

# Predicting the future and political motivation: a computational model

Francesco Rigoli, City University of London (UK)  
francesco.rigoli@city.ac.uk

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## THE MODEL

- The brain represents society in the past, present, future (but also fictive societies (e.g., utopias)) and attach a value to them
- Value is reference-dependent

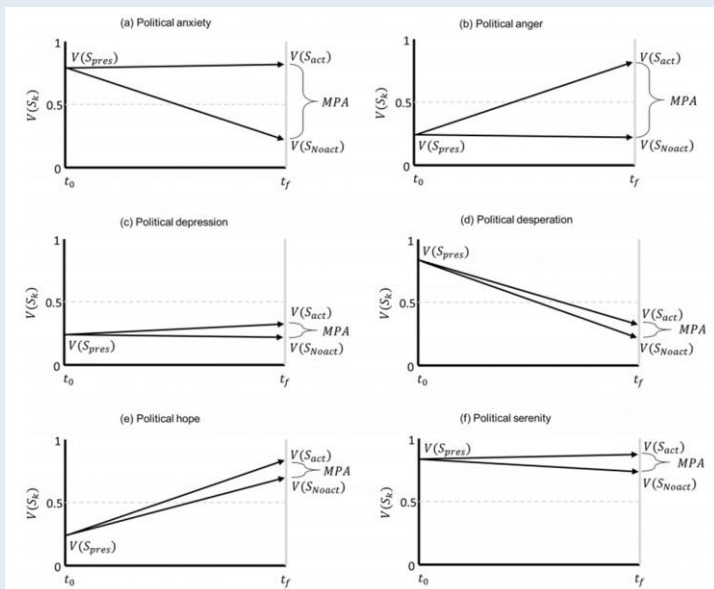
$$V(S_k) = f_{logistic} \left( \frac{R(S_k) - \mu}{\sigma} \right)$$

- MPA: motivation for political action

$$MPA = V(S_{act}) - V(S_{Noact})$$

- $S_K$ : society k
- $R(S_K)$ : raw value of  $S_K$  (e.g., Gini coefficient)
- $V(S_K)$ : subjective value of  $S_K$  (e.g., Gini coefficient)
- $\mu$ : average raw value across societies
- $\sigma$ : SD for raw value across societies
- $S_{act}$ : society predicted with appropriate political action
- $S_{Noact}$ : society predicted without appropriate political action

## POLITICAL MOOD



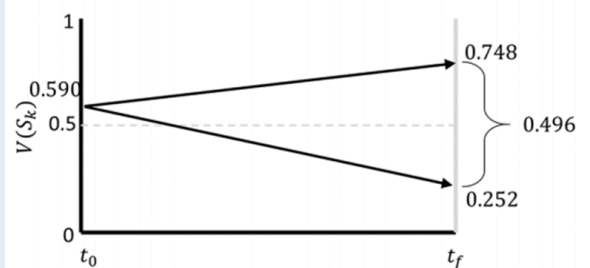
- $t_0$ : present time
- $t_f$ : future time
- $S_{pres}$ : present society
- $S_{act}$ : society predicted with appropriate political action
- $S_{Noact}$ : society predicted without appropriate political action
- MPA: motivation for political action

## GOLDEN AGE

### a) Control condition

$$R(S_x) = 60; R(S_y) = 30; R(S_z) = 40;$$

$$R(S_{act}) = 60; R(S_{Noact}) = 30; R(S_{pres}) = 40$$



### b) Golden age

$$R(S_x) = 600; R(S_y) = 30; R(S_z) = 40;$$

$$R(S_{act}) = 60; R(S_{Noact}) = 30; R(S_{pres}) = 40$$

