Organizing Violence

Robert H. Bates
Order

I. Background

II. Thinking – or Tuesdays with Avner
   A. Stateless societies
   B. Societies with states

III. Answering
Part I: Background
Uganda 1981

• My work: Agriculture

• Uganda: Idi Amin gone

• USAID calls
  – Lead team to advise on the rehabilitation of export agriculture
Uganda 1981

• Out in autumn
  • USAID
  • Coffee
  • Robert Hahn

• Out again in Spring
  – World Bank
The Political Environment

• Struggle for power in Uganda
The Political Environment

• Struggle for power in Uganda
  – Effect on team
  – Effect on counterparts

• 1\textsuperscript{st} reaction
  – Retreat to Nairobi
2nd Reaction

- Fled Africa

- For ten years, immersed myself in the world of coffee
World of Coffee

• Studied the world government of coffee
  – Bicameral legislature
  – Voting rules
  – Solved for the allocation of export rights

• Joined U.S. delegation
  Brawn: Brazil       Brain: Colombia

• Interviewed, worked through archives in Rio, Sao Paulo, and Bogota
Learned from Latin America

Violence not an African problem!
Colombia 1989

- March 3: UPP presidential candidate MURDERED
- March 11: Lawyer for El Espectador MURDERED
- April 21: Bucaramanga radio news commentator KILLED
- May 4: Father of judge who indicted Escobar MURDERED, mother attacked.
- May 30: CAR BOMB Bogota
- June 3: Son of Pres. Barco’s SYG KIDNAPPED.
- June 15: Medellin radio reporter KILLED.
- July 4: Governor of Antioquia KILLED
- July 28: Judge issuing warrants for Escobar arrest MURDERED.
- August 16: Magistrate ratifying indictments ASSASSINATED.
- August 17: …ctd…
Conclusion

• Violence NOT an Africa problem

• Is a development problem

• Figure it out
Part II: Understanding Violence
Thinking

• Center for Advanced Studies 1993
  – Political science + economic history
  – Wrote up coffee book + “Analytic Narratives”
  – Tuesdays with Avner

• What are sources of political order? How can order be possible?
  – Government, but no predation
  – Civilians put aside their arms

• What are its properties?

• When can political order become a state?
First Thought Through

Private Provision of Security

Or

The provision of security in societies without states
Set up as a Game

• Actors: \( i \in (i,j) \)

• Actions: \( w_i \), or work
  \( l_i \), or leisure
  \( m_i \), or military activity

• Constraint: \( T_i = w_i + l_i + m_i \)

• Payoffs to \( i \): \( U_i = U_i(Y_i, l_i) \) where
  \( Y_i = f(w_i) + g(m_i)f(w_j) \)
Repeated interaction
With Repeated Interaction can have political order

• In repeated interaction, can play punishment strategies

If one person steals at t=0,

Then other can choose to punish:
E.g. “Grim trigger”
For t=1,2,...,∞, m_j>0.

• If future losses given sufficient weight, then m_i=0, at t=0

• This claim follows from the “folk theorem” of repeated games
Yields Following Trespass
As An Africanist, I Liked That

Provided an underpinning for one of the great contributions from African studies:

Evans-Pritchard’s, “The Nuer”
The Six Provinces of Southern Sudan

Source: FEWS
FEWS, September 1997
Revised by OFDA 1999
The Nuer LOVE Cattle
They covet cattle, E-P noted. But they do not steal each others’

Why?
NOT because they have chiefs
But: because they have deterrence
Return to the game
Yields A Structure of Payoffs

- Payoffs
- Defection
- Living Peacefully
- Punishment phase
- Time
Shadow of the future
We liked that ----

• Had a model

• Had a relevant case – a canonical one

• But: Troubling thought – and therefore more Tuesdays with Avner
What if Development Took Place: What if economic growth?

Defection

Payoffs

+ 0 -

Increment of value

Punishment phase

Time
Examples

• Diamonds

• Oil

• Foreign aid

• Drugs
Therefore we looked at two other equilibria.

Neither first best. But:

- One with peace
- One with prosperity
Peace

- $m_i = 0$

- Implies:

  $T_i = w_i + l_i + m_i$

- Or that better to be poor
Prosperity

• $f(w_i) \uparrow$

• Implies

\[
T_i = w_i + l_i + m_i
\]

• Or that better to be prepared to fight
Think what this implies

Demilitarization

Prosperity
People Like Both

Demilitarization

Prosperity
Look at the Layout

Demilitarization

#1: $m_i$ going to 0

#2: $f(w_i)$ increasing

Ideal point

Prosperity
Imply Political System (Statelessness) Constrains Level of Welfare

Demilitarization

#1: \( m_i \) going to 0

#2: \( f(wi) \)

Ideal point

Prosperity
One Implication

• Demand for change in political institutions

• Demand for the state
Examples

• 12\(^{th}\) Century

• Rule by Families
  – Rise of Prosperity
  – England-France
More Tuesdays with Avner

Thinking about the state
Our strategy

- Posit a 3\textsuperscript{rd} Actor
  - Call this actor G
- Also values income and leisure
- Doesn’t work for a living
  - Rather: income from m
  - That is: from the use of force
- G a specialist in violence
First Question We Asked

• Are there conditions under which a specialist in violence will choose to use force to protect rather than prey upon private citizens?

OR

• Are there conditions under which will promote the production of wealth rather than secure its redistribution?
2nd Question

• Are there conditions under which private citizens will choose to put down their arms and refrain from raiding; pay taxes; and devote their time to production and leisure?
Political order

- When both the government and the citizens choose those actions
  - Specialist in violence: Protection
  - Citizens: Setting aside arms
- Note stress on choice
The State

When those choices prevail in equilibrium

can say there is a state.
Quickly

• Three actors

• Again repeated play

• The “punishment phase”
  – Specialist in violence turns predatory
  – Citizens resume the use of arms
  – Result: High insecurity – and low income
Look at the problem from the point of view of G
(Some of) The conditions for $G$ to Adhere to the Equilibrium Path

- Conditions on tax revenue
  - Not too high
  - Not too low
- Conditions on discount rate
  - High levels of patience
- Conditions on payoffs off the equilibrium path
Payoffs

Time

Temptation

Tax revenues

Punishment phase – state failure
Note

• These are the conditions under which a state becomes possible.

• These conditions also represent the conditions under which states will fail.
Order

I. Background

II. Thinking – or Tuesdays with Avner
   A. Stateless societies
   B. Societies with states

III. Applying, or Returning to Africa
Some “Facts”

• 46 countries 16 years (1970-1995)

• Indicator: Report of Militias
Revenues
Figure 6.1: Government Revenues

Revenues from Trade by Year

Growth of Government Revenues by Year

- Percent Government Revenues
- Rate of Growth

year

- 1970
- 1975
- 1980
- 1985
- 1990
- 1995

95% CI Fitted values

Figure 6.1: Government Revenues

Revenues from Trade by Year

Growth of Government Revenues by Year

- Percent Government Revenues
- Rate of Growth

year

- 1970
- 1975
- 1980
- 1985
- 1990
- 1995

95% CI Fitted values
An Example

Figure 6.2: Fall of Government Revenues, Sierra Leone
Discount Rate

• Ability to be patient
<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
<th>Duration</th>
<th>Election</th>
<th>Outcome: Incumbent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>Feb-90</td>
<td>1 week</td>
<td>Feb-91 yes</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mar-96 yes</td>
<td></td>
</tr>
<tr>
<td>Congo</td>
<td>Feb-91</td>
<td>3 months</td>
<td>Aug-92 yes</td>
<td>√</td>
</tr>
<tr>
<td>Gabon</td>
<td>Mar-90</td>
<td>3 weeks</td>
<td>Dec-93 no</td>
<td></td>
</tr>
<tr>
<td>Mali</td>
<td>Jul-91</td>
<td>2 weeks</td>
<td>Apr-92 yes</td>
<td>√</td>
</tr>
<tr>
<td>Niger</td>
<td>Jul-91</td>
<td>6 weeks</td>
<td>Feb-93 yes</td>
<td>√</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>Aug-91</td>
<td>2 months</td>
<td>Dec-91 no</td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>Aug-91</td>
<td>7 months</td>
<td>Dec-92 yes</td>
<td>√</td>
</tr>
<tr>
<td>Togo</td>
<td>Aug-91</td>
<td>1 month</td>
<td>Aug-93 no</td>
<td>√</td>
</tr>
<tr>
<td>Zaire</td>
<td>Aug-91</td>
<td>1 year</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>CAR</td>
<td>Oct-91</td>
<td>2 months</td>
<td>Aug-92 yes</td>
<td>√</td>
</tr>
<tr>
<td>Chad</td>
<td>Jan-93</td>
<td>3 months</td>
<td>Jun-96 no</td>
<td>√</td>
</tr>
</tbody>
</table>
Party Systems by Period

Graphs by Period

1 = No Party System 2 = Single Party System 3 = Competitive Party System
Figure 6.3: Political Reform and Militarization
And in an environment …

• Minerals

• Gem stones

• Timber

• Petroleum
Time

Payoffs

+ 

0 

− 

Temptation

Tax revenues

Punishment phase – state failure

Time
Late Century Africa

The Bottom Line: A Perfect Storm

• Revenues:
  – 1973, 1979, 1982
  – Response

• Discount rate
  – External Risk: Debt crisis to Fall of Communism
  – Internal Risk: Political Reform – the Curse of Democratization
    • Zambia
    • Kenya
    • Togo
    • Rwanda

• In an environment where punishment phase not unpleasant
Estimation Problems

• Sample bias
• Time Series with limited Dependent Variable
• Endogeneity
• Time dependence
• Cross sectional dependency
### Probability of Report of Militias

<table>
<thead>
<tr>
<th></th>
<th>Pooled Logit</th>
<th>IV Probit</th>
<th>Conditional Logit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>-0.03944</td>
<td>-0.34154</td>
<td>-0.01707</td>
</tr>
<tr>
<td></td>
<td>(-2.04)</td>
<td>(-2.468)</td>
<td>(-0.609)</td>
</tr>
<tr>
<td>Petroleum</td>
<td>-0.00031</td>
<td>0.00061</td>
<td>-0.00079</td>
</tr>
<tr>
<td></td>
<td>(-0.328)</td>
<td>(1.568)</td>
<td>(-0.349)</td>
</tr>
<tr>
<td>No-party system</td>
<td>-0.45859</td>
<td>-0.48382</td>
<td>-0.7877</td>
</tr>
<tr>
<td></td>
<td>(-1.166)</td>
<td>(-4.272)</td>
<td>(-1.616)</td>
</tr>
<tr>
<td>One-party system</td>
<td>-1.0167</td>
<td>-1.49197</td>
<td>-2.1664</td>
</tr>
<tr>
<td></td>
<td>(-2.004)</td>
<td>(-3.743)</td>
<td>(-4.071)</td>
</tr>
<tr>
<td>Privileged region</td>
<td>1.4032</td>
<td>0.69273</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.491)</td>
<td>(2.858)</td>
<td></td>
</tr>
<tr>
<td>President from non-privileged</td>
<td>-0.56693</td>
<td>-0.40507</td>
<td>-0.80671</td>
</tr>
<tr>
<td>region</td>
<td>(-1.679)</td>
<td>(-2.396)</td>
<td>(-2.027)</td>
</tr>
<tr>
<td>Neighbor average</td>
<td>0.09183</td>
<td>0.16148</td>
<td>-0.05167</td>
</tr>
<tr>
<td></td>
<td>(1.401)</td>
<td>(2.758)</td>
<td>(-0.595)</td>
</tr>
<tr>
<td>Number observations</td>
<td>1048</td>
<td>1012</td>
<td>813</td>
</tr>
</tbody>
</table>