took place between 1640 and the conclusion of the Stein-Hardenberg reforms in the early 19th century."

- Two examples in Europe:
 - Prussia.
 - France under Louis XIV. The bureaucratic system was largely sustained by personal connections, kinship, and patronage instead of formal rules (Chapman and Chapman, 2004). Many historians believe that it was because the royal authority in France was much weaker than we imagined. According to Chapman (2004), Kings and ministers relied on “elites for the functioning of the state and the restitution of order..... The king and ministers, had a co-operative relationship with most local elites in the provinces who, in turn, had their own local clienteles”

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Worldwide History - A Summary

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- 2 It seems that it were strong monarchies that established meritocratic bureaucracy while strong aristocracy pushed for parliaments
- 3 Bureaucracy, in turn, seems to have strengthened autocracy

Evidence I



Figure: CSE and Stability in China and Korea

Table: The Impact of Institutions on Political Stability, Global Evidence

VAR	(1) Ruler duration	(2) Ruler duration	(3) Depose Prob.	(4) Depose Prob.
Parliament	4.000*** (1.516)	3.816** (1.514)	-0.00542 (0.0404)	0.00221 (0.0407)
CSE dummy	4.854*** (1.634)		-0.362*** (0.0706)	
CSE scale		0.0479** (0.0201)		-0.000309 (0.000564)
FE	Y	Y	Y	Y
Obs	3,126	3,126	1,891	1,891
R-squared	0.176	0.175	0.191	0.179

Note: the unit of analysis is ruler-reign. All the results controlled for century and country two-way fixed effect. Data on Europe and the Muslim world comes from Blaydes and Chaney (2013). Data on East Asia is collected by the authors.

Evidence III

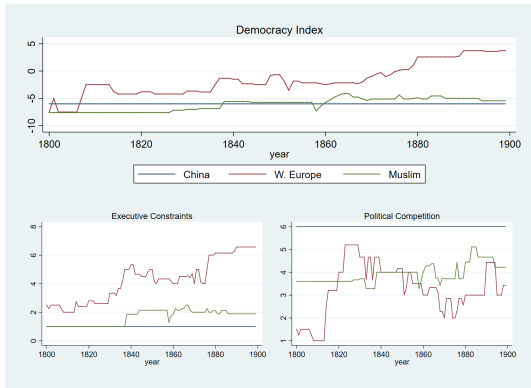


Figure: Comparison of the Political System of China vs. W. Europe

Source: the Polity IV project

Empirical Evidence - A Summary

- 1 Both parliaments and meritocratic bureaucracies were associated with stability
- 2 Two types of stable long-run equilibrium
 - China: autocratic (low executive constraints) and high political competition
 - W. Europe: democratic (high executive constraints) and low political competition

In this paper, we ask

- How did the CSE and other meritocratic bureaucracies contribute to political stability?
- Why were autocratic countries more likely to implement meritocracy?
- How did these institutions lead to two different types of political equilibrium?

Modeling Meritocratic Bureaucracy

- At least two perspectives on the functions of bureaucracy.
 - Weberian ideal-type concept of bureaucracy as an efficient type of organization characterized by hierarchy and unity of command, task specialization, merit-based staffing and promotion, rule-based decision making. To Max Weber, the ideal-type bureaucracy is superior to traditional and charismatic types of authority structures.
 - The second strand of literature believes that bureaucratic organization can be self-interested. Particularly in developing countries, where political organs and institutions are weak, bureaucrats have been blamed for hijacking and exploiting the system (Riggs 1962; Huber and Shipan, 2001)

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- **Our idea of Meritocratic Bureaucracy**
 - Bureaucrats vs. Politician (Alesina and Tabellini, 2007, 2008)
 - “Merit-based”, “professionalism” v.s. “birth-based”, inheritance

Modeling Meritocratic Bureaucracy

- **De jure political institutions**, which governs the official allocation of political rents, and **de facto political power**, which determines the outcome of a conflict.
 - De facto power could be affected by personal capabilities and ambitions, knowledge, family wealth, military talents, etc, etc

Modeling Meritocratic Bureaucracy

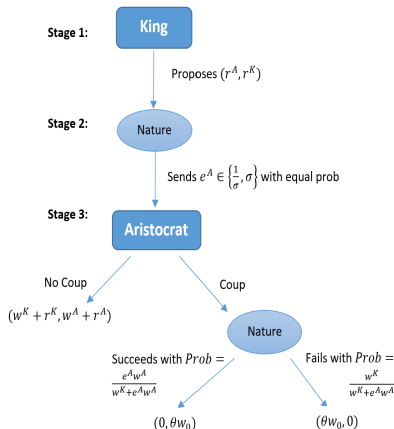
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 - Stochastic shocks to de facto power, which may be private info and not reflect in de jure institutions in a timely manner

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 - Stochastic shocks to de facto power, which may be private info and not reflect in de jure institutions in a timely manner
- Institutional improvements, such as the Parliaments and CSE, can be understood as **mechanisms to reduce the mismatch**
 - Parliament meetings provide a venue for ex-post renegotiation,
 - Standardized exams or martial tournaments provide info about the Aristocrat's hidden ability.

Benchmark - No Institution

- Three-stage, two-player, proposal game. The King (K) and the Aristocrat (A) with initial wealth (w^K, w^A)
- **Stage 1:** K makes a proposal to re-adjust the wealth. This captures the de jure institution
- **Stage 2:** Nature sends a shock e^A to A's de facto power $e^A w^A$
 - $e^A \in \{\sigma, \frac{1}{\sigma}\}$, σ captures the mismatch
- **Stage 3:** A either accepts the proposal or initiates a coup
 - Coup destroys a portion of the wealth $(1 - \theta)w_0$.
- No other asymmetric information (no moral hazard)



Benchmark - No Institution

Theorem 1 (Benchmark Equilibrium)

Under no institution, the shock e^A remains A's private information.

- When $\theta < 1/2$, unique stable equilibrium, K proposes a large r^A and A never coups
- When $\theta > 1/2$, two types of Eqm: for every w^K, w^A , there exist a $\tilde{\sigma}$ s.t. when $\sigma < \tilde{\sigma}$, the game has a unique stable equilibrium; and when $\sigma > \tilde{\sigma}$, the game has an unstable equilibrium where A coups iif he gets a high value shock.

- No mismatch, no instability

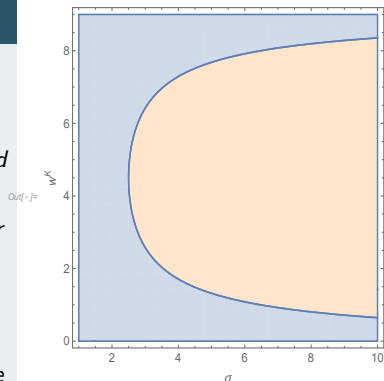


Fig 1: Benchmark Model - Equilibrium

Institutional Improvement

- Meritocratic institution provides publicly verifiable info about the Aristocrat's ability.

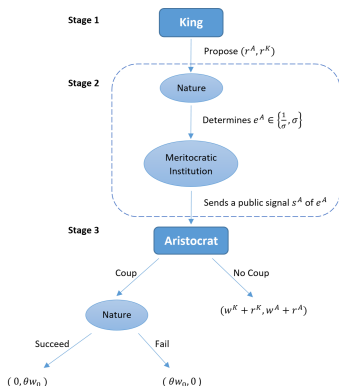


Fig: Timeline under Meritocratic Institution

Institutional Improvement

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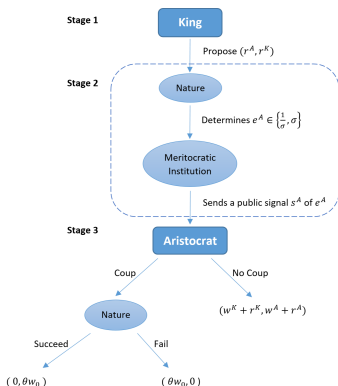


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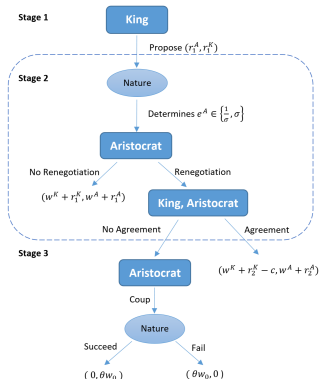


Fig: Timeline under Parliamentary Institution

Theorem 2 (Meritocratic Equilibrium)

Under the Meritocratic Institution, a publicly verifiable signal $s(e^A) = s^A$ is sent after the shock e^A is realized. Probability of the signal being H given the shock being H is π_{HH} .

- 1** *When $\theta \leq \frac{\pi_{HL}}{\pi_{LL} + \pi_{HL}}$, the game has a unique stable equilibrium, where the King proposes an unconditional high offer and A never coups.*
- 2** *When $\frac{\pi_{HH}}{\pi_{LH} + \pi_{HH}} \geq \theta > \frac{\pi_{HL}}{\pi_{LL} + \pi_{HL}}$, there are two types of equilibrium. For every w^A, w^K , there exist a $\tilde{\sigma}_1$ such that*
 - a** *When $\sigma \leq \tilde{\sigma}_1$, a stable equilibrium similar to 1.*
 - b** *When $\sigma > \tilde{\sigma}_1$, an unstable equilibrium where the King offers (r_H^A, r_L^A) conditional on the signal, and the coup probability equals to $\frac{1}{2}\pi_{HL}$.*
- 3** *When $\theta > \frac{\pi_{HH}}{\pi_{LH} + \pi_{HH}}$, there are three types of equilibrium. For every w^A, w^K , there exist a pair of $(\tilde{\sigma}_1, \tilde{\sigma}_2)$ such that*
 - a** *When $\sigma \leq \tilde{\sigma}_1$, a stable equilibrium similar to 1.*
 - b** *When $\tilde{\sigma}_1 < \sigma < \tilde{\sigma}_2$, an unstable equilibrium similar to 2.(b).*
 - c** *When $\sigma > \tilde{\sigma}_2$, an unstable equilibrium, where the King proposes an unconditional low offer and the coup probability equals to $\frac{1}{2}$.*

Equilibrium under Meritocratic Institution

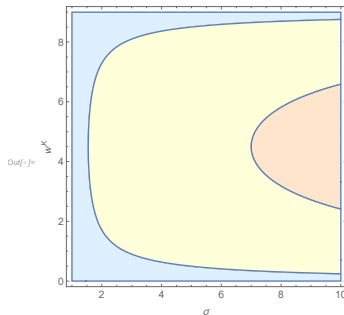


Fig: Eqm under Meritocratic Institution

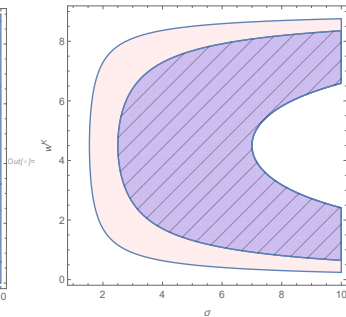


Fig: Stability under Meritocratic Institution

- More informative signal, more stability
- Meritocracy not always improves stability

To examine K and A's preference over institution:

- K always supports meritocratic institution
- A only supports it when stability is improved (history of CSE)

Equilibrium under Parliamentary Institution

- Parliament changes the game in two ways:
 - it resolves information asymmetry ex post.
 - it provides a venue for renegotiation without resorting to coups.

Theorem 3 (Parliamentary Equilibrium)

Under the Parliamentary Institution, renegotiation incurs a cost of c ,

- *if $c \geq w_0\theta \left(P(\sigma w^A, w^K) - P\left(\frac{w^A}{\sigma}, w^K\right) \right)$, there exist a unique equilibrium where the King proposes a high r_1^A and the Aristocrat always accepts regardless of his shock.*
- *If $c < w_0\theta \left(P(\sigma w^A, w^K) - P\left(\frac{w^A}{\sigma}, w^K\right) \right)$, there exist a unique equilibrium where the King proposes a low r_1^A , the Aristocrat accepts the proposal when he gets a low shock and demands renegotiation when he gets a high shock.*

Equilibrium under Parliamentary Institution

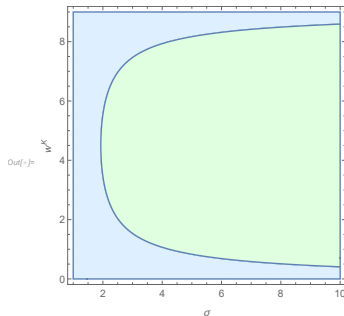


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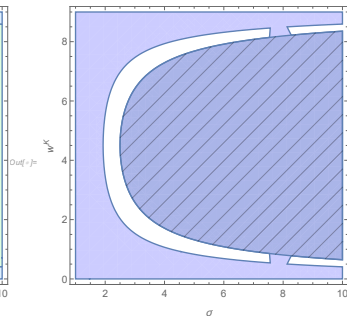


Fig: Stability under Parliamentary Institution

To examine K and A's preference over institutions:

- Both K and A will support parliament if and only if the cost of renegotiation is remarkably larger (larger than the cost of coup).
- Under the more realistic assumption, only the Aristocrat have an incentive to push for parliaments → history of England

So far, monarchy-aristocracy dynamics. How does institution affect political mobility among Aristocrats?

- Three players, (K, A_1, A_2) with initial wealth (w^K, w^{A_1}, w^{A_2}) .
- Shock (e^1, e^2) i.i.d. $\in \{\sigma, \frac{1}{\sigma}\}$
- The coup winning probability: $\frac{e^{A_1} w^{A_1}}{w^K + e^{A_1} w^{A_1} + e^{A_2} w^{A_2}}$
 - A_1 gets the exact same EU whether he coups alone or in a group
 - In other words, no synergy in coup coordination
- The level of *political mobility* defined as the difference between the Aristocrats' payoffs $|r^{A_1} - r^{A_2}|$
 - Under no institution, no mobility

Model Extension: Social Mobility with Multiple Aristocrats

- The equilibrium is similar, except the added uncertainty of multiple Aristocrats
- Under meritocratic institution, mobility occurs naturally with conditional offer
- Under parliament, depending on the negotiation procedure
 - A_1, A_2 first renegotiate with the King as a group, and then decide whether to bargain among themselves \rightarrow mobility is low
 - Three players bargain once \rightarrow mobility is higher but still lower than that under meritocracy as long as $\sigma > 1$

Model Summary

- Both institution improves stability:
 - Parliament allows for timely re-adjustment to de jure inst.
 - Meritocracy allows rent allocation to be (partially) conditional on the shock, thus reducing the mismatch without any change to the de jure inst.
- K prefers meritocracy while A prefers parliament
 - A positive feedback loop
 - Random events at early stage of development could have long-run impact
 - Two types of stable long-run equilibrium

Summary and Discussion

- A seminal idea first proposed by Huntington (1968) and succinctly summarized by Fukuyama (1997): “[O]rder itself was an important goal of developing societies, independent of the question of whether that order was democratic, authoritarian, socialist, or free-market.”
- Fukuyama (2011,2014) and others have argued that “the political development literature is almost entirely based on the experiences of Europe. And since bureaucracy did not play a prominent role in the state building in Europe, bureaucracy has not received adequate analytical attention.”
- A functional equivalence of meritocracy and parliaments
 - Meritocratic bureaucracy as an Open-Access Institutions (North, Wallis, and Weingast, 2009)
- (to do) Dynamic game to examine the conditions under which institutional improvements endogenously emerge

Thank you very much!