

Prices That Make Policy

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Public Choice Outreach

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Three Premises and a Conclusion

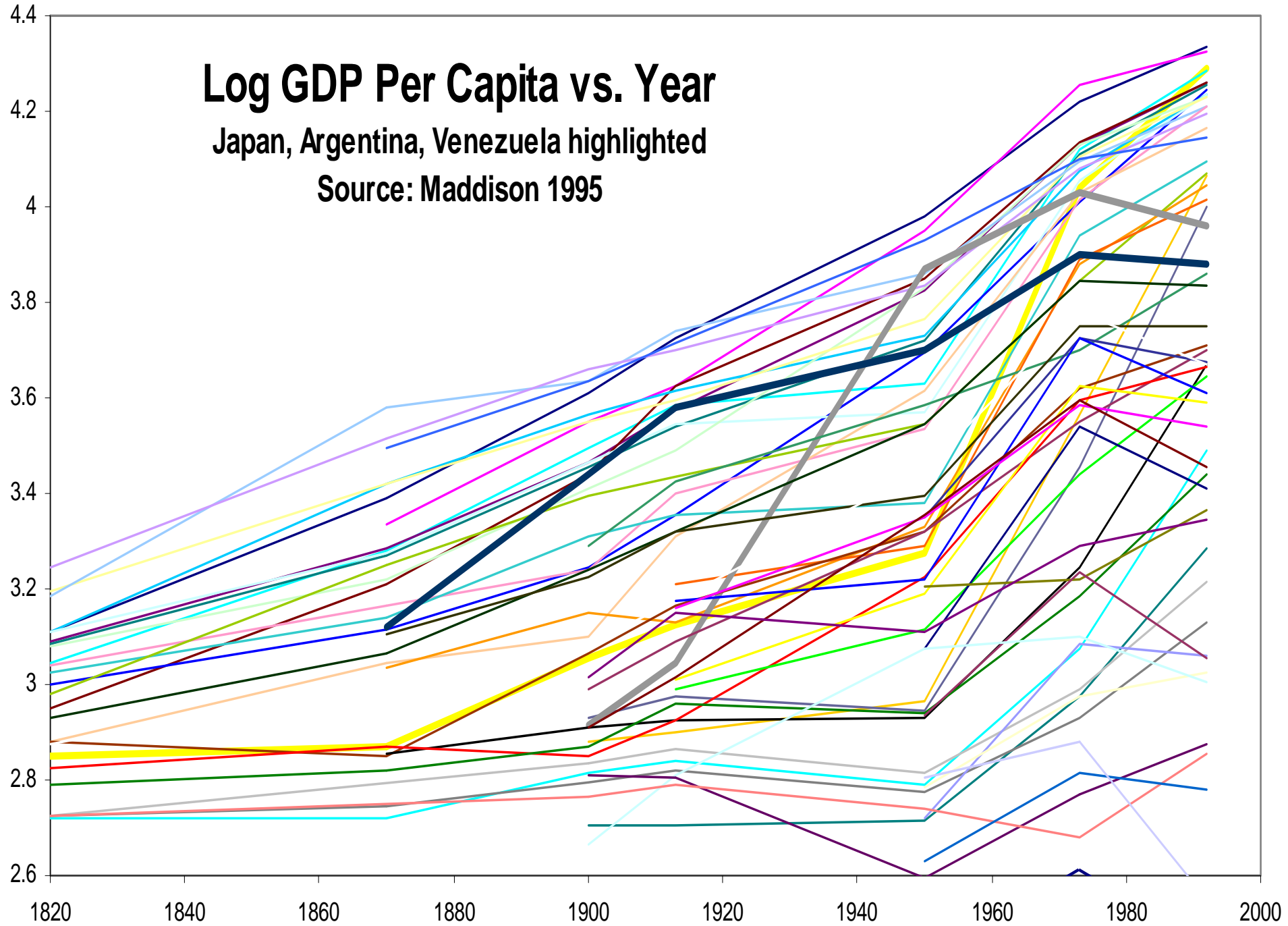
1. It is not that hard to tell rich happy nations from poor miserable ones after the fact.
2. Governments largely fail by not aggregating available information.
3. Betting markets are the best known institution for aggregating information.

∴ Try to vote on values, but bet on beliefs.

Log GDP Per Capita vs. Year

Japan, Argentina, Venezuela highlighted

Source: Maddison 1995



Government Info Failure

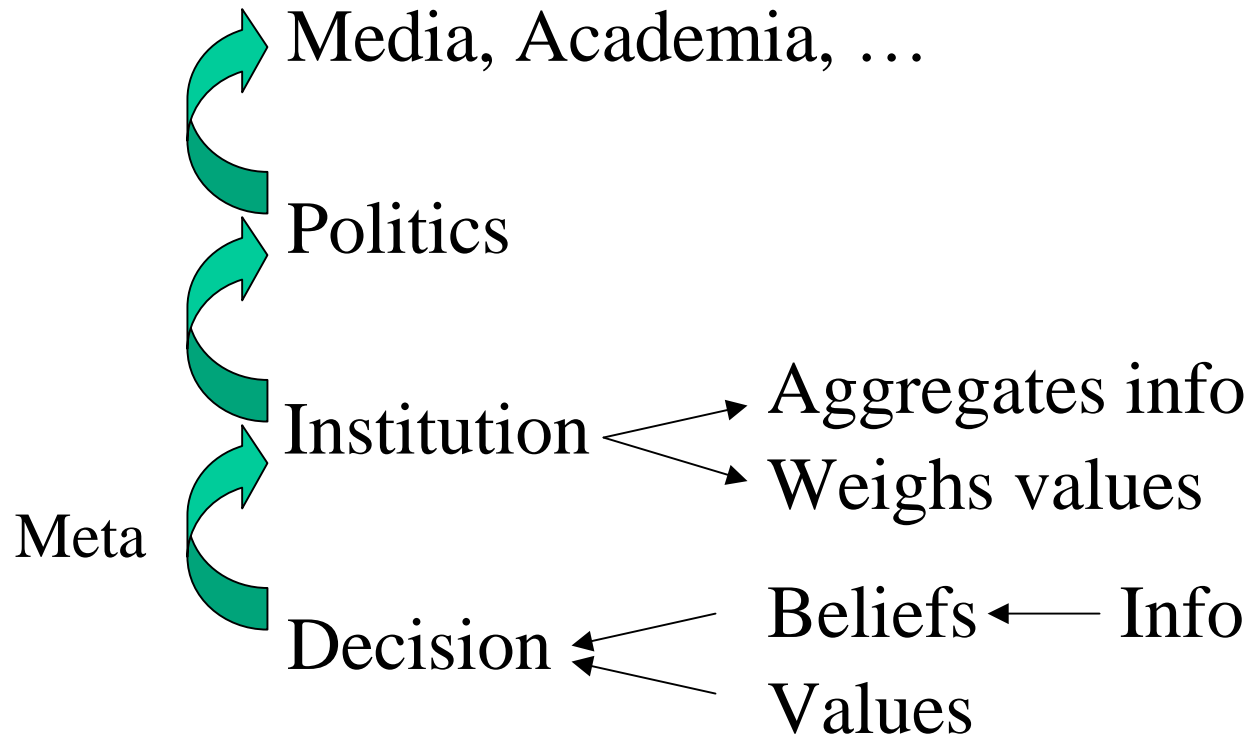
Evidence

- Huge variation in national growth rates
- Stupid/ignorant public opinions, policies
- Disagreement, non-random-walk polls

Theory

- Voters rarely decisive, beliefs like clothes
- Very hard for voters to access expert info

Meta - Decisions



Information Markets

- Most markets aggregate info as side effect
 - Very hard to find info to beat average return
 - Some markets now created for this purpose
- In direct compare, beat other institutions
 - Racetrack odds beat track experts (Figlewski 1979)
 - OJ futures improve weather forecast (Roll 1984)
 - I.E.M. beat president polls 451/596 (Berg etal 2001)
 - HP market beat sales forecast 6/8 (Plott 2000)

Today's Prices

- 40-45% Osama Bin Laden captured or neutralized by 31 Dec 2003
- 35-40% Saddam Hussein captured or neutralized by 30 Sept 2003
- 49-52% Weapons of Mass Destruction found in Iraq by 31 Sept 2003
- 64-66% Bush re-elected as US President

Estimates from Prices

$$\boxed{\$1 \text{ if } A} \leftrightarrow p(A) \boxed{\$1}$$

$$\boxed{\$ x} \leftrightarrow E[x] \boxed{\$1}$$

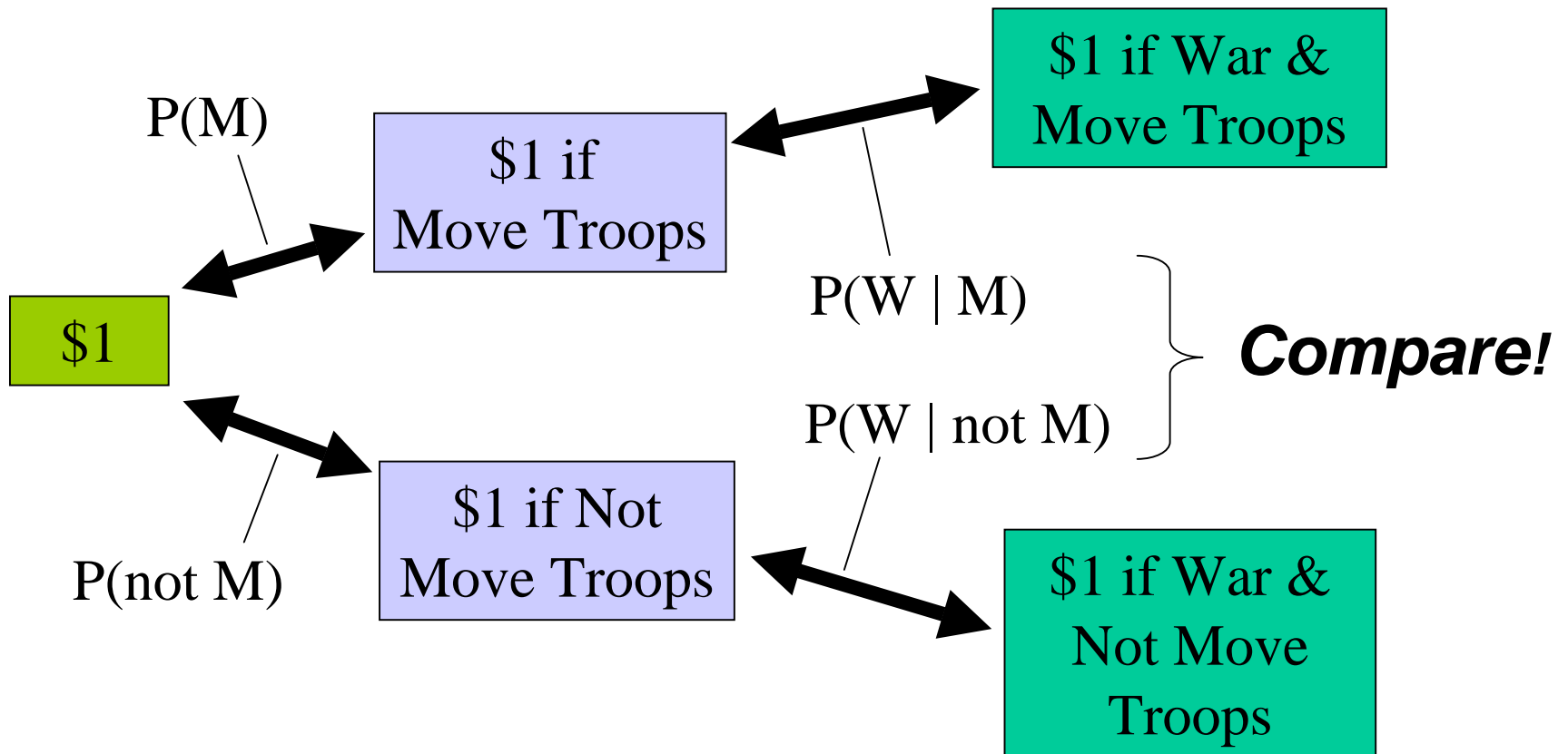
$$\boxed{\$1 \text{ if } A \& B} \leftrightarrow p(A \& B) \boxed{\$1}$$

$$\boxed{\$ x \text{ if } A} \leftrightarrow E[x|A] * p(A) \boxed{\$1}$$

$$\boxed{\$1 \text{ if } A \& B} \leftrightarrow p(B|A) \boxed{\$1 \text{ if } A}$$

$$\boxed{\$ x \text{ if } A} \leftrightarrow E[x|A] \boxed{\$1 \text{ if } A}$$

Markets Can Advise Decisions



Decision Market Applications

E[firm stock price | fire CEO?]

E[f(inflation,unemploy) | Fed raise rates?]

E[my years to live | opt for surgery?]

E[crime rate | gun control bill pass?]

E[Democrat win | Nominate Kerry?]

E[GDP | Bush II re-elected?]

E[SA civil war | US moves troops out?]



Every nation*quarter:

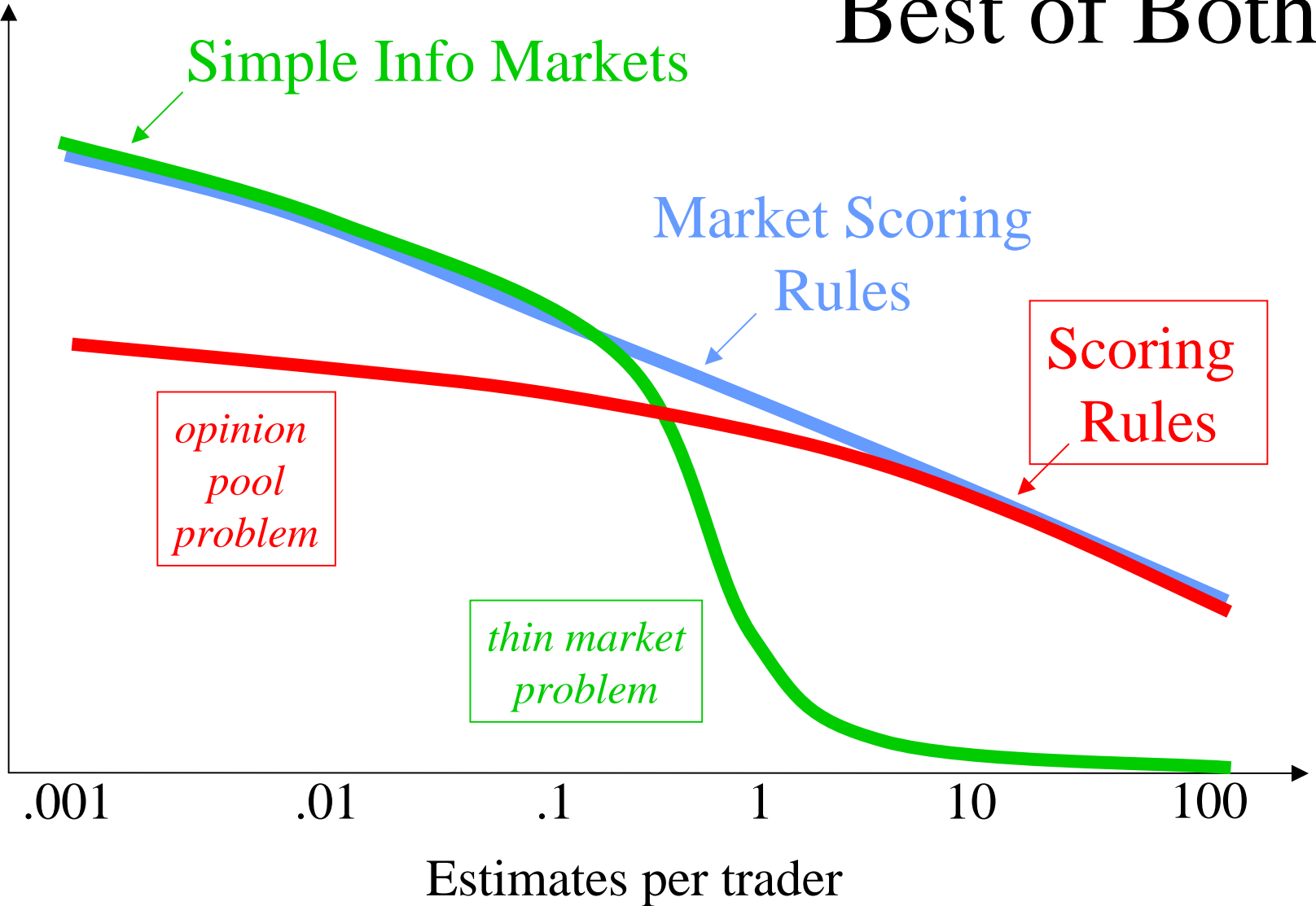
- Political stability
- Military activity
- Economic growth
- US aid/trade
- US military activity

& global, special

But: # Parameters > # Nations * #Quarters * #Variables
Probabilities > 2 #Parameters

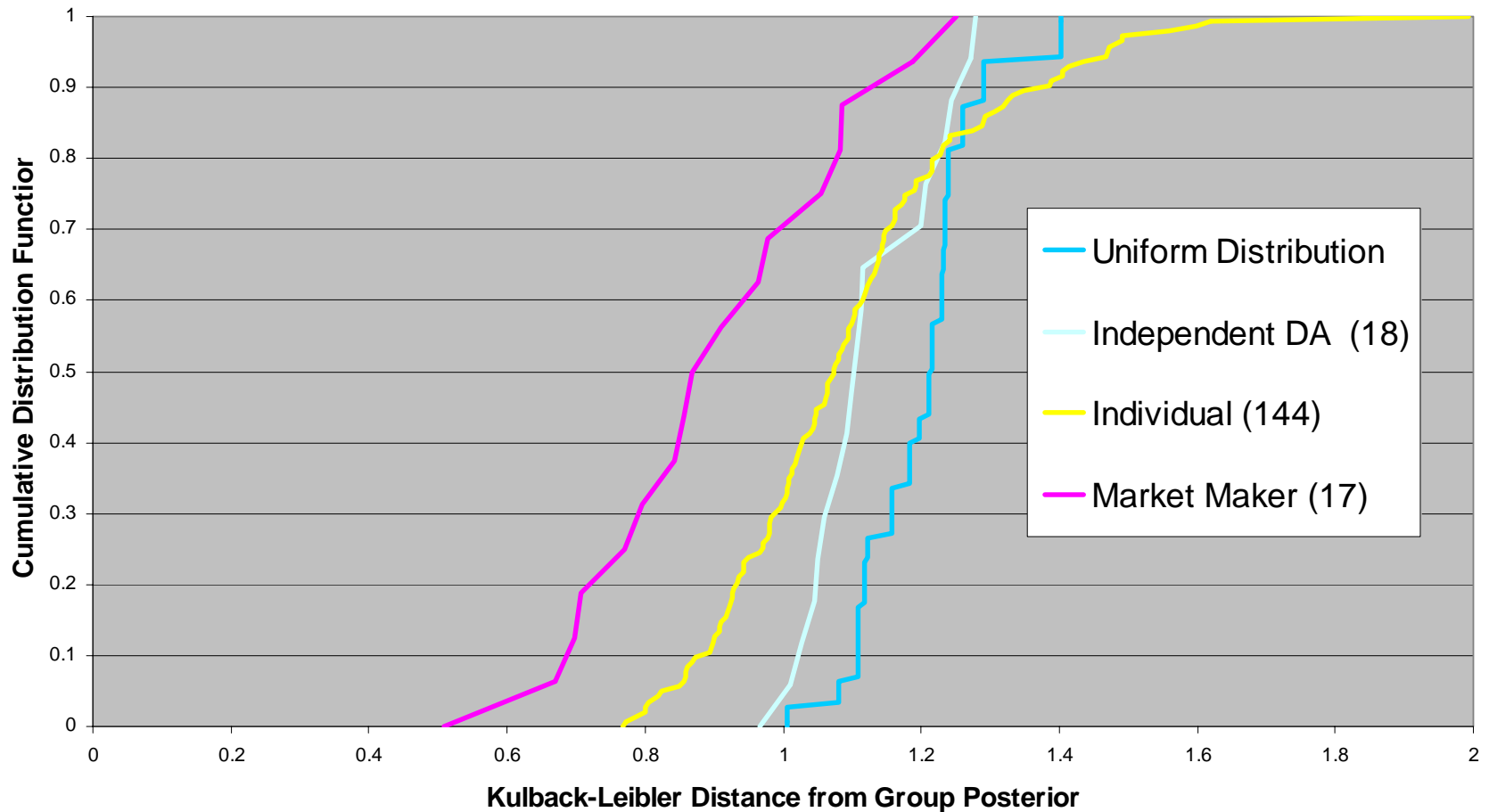
Accuracy

Best of Both

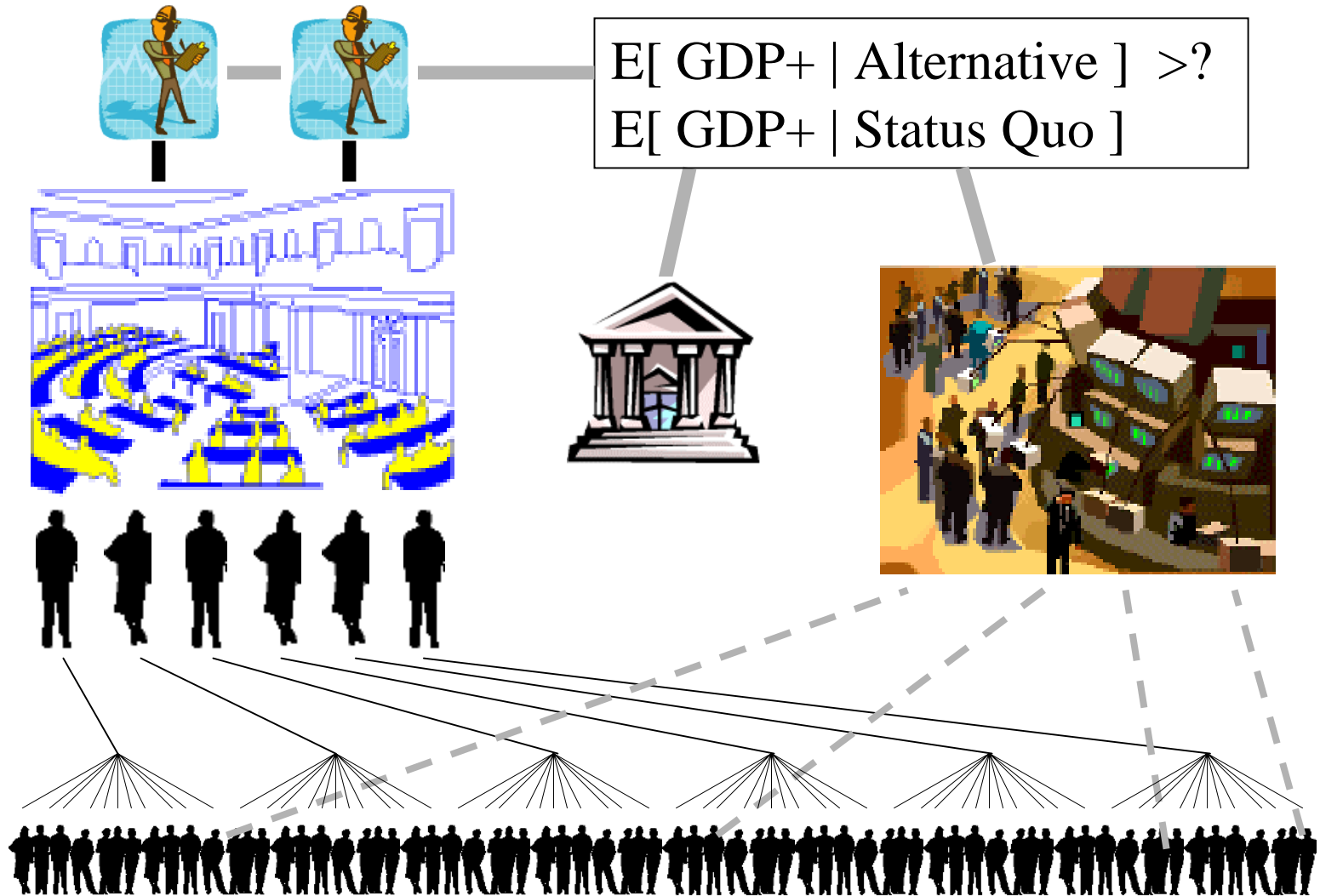


Experiment Results

(Joint work with John Ledyard, Takashi Ishida, Net Exchange)



Vote On Values *But* Bet On Beliefs



Futarchy's One Rule

When a market estimates currently-defined GDP+ to be higher given some proposed alternative policy, that policy becomes law.

- Unless market on future-defined GDP+ vetoes it
- Start with existing policies, fee to make proposal
- Like contract, proposal says how handle conflicts
- High standards at base, recurse to relax standards

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