

# Partisan Unsorting

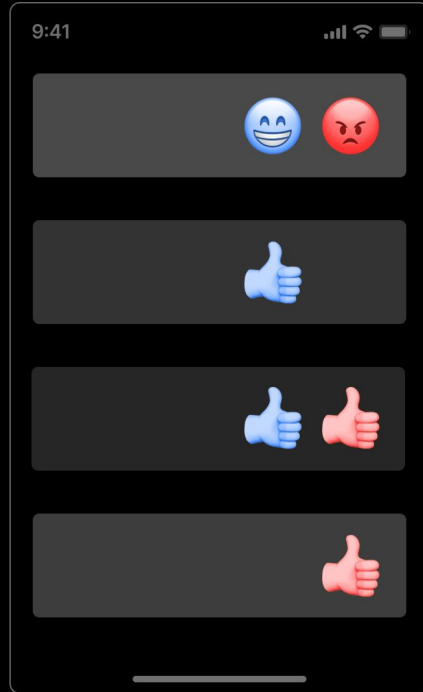
(intuition! arguments! a conjecture!)

Luke Thorburn

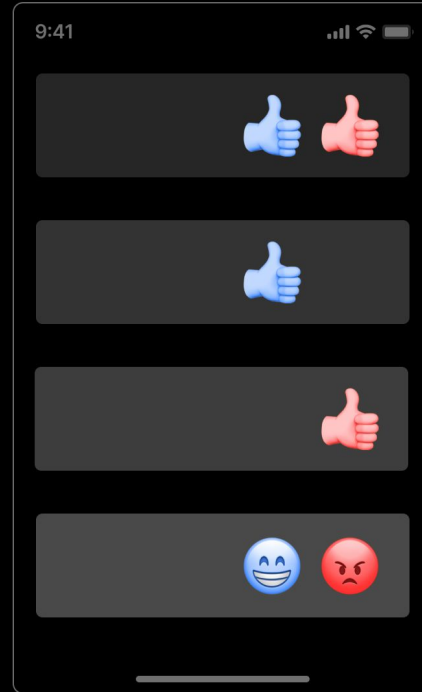
December 2023

# Motivation

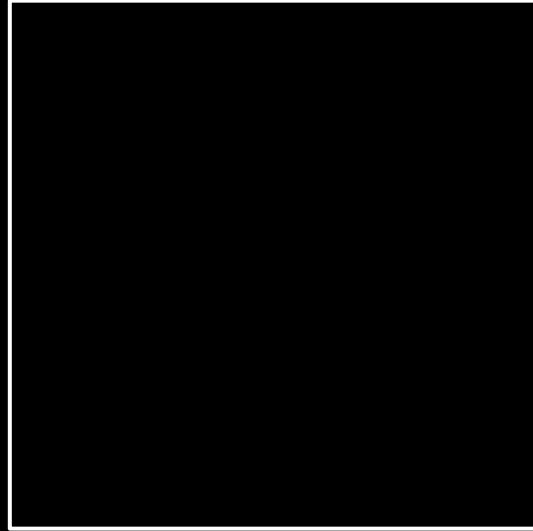
**ENGAGEMENT**  
based ranking  
for  



**BRIDGING**  
based ranking  
for  

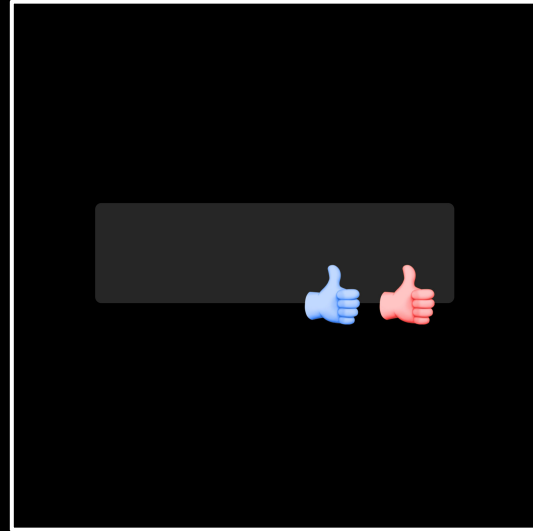


Motivation



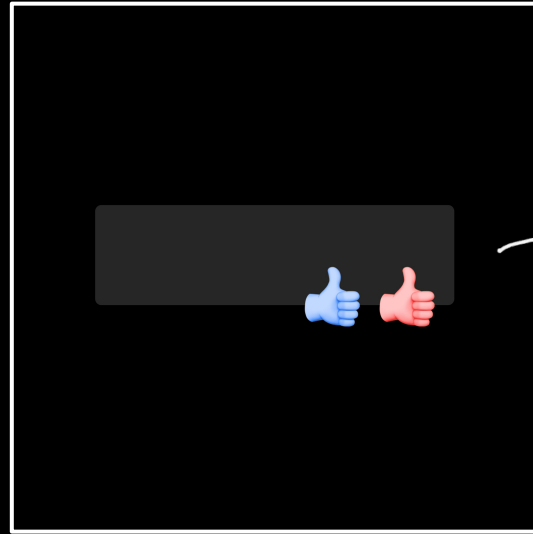
FORMALISM

# Motivation



FORMALISM

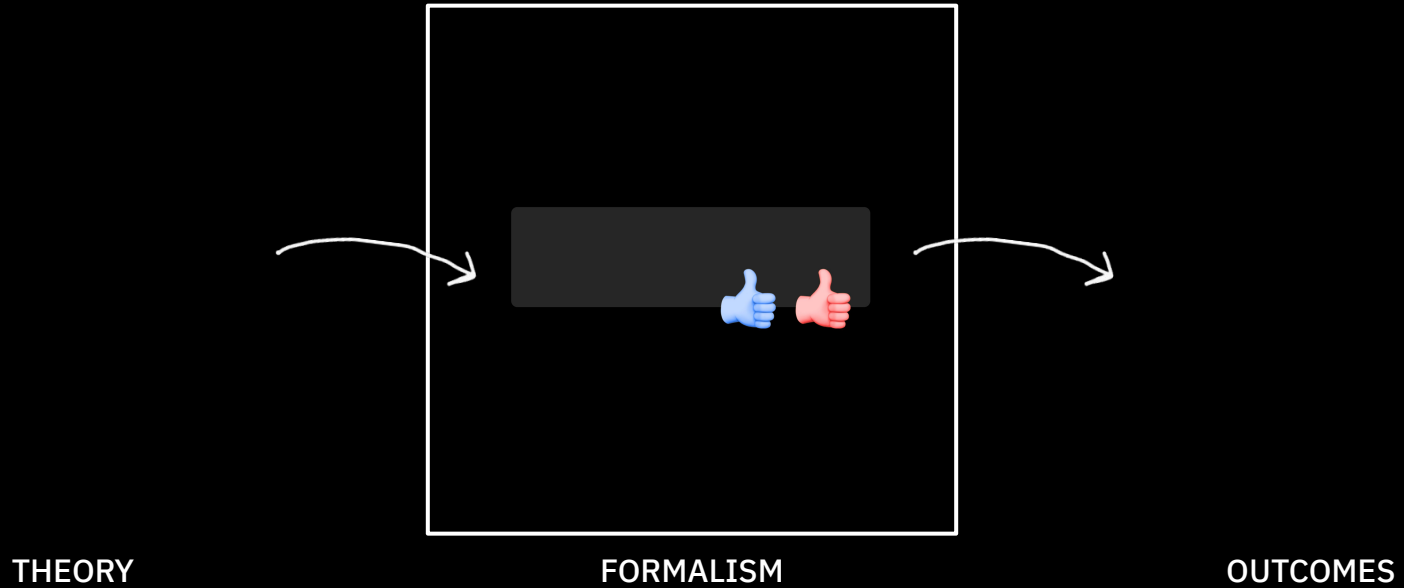
# Motivation



FORMALISM

OUTCOMES

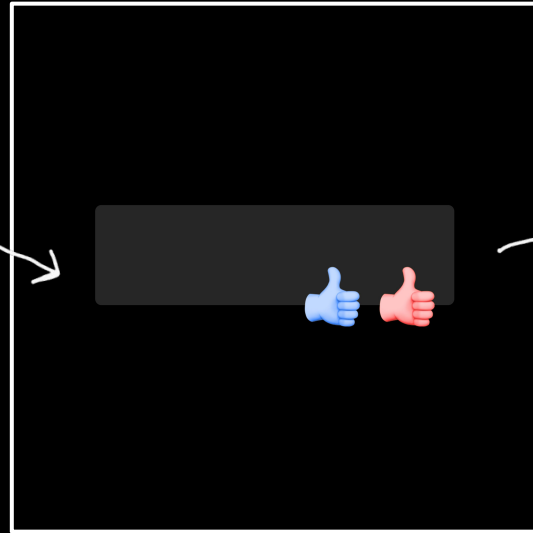
# Motivation



# Motivation



THEORY



FORMALISM



OUTCOMES

- I. Sortedness
- II. Why unsort?
- III. How to unsort?
- IV. Can we unsort?



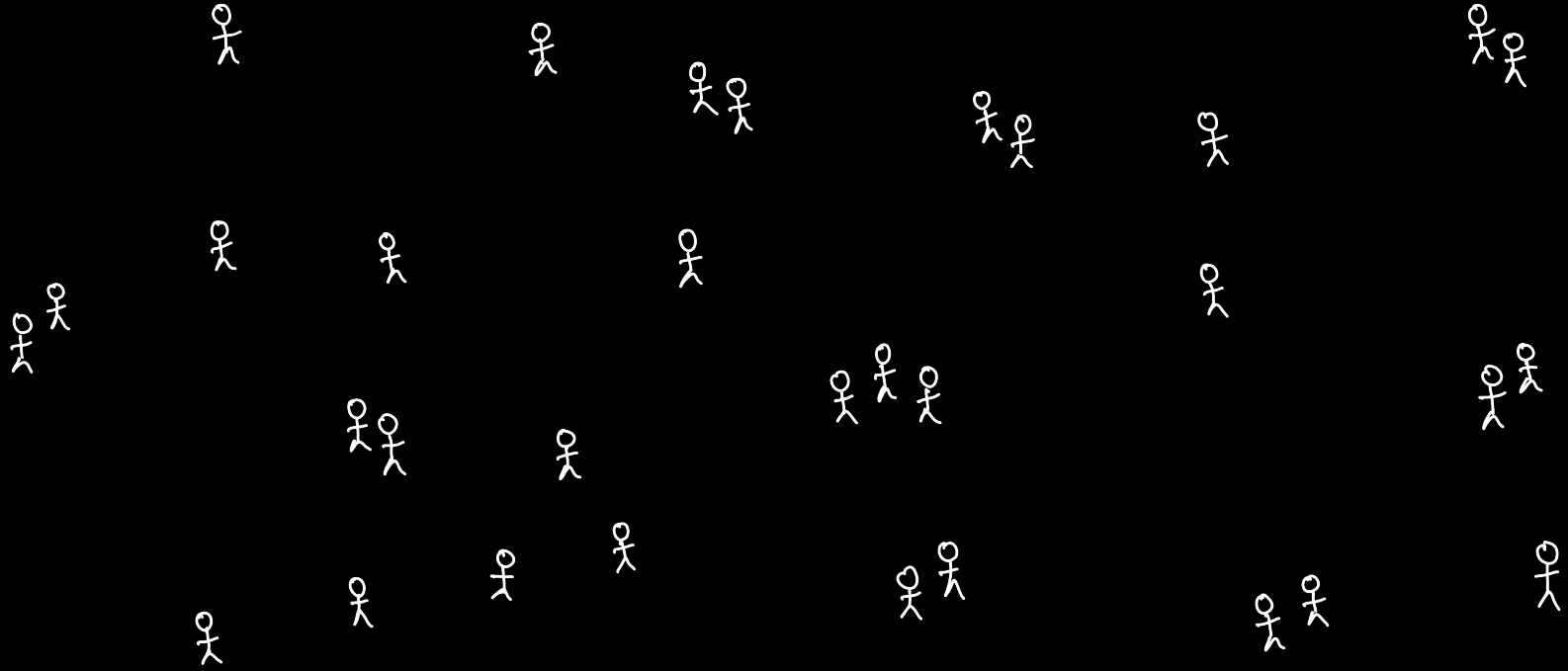
I. Sortedness

II. Why unsort?

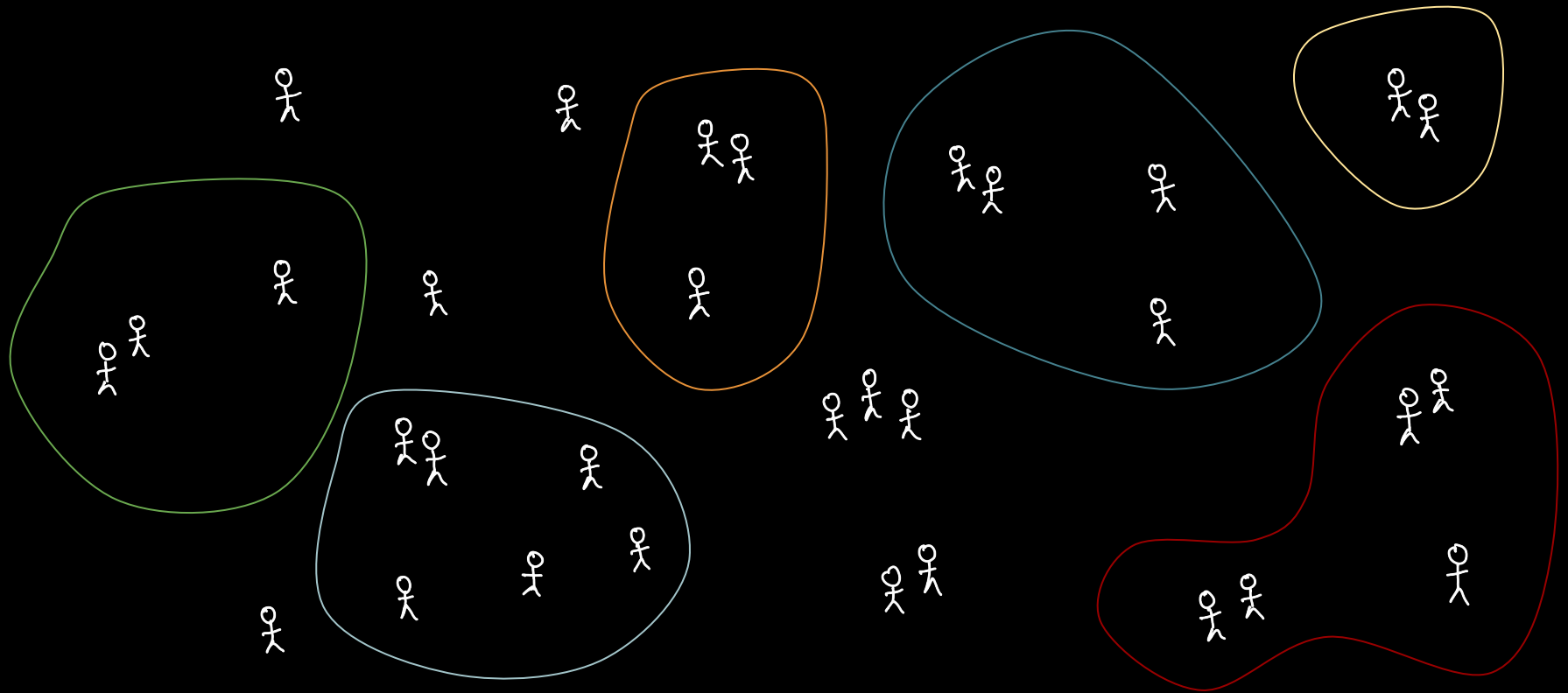
III. How to unsort?

IV. Can we unsort?

Societies are hypergraphs (intersecting groups).



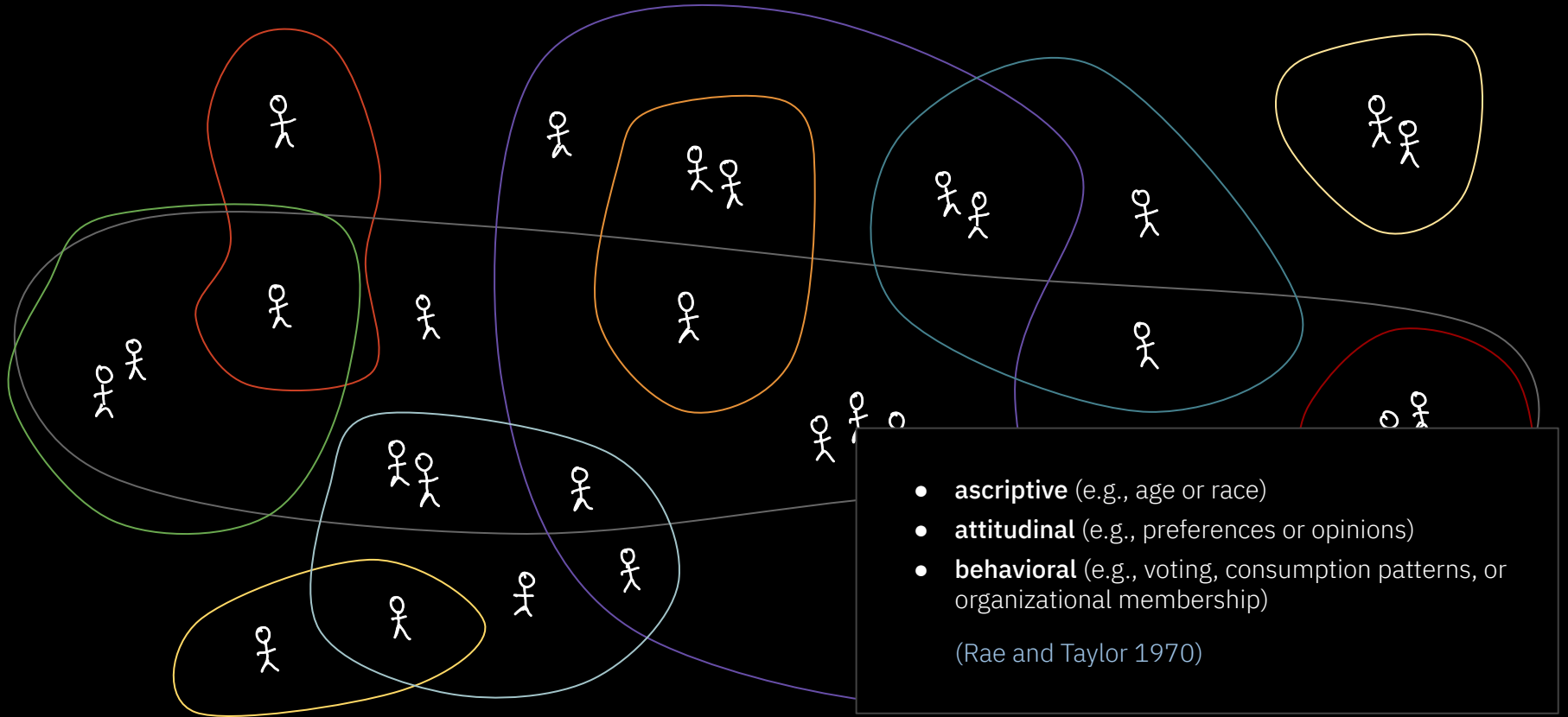
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How to quantify the overall amount of crosscutting?

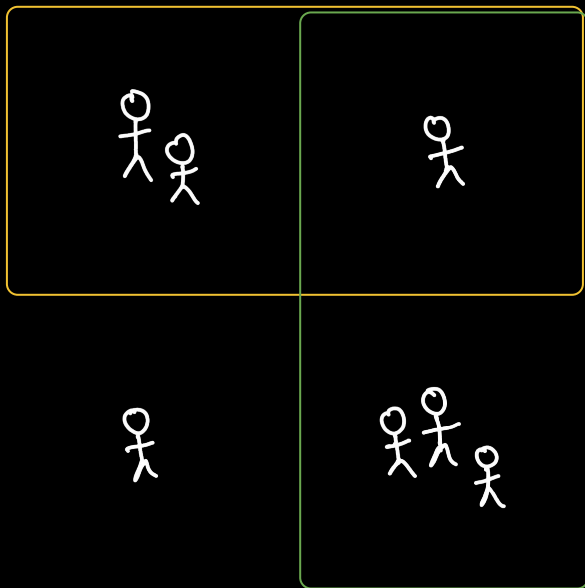


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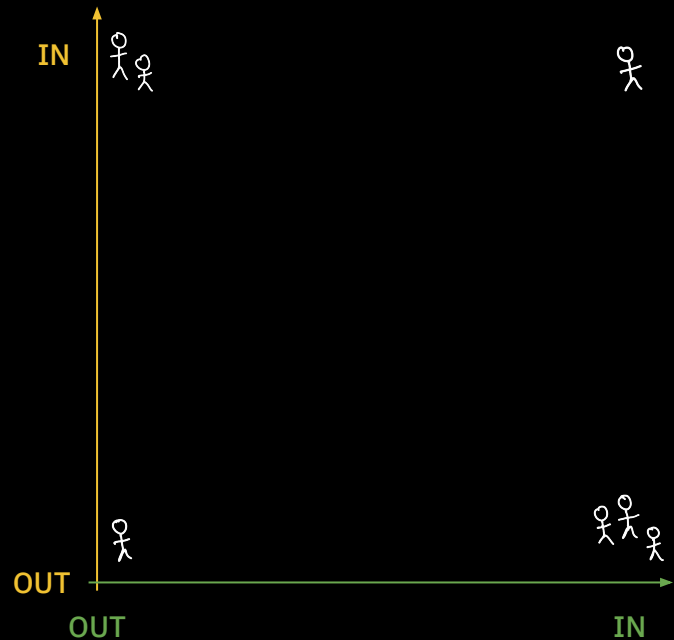
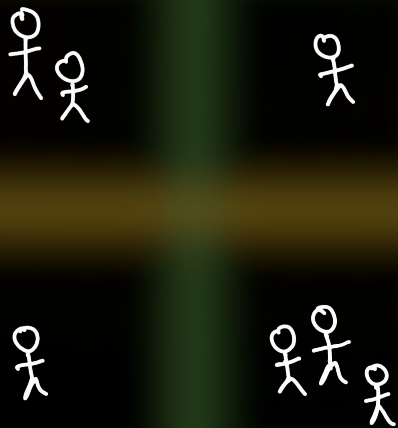




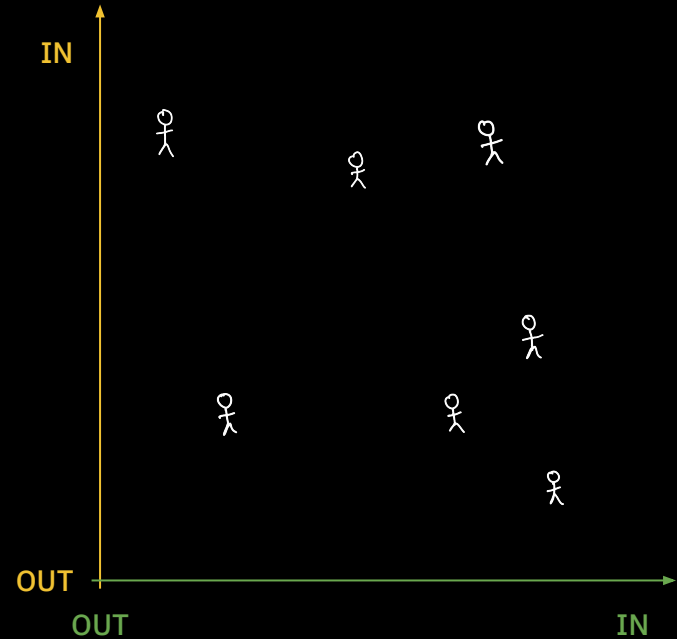
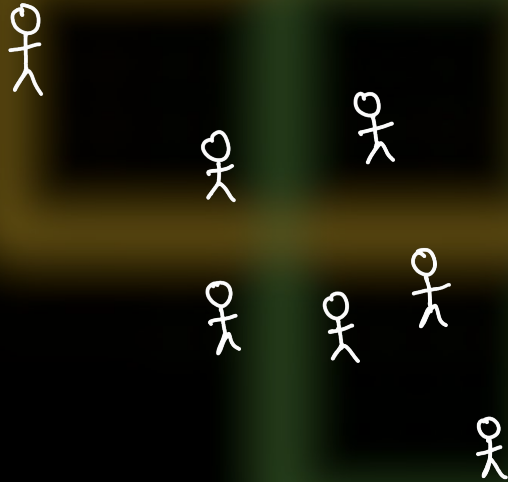
There is a correspondence between hypergraphs and distributions.



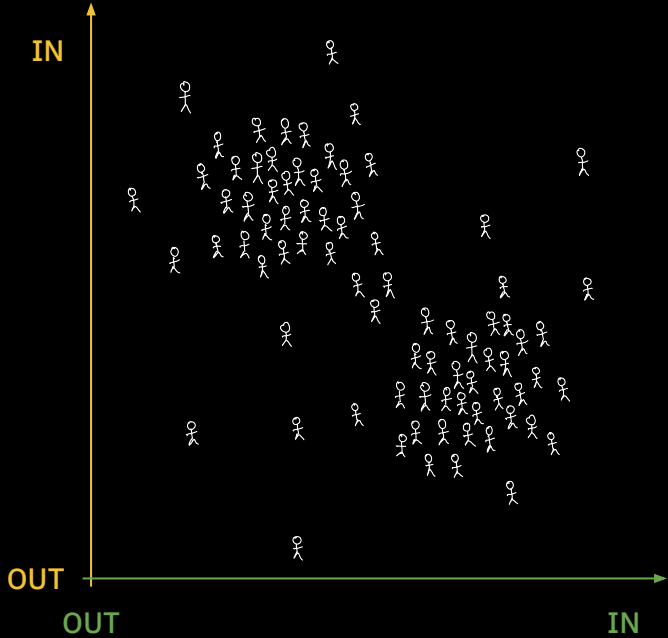
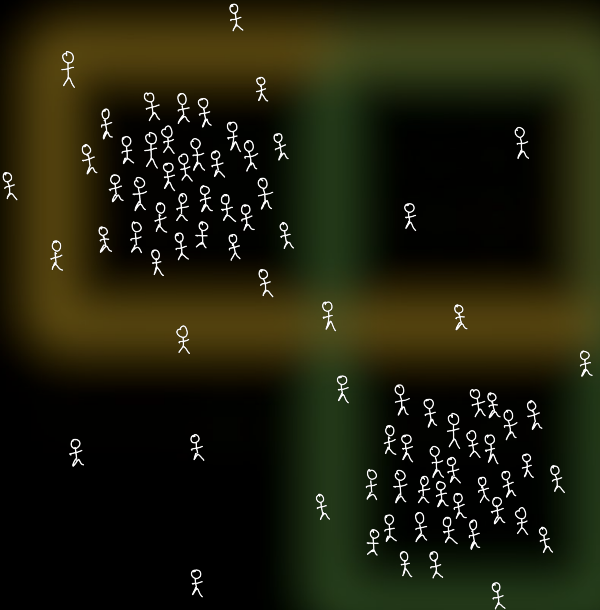
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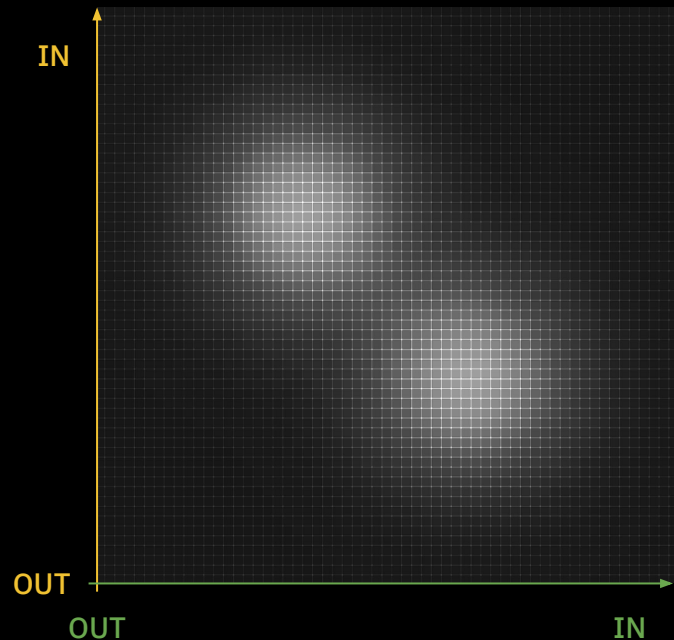
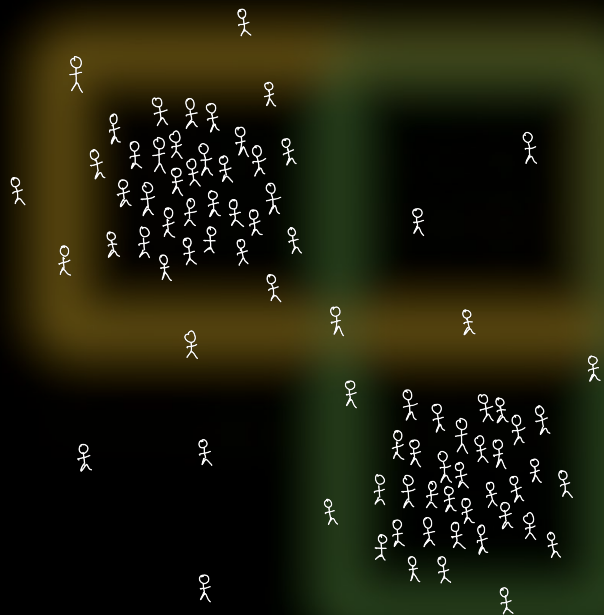
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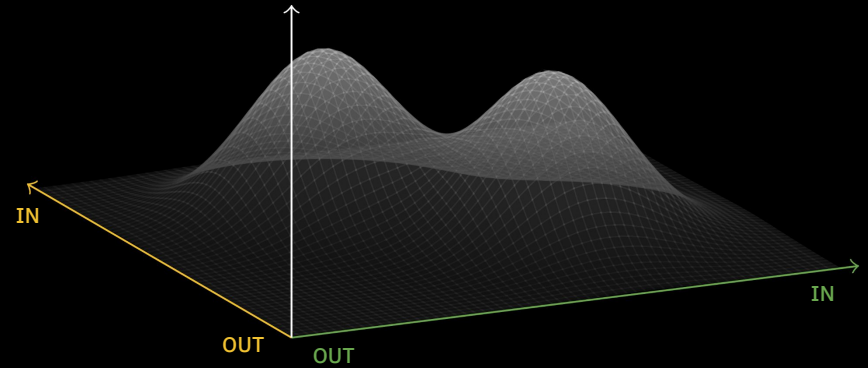
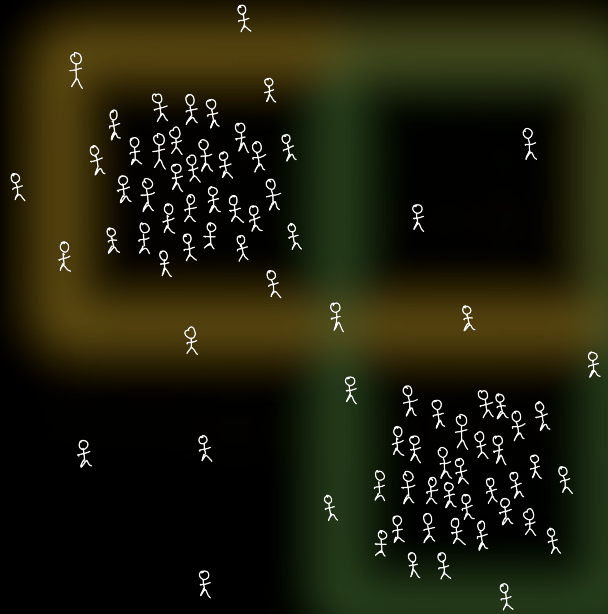
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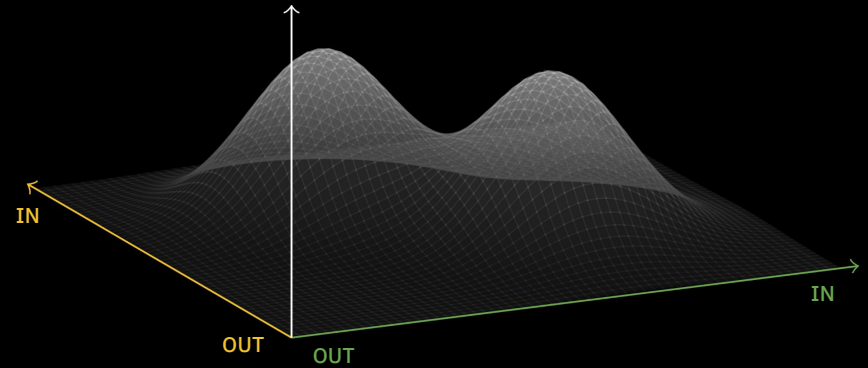
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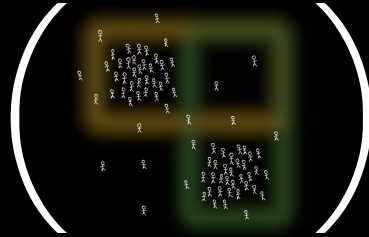


# Crosscutting $\propto$ Dependence

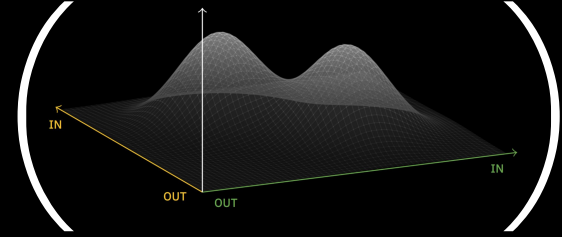


# Crosscutting $\propto$ Dependence

Crosscuttingness



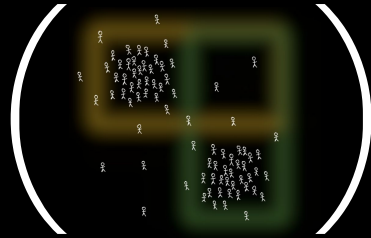
$\propto$  Dependence



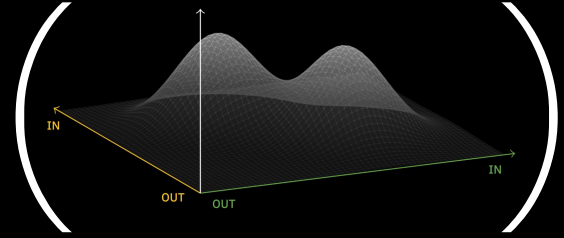


# Crosscutting $\propto$ Dependence = Sorting

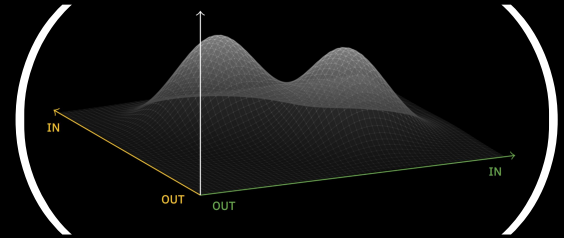
Crosscuttingness



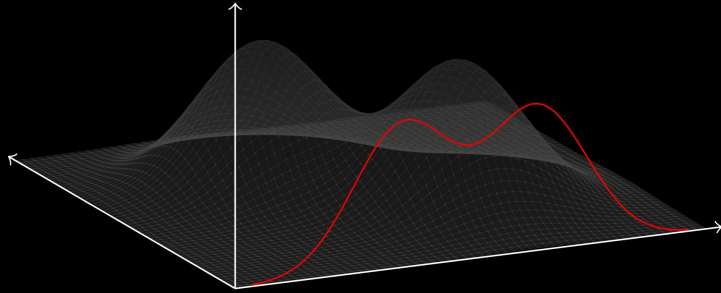
$\propto$  Dependence



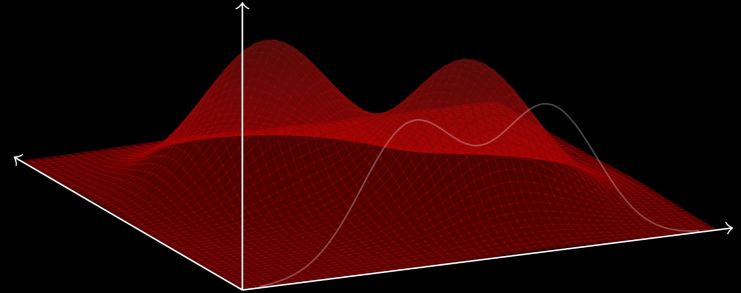
= Sorting



# What is sorting?

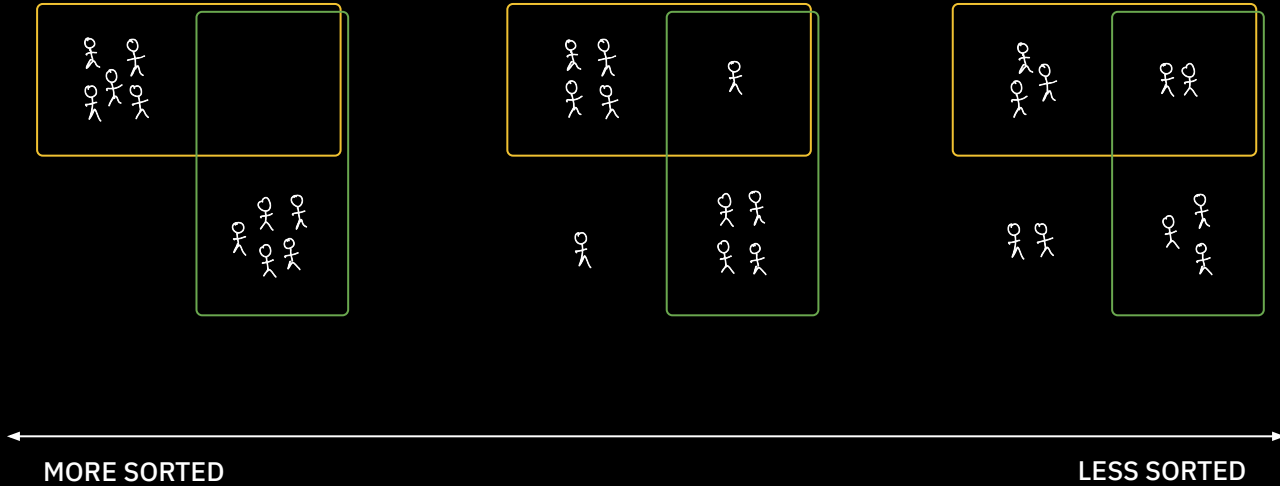


polarization

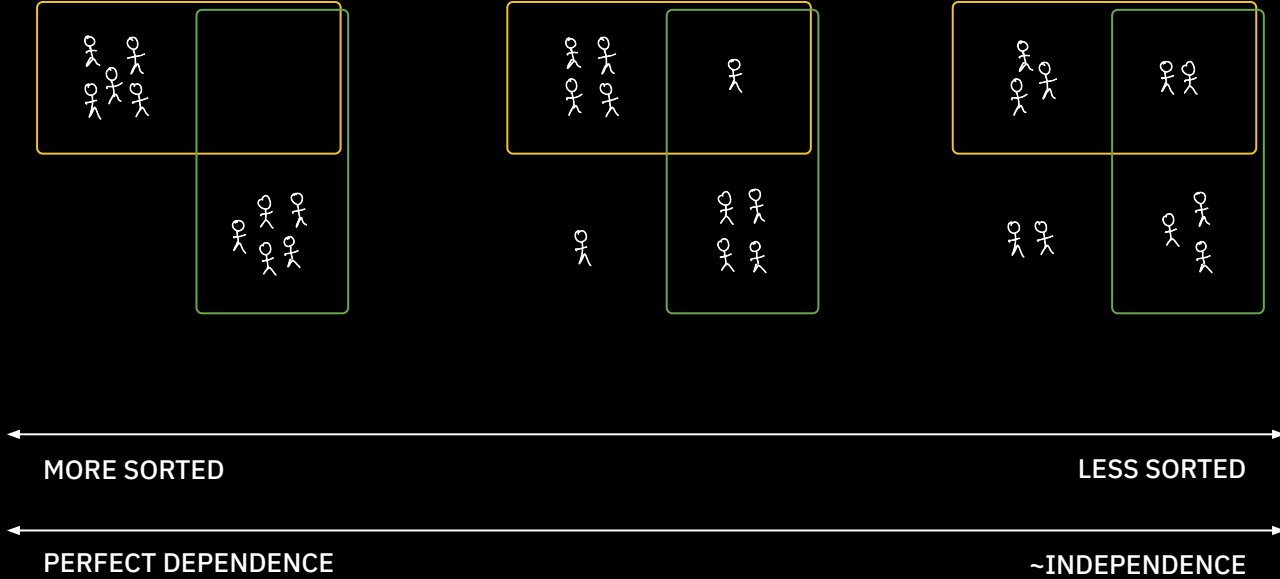


sorting

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# What is sorting?



I. Sortedness

II. Why unsort?

III. How to unsort?

IV. Can we unsort?

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## Sorting is real.

### Direct measurement:

(e.g., Abrams et al. 2015, Kaplan et al. 2022)

- ↑ correlations between issue positions
- “no evidence of polarization; the middle has not shrunk”
- ↑ geographic sorting

### Explains empirical trends:

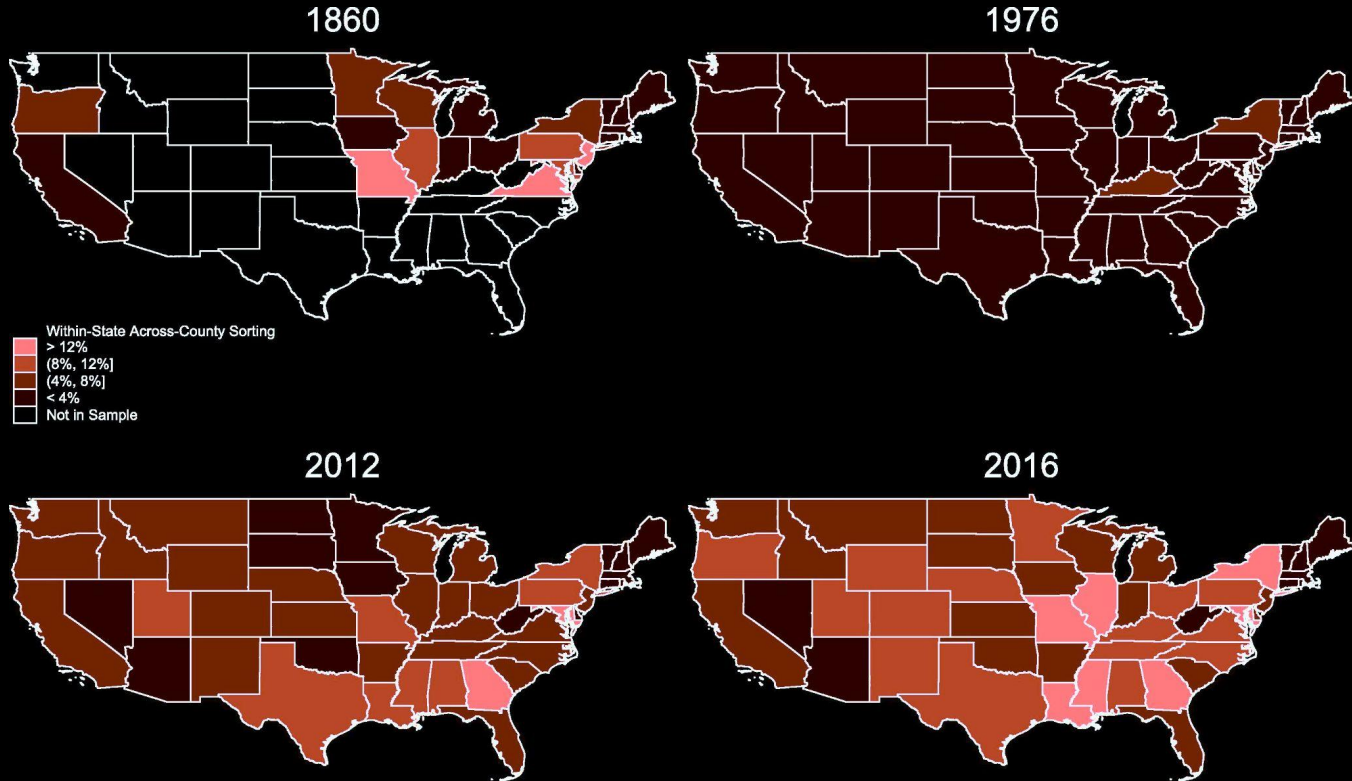
(Levendusky 2009; Abrams & Fiorina 2015; Fiorina 2017)

- ↑ difference in approval ratings
- ↓ split ticket voting
- campaigning to convince → campaigning to mobilize
- ↑ affective polarization

Sorting is bad.

Unsorting is good.

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## Sorting is bad.

- ↑ pigeonholing / stereotyping
- ↓ representation of nuanced, crosscutting positions (Fiorina 2016)
- ↑ risk of civil war (Selway 2011; Gubler and Selway 2012; Siroky and Hechter 2016)

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## Unsorting is good.

- ↑ “surprising validators” (Glaeser and Sunstein 2014)
- ↑ extent to which any majority will have something in common with a minority
- ↑ weak/long ties → ↑ economic outcomes (Jahani et al., 2023)

## Sortedness by other names:

### **safeguards against factionalism**

James Madison, *The Federalist No. 10* (1787)

### **“intersection of social circles”**

Georg Simmel, *Soziologie* (1908)

### **“overlapping memberships”**

Robert Dahl, *A Preface to Democratic Theory* (1956)

### **“overlapping consensus”**

John Rawls, *Political Liberalism* (1993)

### **“diverse diversities”**

Amartya Sen, *Identity and Violence* (2006)

### **“connected society” / “polypolitanism”**

Danielle Allen, *Justice by Means of Democracy* (2023)

## Why not unsort?

- Probably **too neutral** a goal
- Maybe **absurd if taken to the extreme**
- Maybe **the necessary interventions would be unethical**
- Makes **engaging in politics** more complicated

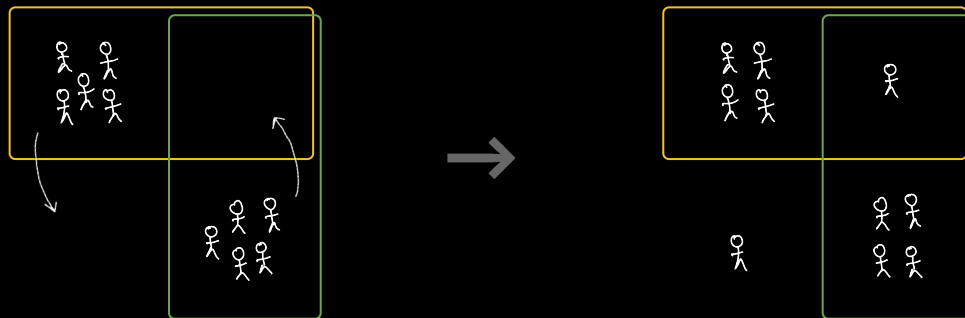
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# Mechanism 1

## Conversion



### EXAMPLES

common ground  
symmacy / common enemies  
surprising validation

consilience  
weak / long ties  
“complicate the narratives”

Most bridging algorithms use “diverse approval”.



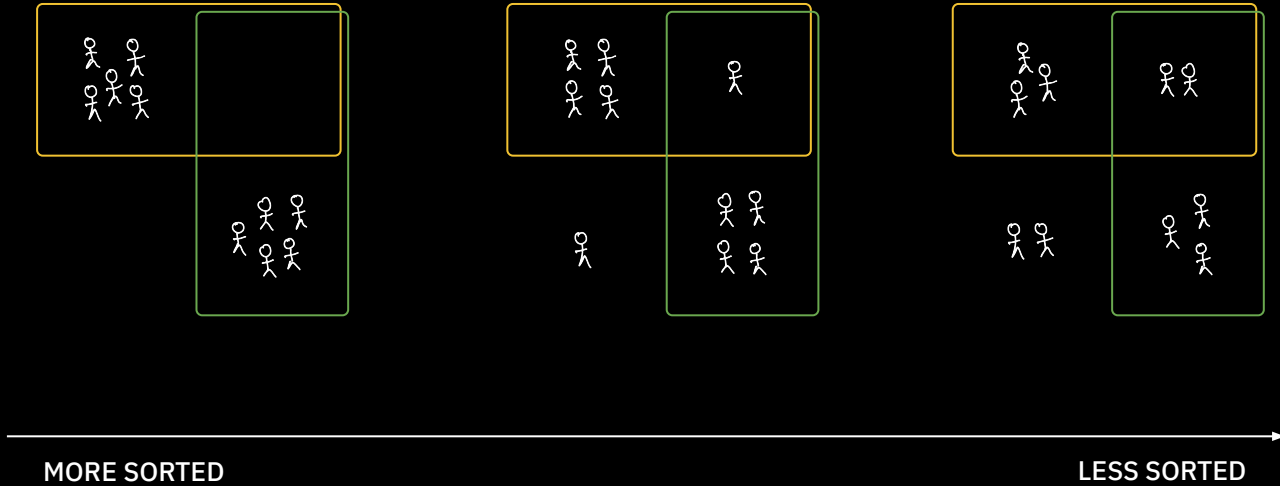
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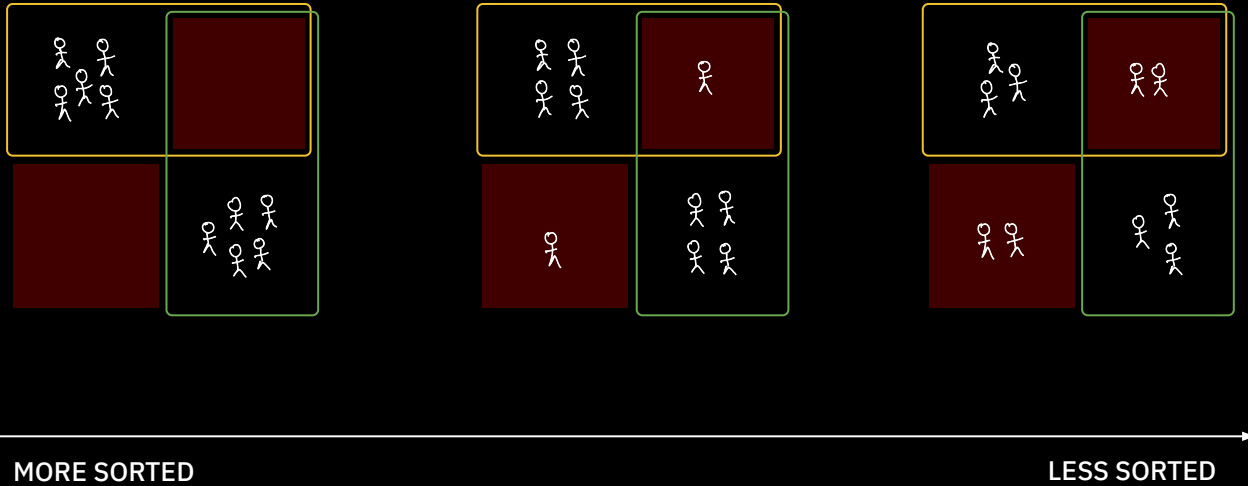
EXAMPLES



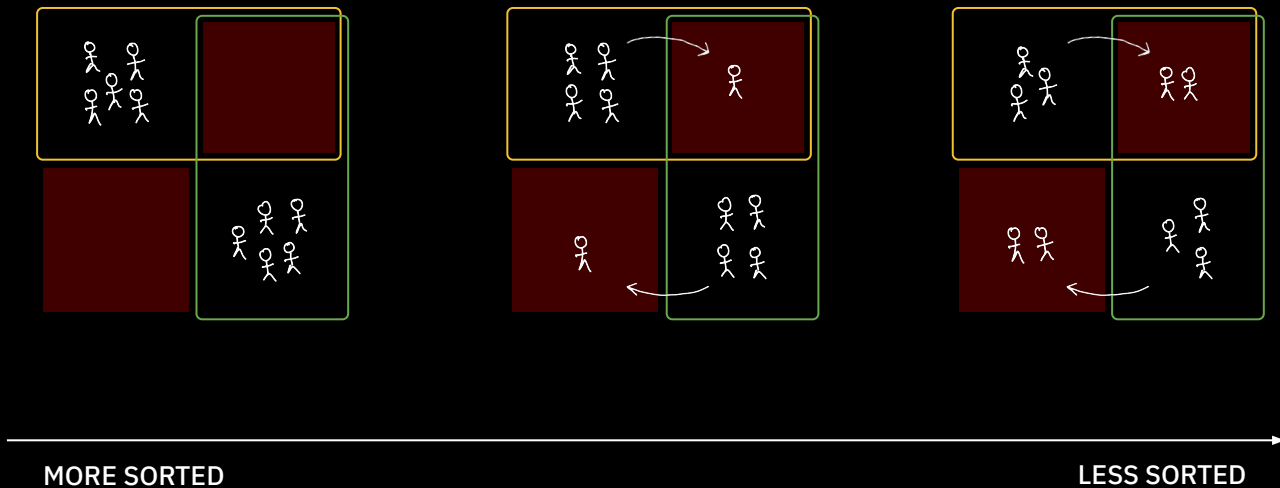
Diverse approval selects for unlikely combinations of attributes.



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# Diverse approval selects for unlikely combinations of attributes.

## Cognitive “biases”

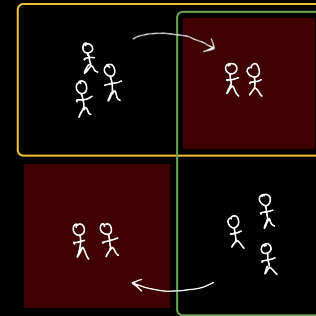
- mere-exposure effect
- illusory truth effect
- experience effects
- anchoring
- pressures to conform

## Learning

- learning new facts
- discovering new interests

## Algorithmic incentives (Brady et al., 2023)

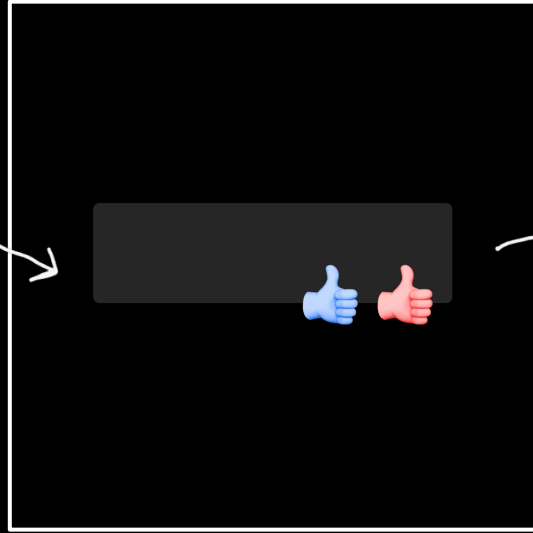
- observational learning
- reinforcement learning
- intentional strategic adaptation







THEORY

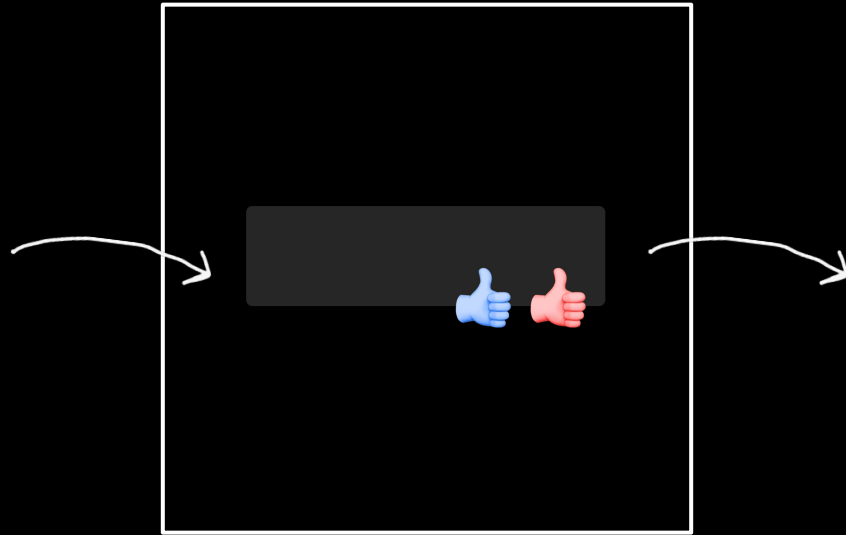


FORMALISM



OUTCOMES

Diverse approval  
contributes to  
unsorting.



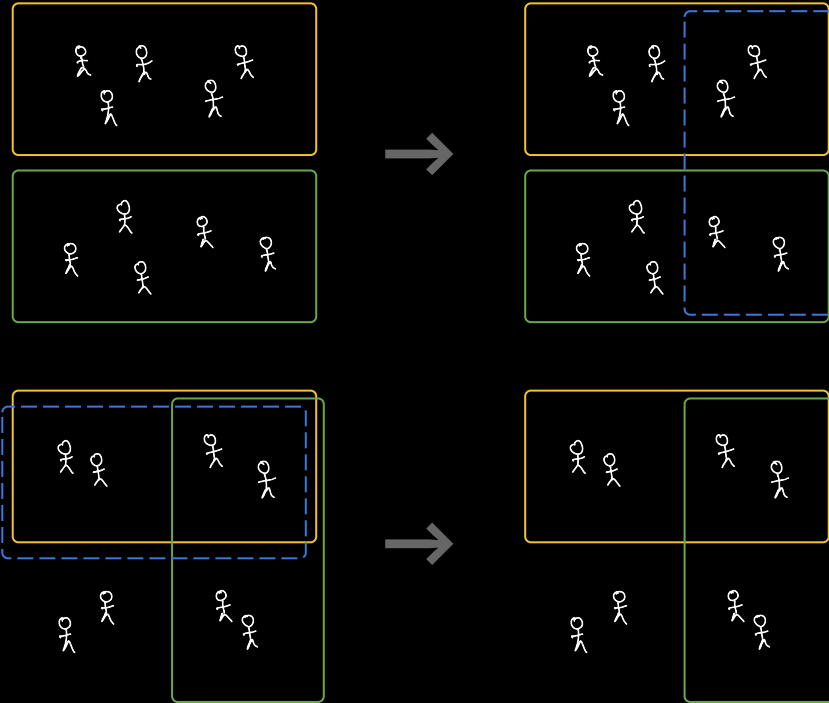
THEORY

FORMALISM

OUTCOMES

## Mechanism 2

# Adding or removing groups/dimensions

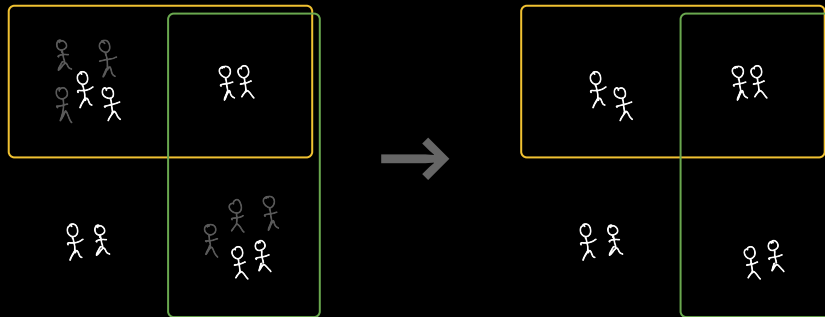
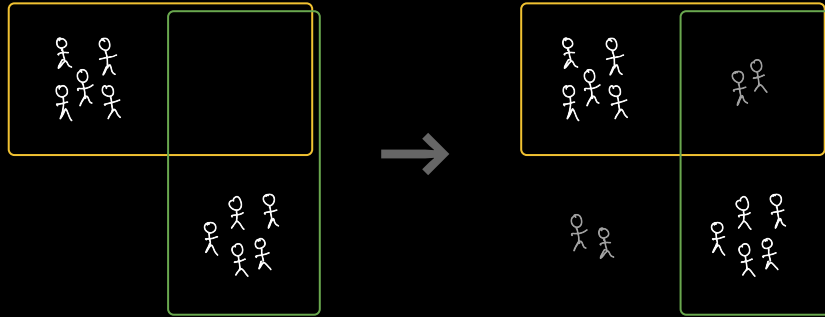


### EXAMPLES

humanization  
intergroup contact  
depoliticization

### Mechanism 3

# Entry or exit of people



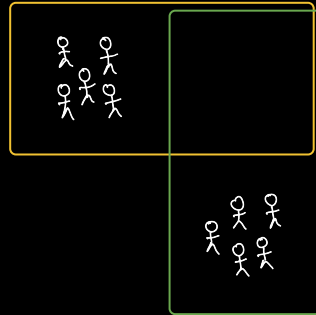
#### EXAMPLES

- migration
- generational change
- account creation / deletion

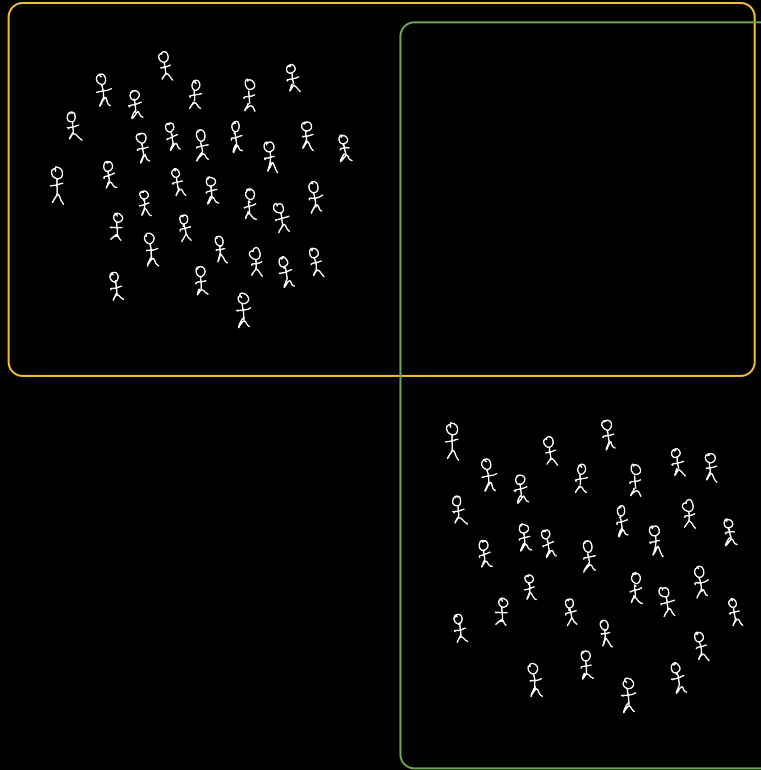
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Sortedness can be reduced globally by intervening locally.

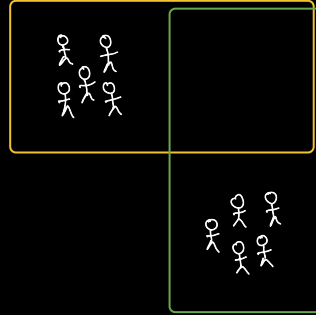


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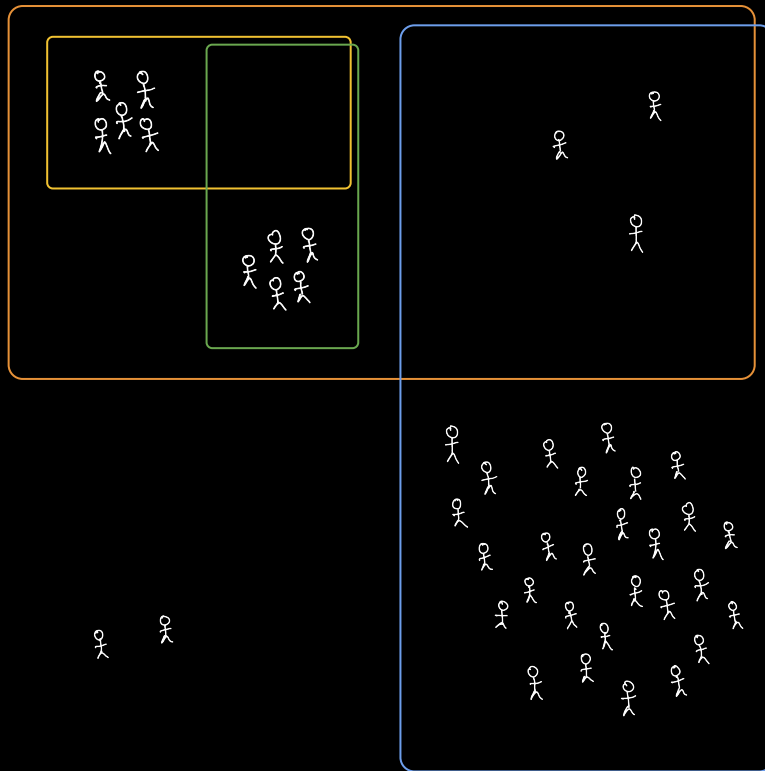




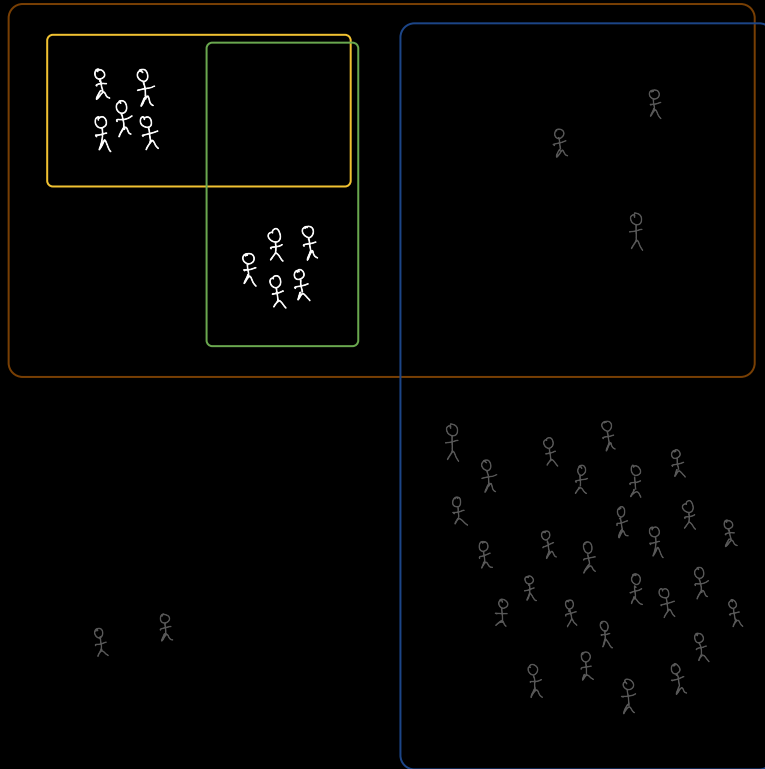
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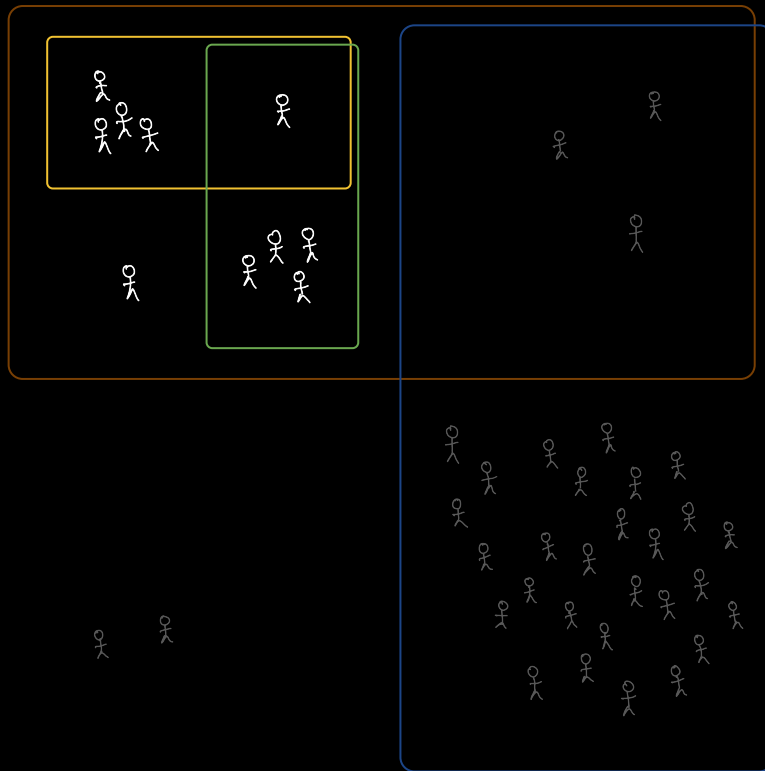
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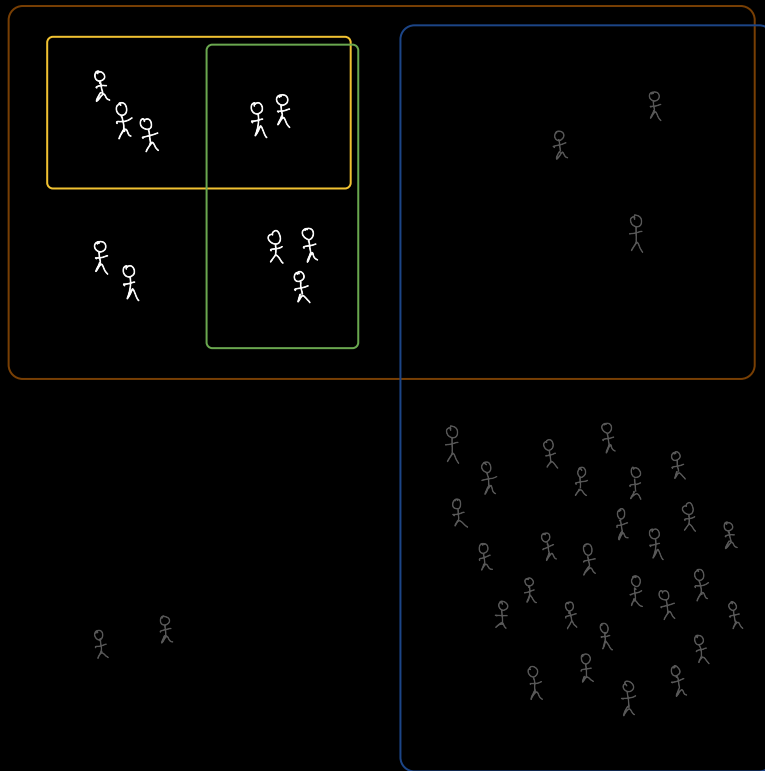
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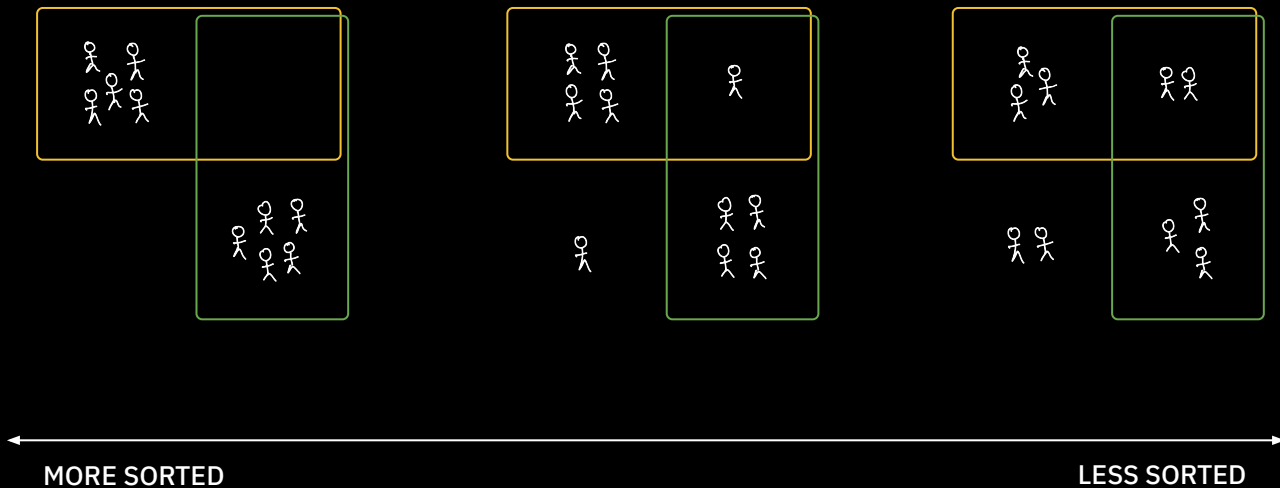
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Sortedness is orthogonal to “public opinion”.



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