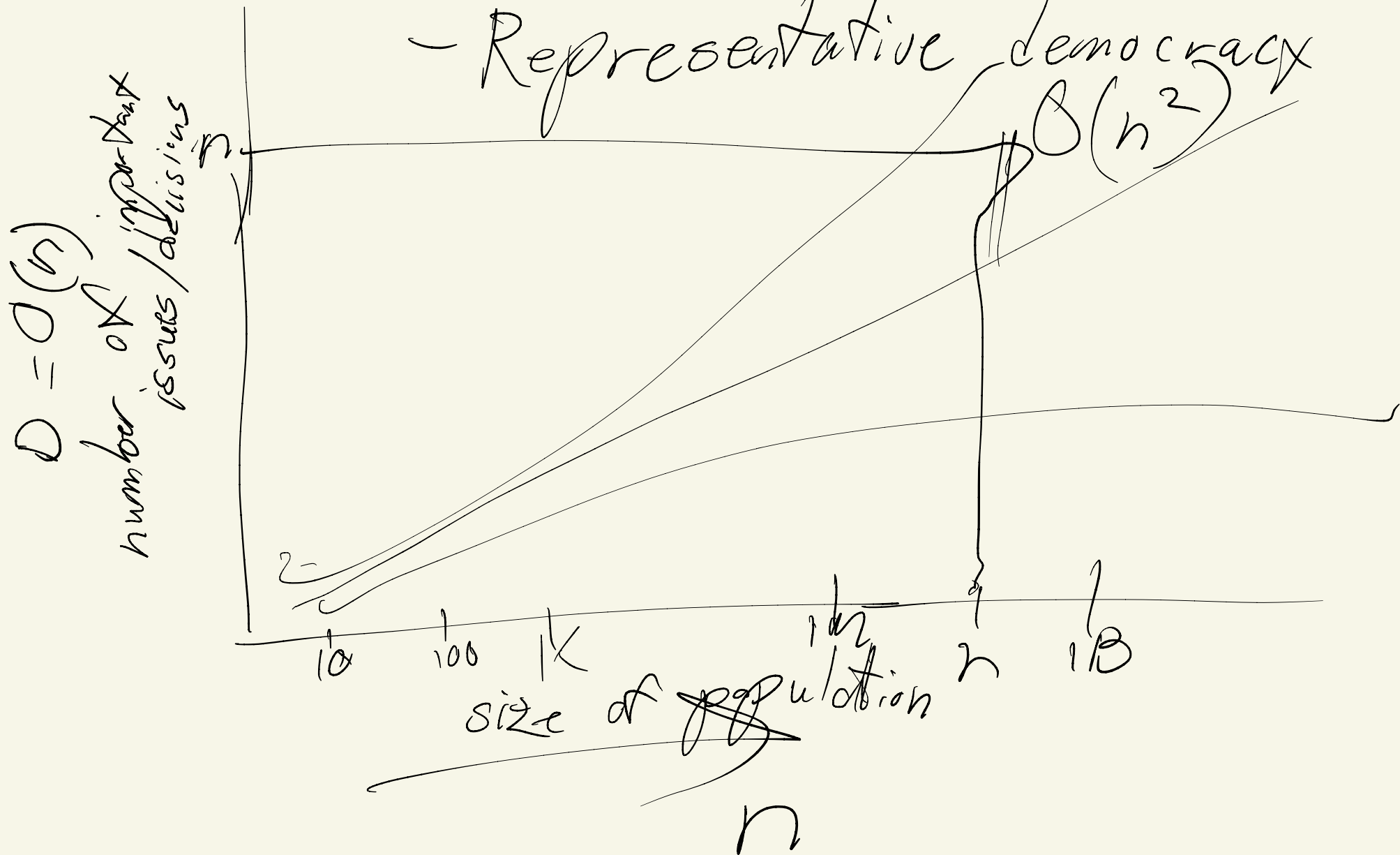# CS-234
Technologies for Democratic society

Fall 2021
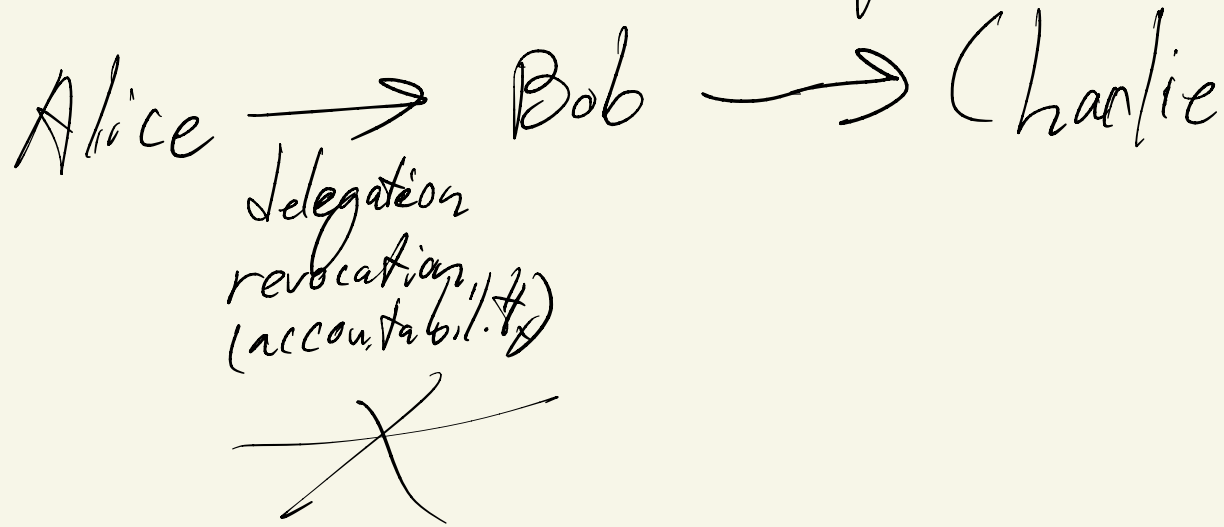
Week 7

Liquid Democracy — why?

Balance:
- Direct democracy $O(n^3)$
- Representative democracy $O(n^2)$

$D = O(n)$

number of important issues / decisions

$O(n^2)$

size of ~~population~~ n

10   100   1K   1M   1B

n

Liquid democracy: the idea

- More <u>flexibility</u> in participation via delegation
  - more individual choice between direct & representative participation

Alice $\longrightarrow$ Bob $\longrightarrow$ Charlie

delegation
revocation
(accountability)

X

Issues / Challenges

- Worst-case scalability challenges
- Super-voters: large concentration of voting power
  "accidental dictators"
- Transitive delegation? good or not?
- Delegation Cycles - "reluctance" parameter
- Complex revocation — complex iterative calculation
  how to choose value
- Granularity, thresholds
- privacy vs transparency