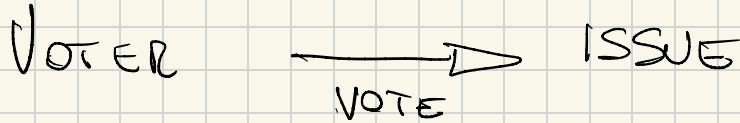


# CS-234 - WEEK 7

# Decision Making Systems

## DIRECT DEMOCRACY

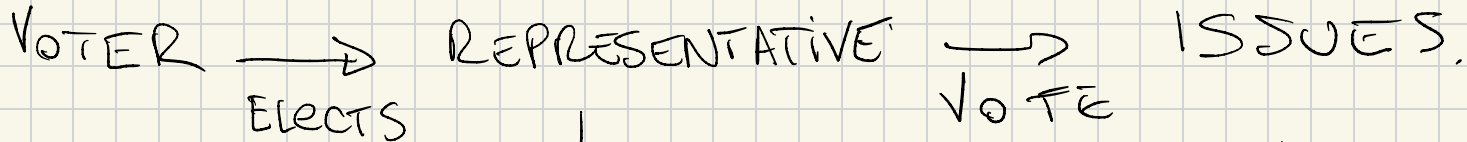


- + CONTROL.
- + TRANSPARENCY.
- + FAIRNESS.

+ It works  
with small cohesive  
groups.

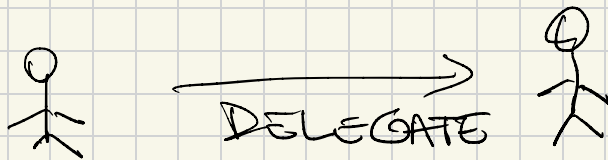
- LACK OF TIME.
- LACK OF CONFIDENCE.

## REPRESENTATIVE DEMOCRACY.



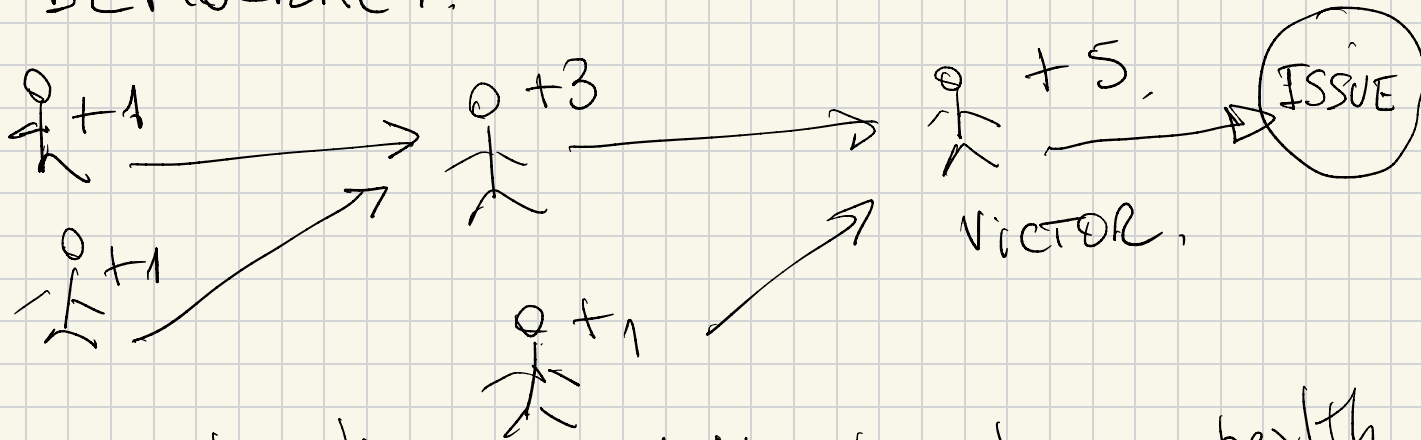
- + REPRESENTATIVES / COMMITTEES  $\rightarrow$  Seasoned experts.
- LESS TRANSPARENT / LESS CONTROL
- $\rightarrow$  WEAKLY DEMOCRACY.

# PROXY VOTING.



- + Absence.
  - COERCION
  - FRAUD
  - VOTE SECRECY ??
- RISKS

# LIQUID DEMOCRACY.



+ Delegation is transitive.

+ It is possible to revoke.

+ Meritocratic. → health.  
+ Policy specific → environment

PRIVACY —

CONUNDRUM.  
for vote  
visibility

TRANSPARENCY

LIQUID DEMOCRACY GOOGLE.

3 YEARS PILOT 2012 - 2015.

Golden Rule for liquid democracy

↳ "If I give you my vote, I have to see what you do with it!"

VOTER  
LEGITIMACY

→ voter identity  
is verified,  
(GOOGLE CORPORATE NETWORK)

BIAS

PAPER  
BALLOTS

VS

SCREEN

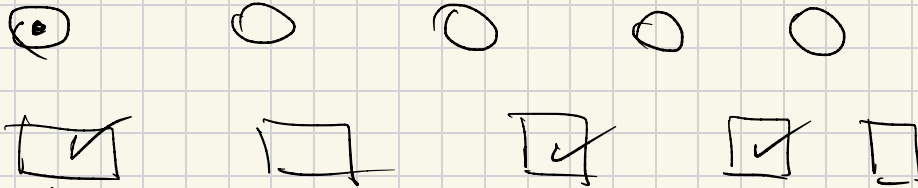
↳ shuffle  
candidate order

# VOTING STYLE

YES/NO

YES       NO.

PLURALITY  
(MAJORITY > 50%)  
APPROVAL -



↑ YES/NO per candidate.

↓ AVOID

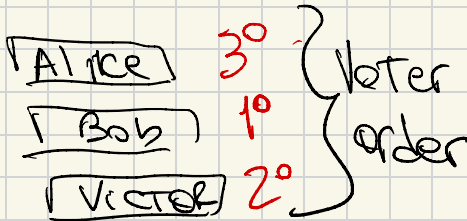
WASTING NOTES

40% / ~~60%~~      WINS

first → 2 candidates

40% / 30% / 30%      WINS  
second → 3 candidates

RANKED



RANGE  
(SCORE)



# CONDORCET METHOD.

→ Candidates are compared, pairwise.

VOTER 1

A

B

C

VOTER 2

C

A

B

VOTER 3

B

C

A

A  $\succ_M$  B

B  $\succ_M$  C

~~A  $\succ_M$  C~~

A  $\succ_M$  B  $\succ_M$  C  $\succ_M$  A

CONDORCET WINNER.  
does not always exist.

NO TRANSITIVE -

# TALLY METHOD

PER OPTION / SUMMATION.  
VOTE

SCORE

- MAX SCORE  $\rightarrow +1$  [TWO SCORE.]
- AVG. SCORE.

BORDA  $\rightarrow$  RANKS ARE WEIGHTED.

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- BINDING  $\left\{ \begin{array}{l} \text{is it binding?} \\ \text{is it respected?} \end{array} \right.$

- DISENGAGEMENT