

Government 1521
Bureaucratic Politics:
Government, Military,
Social and Economic Organizations
D. Carpenter
Lecture 13: Behavioral Rationality, Structure,
and the Complex Politics of Budgeting

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Continuation of
Lecture 12: Recruitment and Retention,
Selection and Socialization

Kaufman's Puzzle
"A tacit assumption in much administrative literature is that what the top officers of an organization want, the organization does, and that this is too routine to warrant study. Perhaps this is frequently the case. But often it is not, as any military commander whose troops have broken and run from fire, or any labor union leader who has been embarrassed by a wildcat strike, or any department head whose program has been sabotaged by a recalcitrant bureau chief, or any law enforcement officer whose subordinates have been found guilty of corruption, or any of dozens of other kinds of "leaders" chagrined to discover their "followers" are no longer following, can sadly testify. It does not "just happen" that the daily decisions and actions of the lower echelons make concrete realities of policy statements and declared objectives of the leadership; this takes planning and work.

Challenges to Unity

1. Complexity of Job – fire control, timber management, local politics, recreation and land uses, range management
2. Time in the Field, Distance
3. Purposive Organizational Decentralization
4. Inconsistent Directives
5. Local Capture
6. Personal Preferences of Field Officers

“Pre-Forming” Decisions

Ex Ante influences:

1. Rules and budgets as Weberian controls on behavior.
2. Authorization, Direction and Prohibition.
 - *Forest Service Manual* (FS “bible”)
3. Budget-making as behavioral constraint (compels planning and tradeoffs before the fact).
4. Operations manuals; adm “bibles” (*Forest Service Manual*). (March-Simon: standard operating procedures formalized and universally distributed).

Ex Post Constraints

Can also sanction behavior after the fact, affecting expected values of behavior before the fact.

1. Mandate encourage use of “diaries” (neo-Weberian records keeping)
2. Rotation of personnel, to avoid local-level capture, increase loyalty to central adm.
3. Application or distribution of penalties and sanctions (random or known/certain)

Recruitment and Retention

Biggest influence is not rules, penalties, but psych dispositions of Rangers.

Selection/Recruitment: "Forest officers are selected in a fashion that winnows out many of the men who probably lack the inherent predisposition to conform to the preformed decisions of the Forest Service, and that guarantees at least a minimum of technical competence." [198]

Socialization and retention: Within-bureau apprenticeship.
"...vacancies are filled by promotion and transfer and never (for all practical purposes) by lateral entry." [180]

Profession-Specific Recruitment

"One of the principal means to this end [the homogenization of professional personnel by the Forest Service] is the use of professional foresters in all types of specialized jobs. Not only are line officers, timber management staff men, and fire control specialists all foresters, as one would expect, so are the specialists in range management (who could be trained in animal husbandry as logically as in forestry), wildlife management (who could be biologists), personnel management, administrative management (whose academic training could well be in public administration or industrial engineering), and in other functions. Probably 90 per cent of the professional men engaged in the administration of the national forests are foresters." [214]

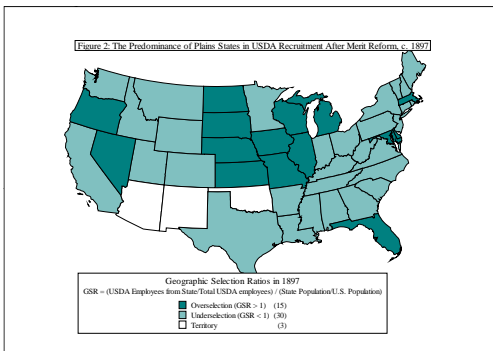
Selection and Socialization

Kaufman on selection and socialization:

...the operations of the external influences may depend on successful manipulation of the personal preferences and perspectives "inside" the Rangers. *Systematic selection and training of personnel, and procedures for building identification with the Forest Service, increase Ranger receptivity to the communications of the central office.* They broaden what Simon has called the zone of acceptance, inculcating in field officers the predisposition to respond primarily to cues and signals from the leaders of the agency, and to resist conflicting influences from other sources." [229; emph added]

Selection and Socialization:
Analogues from Other Organizations

1. U.S. Army – selection from military academies, ROTC; socialization via training and other schools
2. USDA – selection from farm backgrounds and land grant colleges
3. University faculty – select from Ph.D. programs; all go through “publish or perish” tenure stage



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Cognitive Process Tradition in Institutional Political Science

Older, has roots in Simon, March, Lindblom's muddling through, and others

Seminal (highly technical) article: John Padgett [Harvard, now Chicago], "Bounded Rationality in Budgetary Research," *American Political Science Review* (1980).

"Process Incrementalism"

Each year's categorical budget is a function of

- (1) Last year's
- (2) A "pad" (given level of increase)
- (3) Random noise

Result: Normal distribution of cross-program change. Invokes **Central Limit Theorem** from statistics.

Serial Judgment

Suppose that decision is broken down into simple components, either cognitively (within brain) or organizationally (among people), or both.

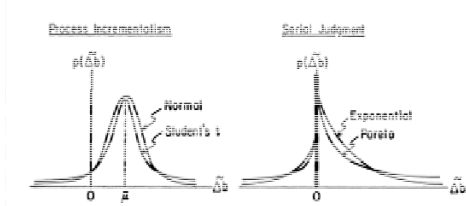
1. Direction of Search. First decide whether this program is to be (a) cut, (b) maintained, (c) hiked.
2. Search for Alternatives. Then given 1, imagine possible cuts "coming at" decision maker, only some of them being noticed as salient

Serial Judgment

3. Model choice as compound (result of decisions that are program-specific as well as governed by the current fiscal climate).

Result: Double-exponential or Pareto distribution. Higher peaks, stretched tails. More “no change” than normal would expect, but also more extreme change than normal would expect.

Alternative Distributions of Budget Change under Two Models of Incrementalism: Predicted **Leptokurtosis**



Source: Compiled by the author.

Figure 2. Graphical Display of Incrementalism versus Serial Judgment Distributional Profiles

Jones and Buamgartner:
Can this approach be extended to other budgets and other political processes?

Data and images courtesy of Bryan Jones and Frank Baumgartner

to be used only for this lecture

Three types of social processes

- *CLASS I*: Adaptable social processes, characterized by rapid adjustment to inputs into the system. Signature output distribution is Normal
- *CLASS II*: Intermediate processes, characterized by moderate levels of stickiness and limited cascading. Signature distribution is exponential.
- *CLASS III*: Social processes characterized by stickiness and cascading (overcoming friction). Signature distributional pattern is Paretian/power function.

Class I: Theories

- Efficient Market Thesis.
 - Markets are a random walk (because rational traders extract all incoming information in an anticipatory manner).
 - First differences are Normally distributed.
- Incremental Budgeting.
 - This year's agency budget is last year's plus an increment drawn randomly.
 - First differences are Normally distributed.

Incremental Budgeting

This year's budget is last year's budget plus an increment negotiated among affected interests.

$$P_t = P_{t-1} + \epsilon_t$$

or

$$(P_t - P_{t-1}) = \epsilon_t$$

$$\epsilon_t \sim \text{IID}(0, \sigma^2)$$

Incremental Budgeting with Upward Drift

$$P_t = P_{t-1} + kP_{t-1} + \epsilon_t$$

(Change is proportional to the size of the budget.)

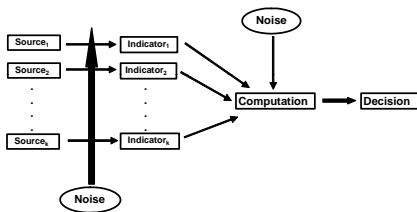
$$P_t - P_{t-1} = kP_{t-1} + \epsilon_t$$

$$(P_t - P_{t-1}) / P_{t-1} = k + \omega_t$$

where $\omega_t = \epsilon_t / P_{t-1}$

(Proportional change in budgets is distributed Normally around a constant proportion—the 'upward drift'.)

Implicit Index Model



Implicit Index Model: proportionate processing implies Normality by the CLT

$$D_t = \omega_{1t}I_{1t} + \omega_{2t}I_{2t} + \dots + \omega_{kt}I_{kt} + \xi_t$$

- D_t is the decision at time t
- I_{kt} is the k th indicator of the state of the world
- ω_{kt} is the weight for the k th indicator
- ξ_t is a random error component

Incremental Updating in the Proportionate Information Processing Model: First differences are Normal (and equivalent to updating from the previous time period)

$$D_t = \sum \omega_{jt} I_{jt} + \xi_t$$

$$D_{t-1} = \sum \omega_{jt-1} I_{jt-1} + \xi_{t-1}$$

$$(D_t - D_{t-1}) = \sum \omega_{jt} I_{jt} - \sum \omega_{jt-1} I_{jt-1} + (\xi_t - \xi_{t-1})$$

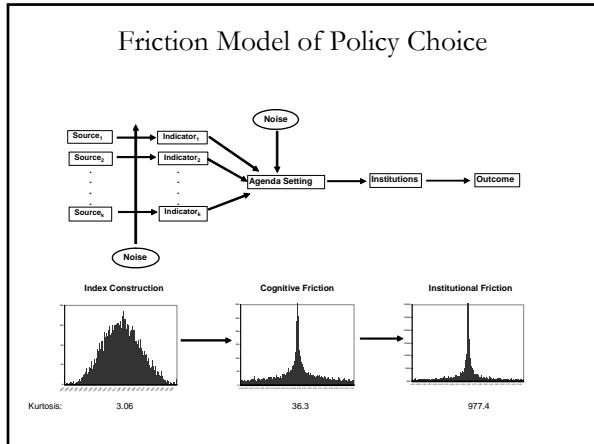
Class III

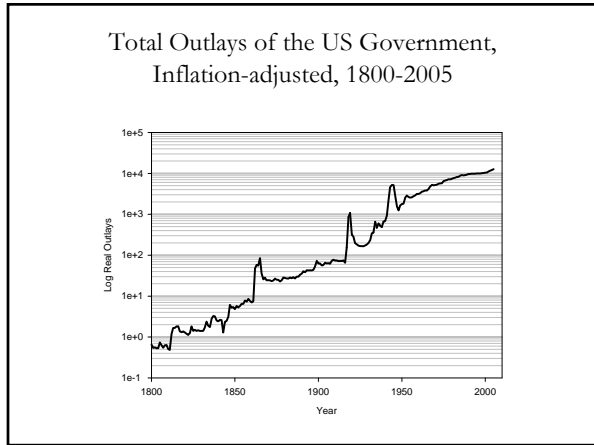
- Result when costs of change are high
 - Institutional friction
 - Cognitive friction
- Somehow costs are overcome
 - Error accumulation lead to disjoint and episodic corrections
 - Cascades

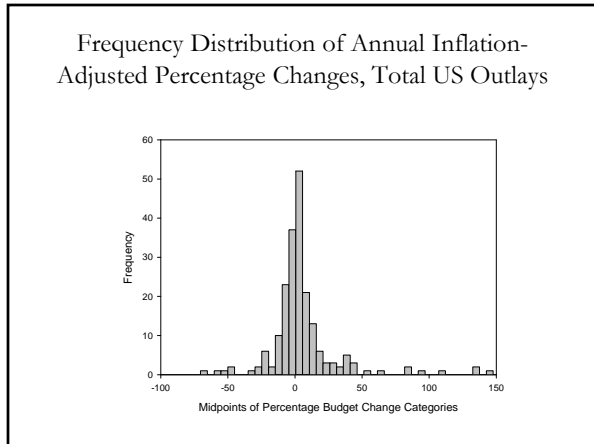
Disproportionate Information Processing occurs when priorities are set through the allocation of attention.

Overweighting a single attribute in a decision-making situation leads to non-Normal change distributions; for example:

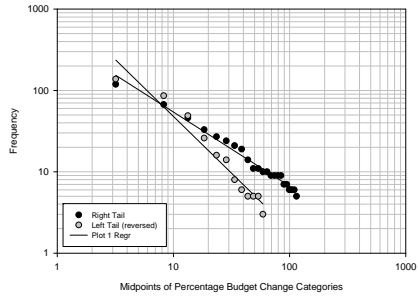
$$D_t = .8I_{1t} + .2I_{2t} + \dots + 0I_{kt} + \xi_t$$



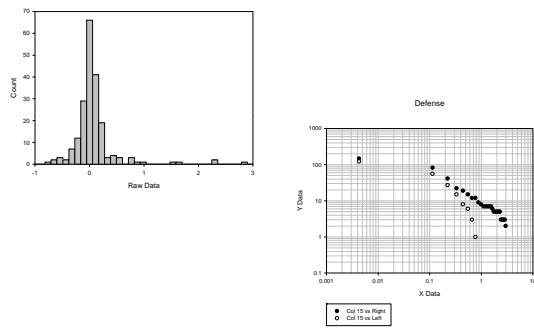




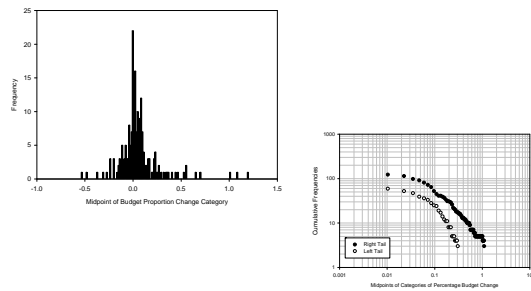
Log-Log Plot, Frequency Distribution of Inflation-Adjusted Annual Percentage Changes, US Budget Outlays



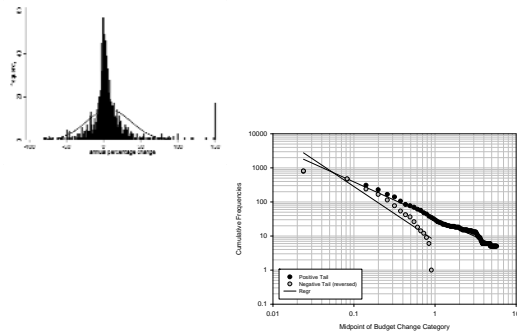
US Real Outlays for Defense, 1800-2004



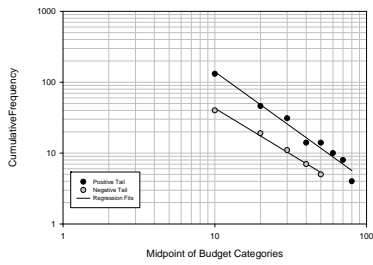
US Real Outlays for Domestic Programs, 1800-2004



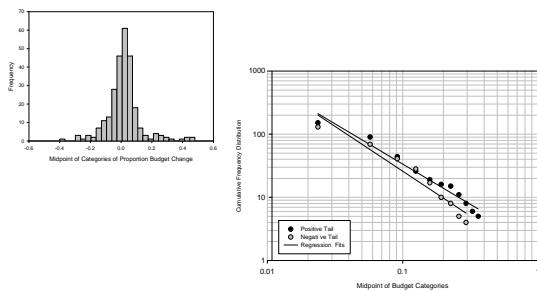
Ten French Ministerial Budgets, 1868-2002.



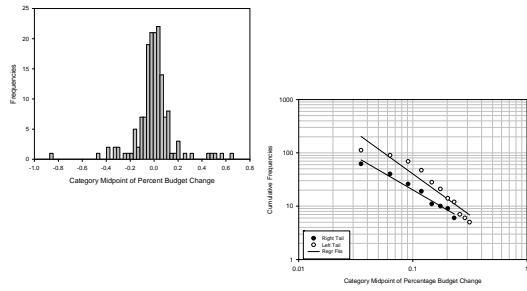
Real Outlays for Belgium, Pooled over Budget Categories, 1991-2000



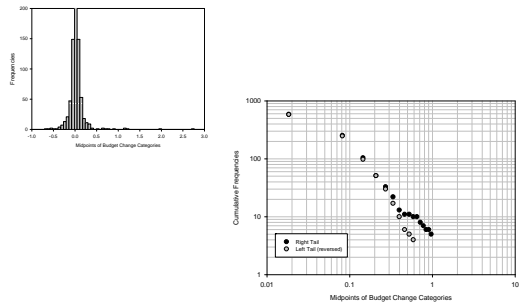
Inflation-adjusted Annual Percentage Change, United Kingdom, Pooled across Budget Categories (1981-1999)



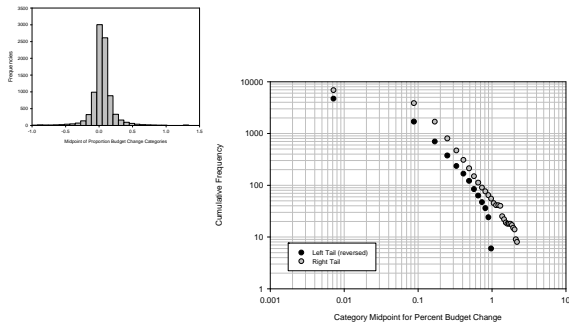
Real Canadian Central Government Outlays, Pooled over Budget Categories, 1991-2000



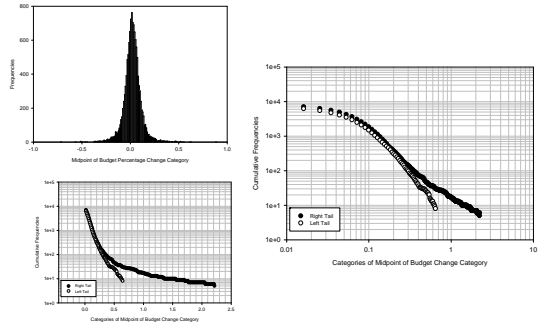
Danish Central Government Real Outlays, Pooled over Budget Categories, 1971-2003



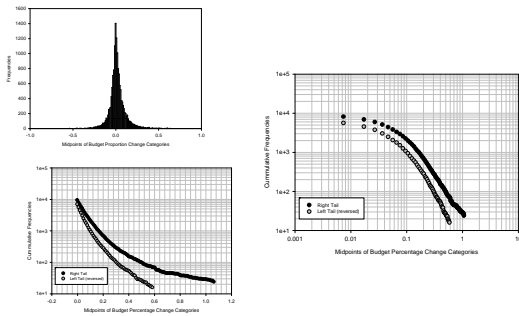
Pooled Inflation-adjusted US State Outlays, 1984-2002



Real Outlays, State of Texas School Districts, 1989-2000



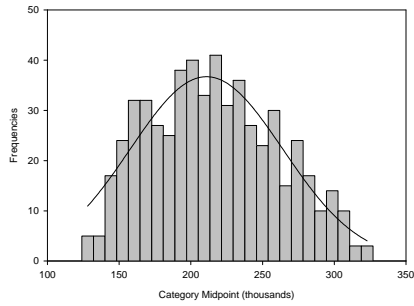
Real Outlays, Danish Local Governments, 1991-2005



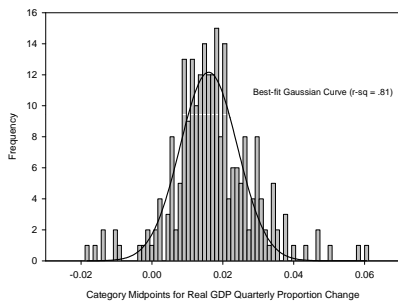
Class I Adaptable Information-Processing Systems

- Are really found in social systems
- Usually lots of 'parts' with minimal friction and lower incentive for 'monitoring and mimicking' and cascading

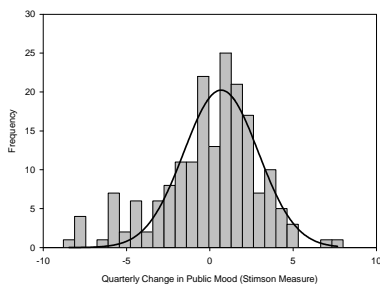
Monthly Change in US Population, 1959-2005



Inputs into the System Are Not Punctuated:
Quarterly Percentage Change in Real GDP, 1947-2005



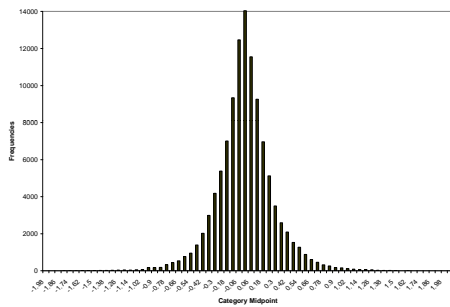
Public Opinion General Mood (Stimson Measure),
1958-2004



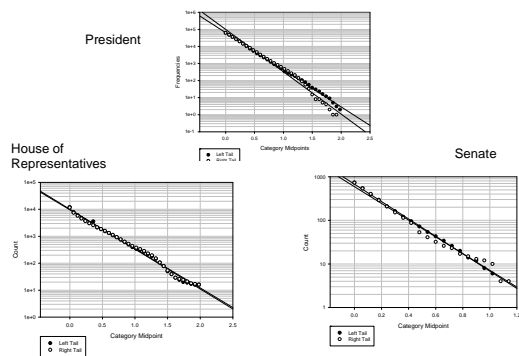
Class II: Intermediate Social Processes

- Characterized by stickiness mostly involving cognitive processing, not institutions
 - Decision and transaction costs are low

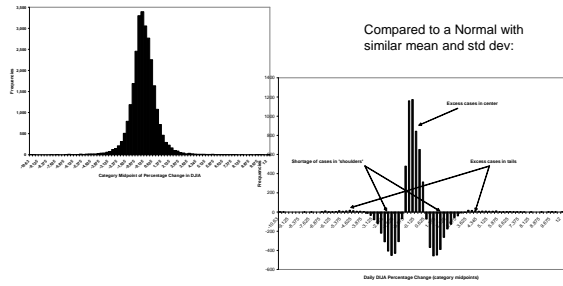
Election to Election Percentage Change in Presidential Vote Margin, by US County



Elections are Exponential

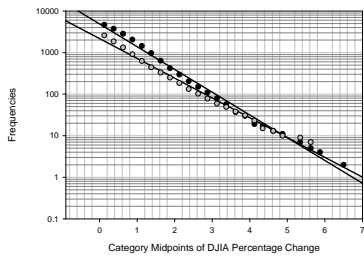


Markets are not Normal



But they may be Exponential, not Paretian

DJIA Daily Percentage Returns, 1896-1921



How Americans Rate their President (1952-2001)

