How Does Repression Work?

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Questions Motivating the Work: Protest

• “Repression works” vs. “repression backfires, causes more resistance”
• Problem of radicalization: does repression make people more radical?
• Cycles of protest: does repression explain the decline of protest?

Questions Motivating the Work: Crime & Policing

• Why does incarceration keep going up?
• Why has massive incarceration not led to an end to crime?
• Dynamics of the drug war

Value of Formal Models

• Specify exactly how you think a process works
• Quickly reveal ambiguity of words like “affects,” “curvilinear,” or “interaction”
• Assess models against data in a logic of falsification
  – Not curve fitting
  – Not prove a model correct
  – Determine whether a model is a plausible account of the data

Narrowing the Problem

• Repression is part of the more general problem of strategic interaction: behaviors designed to affect the behaviors of others
• “Soft repression” & discourses can affect behavior
• Disrupting communication & assembly “works” as repression
• This paper will focus on coercive repression

Coercive Repression

• Examples: arrest, incarceration, fines & other economic penalties, injury, death
• Impose costs on people
• Assume the costs are contingently imposed: you only get repressed if you (or other group members) challenge
• (Non-contingent repression happens, e.g. in massive terror or ethnic extermination, is another analysis)
Empirical Data: Examples & Issues

Repression & Repressiveness

- Acts of repression are inherently correlated with challenging acts: more arrests of protesters when there is more protest, more arrests of criminals when there is more crime
- When repression works well, there are few challenges; but this does not mean a system is not repressive
- Acts of repression per acts of challenge is a better measure of how repressive a system is
- Studies of the lagged effects of repression & protest on each other need to address these issues

German Protest Data

- There is a positive correlation between the number of people participating in confrontative or violent protests in a month and the number of people arrested for confrontative or violent protests
- But there is a negative correlation between the number participating in such protests and the ratio of arrests to participants in a given month

Repression of Confrontation & Violence

- Koopmans argues that violence always has high probability of repression, but repression of confrontation rises in a cycle
- Next graph shows smoothed ratio of arrests to participants separately for confrontation & violence
- Across entire series, confrontation & violence equally likely to be repressed early on, repression of both declines then rises again, with violence having higher repression rate than confrontation
- Does not fit Koopmans argument (but he may be right about smaller cycles)
- Arrest probabilities are also volatile and spiky
Repression of Crime

- US has extremely high incarceration rate
- Incarceration has gone up while crime has gone down
- Incarceration is targeted on African Americans
- African American incarceration is tied to drug war
- Possible links to political repression

Crime Trends

Source: Crunching Numbers: Crime and Incarceration at the End of the Millennium by Jan M. Chaiken
Based on Bureau of Justice Statistics data from National Crime Victimization Survey. Figures adjusted for changed methodology, shaded area marks change.
Violent Crime

Wisconsin Prison Admissions by Race

Wisconsin: Total Prison Admissions

White, NH total
Black, NH total
Hispanic total
American Indian Total
Asian Total

Rate per 100,000 population


Wisconsin Total: New Prison Sentences Only

White, NH total
Black, NH total
Hispanic total
American Indian Total
Asian Total

Rate per 100,000 population


Wisconsin Total New Sentences, White NH

Rate per 100,000 population

VIOLENT OFFENSES
ROBBERY/BURGLARY
DRUG OFFENSES
LARCENY/THEFT
OTHER OFFENSES
UNKNOWN

Wisconsin Total: New Sentences, Blacks NH

Rate per 100,000 population

VIOLENT OFFENSES
ROBBERY/BURGLARY
DRUG OFFENSES
LARCENY/THEFT
OTHER OFFENSES
UNKNOWN

Adult Arrest Rates Per 100,000
Average 1998-1999

Madi. PD Dane Cty Milw. PD Milw. Cty

Average 1998-1999

White
Afr. Am.
How Repression Works

- **Incapacitation**: makes it impossible to challenge for a given period. E.g., arrest, incarceration, injury, death.
  - Probability of acting is zero while incapacitated
  - Affects only those directly repressed/punished
- **Deterrence**: makes a person choose not to challenge by increasing potential costs of challenge. E.g., any punishment.
  - Probability of acting is reduced but not zero
  - Can affect bystanders as well as those repressed/punished
- **Backlash effects**: punishment directly or indirectly increases future challenges
  - Punishment creates anger, hostility, rejection: psychological responses
  - Indirect effects may be reducing alternatives to challenges

Modeling Deterrence

\[ c_t = c_{t-1} - \alpha r_{t-1} c_{t-1} \]

- \( c \): probability of a challenge
- \( r \): probability a challenge is met with repression
- \( \alpha \): strength of the effect of repression on challenging
- Note: multiplying by \( c \) makes the effect bigger when the probability is large and keeps the function within bounds

Effect of Deterrence

- If \( \alpha \) and \( r \) are >0, even if they are small, \( c_t \rightarrow 0 \) as \( t \rightarrow \infty \).
- Implies that any ongoing system with any repression and any deterrence effect should have zero challenging.
- To counter this, we need an ongoing process that pushes the probability of challenge back up after deterrence has pushed it down.

Interaction of Benefits and Deterrence

- Challenge (protest or crime) produces some benefit \( b \) with coefficient \( \beta \)
- If \( B=\beta b \) and \( R=\alpha r \), this system goes to equilibrium at \( c=B/(B+R) \)

Success & Deterrence: Stochastic System

- Use a Monte Carlo engine to generate challenge, repression, or success with indicated probabilities
- Repression or success occur only if a challenge has occurred (so the effect of each is also a function of the probability of action, making the calculation of the equilibrium iterative)
- The system produces oscillations around an equilibrium
Repression & Success Interactions

- Figure shows moderate repression & success rates
- When rates of both are high (> .5), the oscillations are faster and the cumulative distribution shows few ripples
- When rates of both are low (< .05), success and repression are rare events producing bursts or crashes of action, long oscillations around the equilibrium, and volatile trajectories that vary greatly within the same conditions
- Repression & success interactions are similar to those for reinforcement & non-reinforcement

Endogenous Repression & Success

- When repression & success are functions of the amount of challenge, the system comes rapidly into equilibrium
- If only repression, equilibrium is 0; if only success, equilibrium is 1
- If both are in the system, the equilibrium is a function of the positive & negative forces
- Stochastic systems go rapidly to equilibrium as well as determinate

Conclusions About Repression & Success

- The stochastic interaction of repression & success at moderate to high levels can produce oscillations around an equilibrium rate of challenging
- When the probabilities of both are low, the trajectories are volatile
- Simple models of repression do not account for cycles or changes in the overall probability of challenging
- Endogenous repression & success whose rates change in response to levels of challenge rapidly produce stable equilibria and cannot account for cycles
Backlash

- Backlash is a psychological response to punishment that increases probability of challenging
- May also be structural: reduced employment opportunities after incarceration

Modeling Backlash

- In a determinate system, backlash operates like success
  \[ c_t = c_{t-1} + \beta r_{t-1} (1-c_{t-1}) - \alpha r_{t-1} c_{t-1} \]
- Here \( \beta \) is the product of the extent to which repression increases opposition and the extent to which opposition increases the probability of challenging
- The equilibrium here is \( \beta (\alpha + \beta) \). E.g. if both \( \alpha + \beta = .5 \), the equilibrium is .5.

Backlash: Stochastic Models

- Is oppositionalism temporary or permanent?
  - If it is a permanent attitude that, once established by repression, never goes down then
    - Oppositionalism always goes to 1 in the face of repression
    - It goes to 1 faster the higher the repression rate
    - As soon as oppositionalism =1, the probability of challenge oscillates around a high equilibrium

Figure 6a. Backlash as permanent attitude change promoting protest. Probability of repression is 1, effect coefficients are all 1, equilibrium probability is .62

Figure 6b. Backlash as permanent attitude change promoting protest. Probability of repression is .5, equilibrium probability is .73

Figure 6b. Backlash as permanent attitude change promoting protest. Probability of repression is .1, equilibrium probability is .92
Permanent Backlash: Summary

- If repression causes even small permanent increases in oppositionalism, a repression system evolves to one in which the actor has the maximum possible desire to challenge, and even with very high levels of repression, the overall rate of challenging stays very high
- Oscillations around equilibrium balance out quickly to a constant probability

Temporary Backlash?

- Perhaps we could build some kind of decay function on the backlash, but basically as long as the authorities use repression, the backlash will push the probability back up
- Systems with significant backlash will stabilize at fairly high equilibrium probabilities of action

Incapacitation

- Difficult to model, but is an important part of crime control
- Incapacitation pulls the actor out of the system, so s/he cannot commit a challenging act
- The question is whether incapacitation can create feasible regimes
- Initial models assume permanent incapacitation
Incapacitation: Basic Effects

\[ F_t = \text{free population (initial 1, so subsequent values are proportion not incarcerated)} \]

\[ C_t = \text{crimes at time } t \]

\[ P_t = \text{probability of a free person committing a crime} \]

\[ I_t = \text{proportion of initial free population newly incarcerated at time } t \]

\[ C_t = P_t F_t \] (crimes = probability times those free)

\[ \Delta C_t = P_{t+1} F_{t+1} - P_t F_t \]

Making substitutions and simplifying,

\[ \Delta C_{t+1} = -I_t P_t + P_t (F_t - I_t) \]

Detail on Substitutions & Simplifying

\[ \Delta C_{t+1} = P_{t+1} F_{t+1} - P_t F_t \]

\[ F_{t+1} = F_t - I_t \]

\[ P_{t+1} = P_t + \Delta P_t \]

\[ \Delta C_{t+1} = \Delta P_t (F_t - I_t) - P_t I_t \]

\[ \Delta C_{t+1} = \Delta P_t (F_t - I_t) - P_t I_t \]

Incapacitation Affects Challenges If . . .

\[ \Delta C_{t+1} = -I_t P_t + \Delta P_t (F_t - I_t) \]

\[ \Delta C < 0 \text{ if } \Delta P < 0; \text{ incapacitation reduces challenges if incapacitation reduces the probability of free people committing challenging acts} \]

\[ \Delta C < 0 \text{ if } \Delta P > 0 \text{ and } \Delta P_t (F_t - I_t) < I_P; \text{ incapacitation reduces challenges if the positive change in probability times the population still free is less than the probability times those newly incapacitated} \]

\[ \Delta C > 0 \text{ if } \Delta P > 0 \text{ and } \Delta P_t (F_t - I_t) > I_P; \text{ incapacitation increases challenges if the positive change in the probability times the population still free is greater than the probability times those newly incapacitated} \]

Net Effects of Incapacitation on Challenges

- Depends on whether there is a backlash effect on the probability of challenging that (net of any deterrence effect) is greater than the effect of removing challengers from the population
- However, this is only for one iteration at a time
- It does not consider long-term system effects

System Effects of Incapacitation

- To incapacitate members of a population, you have to either kill or incarcerate them
- If the proportion of the population offering challenges is very small and the backlash effects are small relative to the deterrent effects, incapacitation can work
- But if challengers are a significant proportion of the population and there are significant backlash effects, an incapacitation system rapidly can become impossible or genocidal, involving the incarceration of annihilation of a majority of the population

A model of incapacitation

- This model is “hot off the presses,” still being debugged
- But seems to reveal some of the problems with incapacitation models
- Deterrence is modeled as proportional to the ratio of those “caught” to those challenging
- Backlash is modeled as proportional to the proportion of the initial population who have been incapacitated
- NOTE: Backlash & deterrence affect only those who remain free/alive
Result 1: Incapacitation works when there is zero backlash effect and a positive deterrence effect

Challenging declines to zero and most of the population remains free.

Result 2: If there is no deterrence effect, incapacitation will gradually take out the entire population.

The challenging rate remains constant, challengers are eliminated from the population.

Result 3: Even a small backlash effect (here .03 compared to .11 for deterrence, but .01 and .5 show the same pattern) and no limit on state repressive capacity rapidly has the entire population incarcerated or dead.

Free population falls rapidly to zero and challenge probability rises to an equilibrium higher than the initial probability.

Result 3, continued

Challenges first rise, then fall; everyone who challenges gets incapacitated.

Regime Constraints

- The question then becomes, what are the constraints on a regime’s capacity to incapacitate its entire population? (Or an entire subpopulation.)
- I have not yet found plausible models for constraints of incapacitation, but there obviously have to be some.

Summary

- Repression can eliminate challenge through deterrence only if there are no positive benefits of challenge or backlash effects.
- Repression as deterrence in interaction with the positive benefits of challenge and/or backlash effects tends to produce oscillations around equilibrium probabilities of action.
- Repression as incapacitation can work only if there is also deterrence and there are no backlash effects.