

# The Voter Model: Background, Approach, and Implementation

SCID Review of Work, 27-28 October 2011

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# Overview

- Introduction
- Theoretical background
- The model's logic
- Data sources
- Current implementation of the model
  - Possible additions
- Demonstration of results
- Conclusion

# Introduction

- We are presenting the DIM for one of the main outcomes under study by SCID: Socio-political integration
  - Focus on turnout, hence ‘voter model’
- Focus: UK
- Baseline model (still work in progress) that is/will be adaptable to explore the impact of various factors as well as certain (theoretical) assumptions
  - Aim to be consistent with current theories + research evidence

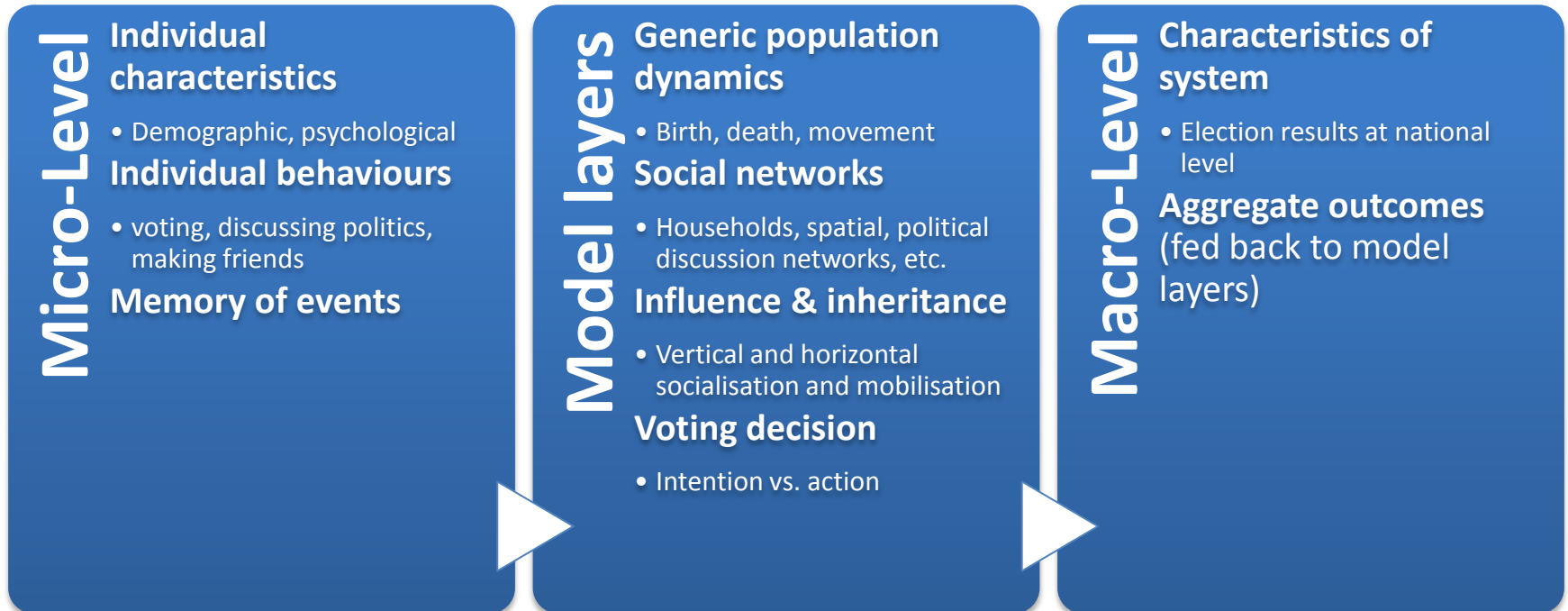
“they can't, they don't want to, or nobody asked”  
(Verba, Schlozman, Brady and Nie 1991)

# **THEORETICAL BACKGROUND**

# (very, very brief) Theoretical background

- Focus on two main 'divides'
  - Socio-psychological models: importance of social characteristics, resources, social context, partisanship, socialisation, mobilisation
  - Instrumental/choice-based models: cost/benefits calculations, knowledge & interest
- Also focus on individual and group dynamics in voting
  - Habit
  - Networks of discussion
  - Household influence

# The model's logic



# Data sources

- Initialisation from 1992 BHPS
  - Using information from random sample of 1,000 households
    - Age, ethnicity, year of arrival, voted, member of organisations, etc.
- Social mobility
  - BHPS as well
- Fertility/mortality
  - Life tables and birth statistics from ONS
- Immigration
  - Timing of arrival: Year of arrival of immigrants present in 1992 BHPS
  - Overall inflow/outflow: Derived statistics from 2001 Census (CCSR), based on a predetermined ward + household local/international in-migration information from 1991 household SAR at national level
- Influence & inheritance\*
  - Existing literature on the various channels of influence, mobilisation and socialisation
- Voting
  - Output of model in itself, but results also checked against historical results

What is in it and why

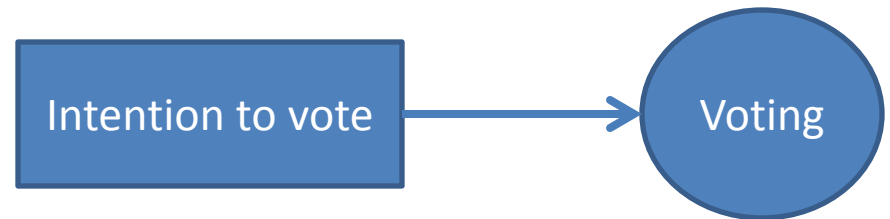
# **THE IMPLEMENTATION OF THE MODEL**



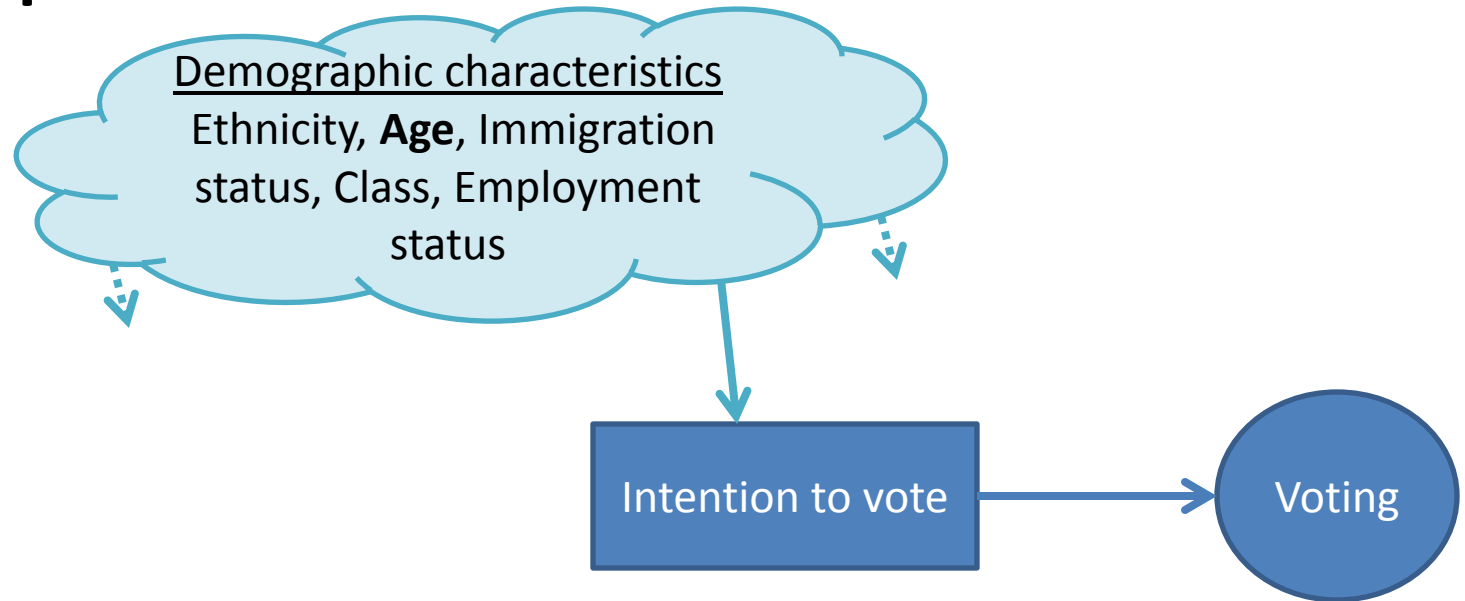
# Implementation of the model

- The structure of the current model is based on the theoretical accounts previously outlined (+ empirical evidence as to the impact of certain characteristics)
  - Put together as narratives of voting, from which we derive rules by which our agents act
- Focus on micro, meso, and macro level aspects of ‘why people vote’
  - Also ‘why people start/stop voting’
- This is an ever-evolving model, that is far from complete, and whose structure will now be presented

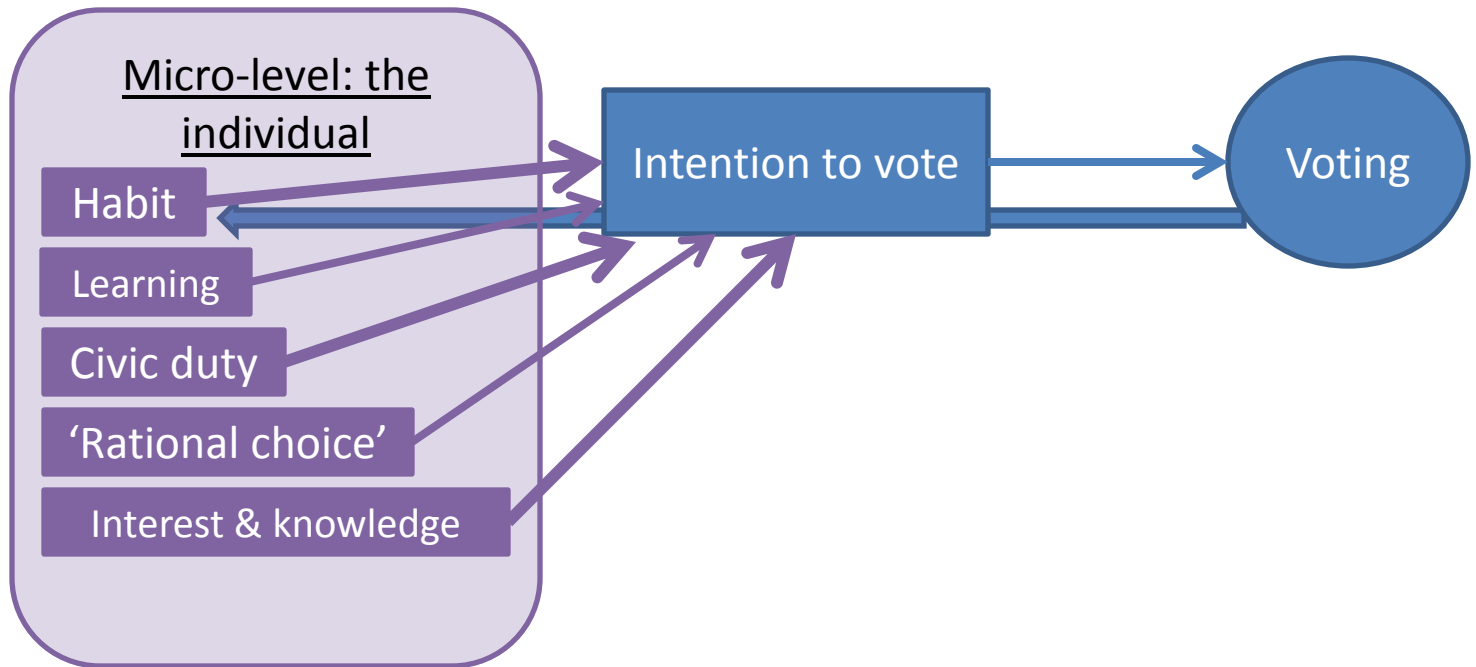
# Implementation of the model



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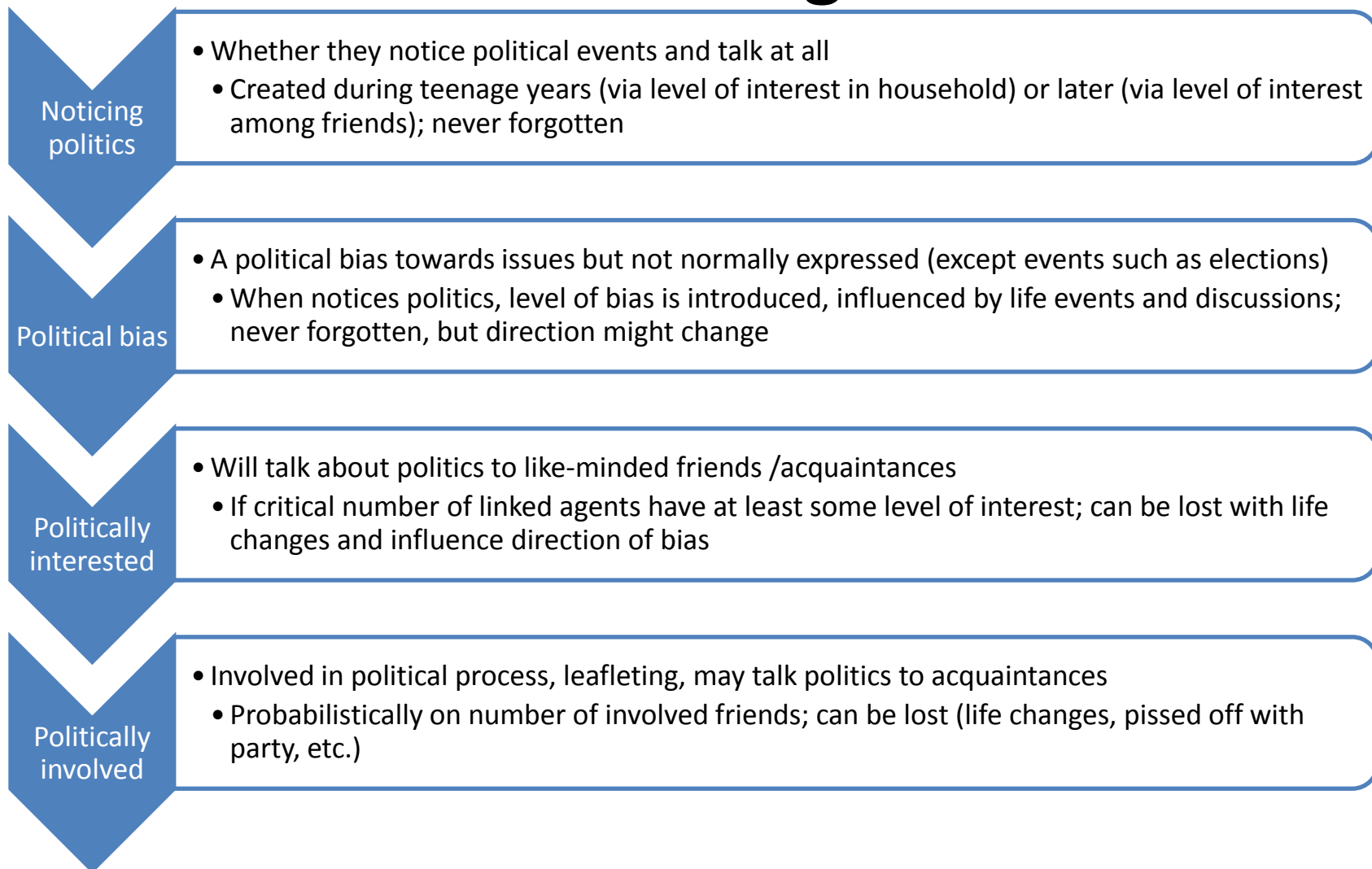
# In more detail...

- *Habit*: if memory of having voted in 3 out of 4 last elections, then habit acquired (intent to vote at subsequent election)
  - Lost if cannot vote in 2 subsequent elections
  - Examples of narratives
    - They do what they did before several times, don't really consider any alternative
    - That they voted before means they are likely to remember to vote
    - A person knows how to vote, where it is etc. so it is easier to put into practice
- *Learning*: satisfaction derived from past election results (linked to past turnout) increases level of interest
  - Also intrinsic learning process via household
  - Example of narrative
    - They learn to vote due to positive or negative reinforcement - they voted last time and got a positive result, i.e. the party they wanted (or prevented a party they did not want)

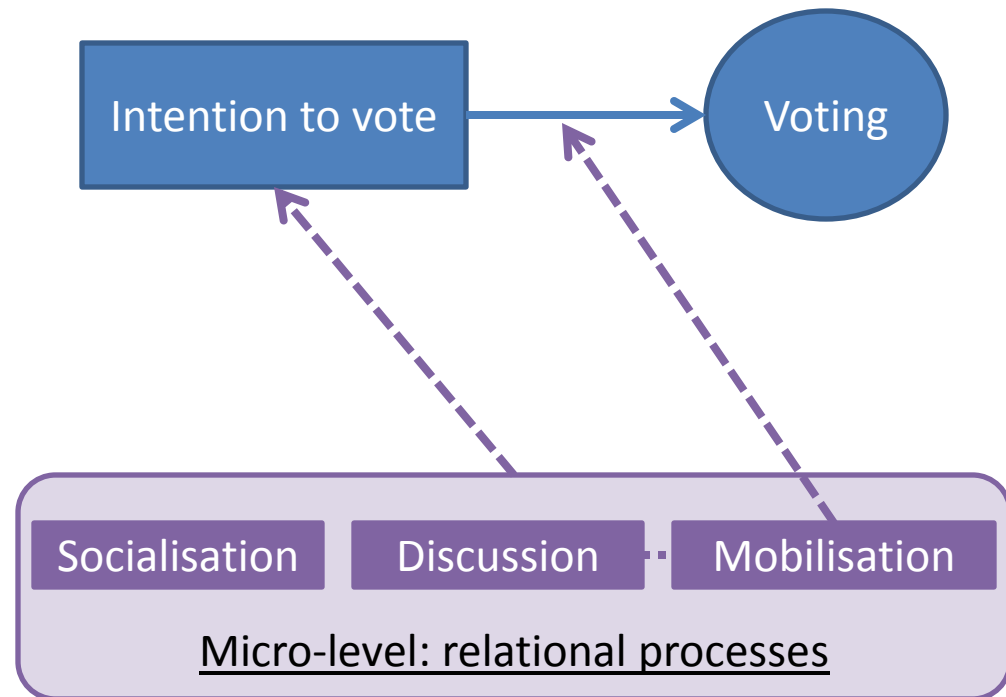
# In more detail...

- *Civic duty*: acquired via inheritance or interactions with other agents
  - Influences intention & discussions with other agents
  - Example of narrative
    - They vote because it is their civic duty, i.e. obey a perceived social norm to vote
- *'Rational choice'*: strength of preference, in combination with interest in politics, affects voting intention
  - Feedback if agent remembers + satisfaction of past voting
  - Examples of narratives
    - They believe voting has a chance of benefiting them in the outcome, as the result of a weighted choice. Influencing factors could include:
      - How close is the election race?
      - Current weather (is it raining?)
      - Perception of outcome benefits and its likelihood

# Interest and knowledge: The 'knowledge tree'



# Implementation of the model

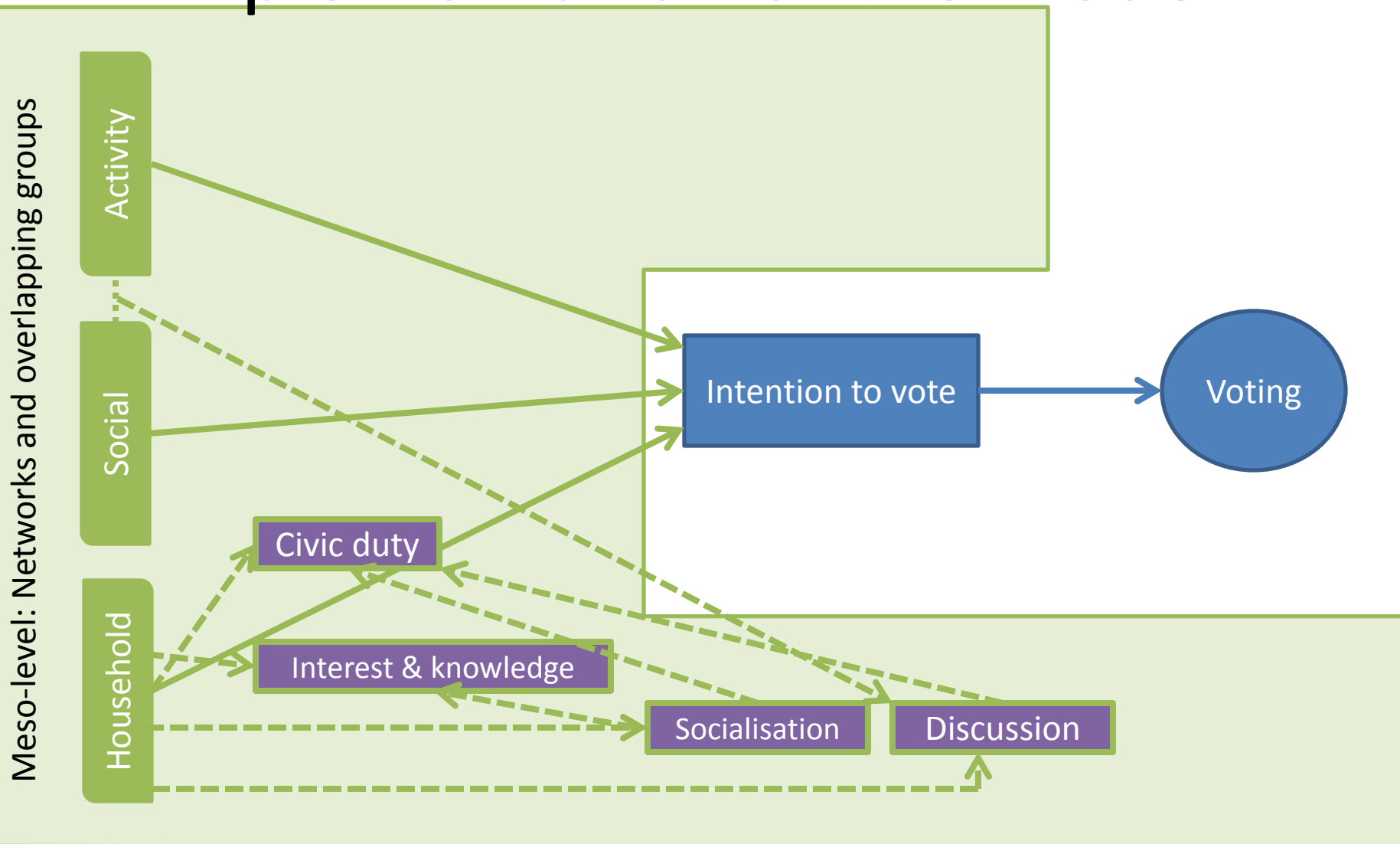




# Examples of narratives

- Socialisation
  - People start voting due to the influence of their family via:
    - Learning how to vote
    - Conformity with family
    - Internalising values such as civic duty
    - Learn to express political action
- Mobilisation
  - A party of campaign group persuades a person to go and vote
- Discussion
  - People's membership of political groupings/views means that they have frequent political discussions and hence are motivated to vote (this overlaps with many of the above stories)

# Implementation of the model



# A bit more about networks

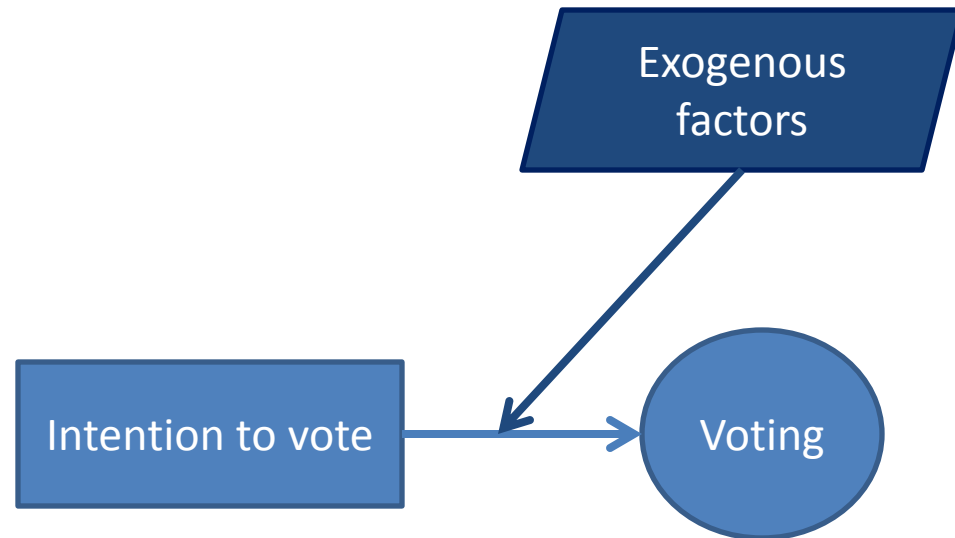
## Generating networks

- Focus on four mechanisms
  1. Homophily
  2. Proximity
  3. Foci (1+2 together)
  4. Transitivity
- Formation (and dissolution) of networks will have strong homophilic and maturation components

## Influence

- Main influence in networks assumed to go via political discussion
  - Far reaching influence
- Networks + interest affect exposure to discussion
- Presence of experts
  - Politically involved
- Reception of mixed messages reduces influence of agents

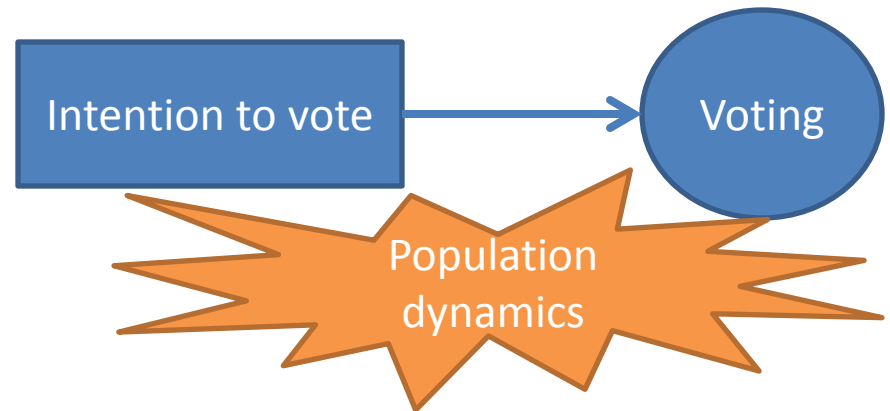
# Implementation of the model



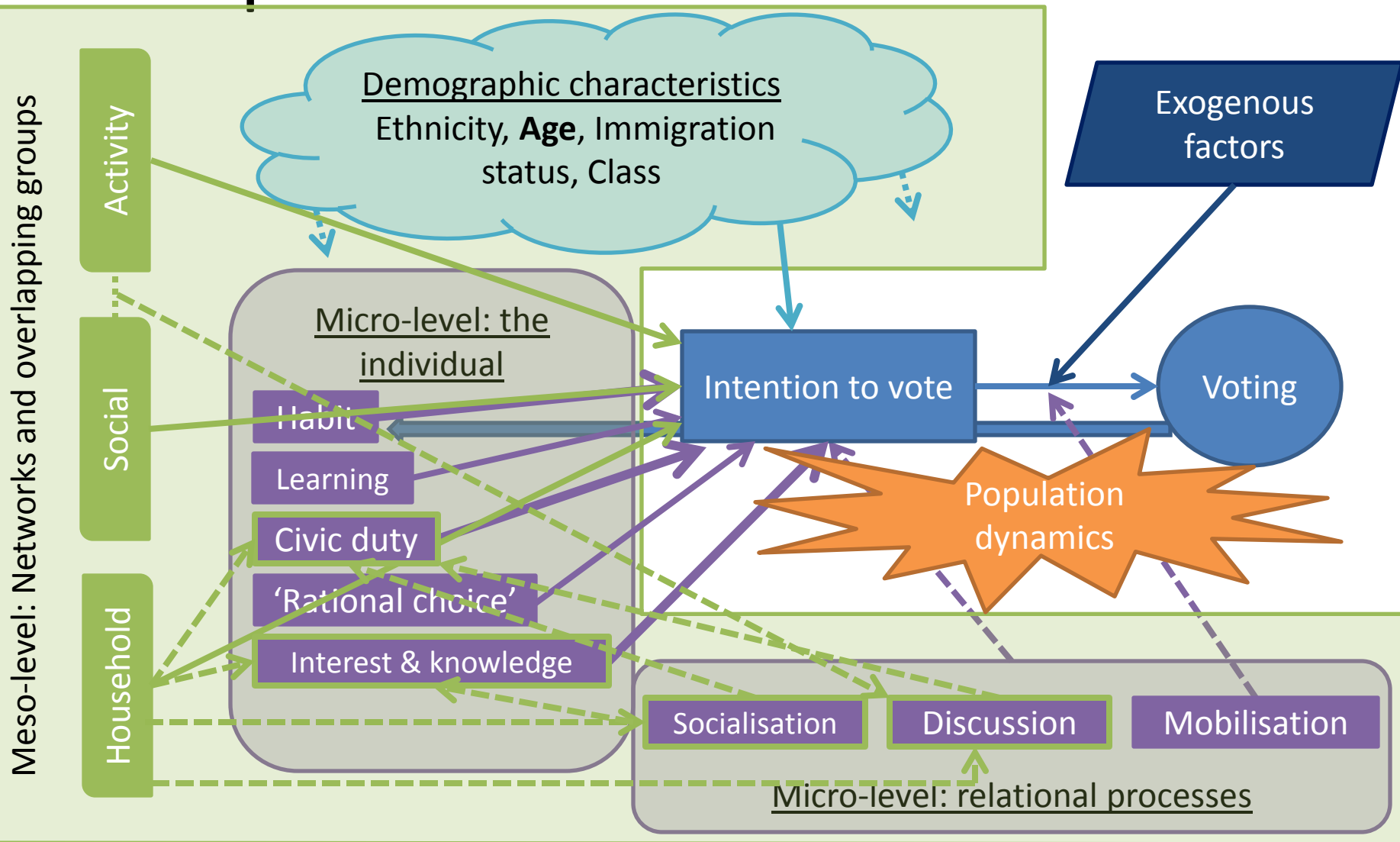
# Some examples of exogenous factors in the model

- New baby
  - Probability of voting decreases with presence of young child in household
- Moving house
  - Loss of network ties
- Old age
  - Participation decreases after age 75 (and stops when agents die)

# Implementation of the model



# Implementation of the model



# Implementation of the model

## Possible additions

### **Proposed to include:**

- Waves of immigration
- Party-based mobilisation
- Immigration and class
- Close/interesting elections
- Group Consciousness
- Multiple sources for a social relationship

### **Might include:**

- Disillusionment
- Changing demographics
- Level of education
- A finer grain of ethnicity representation
- Changing homophilic relationships
- Sex



# **DEMONSTRATION OF RESULTS**

# Conclusion

## What can we do with this?

- Possible avenues of enquiry
  - What drives differences (or lack thereof) in turnout between ethnic groups?
  - How does diversity and/or density affect turnout?
    - Is it a social network effect?
  - What are the likely spill over effects of party-based mobilisation?
    - Long-term impact?
  - What happens to turnout when networks break down?
  - How might immigration affect ethnic differences in participation?

# Conclusion

## What do we want from you?

- Ideas
- Comments
- Suggestions
- No abuse

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THE SOCIAL COMPLEXITY OF IMMIGRATION AND DIVERSITY

<http://www.scid-project.org>

# THANK YOU!

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