

A blue-tinted photograph of a dense city skyline, featuring numerous skyscrapers. The Empire State Building is the most prominent structure on the right side of the image.

THE PROMISE OF CLIMATE PREDICTION MARKETS

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Moran Cerf, Sandra Matz, Malcolm MacIver, “[Participating in a climate prediction market increases concern about global warming](#)”, *Nature Climate Change*, 2023

The challenge of projecting the *future* onto the *present*

- Putting your money where your mouth is
- Making false beliefs costly

“The easiest way to solve a problem is to deny its existence”

Isaac Asimov

Prediction Markets



Prediction Markets

“Will there be sandwiches for lunch?”

1. Bet (typically, binary)
2. Source
3. Settle date



Prediction Markets

“Will there be sandwiches for lunch?”

1. Bet (typically, binary)
2. Source
3. Settle date
4. Trading



Climate Prediction Markets

- Discussed in recent works in the context of:
 - risk assessment, energy consumption, etc.)
 - Polling opinions
 - Predicting outcomes
 - Sourcing financial resources



Climate Prediction Markets

- Discussed in recent works in the context of:
 - risk assessment, energy consumption, etc.)
 - Polling opinions
 - Predicting outcomes
 - Sourcing financial resources
- **Change opinions, beliefs, knowledge**

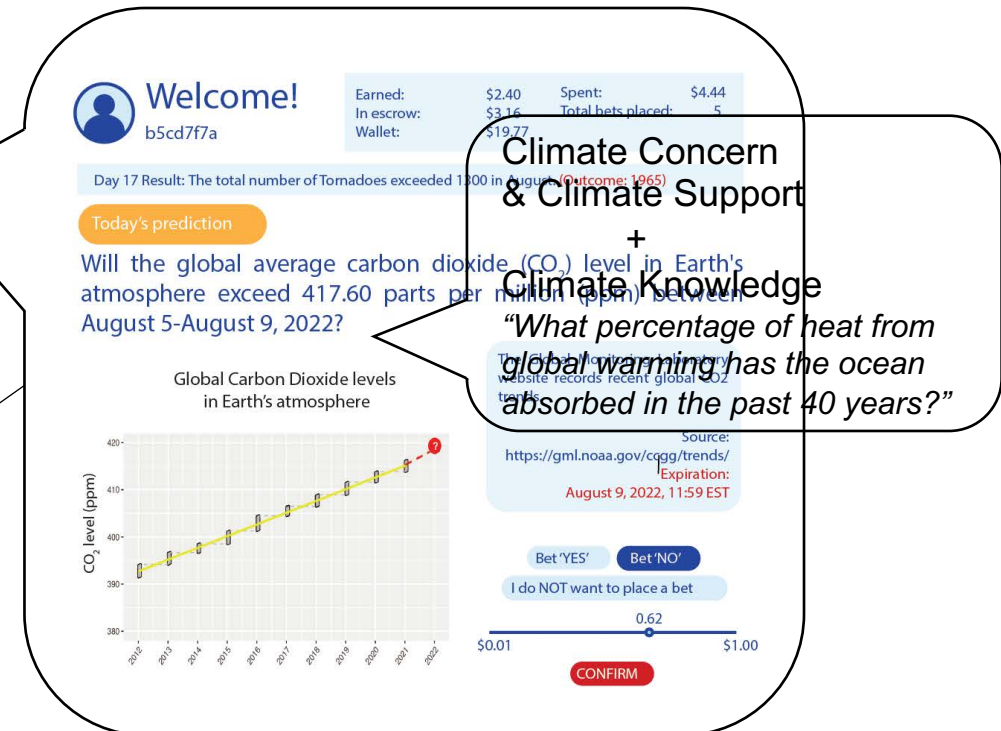
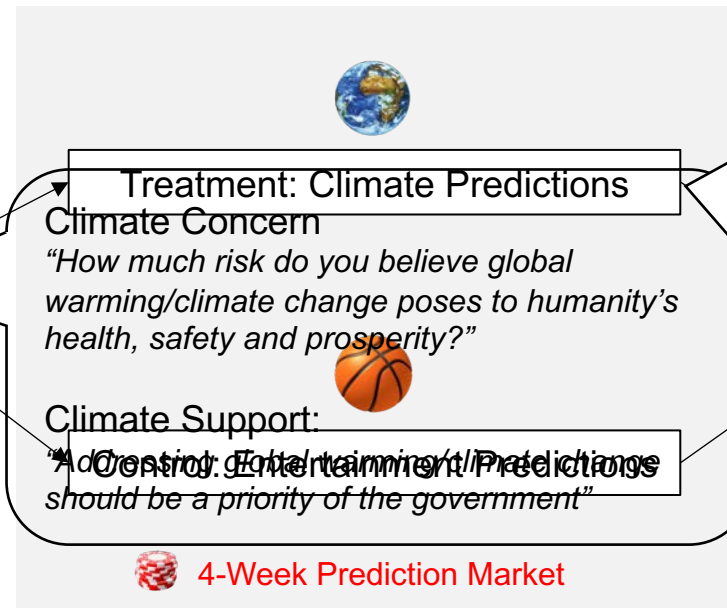


Does participating in a climate prediction market increase concern, support, and knowledge?

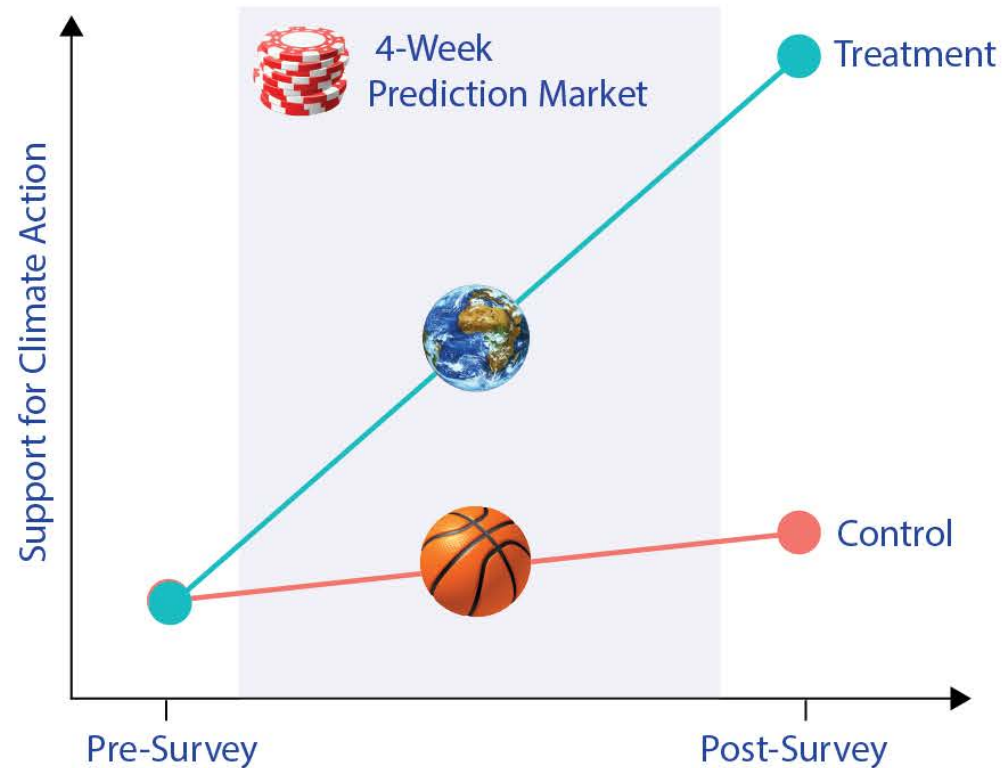
Large online experiment with 664 participants (across the entire political spectrum)



Pre-Survey



Does participating in a climate prediction market increase concern, support, and knowledge?



- ✓ The effects are small
- ✓ Same effects across the entire political spectrum

*Same Treatment Effects for: Climate Concern and Knowledge

What did you learn?


"There are a lot more wildfires in California than I expected"

"Global warming is real"

"I learned how many disasters are going on right now. I feel that maybe I learned to take climate change a little more seriously than I have in the past."


"I learned that there are a lot of data sources on the web that track things I didn't even think of like fires/floods/CO2 emissions, etc. I didn't even really know where to look for such things, but now I do."

Turning this into a real prediction market...

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Global Warming

Would the global warming index reach +1.14°C by October 1st, 2018?



See source: [<http://www.globalwarmingindex.org/>] The global warming index is calculated by a group of researchers at Oxford and University of Leeds based historical climate data. This index indicates how human activity affects global warming. The higher the index gets, the warm the earth is. This bet will be redeemed once the website updates its newest measurement. The expiration date of this bet is 11:59 PM, October 1st, 2018(CST).

Expires: Mon Oct 01 2018

Buy Yes: 50

Buy No: 50


Price: 50 Cents

Bet Yes

Bet No

Disaster

Will there be more than 15 floods in the United States on October 1st, 2018?



See source: [https://waterwatch.usgs.gov/new/index.php?id=ww_flood] This bet will be redeemed once the website updates its newest measurement. The expiration date of this bet is 11:59 PM, October 1st, 2018(CST).

Expires: Mon Oct 01 2018

Buy No: 45

Price: 50 Cents

Bet Yes

Bet No

Final thoughts

- It is hard to do
- Any time window works (sadly...)
- Works across entire political spectrum
- It offers people a way to reflect their view anonymously
- It can be used for polling, risk assessment, policy
- It can become a tool for “Win-Win”
- *It can become a real financial instrument*



THANK YOU