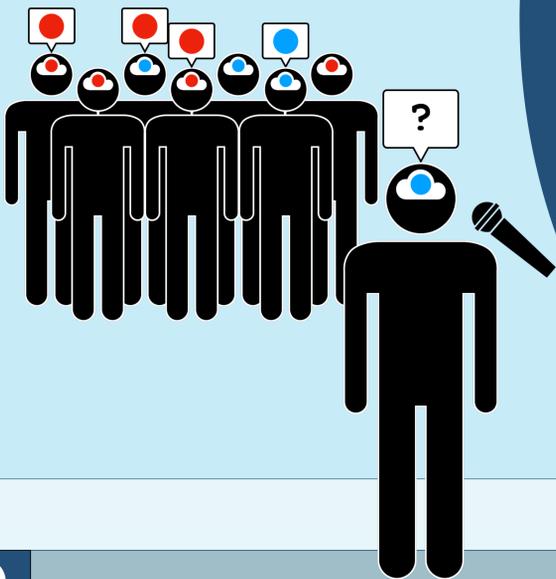


Unexpected Results

- **1982** election for the Governor of California that resulted in a significant loss for the Democratic candidate, Tom Bradley, despite him being consistently ahead in polls
- The result raised questions over polling methods. Scrutiny resulted in something unexpected

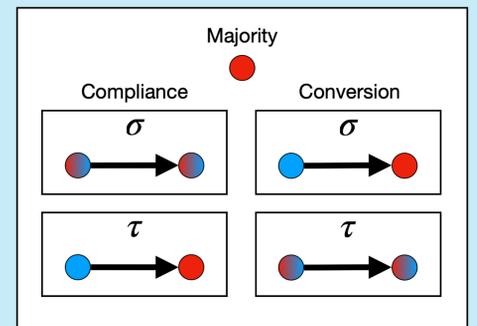
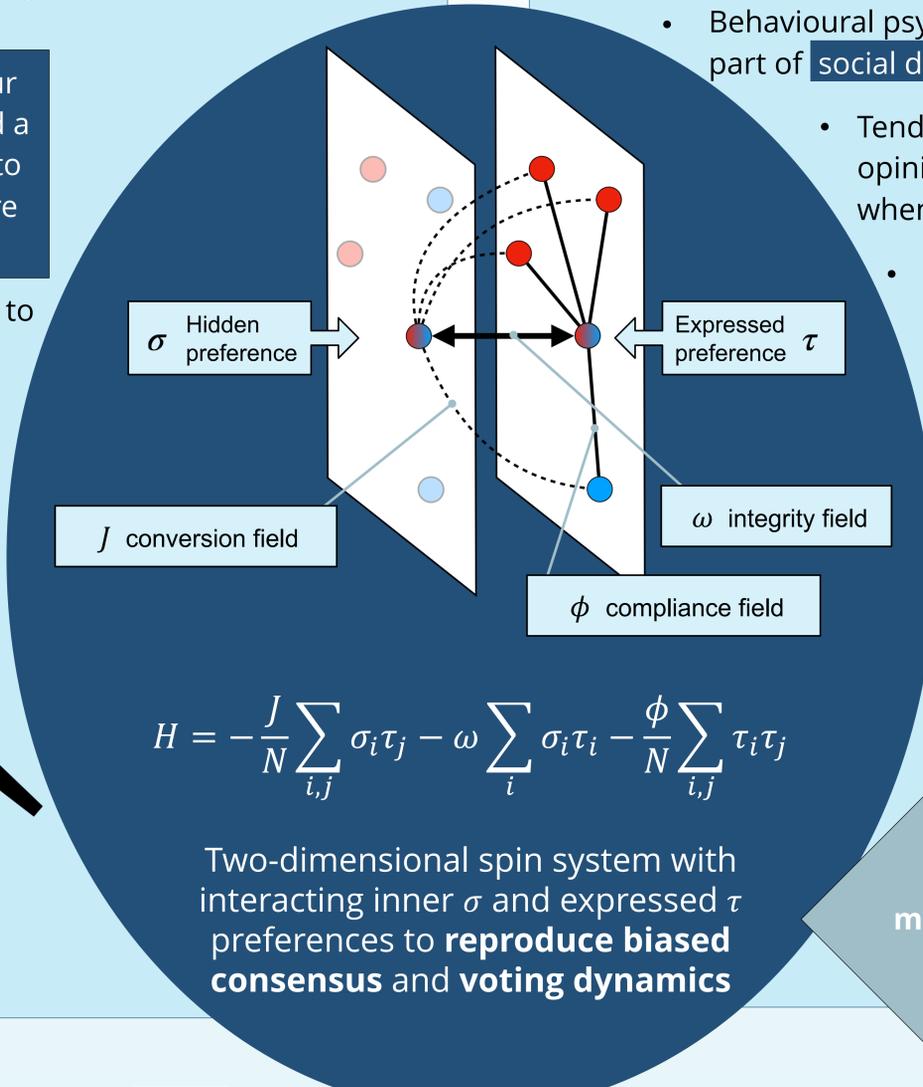
Bradley was a candidate of colour and voters had probably declared a preference for him when polled to appear more progressive or more politically correct!

- Since then the behavioural tendency to conceal one's true opinions when that could lead to criticism has been labelled as **Bradley effect**. This effectively represents the electoral incarnation of social desirability bias



Behavioural Psychology

- Various social experiments have shown that respondents tend to mask their true political preference for controversial candidates in favour of what is generally considered more socially acceptable
- Behavioural psychology identifies two mechanisms as part of **social desirability bias**:
 - Tendency to adapt one's own expressed opinion to the "wisdom of the crowd" – even when they privately loathe it
 - Tendency to be convinced and make the public expressed opinion one's own

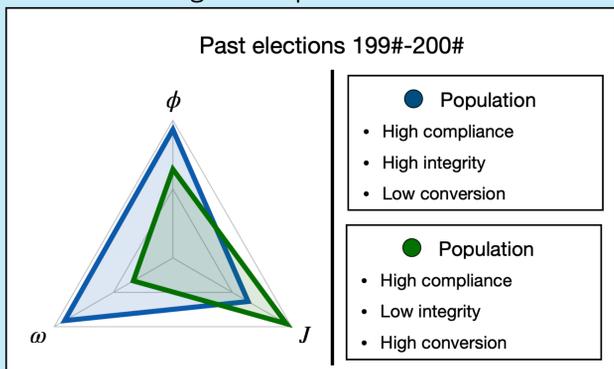


The interaction between crowds' and individuals' opinion occurs through **influence fields**

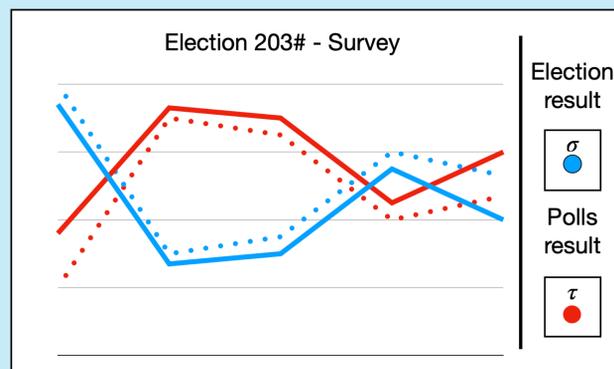
We model this effect using a **maximum entropy stat-mech spin model**

Understand

- Our model can be used to combine election results with polls to gain insight into populations stance over social and political issues
- Tool that can be used by social scientists to understand racial, gender, ideological and other biases making use of past election results



Predict



- Our model can better predict election results by distinguishing between inner and expressed preferences when field strengths are known
- And next... Boltzmann neural network built on our system to accurately reproduce polls time series

Correct for Bias

- Other domains suffer similar distortions...



It has been shown that social desirability bias has great impact on **self dietary monitoring** and clinical studies would greatly benefit from correcting for it



Social desirability bias hinders progress in **professional athletes' performances** due to over-reporting workouts if self-monitored

About Us

We are members of the Quantitative and Digital Law Lab - led by Dr. Pierpaolo Vivo, UKRI Future Leaders Fellow at King's College London. Our team is interested in the application of mathematical and digital methods to improve the understanding of complexity in legal and political systems.

Visit our website: quantlaw.co.uk - Get in touch: luca.gamberi@kcl.ac.uk