

Exploring Neighbourhood Effects Through Agent-Based Models



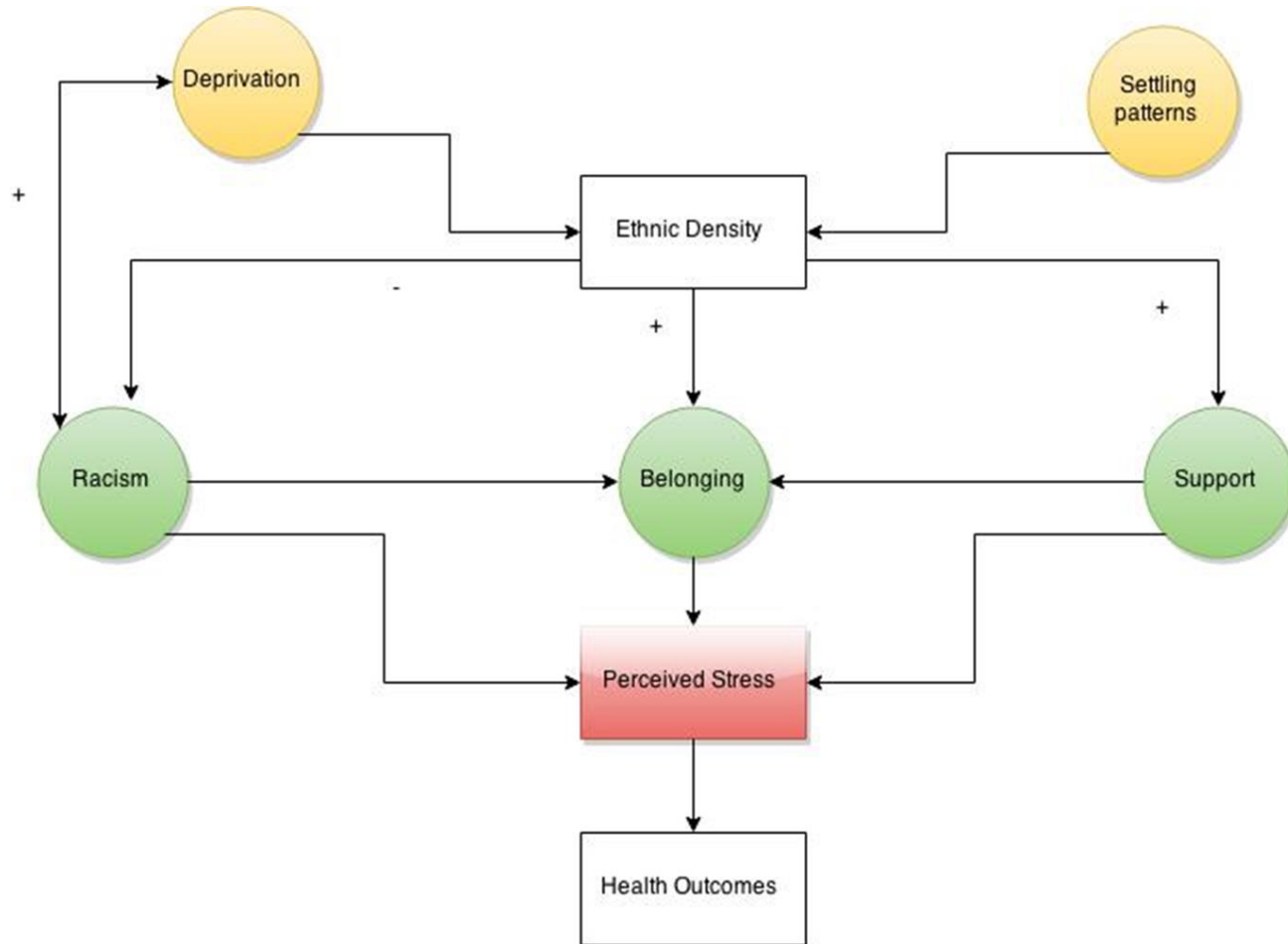
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My research



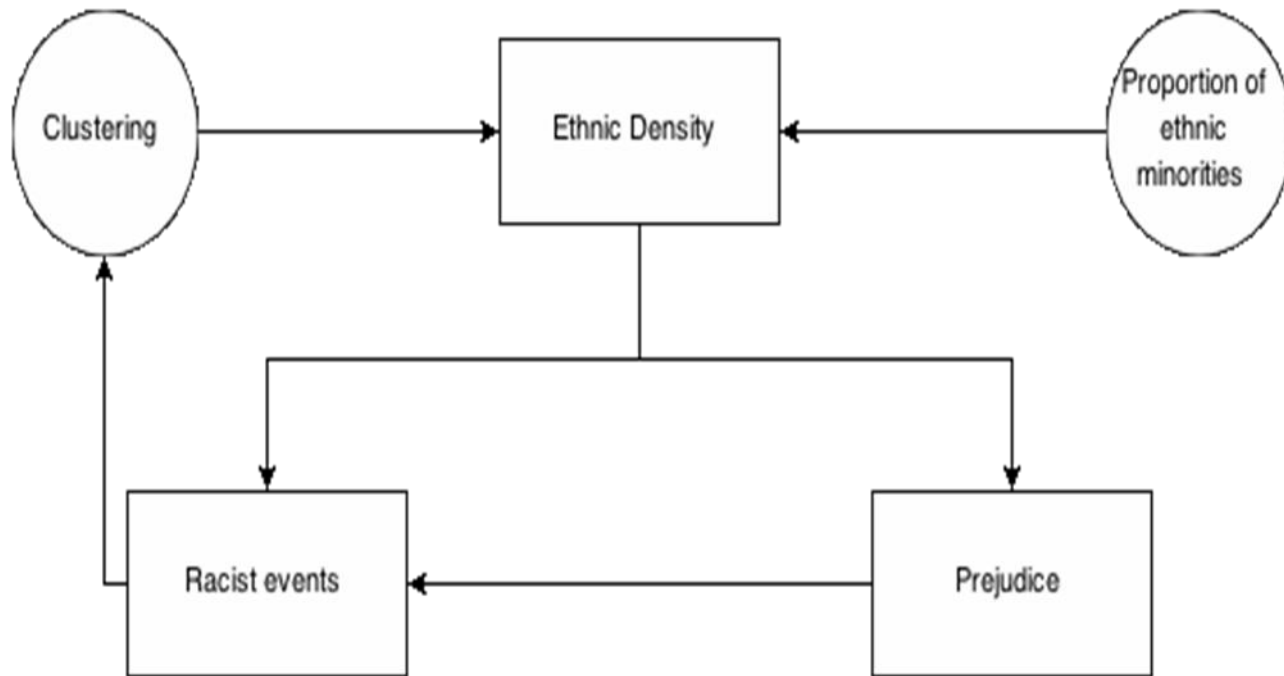
Racism

- Racism is hard to measure – complex.
 - Interpersonal Racism
- Where does interpersonal racism take place?
 - Areas of multiple deprivation, high unemployment, with a small but increasing ethnic minority group
 - Position within these communities
 - Racialised beliefs supported by the community
 - Power struggle

The effect of Ethnic density

- So does an increase in ethnic minorities lead to more or less racist events?
 - Contact: increased proportion of ethnic minorities causes increased contact which reduces prejudice
 - Conflict: increased proportion causes a sense of threat (realistic and symbolic) which increases prejudice

The Model



Why use ABM for neighbourhood effects research??

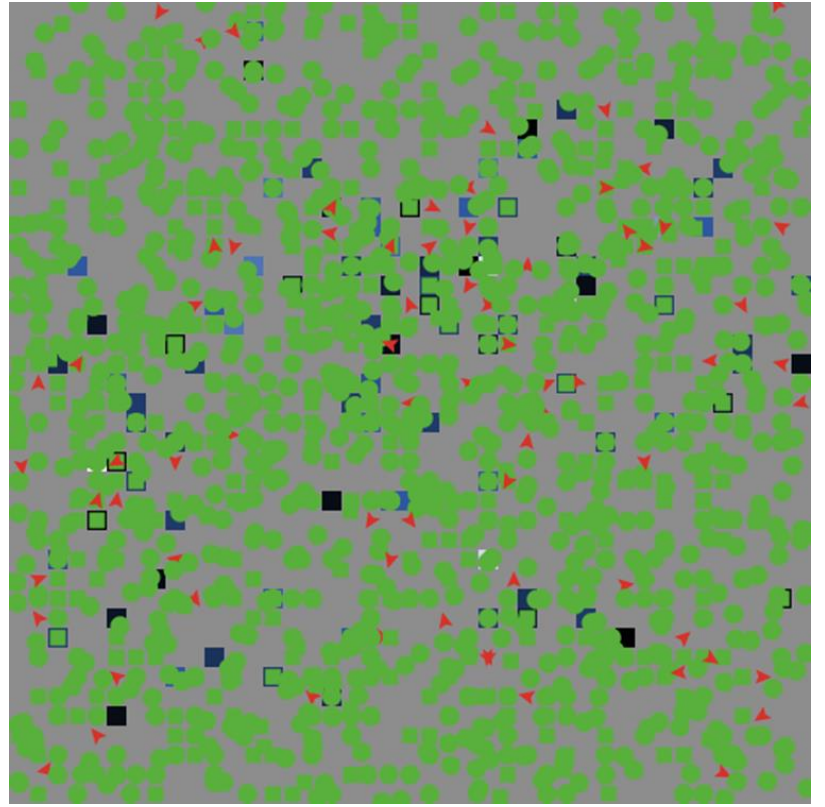
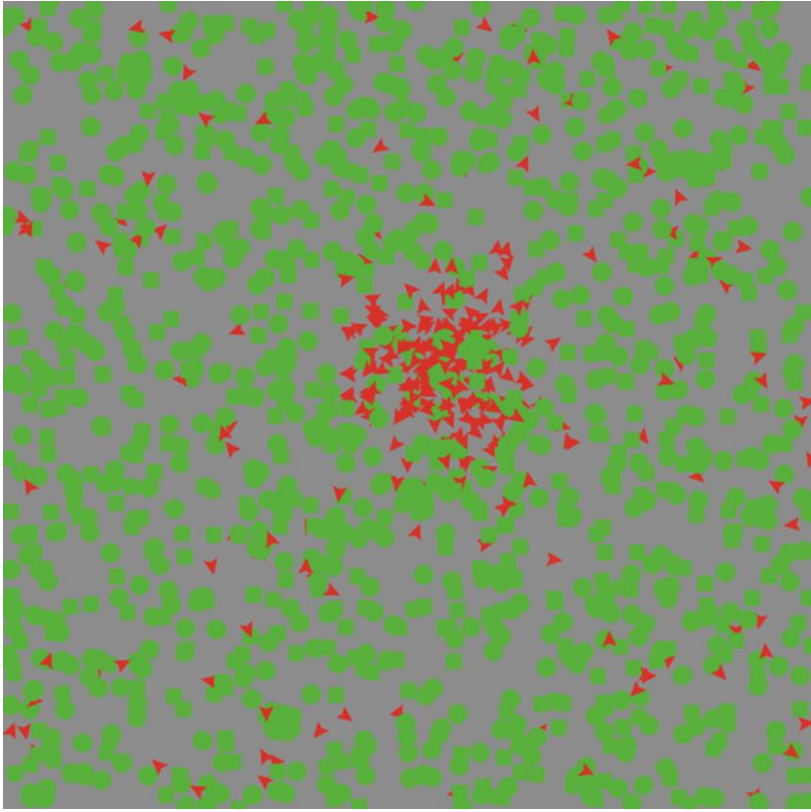
- Location
 - Neighbourhoods are complex and dynamic
 - Not properly accounted for in data
 - MAUP



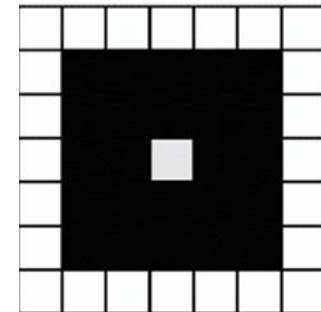
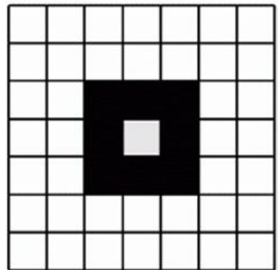
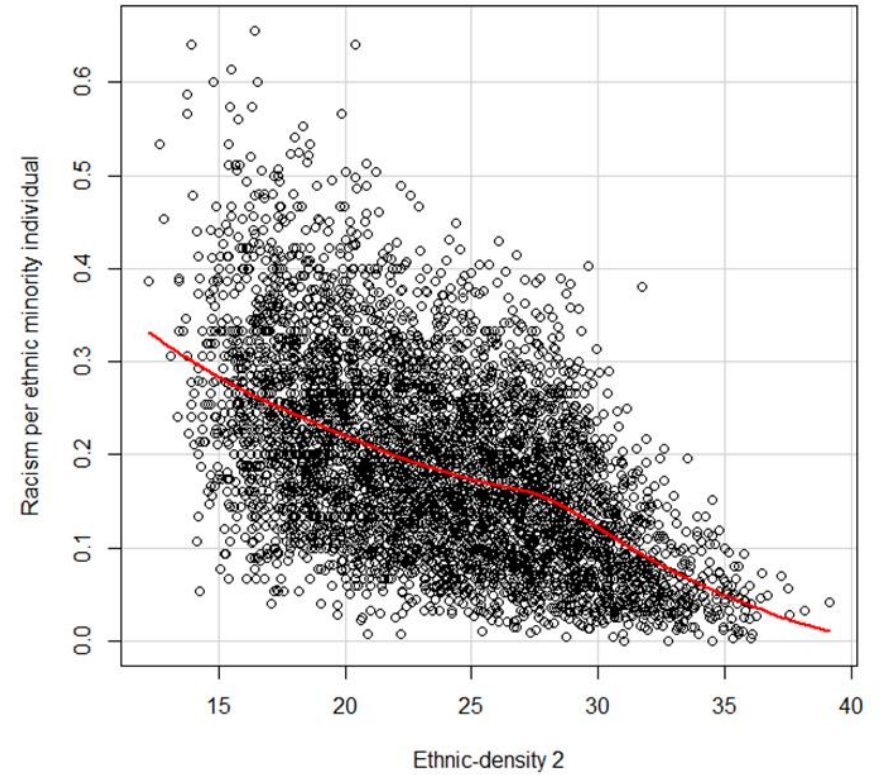
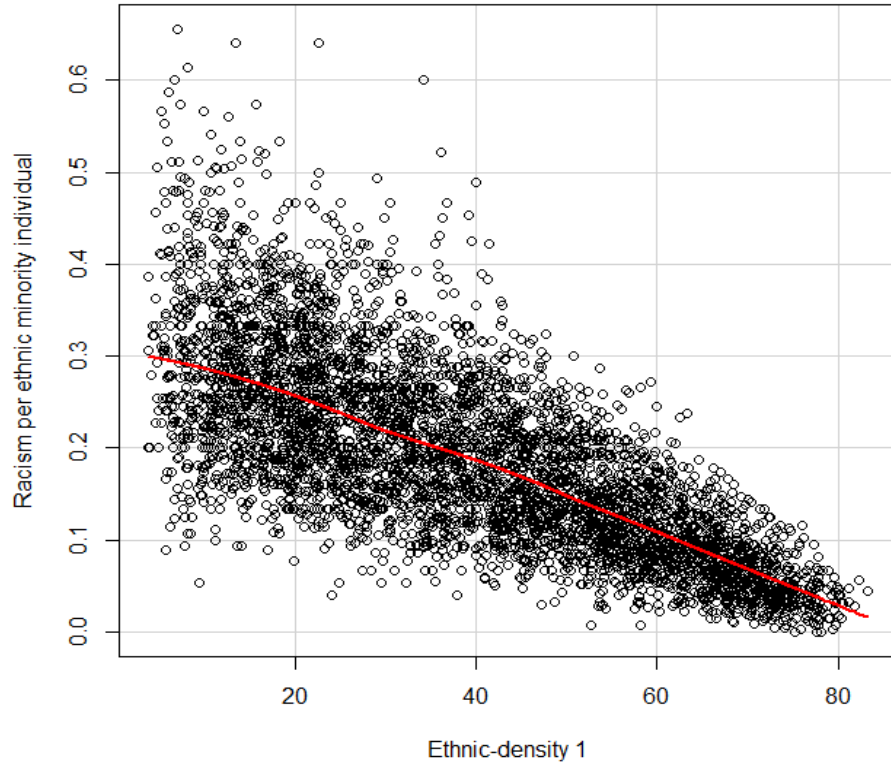
- Causal effects:
 - Selection
 - Simultaneity
 - Omitted variables

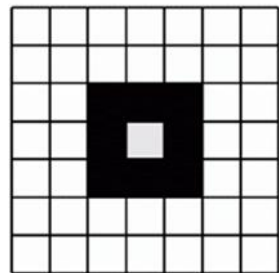
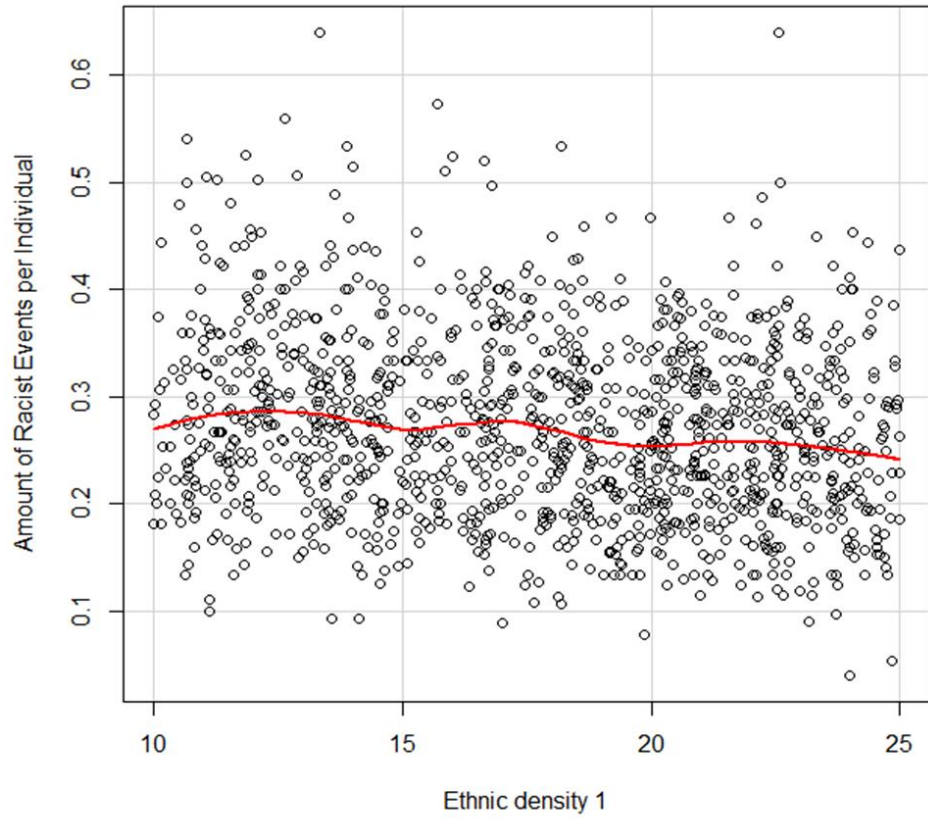
What are Agent Based Models?

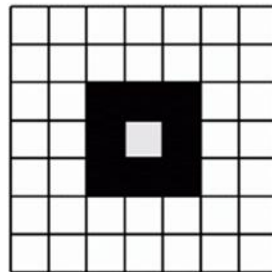
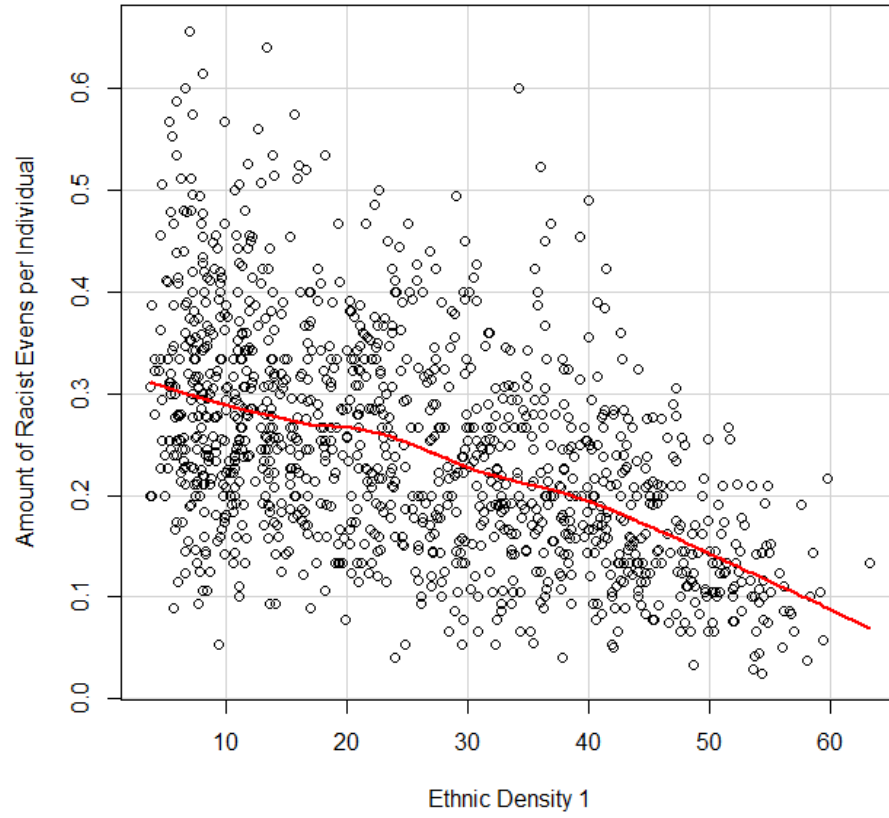
- Bottom up approach: individual actions lead to complex patterns of behaviour
- Simulated Environment
- Agents = humans, firms, government bodies, animals etc. etc.
- Agents interact and learn over time
- Variables and information can be stored and then analysed



Results







Key Findings

- Contact is a double-edged sword
 - Clustering prevents both positive and negative contact between different groups
- Distance matters
 - For protective effects it matters if ethnic minorities are on the inside of a cluster
- Ethnic density may have a threshold effect
 - Non-linearity

Future work...

- Deprivation
- Immigration
- Health