

## Logrolling, May's theorem and Bureaucracy

	Issue	
	A	B
V1	-2	-2
V2	5	-2
V3	-2	5
Maj voting	Rejected	Rejected
Welfare	-1	-1

Note: A rejection of an issue turns signs around! The two issues are independent.

Logrolling: Three alliances can be made:

Coalitions	A	B	Welfare reached			Sum	Defection proof
			V1	V2	V3		
1: V1 & V2	yes	no	+0	+7	-7	0	yes
2: V1 & V3	no	yes	+0	-7	+7	0	no
3: V2 & V3	yes	yes	-4	+3	+3	+2	no

Which coalition is most likely: Either 1 (defection proof) or 3 (biggest interest)

PS: Colemans argument is that 3 is the most likely, due to biggest interest. But if only the players themselves know their welfare, then! All three coalitions are equally likely. Also, permanent coalitions, and cycling coalitions. Is defection a serious risk? Only if the three voters never meet again and have no reputation to guard.

Does logrolling increase aggregate welfare? In the example it does not decrease welfare, however it is easy to make examples where it does. It is difficult in the cases where the coalition of the most interested is formed! If all coalitions are between the most interested parts then logrolling does increase welfare! I think this is the general result.

Monday: Niels Bruun Christensen: Simulation of vote outcomes

### Mays theorem.

Consider decision function  $D(V_1, \dots, V_n)$ . Each has one vote  $D_i = +1, 0, -1$

Majority voting is:  $D(D_1, \dots, D_n) = \text{Sum of } D\text{'s}$  and: (a) If  $\text{sum} > 0$ ,  $D = +1$ . (b) If  $\text{sum} = 0$ ,  $D = 0$ . (c) If  $\text{sum} < 0$ ,  $D = -1$ .

Four conditions:

- 1 Decisiveness. The group decision is well defined and has same result for any given set of preferences.
- 2 Anonymity. The decision is independent of any permutation of the preferences.
- 3 Neutrality. If A defeats B, and all individuals order C and D as A and B then C defeats D.
- 4 Positive responsiveness: If D is 0 or 1 and one individual changes his vote from -1 to 1 or from 0 to +1, then  $D = 1$ .

The theorem: A group decision is majority voting if and only if it fulfill the 4 conditions.

Proof: Majority voting fulfill the conditions. Easy.

Other way: The conditions hold. Prove that it must be majority voting:

1, 2 and 3 must cause: (C) if for decision x between A and B,  $N(+)=N(-)$  then  $D = 0$ .

Assume (C) does not hold: ie that  $D = 1$ , Consider y between C and D where all +'es er -'es and vice versa. By neutrality we should get the reverse result. Now reshuffle all voters by anonymity the result should be the same. Hence decisiveness is rejected. That is: (C) must hold.

But then by positive responsiveness if one voter more than 50% is for he is decisive. That is majority voting.

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Does this prove that majority voting is optimal.

Well, it does prove that it has some optimality properties.

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The other extreme: *Unanimity*

Crazy rule, but it is closer to economics and the Pareto principle, and Coase's law. Wicksell.

Problem: For many agents impossible. Manipulation by people, who hide preferences.

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## **Bureaucracy:**

Deep observation: Any human organization has as “internal” goal: *Cost maximization*.

The theory of the firm: Two mechanisms: (1) Owner is residual claimant. (2) Competition + bankruptcy risk. They are turning the internal goal around to: *Cost minimization*

A bureau: Both mechanisms are missing. Hence cost maximization till external constraint.

Firm produces “minimum costs” + “normal profit”. A bureau produces “minimum costs” + “employee rents”. Three very similar theories of bureaucracy:

1. Niskanen’s theory of budget maximization
2. Kornai’s theory of soft budget constraint
3. The theory of rent seeking

Key message of all three theories: The bureaucracy tries to maximize costs till it hits some external constraint: It is set by politicians and voters. In the process it generate extra costs, called rents or *internal rents*.

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## **Detour:**

To turn the agents desire for cost maximization into the society need for cost minimization, some *hard mechanisms* are needed.

Definition: Capitalism is a system where the means of production are privately owned (and decisions are coordinated by the market). Socialism is a system where the means of production are state owned (and decisions are coordinated by planning).

The mechanisms (1) and (2) does work under capitalism, but not under socialism. Here it must be replaced by something else: (3) Plan pressure for growth. (4) Controls: 5 used.

Note under capitalism: the hard mechanisms (1) and (2) are non-state mechanism. Hence the state is the sweetener, softening the hardness of the system. Under socialism the hard mechanisms are state mechanisms. Hence the state is popular under capitalism and unpopular under socialism. Consequently democracy is easy to combine with capitalism, but hard to combine with socialism.

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Empirics: Find cases where the same good is produced on private market and by the public.

Many cases at the border between the sectors. Compare market price of good with public production costs.

400 studies done, 4 from Denmark: Ole P Kristensen, Allan Würtz, Henrik Christoffersen & me (2), Jens Blom Hansen. Typical results: 20 - 30% more expensive in public. Hence approx 30% rents.

The two basic theories of bureaucrats:

**Servants:** passive machinery serving the politicians serving the people. Demand for public goods transformed into production, by political markets and machine-like servants.

**Agents,** who maximize costs till they hit external limit.

Both views are obviously parts of the true picture, that is why rent seeking is slow. Kornai stresses that it takes time, but that it will eventually happen.

Mechanisms: To maximize necessary to hide costs, ie to make cost comparisons difficult. Hence, bureaucracies do their utmost to keep output qualitative. The primary schools fight against marks, and against publication of marks – it has even build an anti-mark ideology – for idealistic reasons and for selfish reasons.

PS: Eskild Heinesen's and Peter Nannestad's School-papers.

Output = a + b Inputs + c Background.

Result: Input has very weak effect on output.

Case: Pupil/teacher-ratio no effect within range. Teachers beliefs vs empirical studies.

Case: 1975-90 40% drop in enrolment, no fall in input. Hence input per pupil 40% up. Effect ?

Case: PISA for all OECD. Denmark top in input, middle in output.

PS: Renovation. Public interest. Where is the externality?

MoF etc always try hard to make the various bureaucracies reveal the true costs, allowing benchmarking, while the bureaucracies try to beat these efforts.