A photograph of a classroom. A female teacher in a light blue shirt stands at the front, smiling and gesturing with her hands. Several students in the foreground and middle ground have their hands raised, indicating an interactive lesson. The classroom features a green chalkboard, a whiteboard, and wooden desks. A blue semi-transparent banner is overlaid on the lower half of the image, containing the title text.

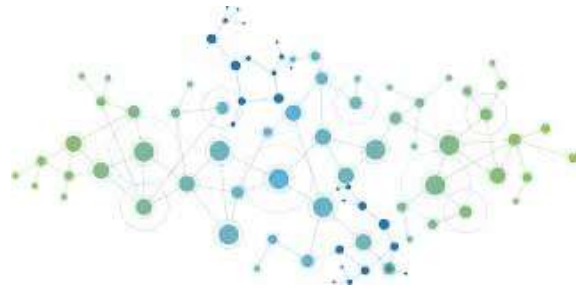
Homophily, networks and cultural capital: what clues do they provide about educational disadvantage

Professor Chris Brown
School of Education, Durham University

Aims of the session

1. To provide an understanding of networks, homophily and cultural capital
2. To connect these concepts to educational disadvantage and to provide new perspectives on possible causes of disadvantage



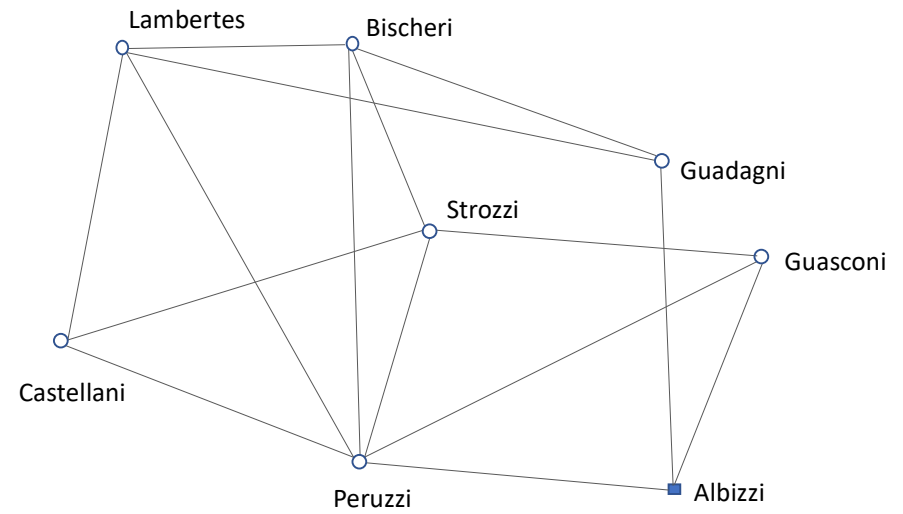
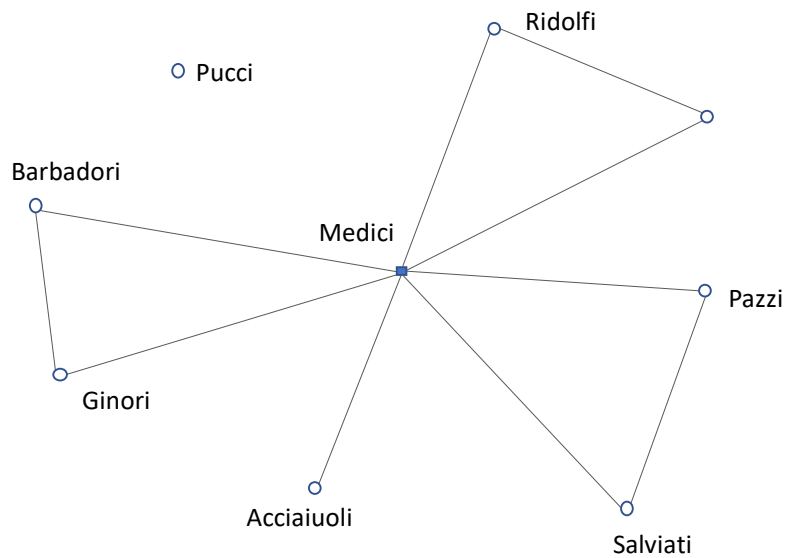


A network perspective

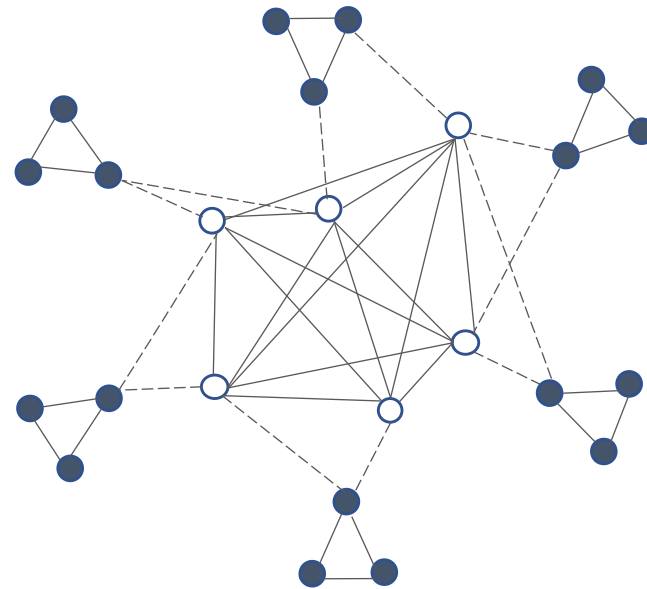
Example of a network: Jackson Pollock



Centrality

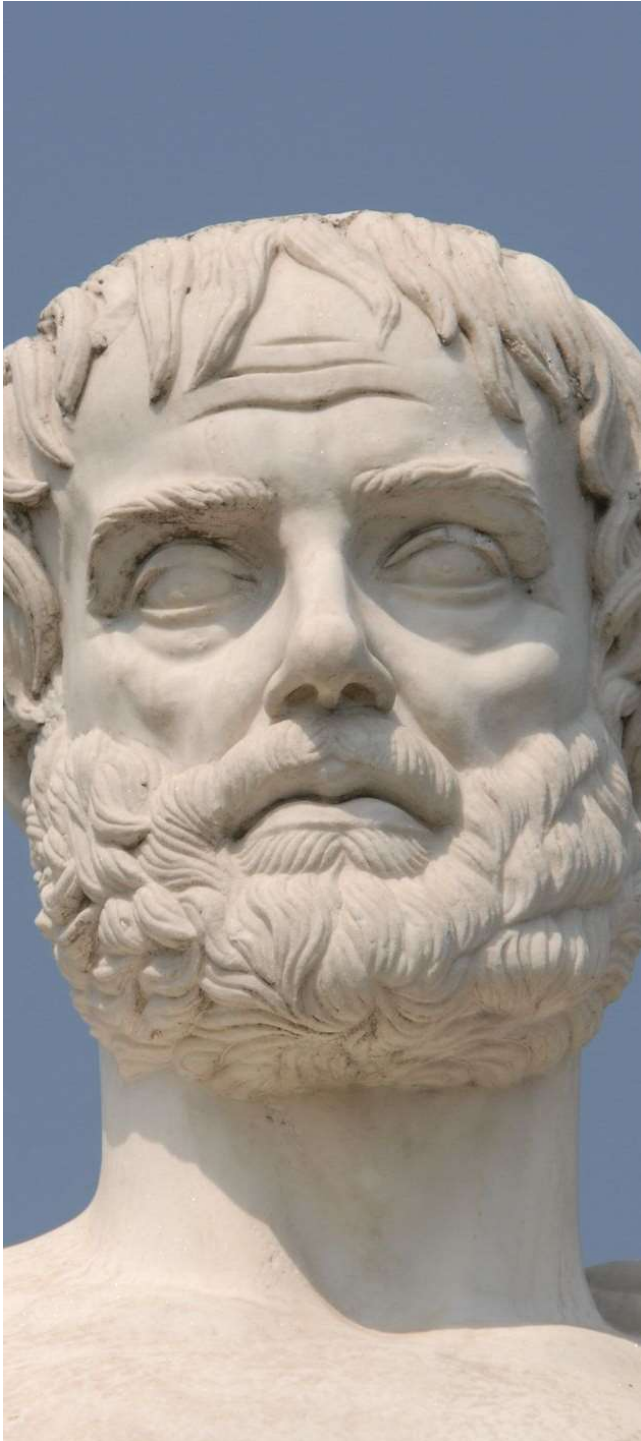


Density



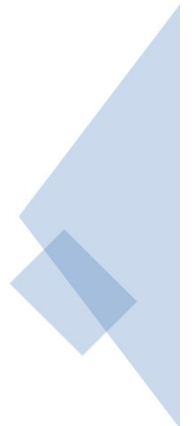
The network at the centre of the diagram is densely connected, with only weak links to other groups.

If we assume the members of this network only adopt the views and norms of the majority, then they always disregard the behaviours and perspectives of the darkly shaded groups - even if these have the potential to improve the outcomes of network members



Homophily

- One of the most important characteristics often seen in networks is that of *homophily*.
- This is the idea that like attracts like or, as it's more commonly expressed, that 'birds of a feather flock together'.
- In essence, homophily dictates that we tend to form networks with people we see as being like us.





Think

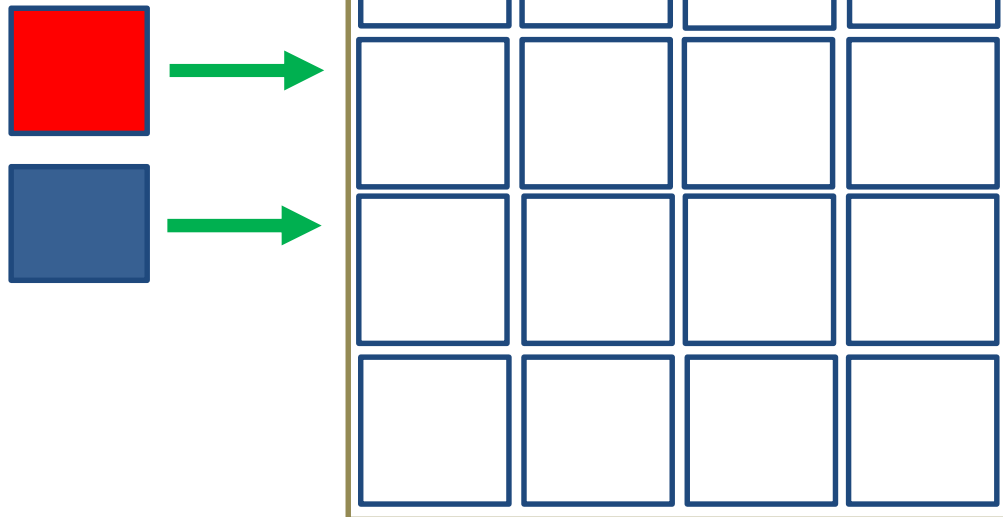
Of the people you are closely connected to, how many are the from the same ethnic background as you, or the same social class?

And how many aren't?

Homophily

To provide a simple example of Schelling's analysis.

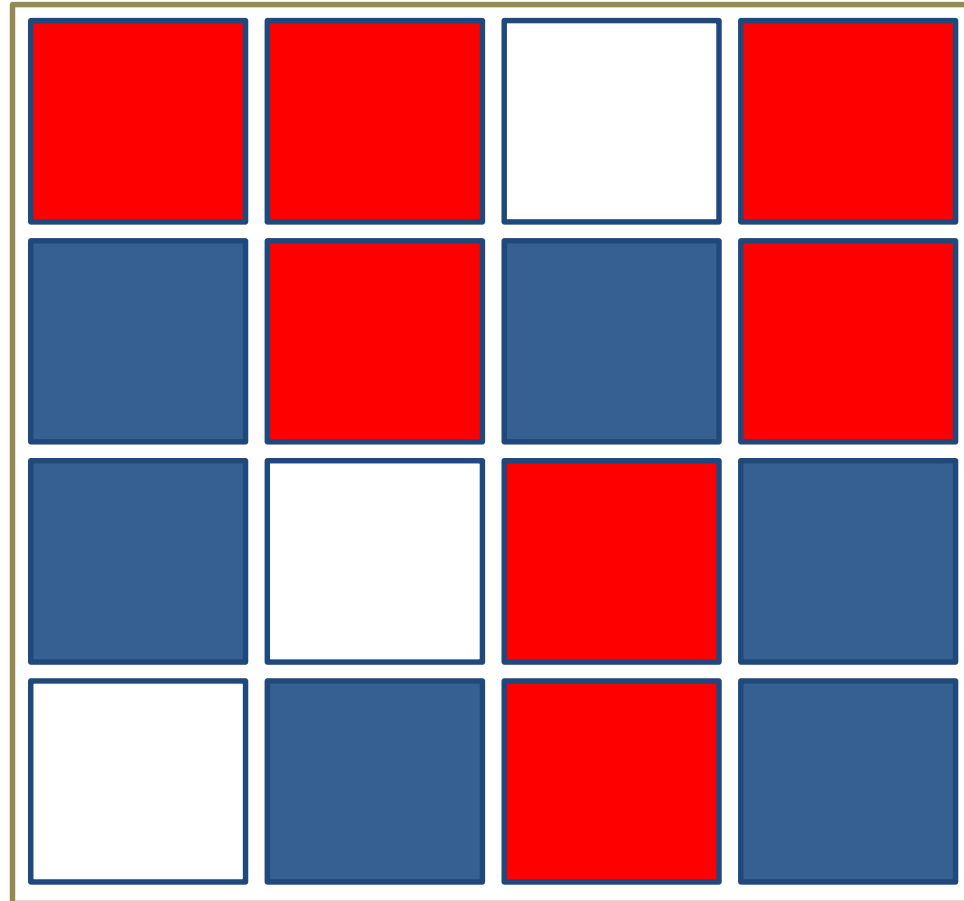
Let's suppose there are two types of people in the world: those who like red and those who like blue, with these people living on a four-by-four grid.



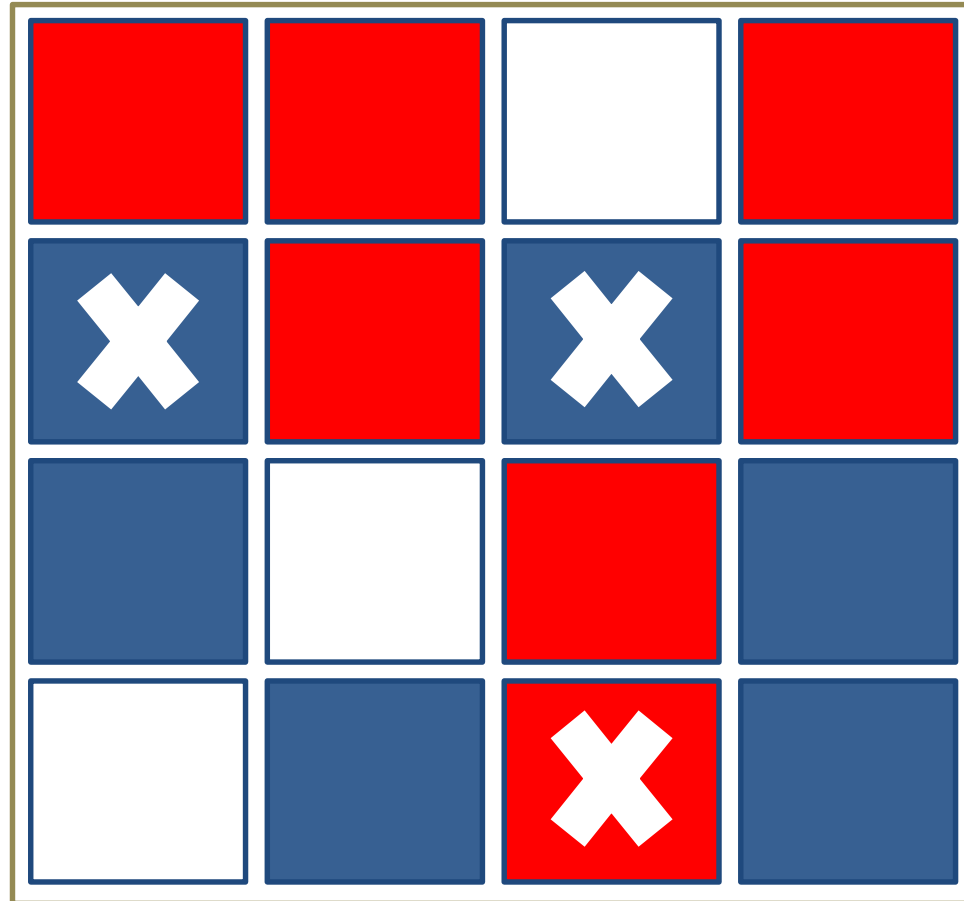
Homophily

- Each individual has up to 8 neighbours who live adjacent to them. As well as liking specific colours themselves, individuals also have preferences in terms of the colours their neighbours like and are generally happy when at least a third of their neighbours like the same colour as they do (i.e. either or blue).
- If we randomly allocate thirteen individuals to the grid, this leaves three squares empty. Individuals will stay where they are if at least a third of their neighbours like the same colour they do, otherwise they will move.

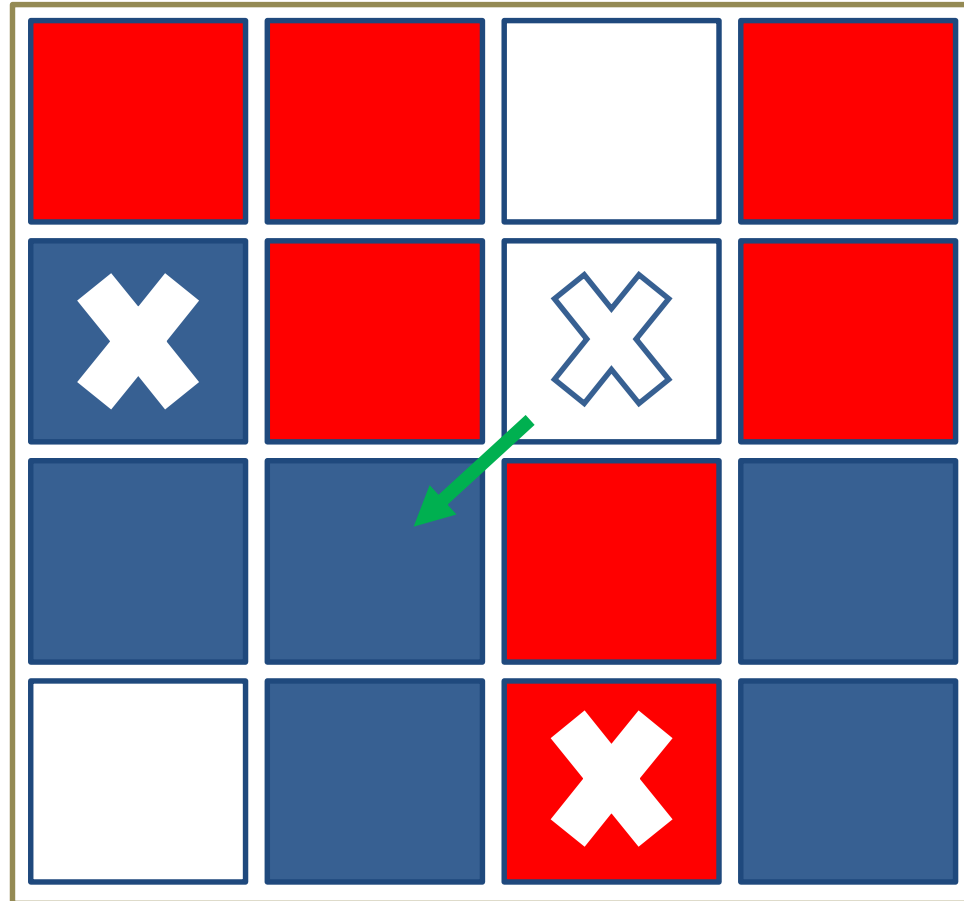
Starting position



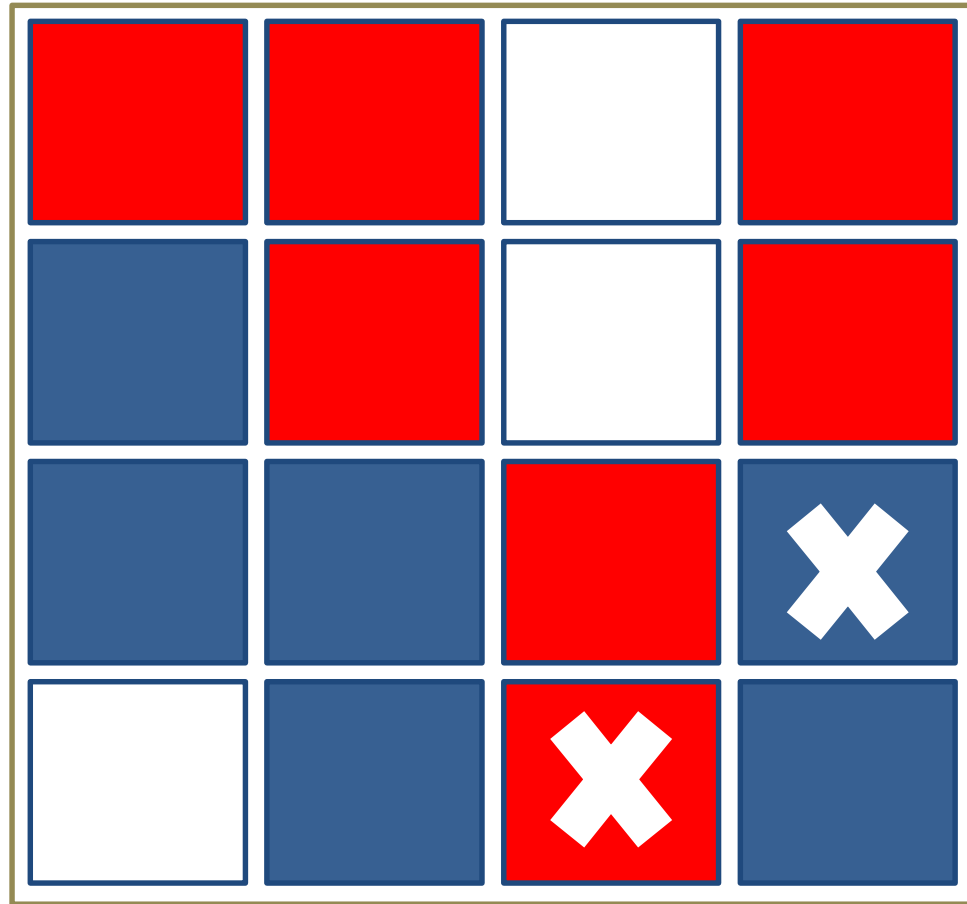
Three individuals are unhappy



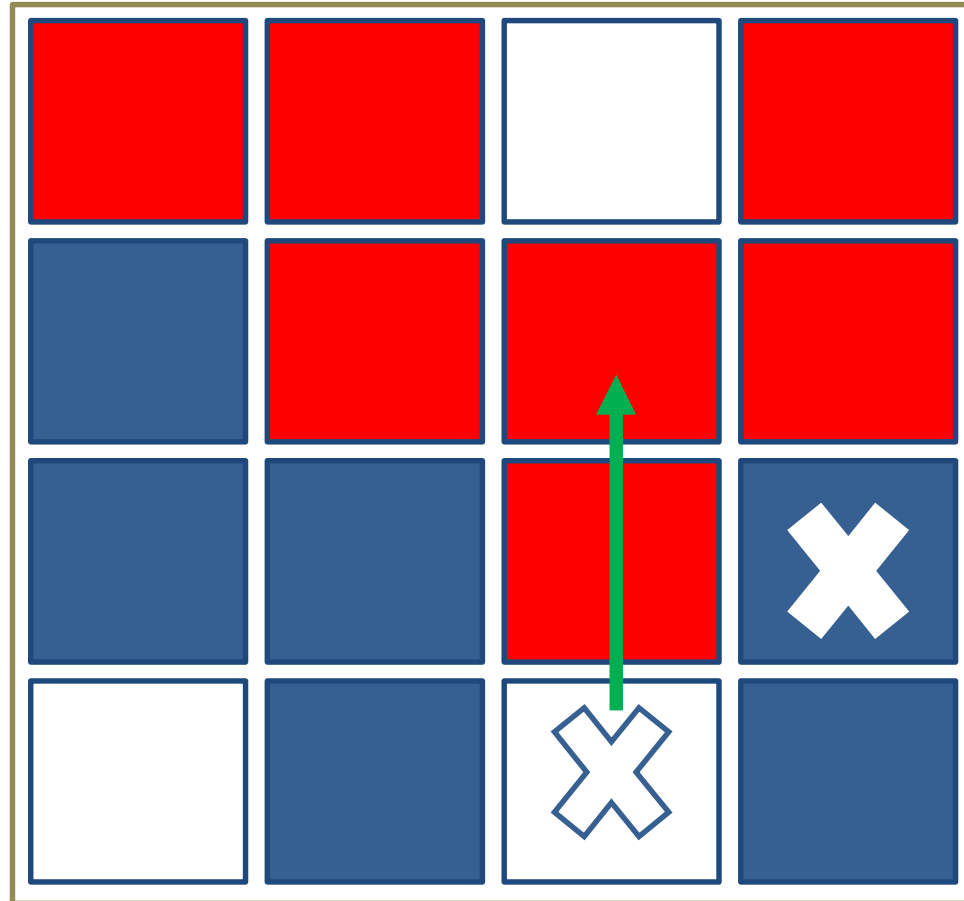
One unhappy individual moves down
and to the left



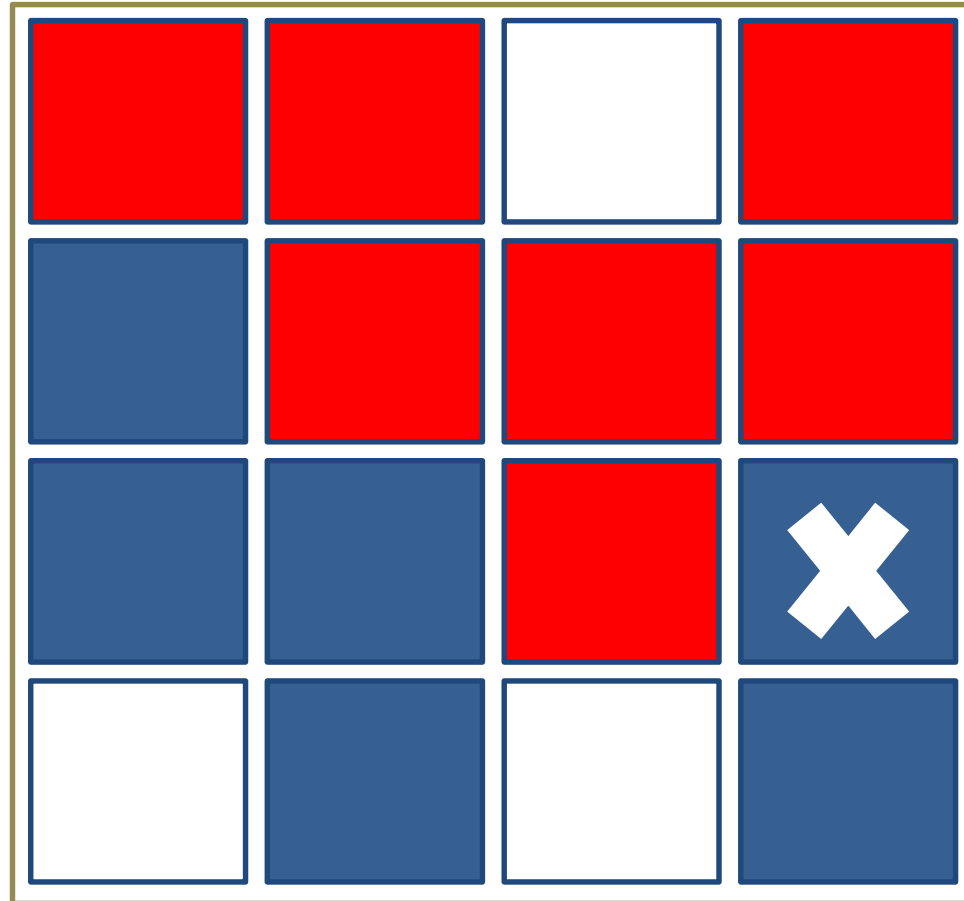
Now there are two unhappy individuals



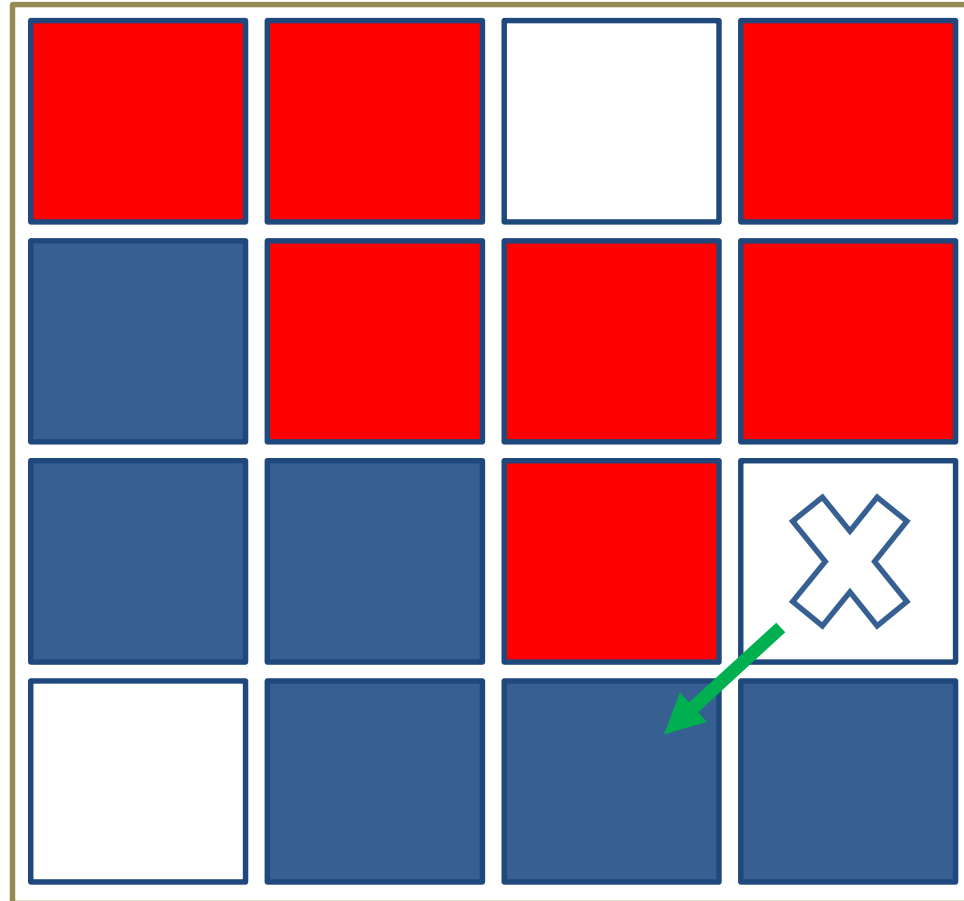
One unhappy individual moves up two squares



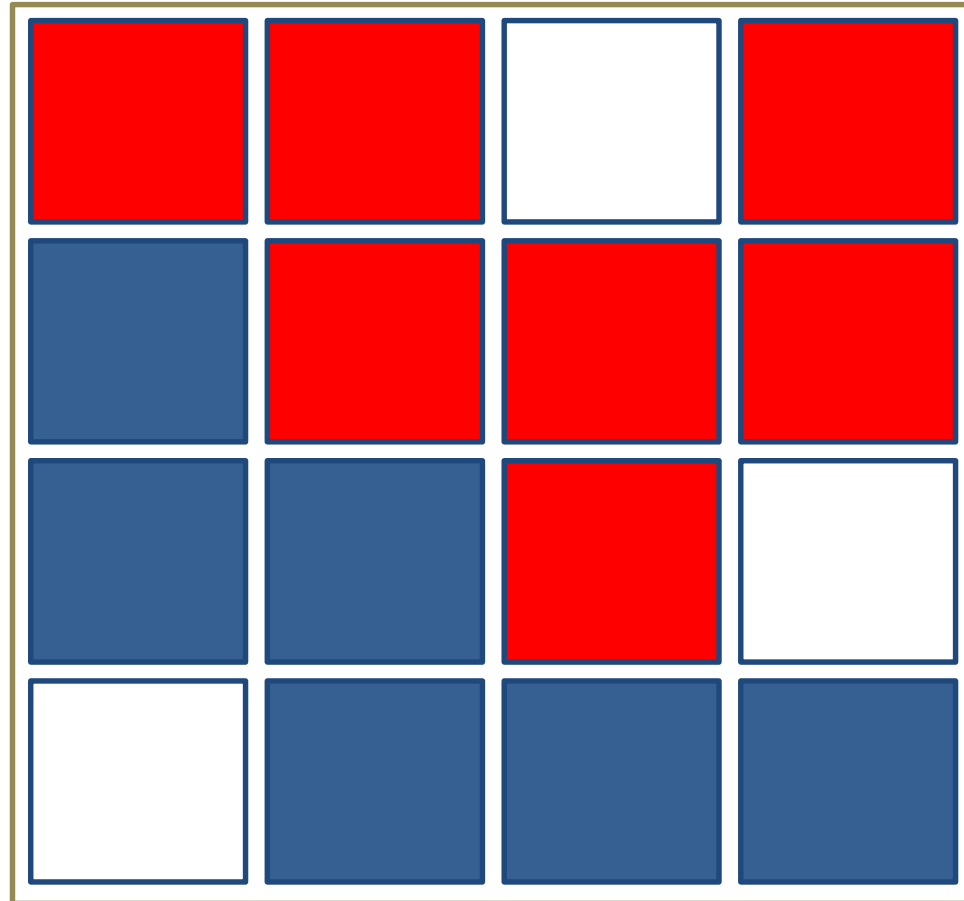
Now there is just one unhappy individual



The last unhappy individual moves
down and to the left



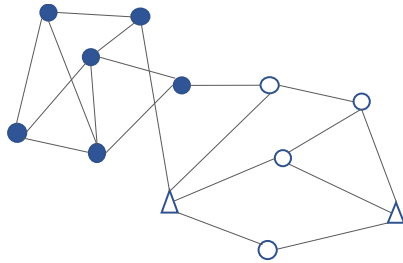
Finishing position: everyone happy but two distinct communities



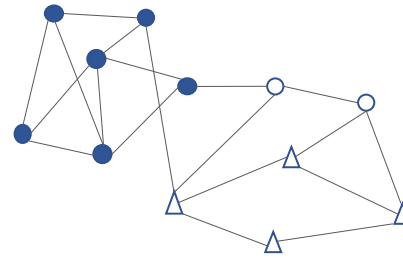
Homophily

But while Schelling – who won the 2005 Nobel Prize in Economics for his work – had directed his analysis at race segregation, the emergence of distinct communities can arise from arise from any number of homophilic-related preferences...

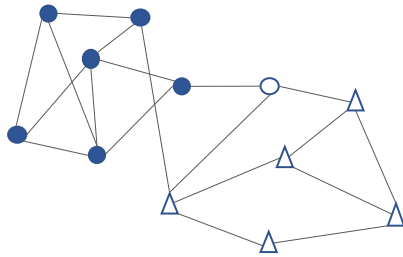
...and with a range of consequences



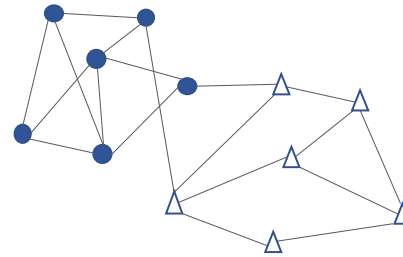
a) The anti-vaxxers start with two face mask refuseniks



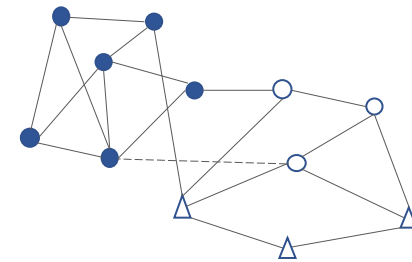
b) The majority of friends of the two middle anti-vaxxers refuse to wear face masks, so they do too



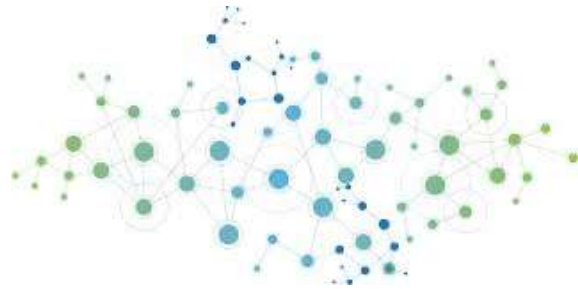
c) Now a majority of the top right anti-vaxxer's friends are refuseniks, so she also becomes one



d) Finally, the last anti-vaxxer becomes a refusenik, but because of homophily, the spread of this attitude stops with this group



e) Adding one connection (the dotted line) is all that is needed to limit the spread of refusenik attitudes



Cultural capital





The
importance
of high
culture

- In the early 1980s Princeton academic, Paul DiMaggio, discovered something astounding about what causes success.
- DiMaggio was interested in how people like to spend their time and how different activities impact our lives in different ways.
- In particular, he was interested in whether the experiences people had outside of school were as important for their future success as the learning they acquired within it.

See: DiMaggio (1982); DiMaggio and Mohr (1985).

The importance of high culture

- DiMaggio's results showed that the activities we engage in during our leisure hours are the extent to which we will prosper.
- Not only can such pursuits be engaging in them will likely to go to university we will live in, where we will die young.
- Crucially, DiMaggio's results show that these effects operate independently of whether we come from an affluent background, or the social class we are born into.

What DiMaggio had in fact uncovered was the importance of a new type of network: the kind that provides us with access to *cultural capital*.

The importance of high culture

- Tracing a cohort of almost 3,000 people as they moved from infancy to adulthood, researchers found that exposure to high culture was associated with higher income and better health outcomes. **What does high culture comprise?**
- In fact, engaging with one type of culture was much more associated with future life expectancy than another: a cultural activity referred to as "high culture" was associated with a 10% increase in life expectancy. **How might it be facilitated?**

The importance

- DiMaggio's findings from numerous studies, across various countries from the 1970s to the 2000s, show that children who own books are much more likely to enjoy reading, will read more and will have higher attainment than those who don't. We also know that that young people that use their public library are nearly twice as likely to be reading every day in their leisure time...
- At the same time, DiMaggio's initial notion of 'high' cultural capital has also expanded.

We know that children who own books are much more likely to enjoy reading, will read more and will have higher attainment than those who don't. We also know that that young people that use their public library are nearly twice as likely to be reading every day in their leisure time...

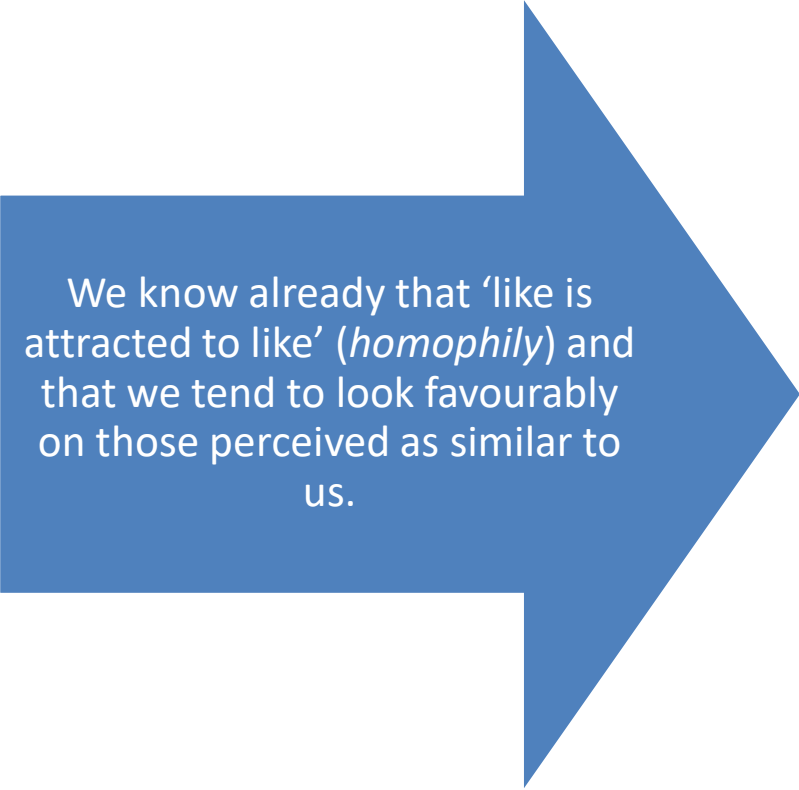


The importance of high culture

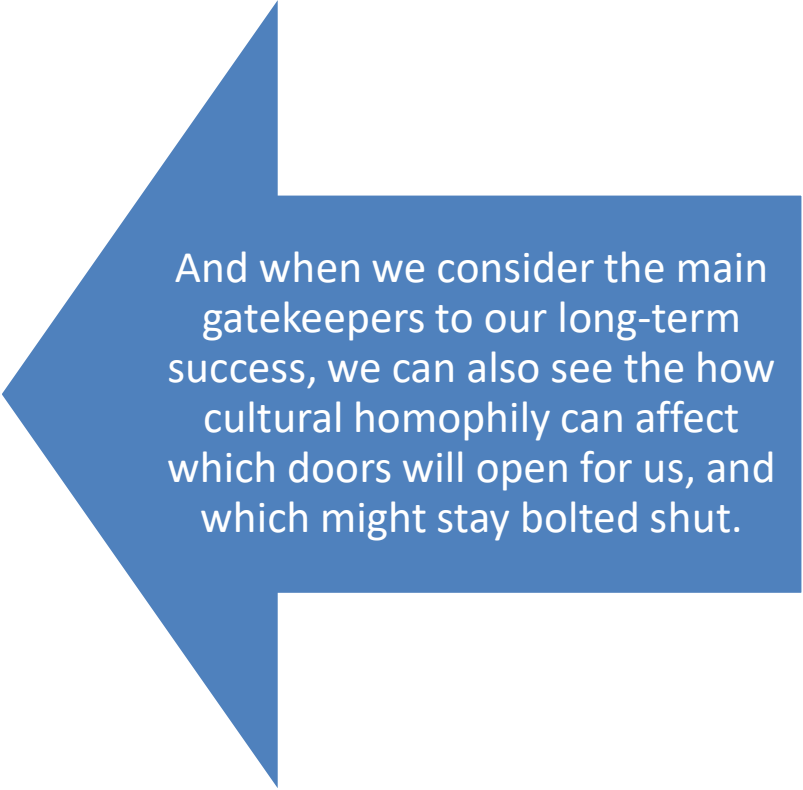
- Analysis of the cultural participation and reading activities of nearly 5,000 children in the USA across an eight-year period, has shown how these have significantly positive effects both on reading and maths test scores.
- Similarly, the PISA study, which regularly tests 15 year olds in 88 countries on reading, maths and science, suggests a strong relationship between the number of books in the home and students' test performance.



Why high culture?



We know already that 'like is attracted to like' (*homophily*) and that we tend to look favourably on those perceived as similar to us.



And when we consider the main gatekeepers to our long-term success, we can also see the how cultural homophily can affect which doors will open for us, and which might stay bolted shut.

Exploring engagement with high culture

We can assume that people who are more likely to engage with higher forms of culture are more likely to be clustered together in particular areas, forming dense networks with one another.

The opposite too should also apply - with people less inclined to engage in high culture also clustered together, but as part of separate communities.

What leads
to
engagement
with high
culture?

Since DiMaggio's research revealed that those who engage with high culture are likely to be more successful than those who don't, we should also be able to discern that, the more affluent the area, the more likely it is that people living there engage with high culture.

Likewise, the
opposite too
should apply

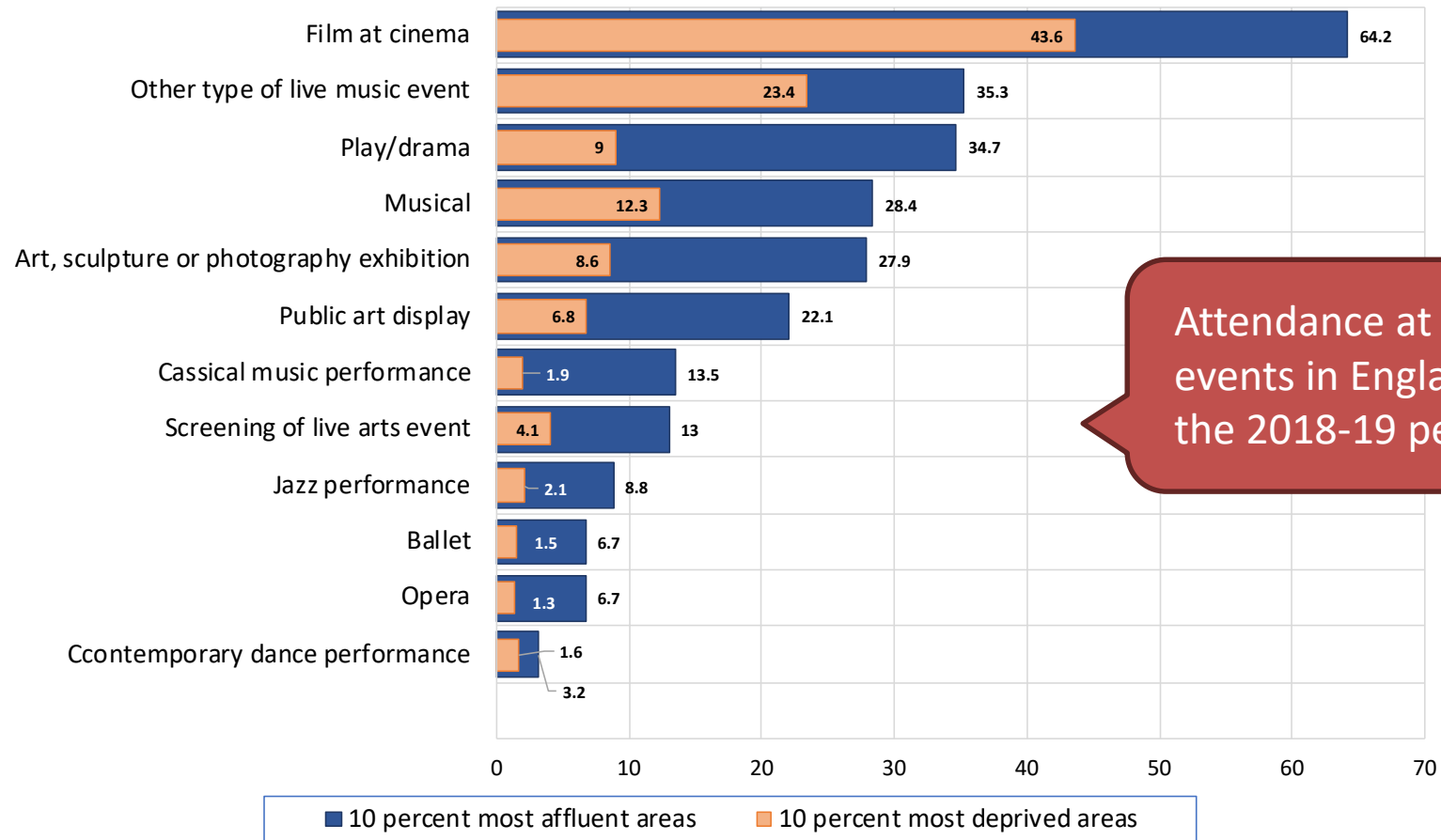


Cultural
capital
data

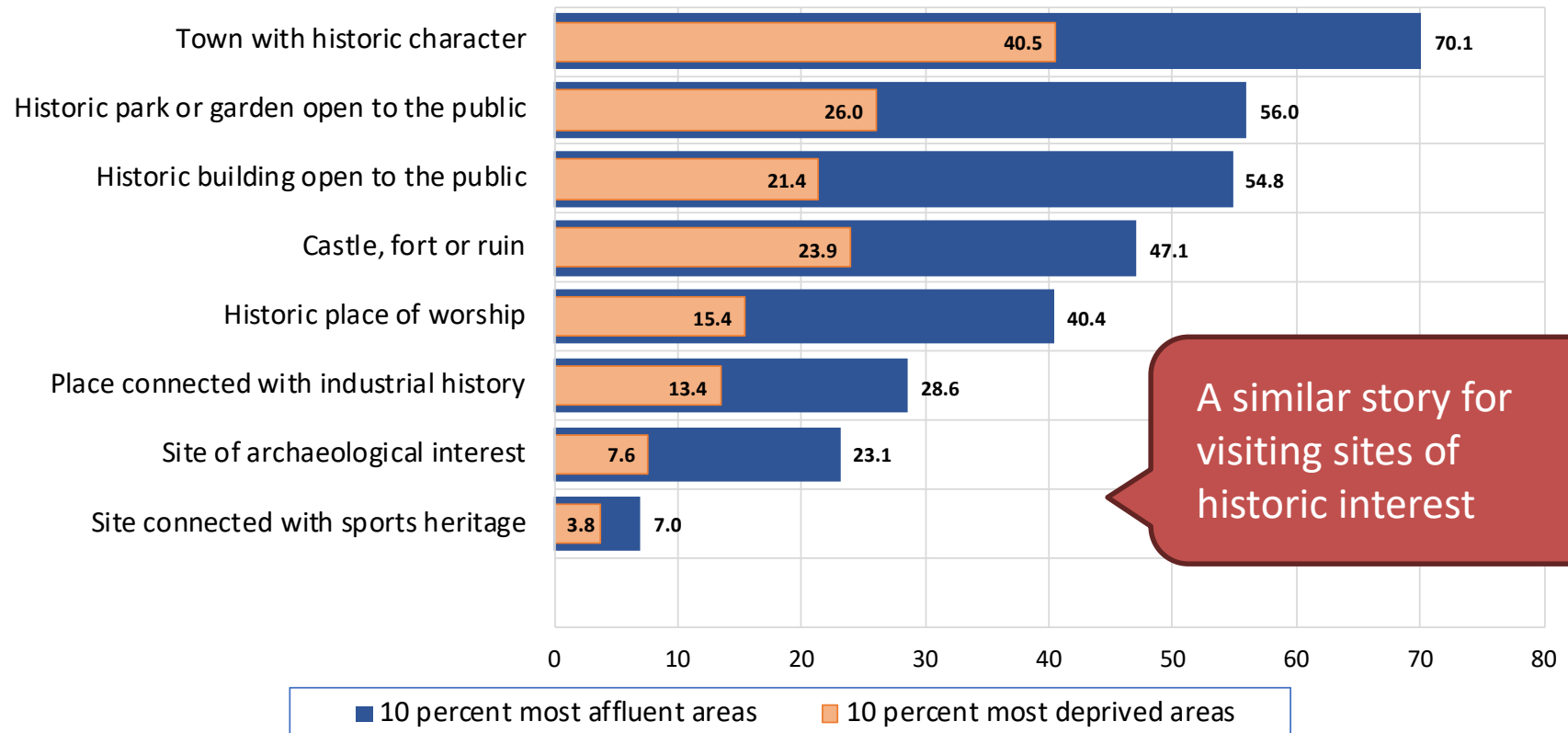
Data taken from England's *Taking Part* survey. *Taking Part* records which cultural activities people engage with over the course of a year – from this be visiting museums watching television.

Over 8,000 people took part in 2018/19, meaning the survey offers a real 'state of the nation' in terms of understanding of cultural participation.

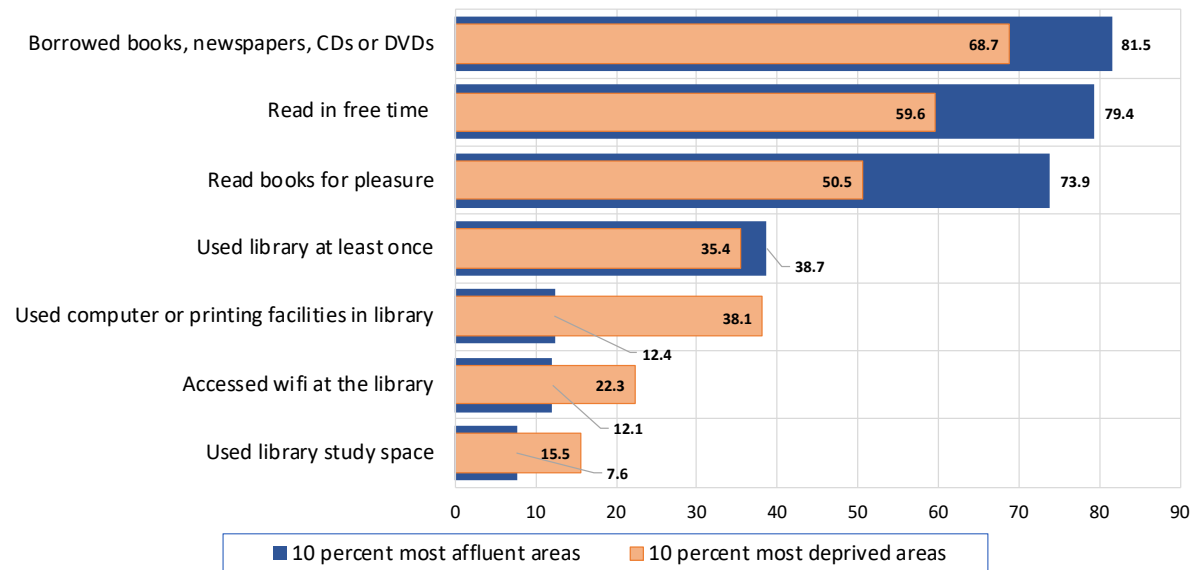
Saw or attended the following arts activities over last 12 months (% responding yes)



Visits to sites of historic interest over the last 12 months (% responding yes)



Reading and using the library during the last 12 months... (% responding yes)



Plenty of other supporting evidence...

Other examples

- Those living in disadvantaged areas aren't very likely to visit museums and galleries (only 38 percent indicated this was the case compared to 59 percent of those from advantaged communities).
- 'Haves' are also more likely to be more interested in sport and physical activity than 'have-nots': with 43 percent compared to 24 percent of people living in deprived areas having attended a live sporting event in the last 12 months.

Other examples

Those in advantaged communities are also almost twice as likely to be physically active than 'have-nots': in the most advantaged communities, 30 percent go for bike rides compared to 16 percent in the most disadvantaged neighbourhoods.

55 percent of those in affluent communities engage in sports and fitness activity compared to 31 percent in disadvantaged areas.

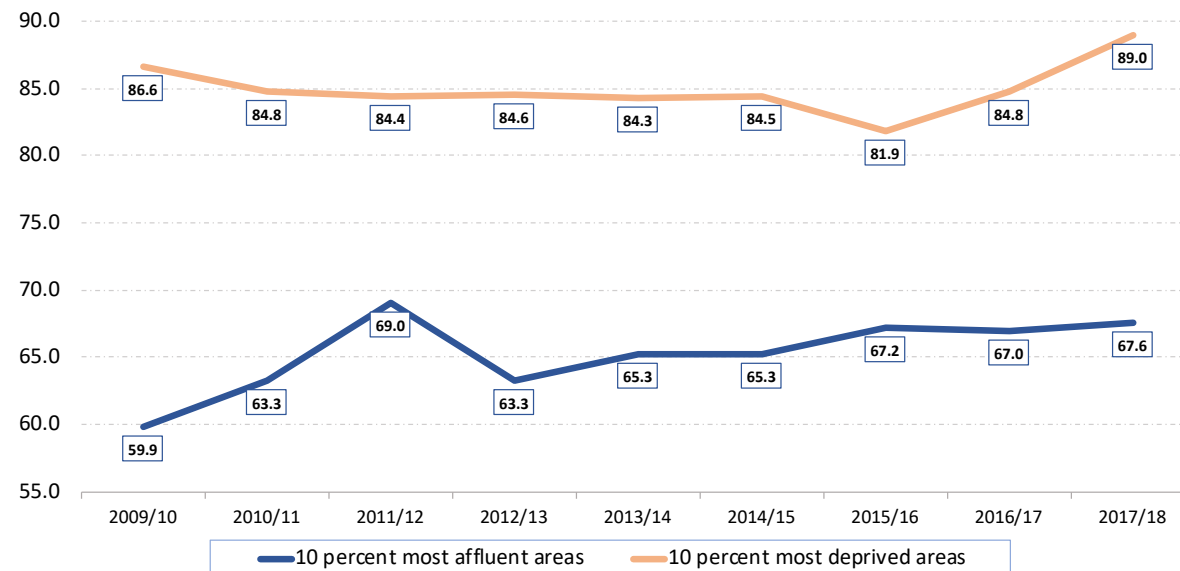
People in advantaged communities are also ten percent more likely to walk for at least ten minutes a day (90 percent versus 80 percent).



Engagement in high culture is a network driven phenomenon

So, when it comes to building high cultural capital, a clear neighbourhood effect does indeed occur. In other words, the high cultural capital networks of those living in advantaged and disadvantaged areas are fundamentally different.

Proportion of adults who have engaged with the arts during the last 12 months, 2009/10 - 2017/18 (% responding yes)



We can also see, when looking at time series data that engagement with high culture - in this case, the arts - has remained broadly stable over time, meaning the neighbourhood effect is long standing.



Engagement in high culture is a network driven phenomenon

- But, since we know that engaging with high cultural capital can be beneficial, surely it makes sense to find ways to change this situation, so enabling more people to engage with high culture more often?
- To be able to do so, however, we need to better understand what exactly the barriers to engaging with high culture are for those in disadvantaged areas.

Barriers to engaging with cultural capital

-
- To begin with, it's useful to rule out the usual suspects: namely, the cost of engaging in high culture and the ability for people to physically access cultural sites and events. We can do this quite easily because, actually, only a relatively small percentage of people in deprived areas indicate that these things are a problem for them.
 - For example, historic sites are not seen as overly expensive to visit, nor difficult to get to: with only 6.5 percent of people in deprived areas indicating that entry prices for historic sites are too high and just 10.3 percent suggesting they would find it hard to travel to a castle, historic building or site of archaeological interest (and in fact, similar responses are provided by those living in more affluent areas).
 - What's more many high culture activities, including visiting museums and galleries, borrowing books from the library and participating in sport can all be accessed for free.

Barriers to engaging with cultural capital

- We can also dismiss the anxiety of people worrying they might not 'fit in'.
- This is because only 4.6 percent of those in deprived areas indicate that feeling 'out of place' is a barrier for them to engage in cultural events (and again, this is not significantly different from those living in affluent communities).

Barriers to engaging with cultural capital



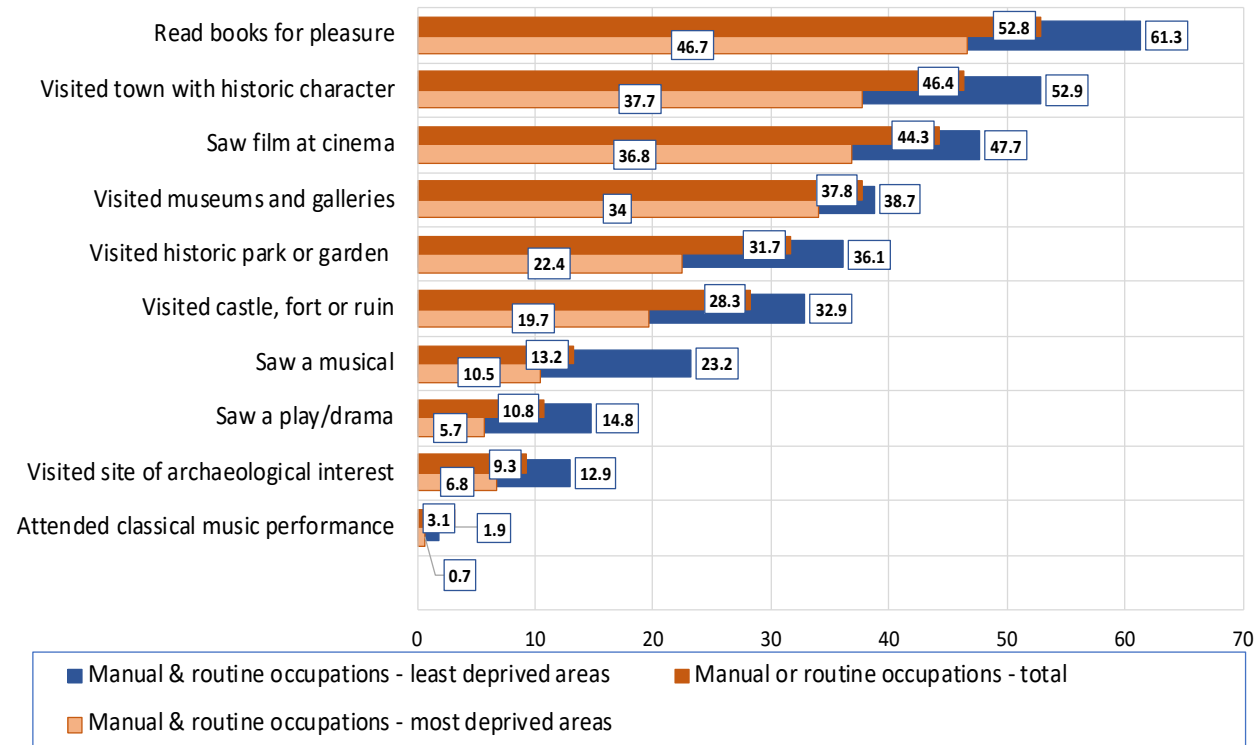
We can also disregard people not knowing what's on and the pressure of having too little time, with similar (and similarly low) responses for each provided by both those in affluent and in deprived areas.

Barriers to engaging with cultural capital

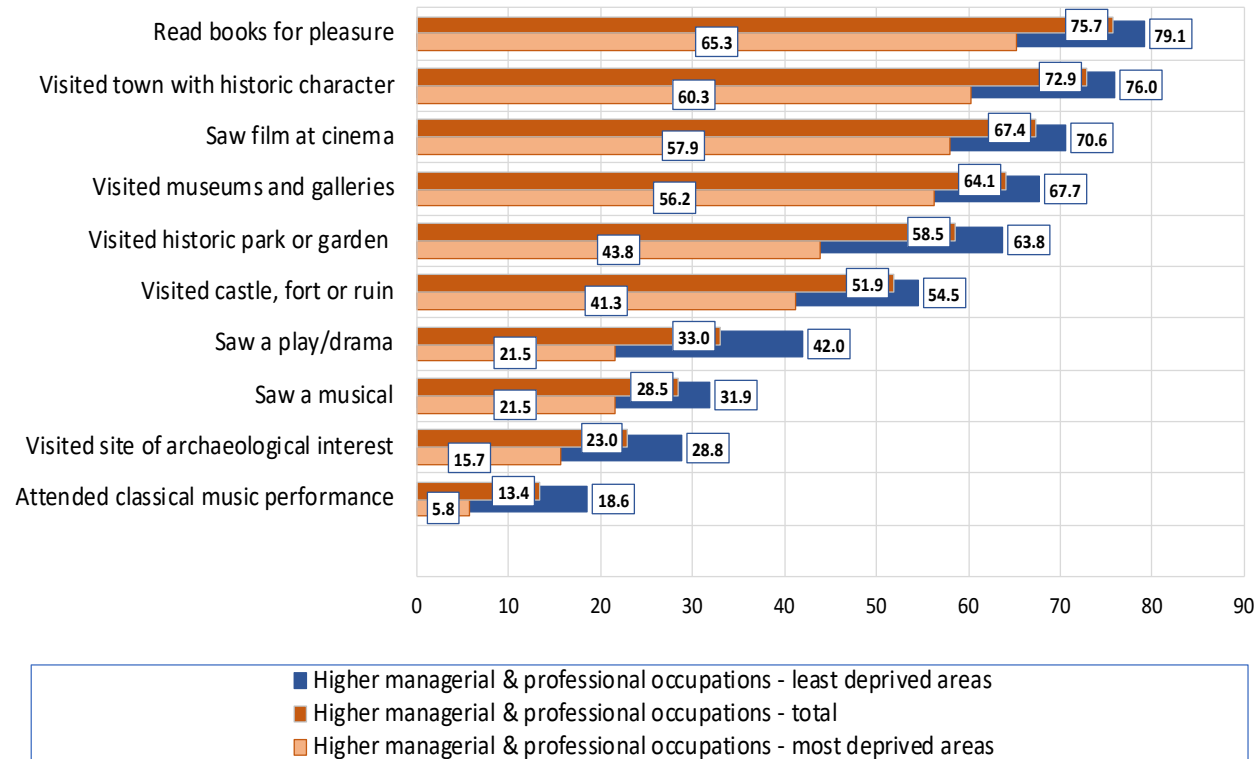
Having eliminated these things, what we are left is an explanation that, while you might not immediately guess it, is actually the one that makes the most sense:

that if nobody else in our networks engages with high culture then we probably won't either.

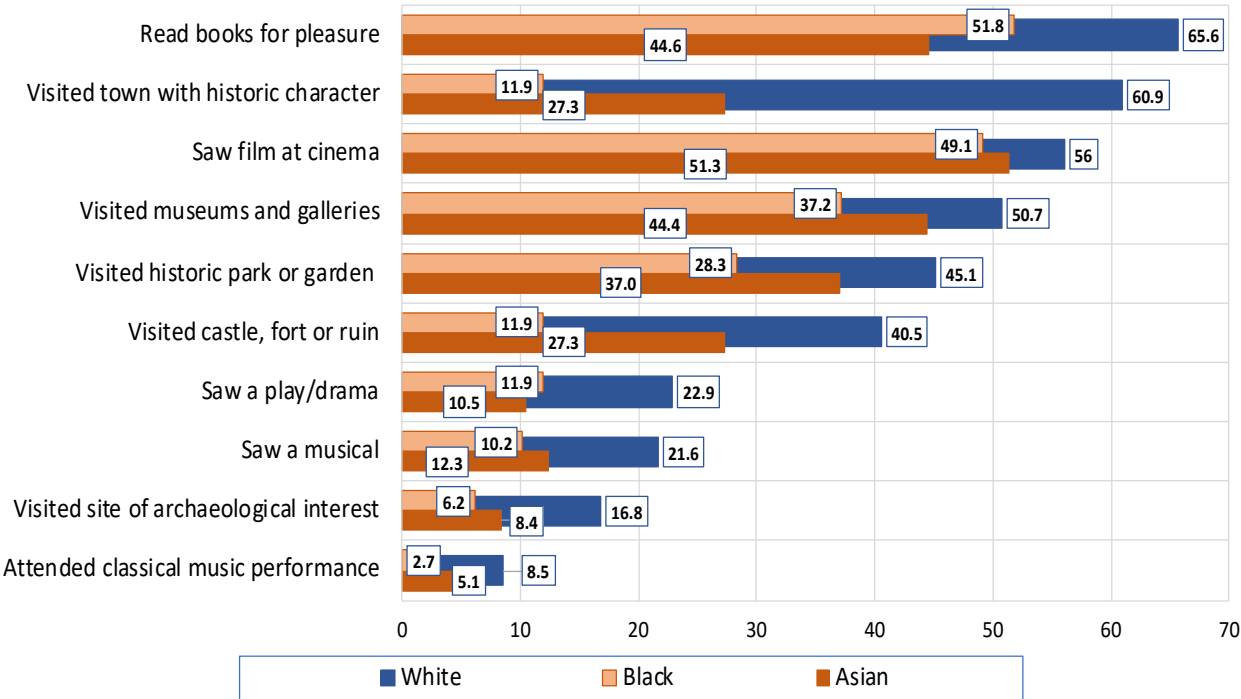
Engagement in a range of cultural activities over the last 12 months – manual and routine occupations by area (% responding yes)



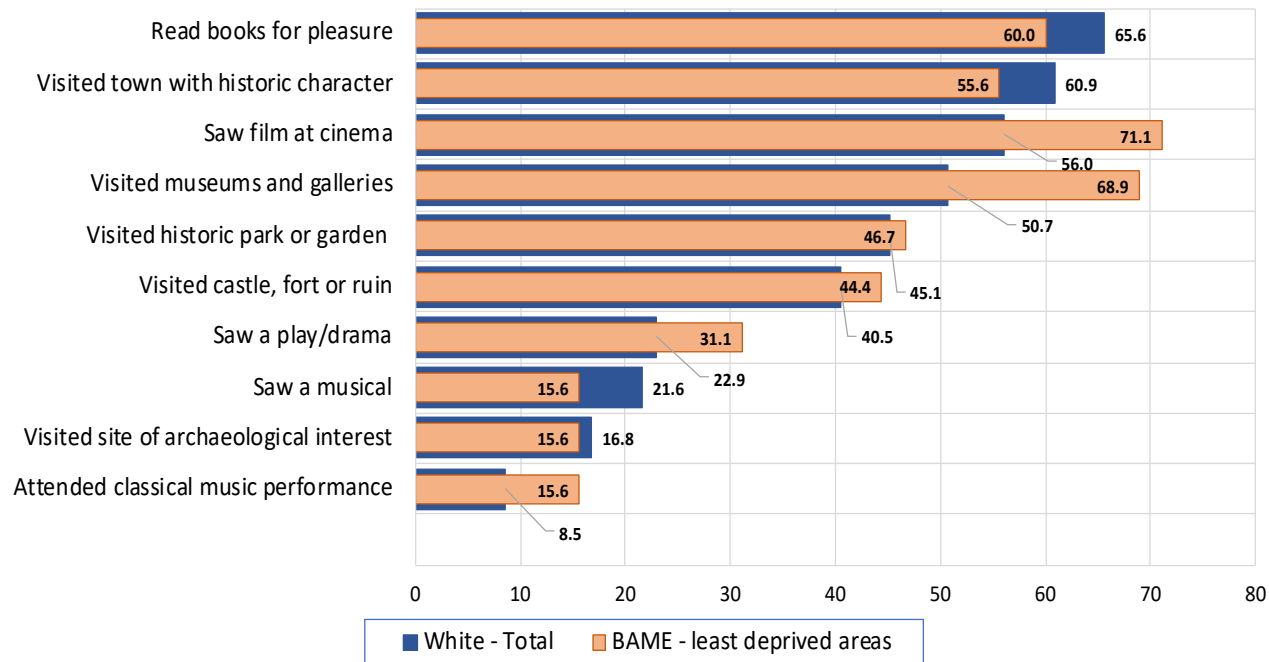
Engagement in a range of cultural activities over the last 12 months – higher managerial and professional roles by area (% responding yes)



Engaged in a range of cultural activities over the last 12 months by ethnicity (% responding yes)



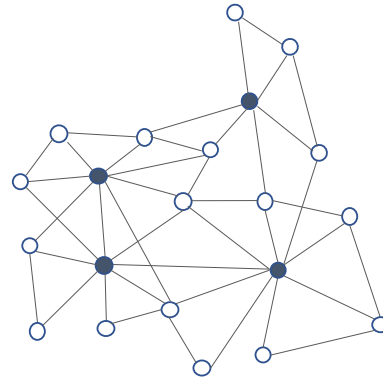
Engaged in a range of cultural activities over the last 12 months by ethnicity and least deprived areas (% responding yes)



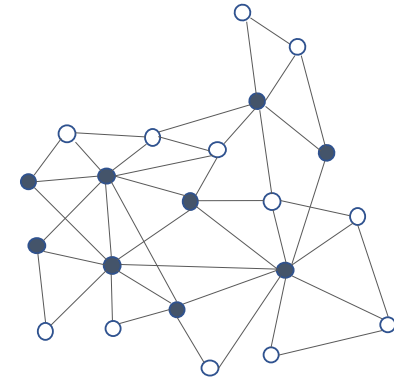
But why?

- Social touch points such as our neighbours or our children's friends...
- But this means we can also use social networks to foster change

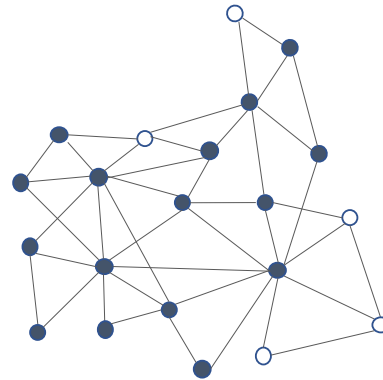
Using opinion formers



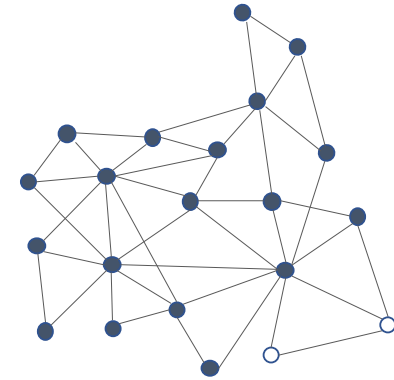
a) Four opinion formers are initially identified



b) Five more come onboard



c) Another seven join



d) The final two will join in another two moves



Questions?

**Professor Chris Brown
School of Education, Durham University**