Domains of Social Distance

Social Stratification Research Seminar

11-13 September, Cambridge

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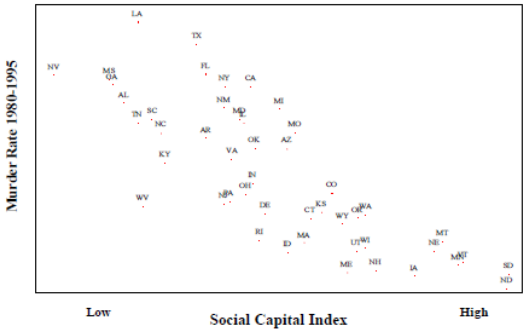
Sponsored by the ERSC Secondary Data Analysis Initiative Phase 1 project '***Is Britain pulling apart? Analysis of generational change in social distances***'
http://www.camsis.stir.ac.uk/pullingapart
http://www.twitter.com/pullingapart
http://pullingapartproject.wordpress.com/

Why Social Distance Matters

- Two major sociological theories relate social distances and societal outcomes
  - Bowling Alone suggests greater social capital breeds better societies
  - Spirit Level argues greater income inequality, related to distance between social groups, breeds worse performing societies
- Increase in social connectivity, particularly across stratification divides, can improve societal outcomes
- Has Britain pulled apart?



Measuring Social Distances

- Individual level
  - Statistical methods available for measuring homophily
  - Incorporating two potential processes
    - 'Structured' connections(?) – ties incorporating social structure
    - 'Unstructured' connections(?) – ties outwith structural processes
- Group level
  - Aggregation enables a focus on the 'structured' rather than 'unstructured' connections
  - Statistical methods available analysing such structures
    - Social interaction distance
    - Social network analysis

Potential areas of social distance unrelated to stratification

- Sports and leisure interests
- Place of birth
- Religion and religiosity

- Do people associate with others with similar identities to themselves?
  - Analysed using Wave B of Understanding Society

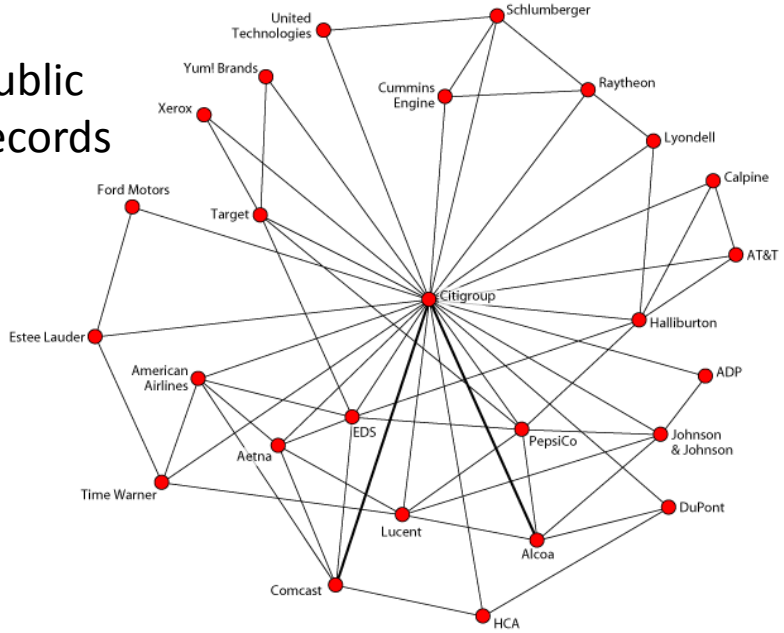
What is network analysis?

- Statistical analyses typically assume that actors are independent
  - Therefore, changing attributes of one respondent can only change outcome of one respondent
    - or, if child A revises for their maths exam, it won't improve the score of child B or C.
- Network analysis assumes an interdependency of actors
  - Therefore, changing an attribute for one respondents can influence outcomes for others
    - or, if children B and C are swap stickers, then A and B also swapping will increase chances for A and C swapping
  - Social connections can have influence over our outcomes, whilst the connections of our connections can be important

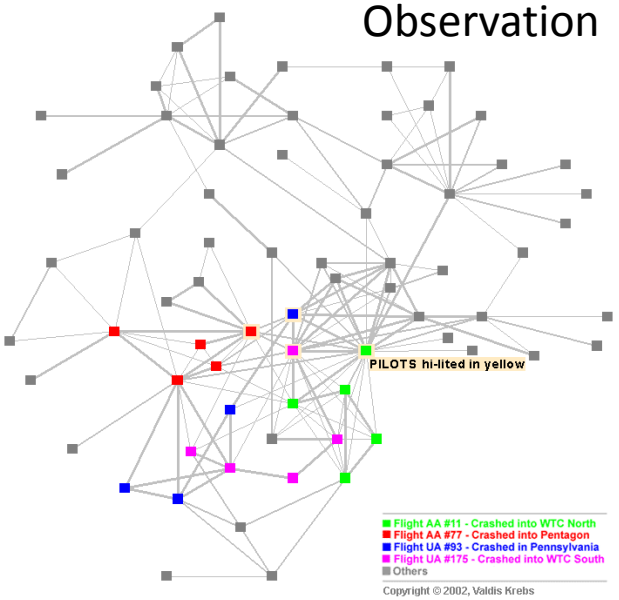
http://www2.ucsc.edu/whorulesamerica/power/corporate_community.html

http://www.orgnet.com/hijackers.html

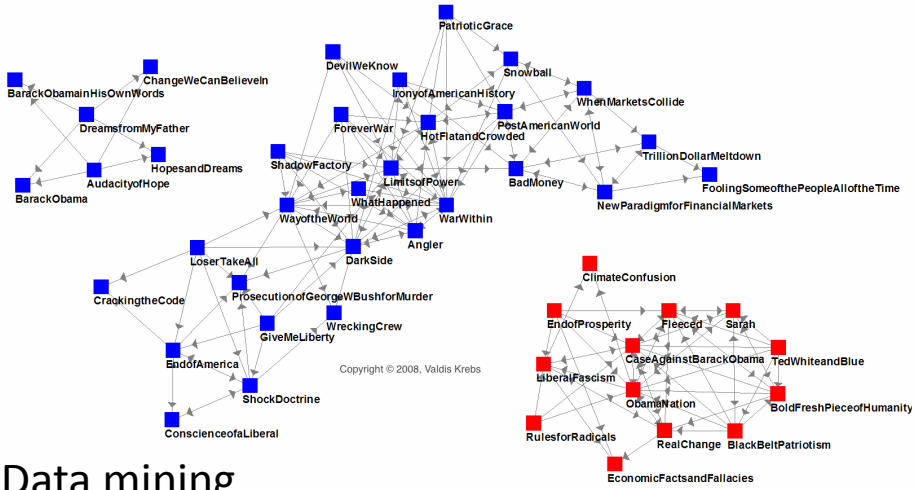
Public records



Observation

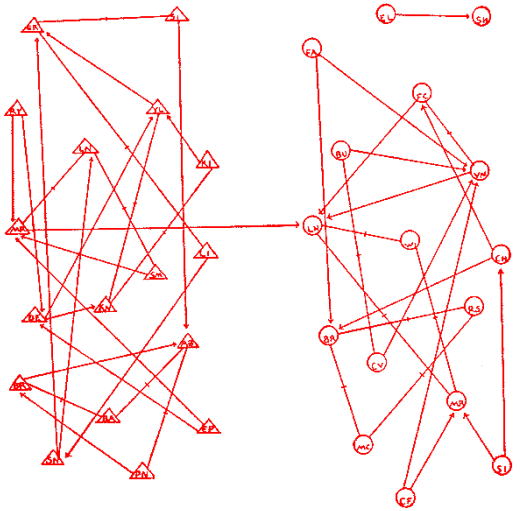


Usual methods for collecting network data



Data mining

Interviews



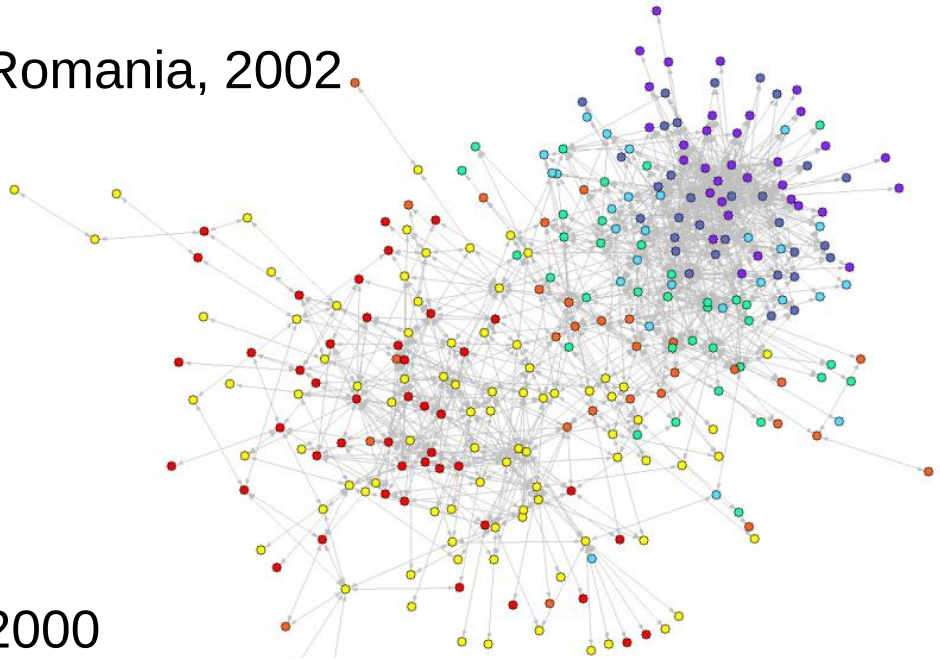
http://www.cmu.edu/joss/content/articles/volume1/Freeman.html

http://www.thenetworkthinkers.com/2012/10/2012-political-book-network.html

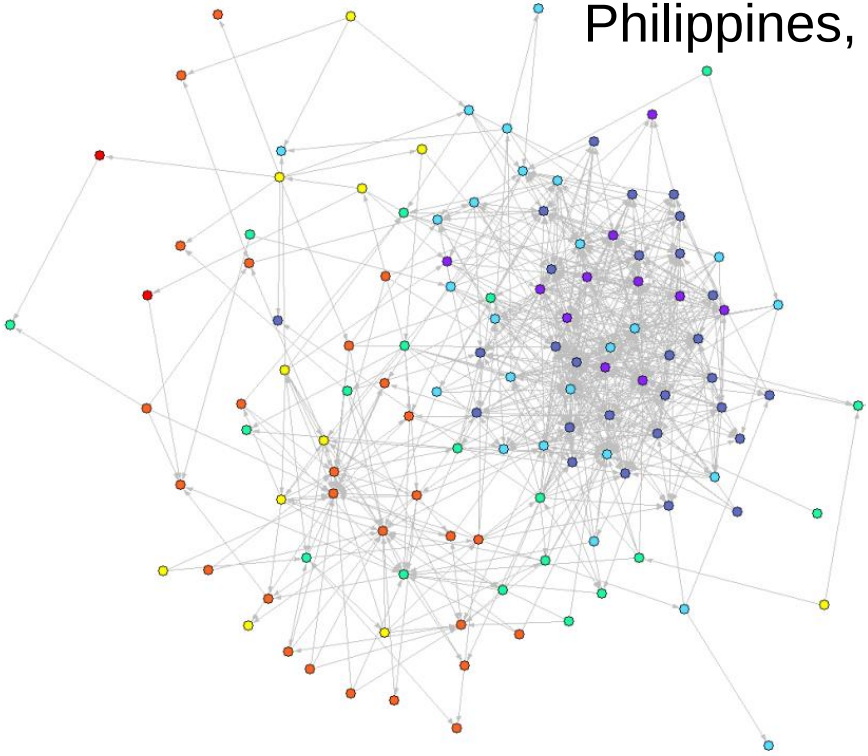
Network data can also come from secondary surveys:

Occupational networks (red to violet for low to high CAMSIS, grouped into 7). (see www.camsis.stir.ac.uk/sonocs)

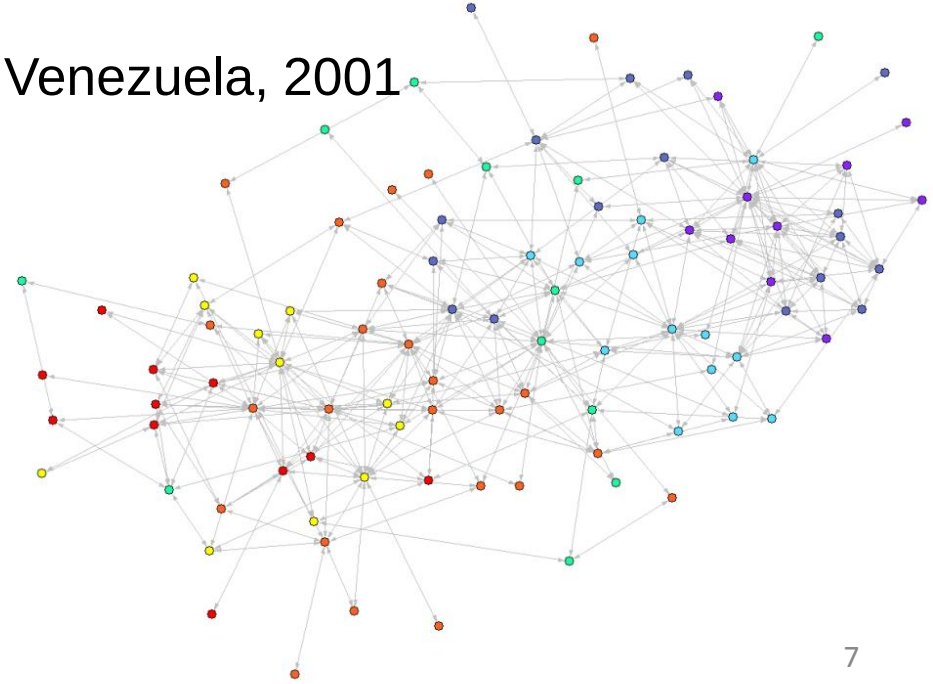
Romania, 2002



Philippines, 2000



Venezuela, 2001



Sporting example

- Participation in 24 different sports available in Understanding Society (wave B)
- People can perform one (32%); multiple (30%); or no (38%) sports
- Are people clustered into connecting to people in similar sports?

Abstracting network data from surveys

Women's sports

Man's sports	Gym	Running	Football	Golf	Swimming	…
Gym		658	31	113	1,595	
Running	997		33	63	1,113	
Football	766	417		64	2,384	
Golf	866	375	18		1084	
Swimming	1,639	758	41	167		
…						

No. of male-female partners performing different sports

Note: 6,927 couples with 65k combinations across 24 sports

Source: Understanding Society, 2010.

Abstracting network data from surveys

Woman's sports

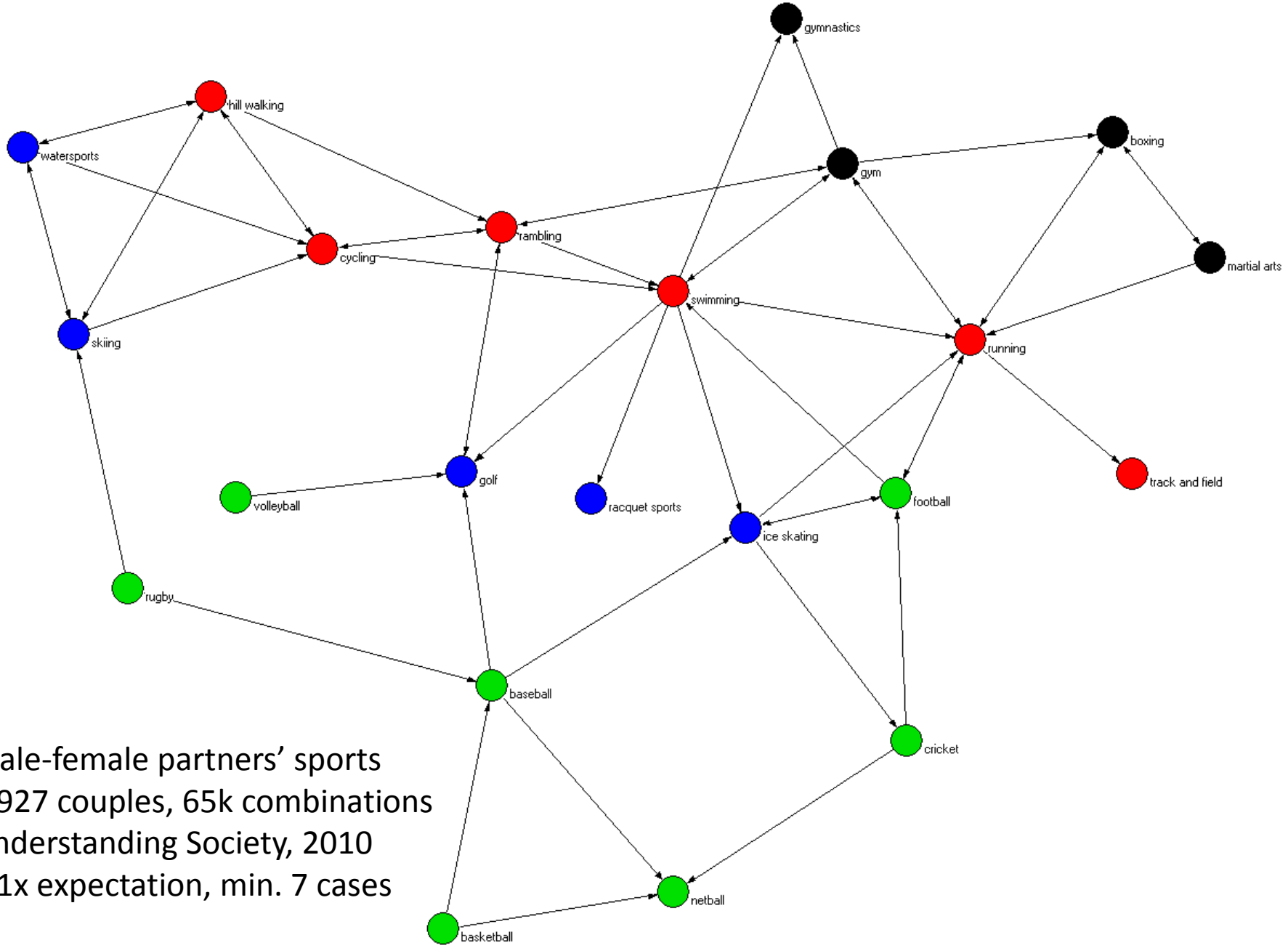
Man's sports

	Gym	Running	Football	Golf	Swimming	…
Gym		1.23	.89	1.00	1.28	
Running	1.13		1.16	.65	1.07	
Football	1.02	1.10		.78	1.12	
Golf	1.02	.86	.60		1.08	
Swimming	1.24	1.13	.98	.89		
…						

Representation levels of male-female partners performing different sports

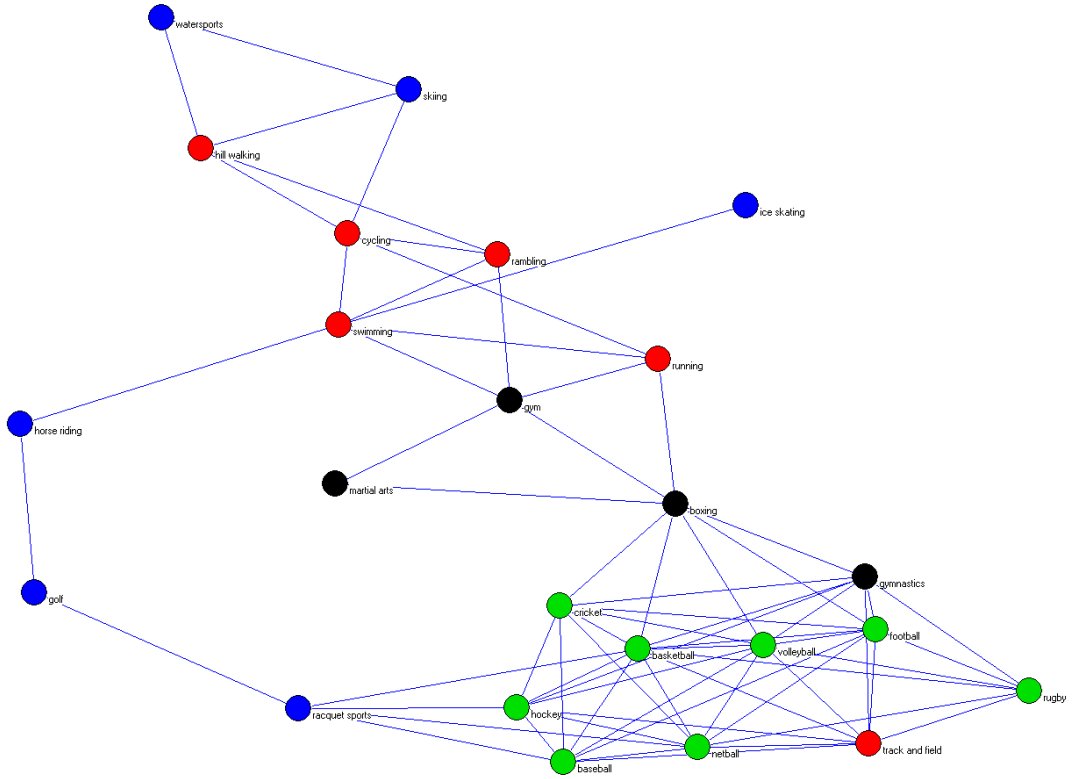
Note: 6,927 couples with 65k combinations across 24 sports

Source: Understanding Society, 2010.

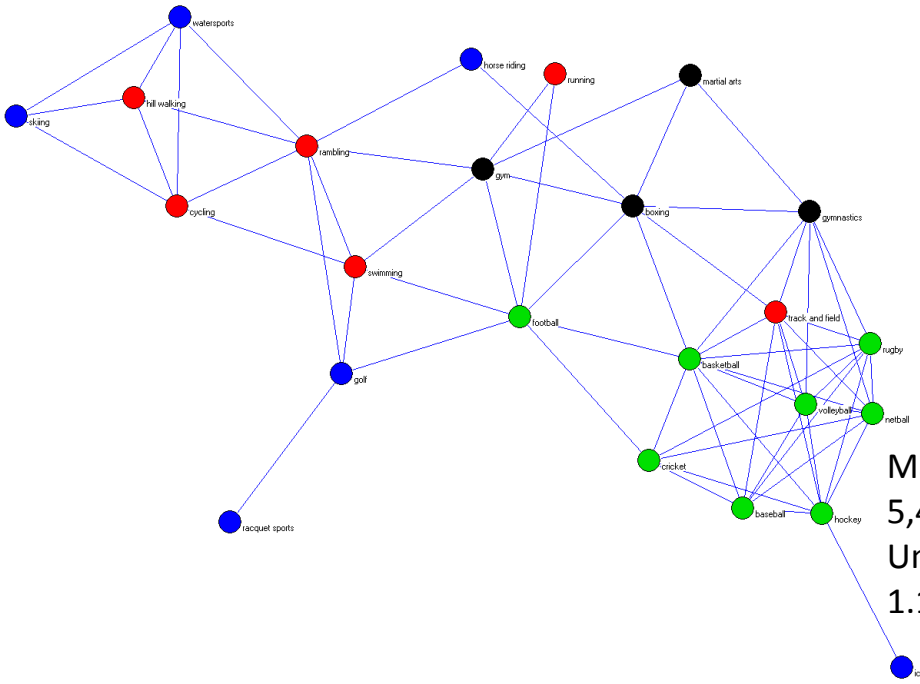


Male-female partners' sports
6,927 couples, 65k combinations
Understanding Society, 2010
1.1x expectation, min. 7 cases

Division of team sports and individualist pursuits apparent when looking at male and female participation separately



Female within-household sports (top right)
5,953 people in 122k combinations
Understanding Society, 2010
1.1x expectation, min.6 cases



Male within-household sports (bottom left)
5,400 people in 188k combinations
Understanding Society, 2010
1.1x expectation, min. 6 cases

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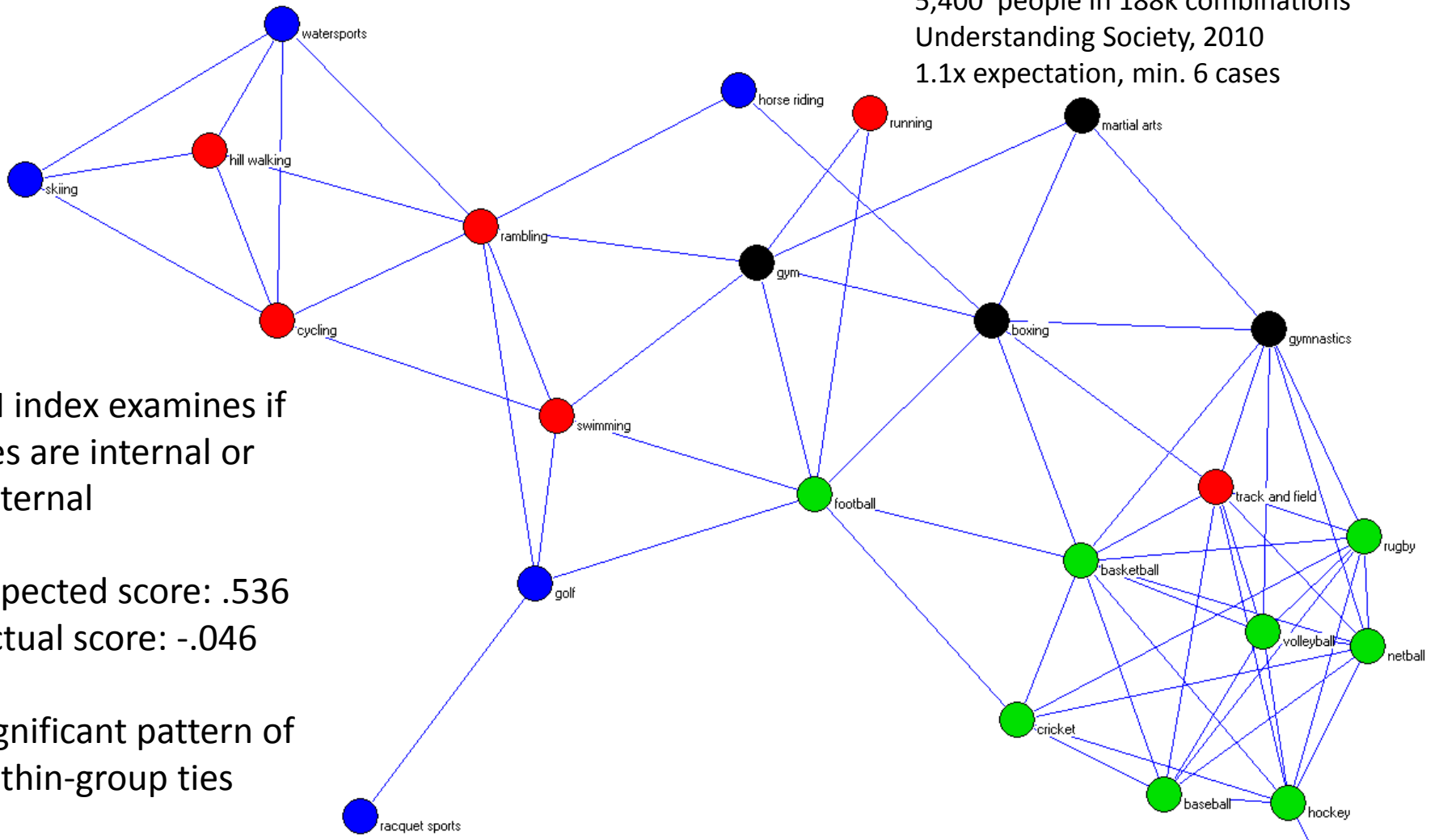


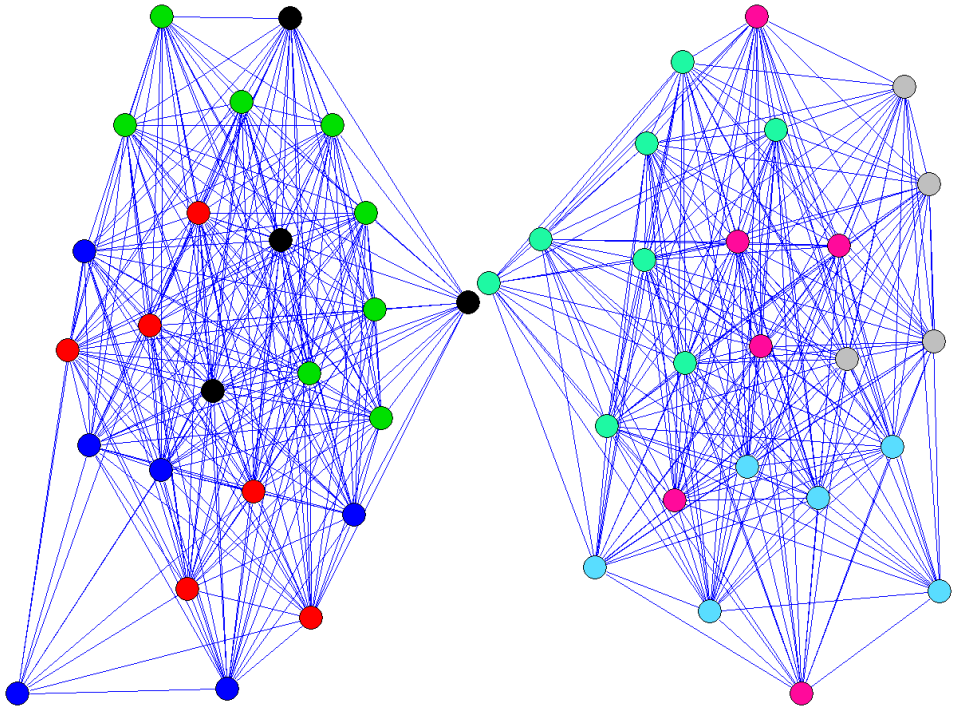
E-I index examines if ties are internal or external

Expected score: .536
Actual score: -.046

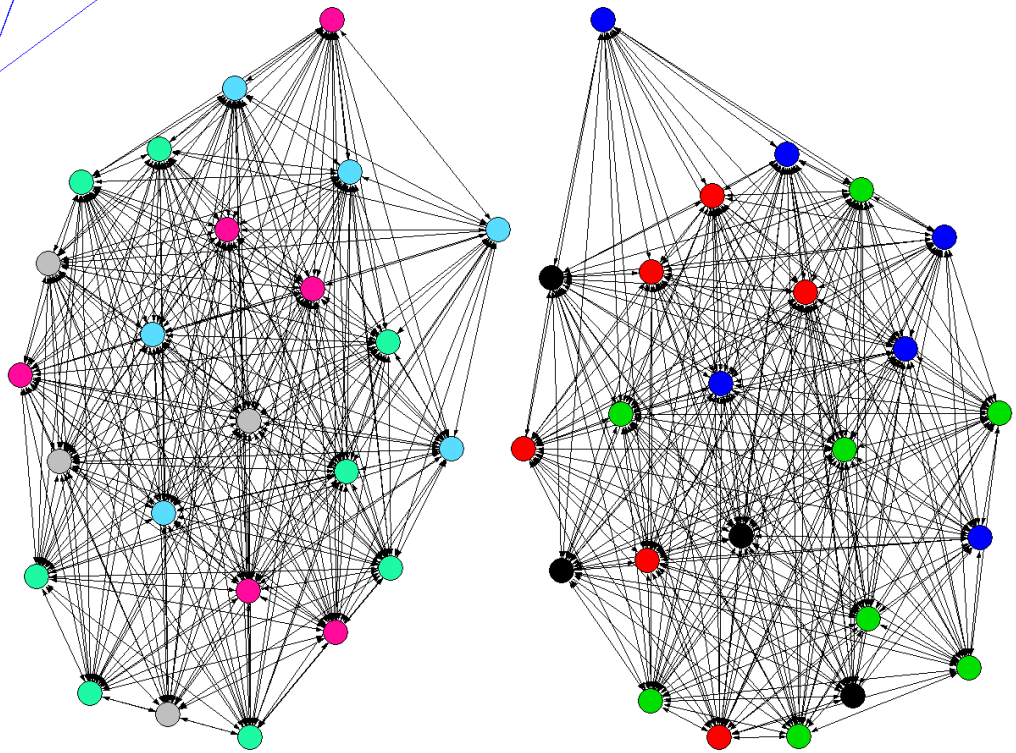
Significant pattern of within-group ties

1 2 3 4

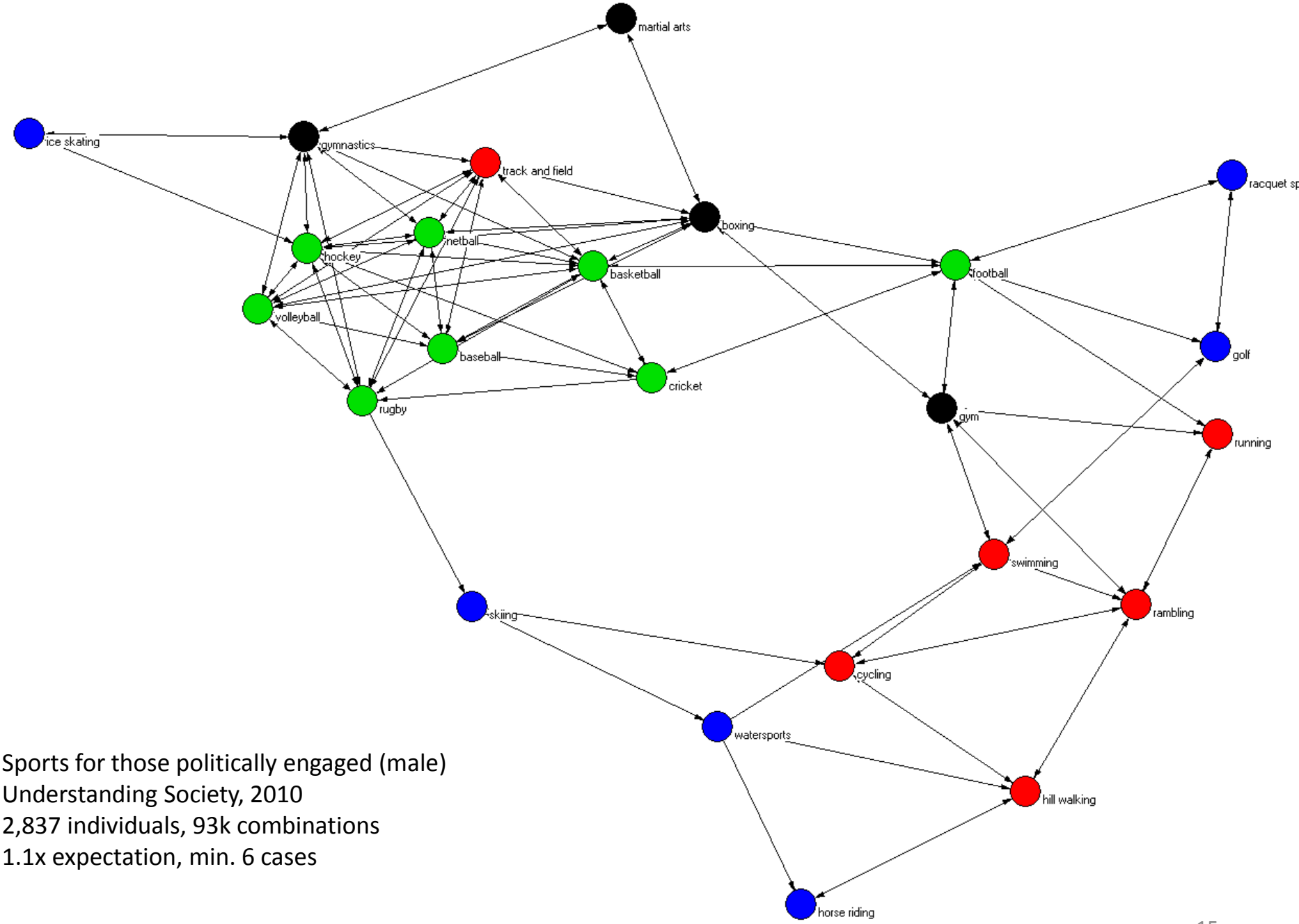
		Intern	Extern	Total	E-I
1	1	10.000	13.000	23.000	0.130
2	2	10.000	21.000	31.000	0.355
3	3	44.000	17.000	61.000	-0.443
4	4	4.000	11.000	15.000	0.467



Sports by political party(male; Labour/Conservative)
Understanding Society, 2010
2,521 individuals, 77k combinations
1.1x expectation, min. 3 cases



Sports by political interests (male)
Understanding Society, 2010
5,675 individuals, 189k combinations
1.1x expectation, min. 6 cases



Sports for those politically engaged (male)
Understanding Society, 2010
2,837 individuals, 93k combinations
1.1x expectation, min. 6 cases

Pulling apart by sport

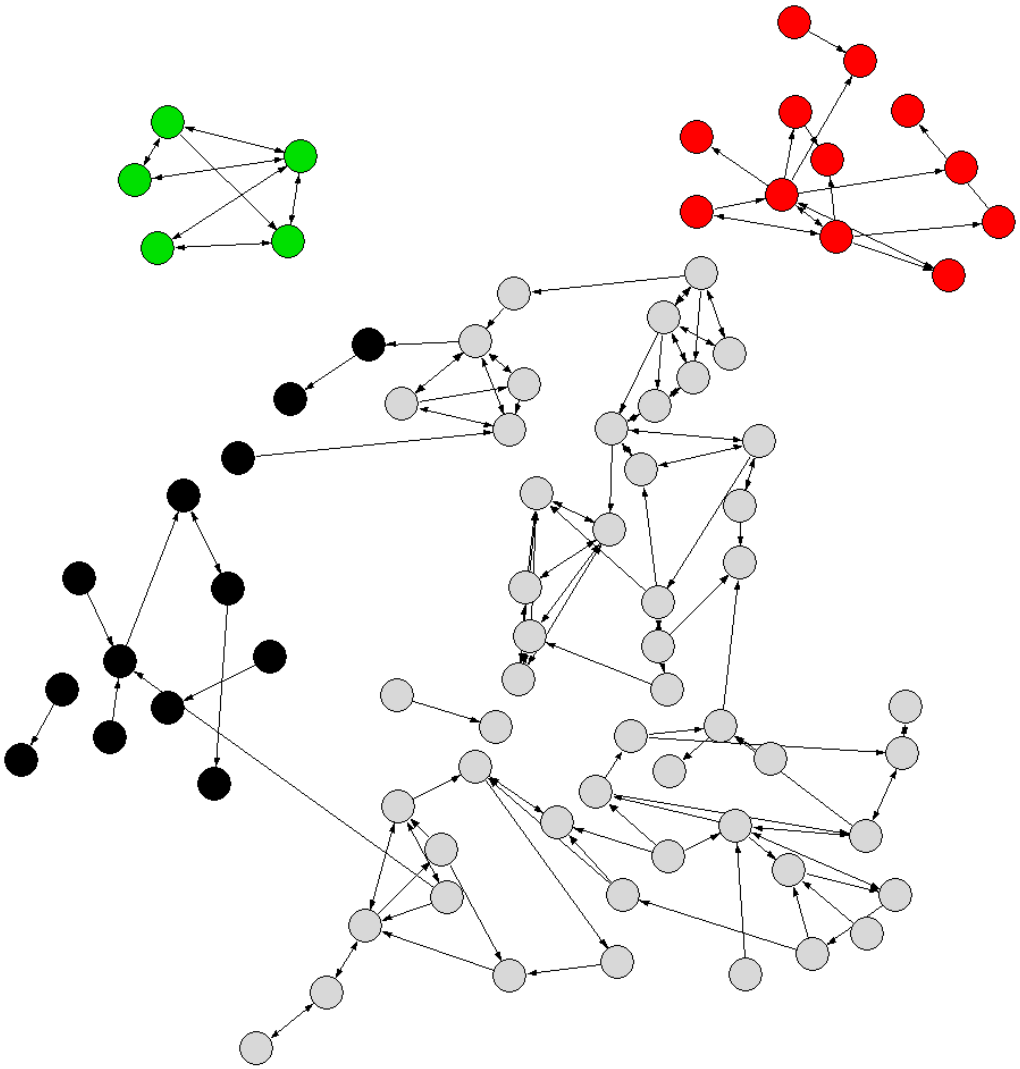
- Evidence that people associate with others who perform similar sports to themselves
- No evidence that this is a sizeable difference, or linked with stratification

- People are clustered by types of sport, but not distant

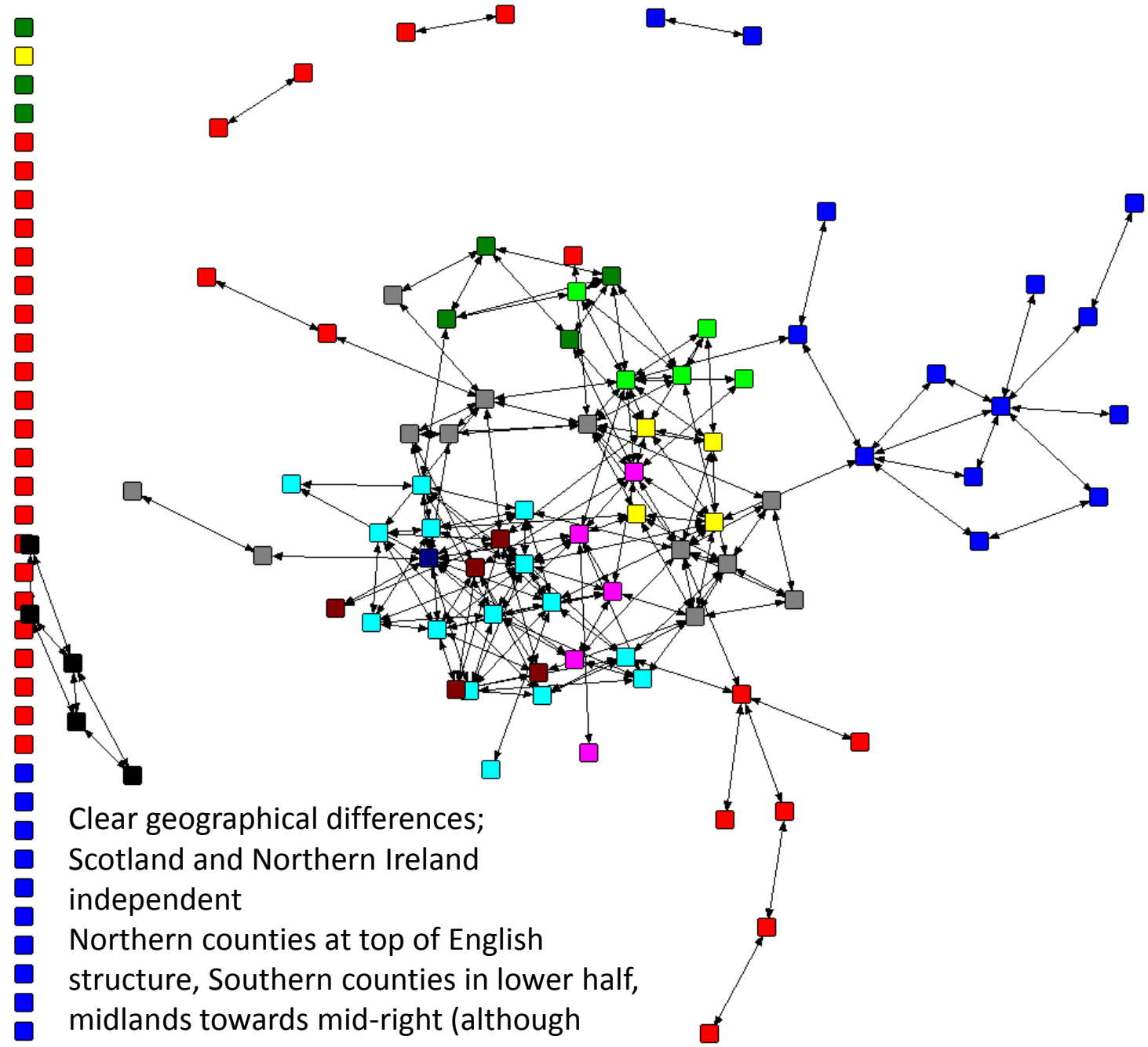
Place of birth

- Born in same locality *(usually county)*
  - Couples: 56%
  - Non-related household sharers: 22%
  - Grandparents-grandchildren: 27%
- Born in same UK country
  - Couples: 90%
  - Non-related household sharers:87%
  - Grandparents-grandchildren: 89%

Network of cross-county couples (UKHLS, wave B)



Over-represented birth county combinations for couples (min. 2 ties, value>1.5)



UKHLS – WAVE B

Over-represented birth county combinations for couples (min. 2 ties, value>1)

Dark blue (right) Scotland

Black (left) Northern Ireland

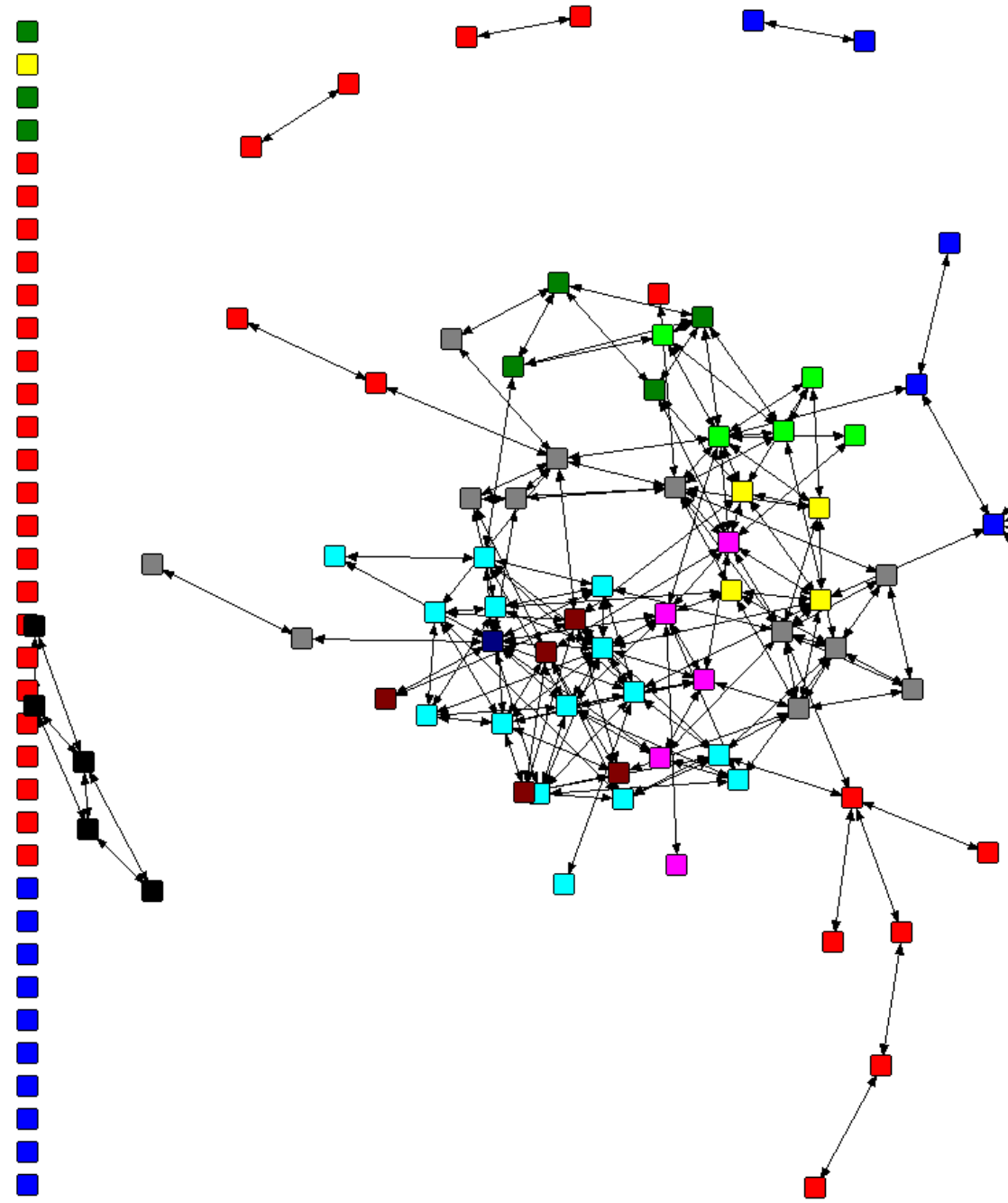
Red (split) Wales

Pale blue: South East
Pink: East of England
Beige: South West
Blue: London

Yellow: East Midlands
Grey: West Midlands

Greens: North East and North West
Pale grey: Yorkshire

Clear geographical differences; Scotland and Northern Ireland independent
Northern counties at top of English structure, Southern counties in lower half, midlands towards mid-right (although West Midlands shows north-south divide)

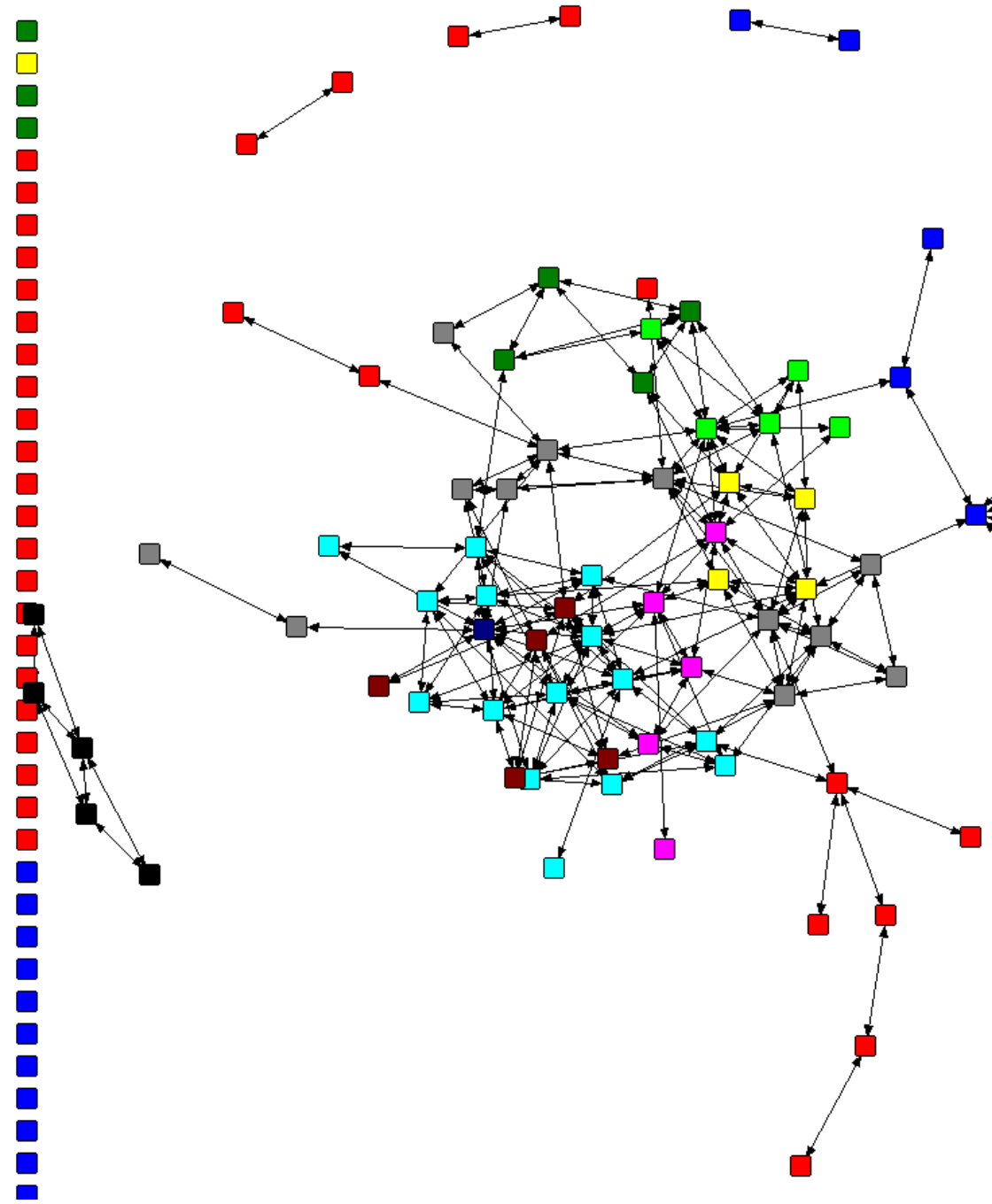


QAP correlation

Dependent: Couples ties
Independent: region (given different county)

Correlation .115

P=.0002 : Significant correlation between regions and over-represented counties.

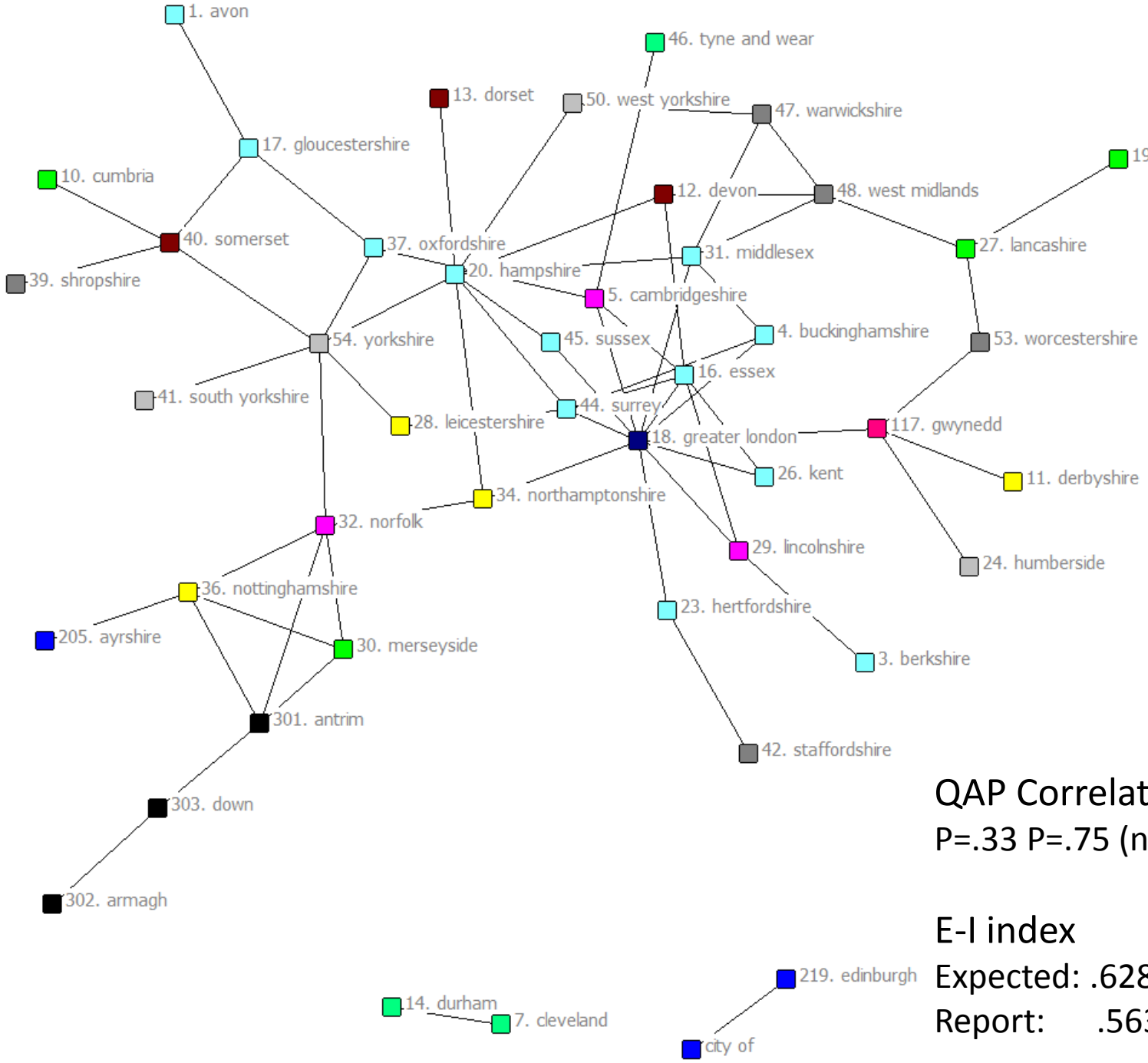


E-I index (counties into regions)

Expected E-I: .628
Reported E-I: -.096

Significant clustering at regional level at 5% level

No region achieved expected value (East Midlands highest at .429)



UKHLS, Wave B

Over-represented non-related household sharers by place of birth

QAP Correlation

P=.33 P=.75 (not significant)

E-I index

Expected: .628

Report: .563 (not significant)

Pulling apart by birthplace

- Tendency for people to have partners from same region
- National differences with the UK
- No apparent north/south divide but rather short-based connections
- Little evidence that region matters for non-household shares

- Future work will compare with other summary statistics – e.g. average house prices; industrial sector; employment and educational statistics; voting tendencies

Religion and religosity

- Ties to those with same religion?
  - 84% for couples
  - 76% for non-related household sharers
  - 82% for grandparents-grandchild (within households)
- Ties to those with same religosity
  - 53% for couples
  - 61% for non-related household sharers
  - 62% for grandparents-grandchild (within households)

	How important is your religion to you….			
	Very	Fairly	Not very	Not at all
Very	68%	17%	8%	7%
Fairly	20%	43%	30%	21%
Not very	8%	25%	36%	26%
Not at all	4%	15%	27%	47%

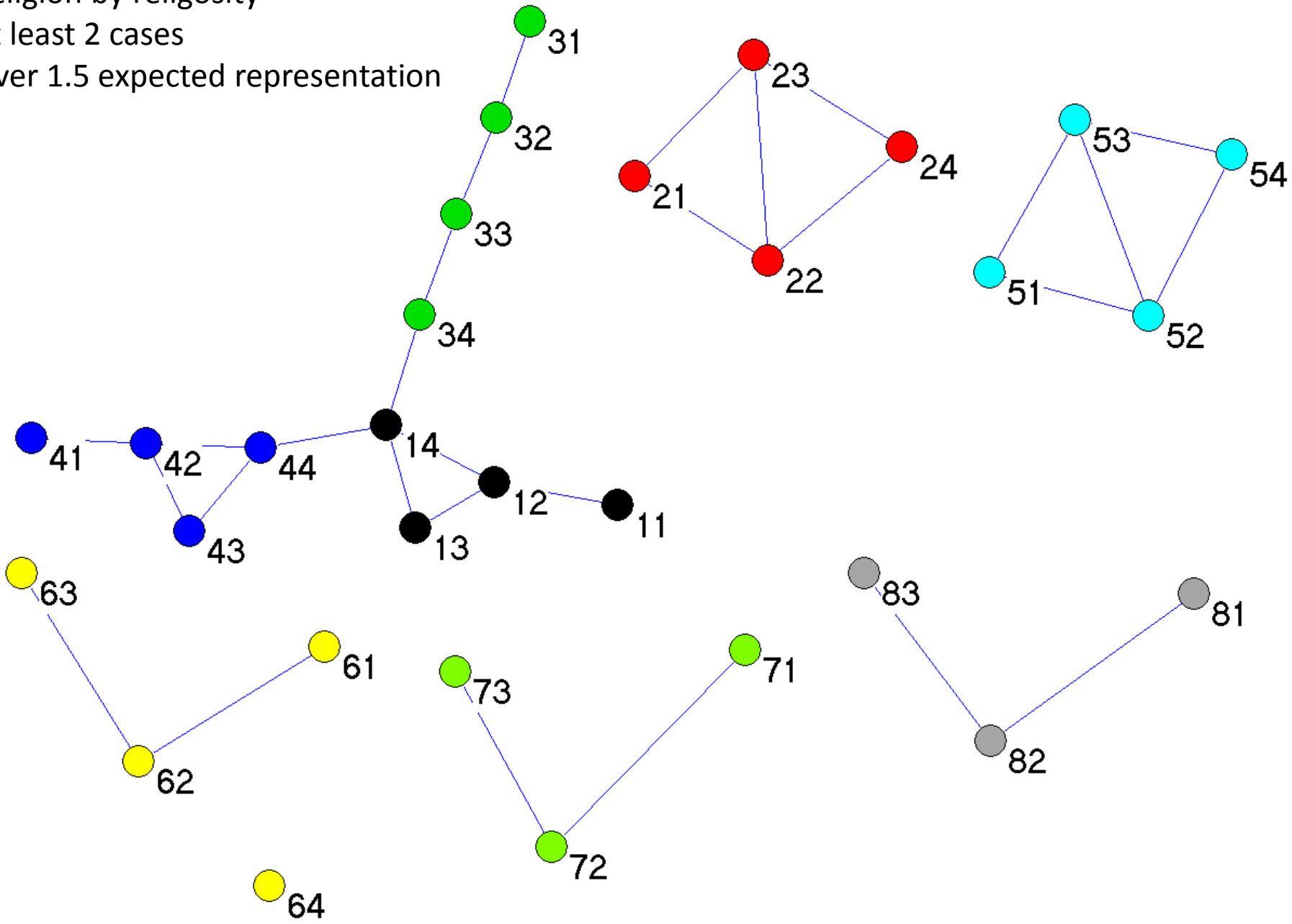
Percentage of women (columns) marrying men (rows) by importance of religion

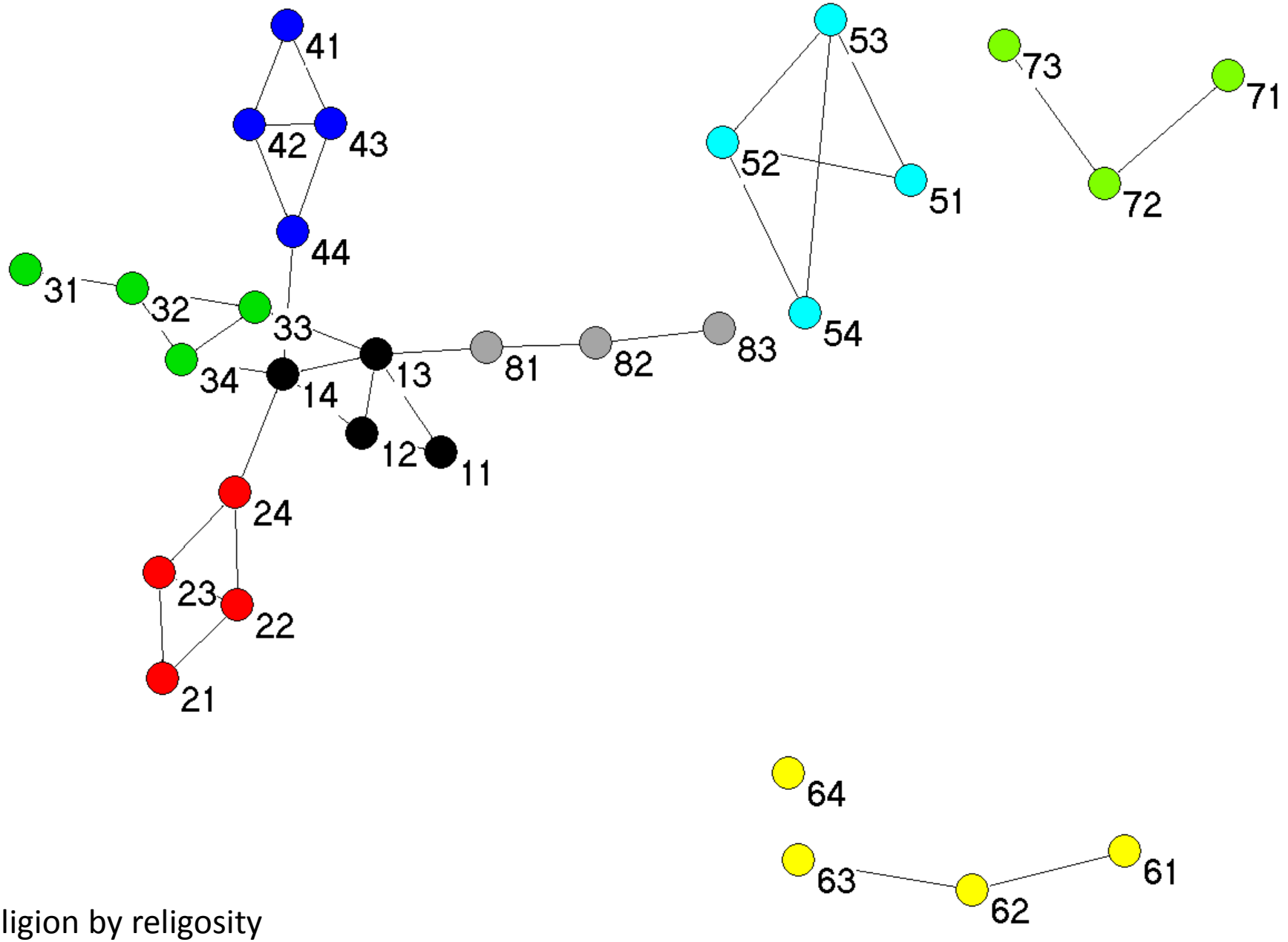
Understanding Society Wave B 3,337 couples

	Husbands	Wives	% men endogamous
Catholic	17.2%	17.5%	70%
Protestant	15.4%	15.1%	80%
Anglican	42.9%	43.2%	85%
Muslim	16.2%	15.9%	95%
Hindu	4.9%	4.8%	98%
Jewish	1.7%	0.6%	86%
Sikh	2.2%	2.3%	97%
Buddhist	0.5%	0.6%	78%

Distributions of religious couples by gender in UKHLS, and % of men in same-faith relationships (excluding no religion)

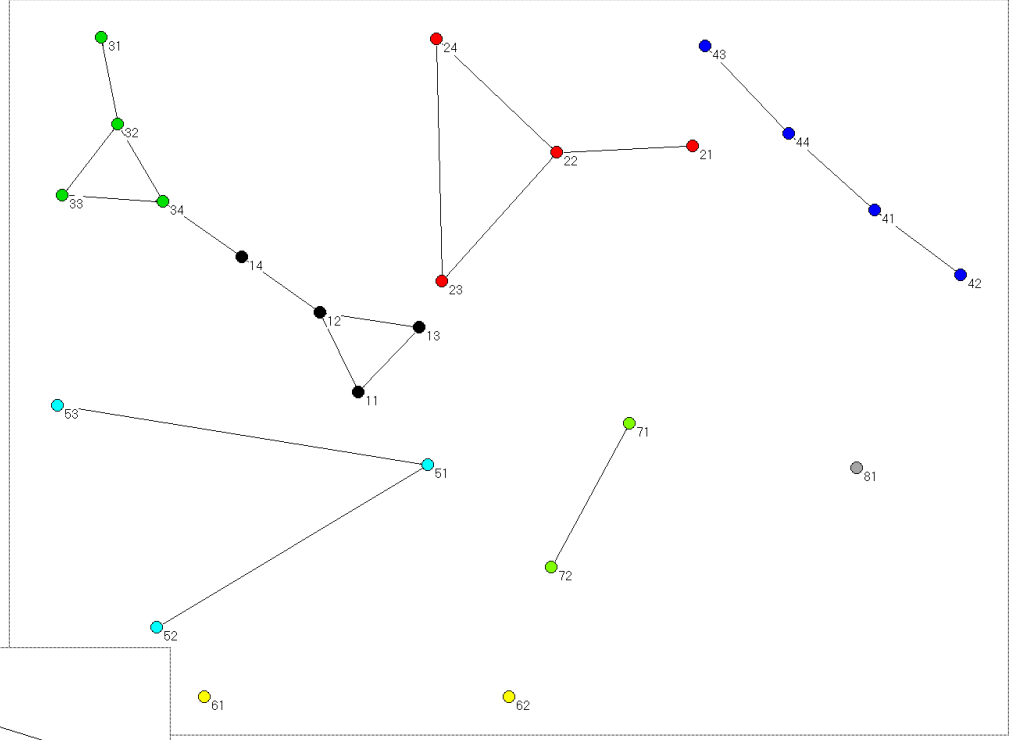
Religion by religosity
At least 2 cases
Over 1.5 expected representation

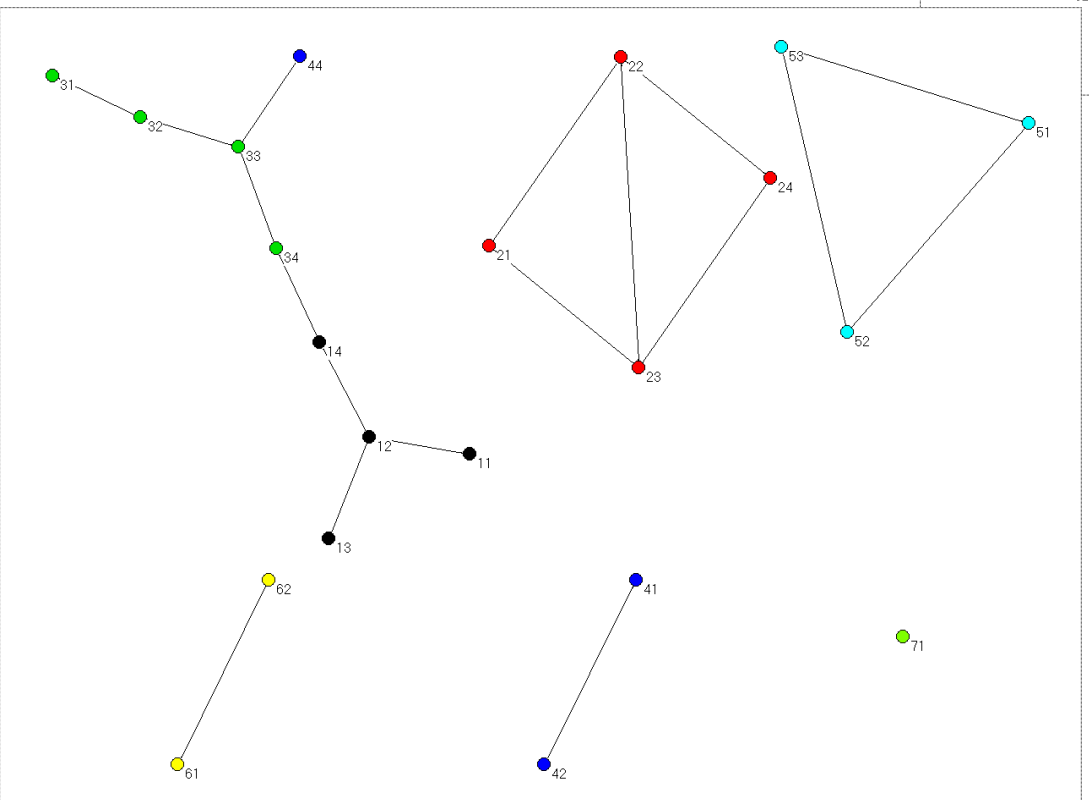


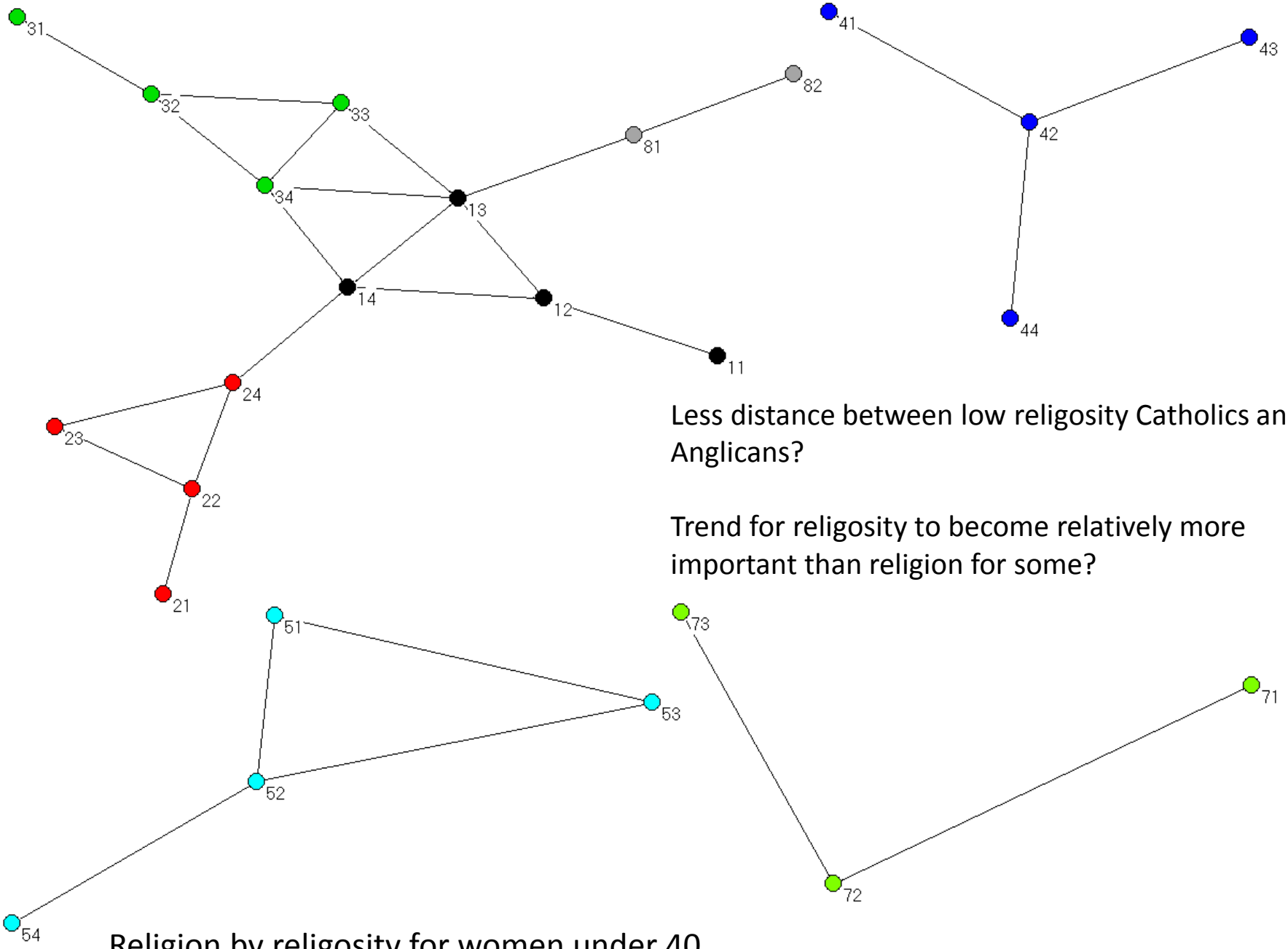


Religion by religosity
At least 2 cases
Over expected representation

Religion by religosity for:
Women 41-60 (top left)
Women over 60 (bottom right)







Less distance between low religosity Catholics and Anglicans?

Trend for religosity to become relatively more important than religion for some?

Religion by religosity for women under 40

Pulling apart by religion

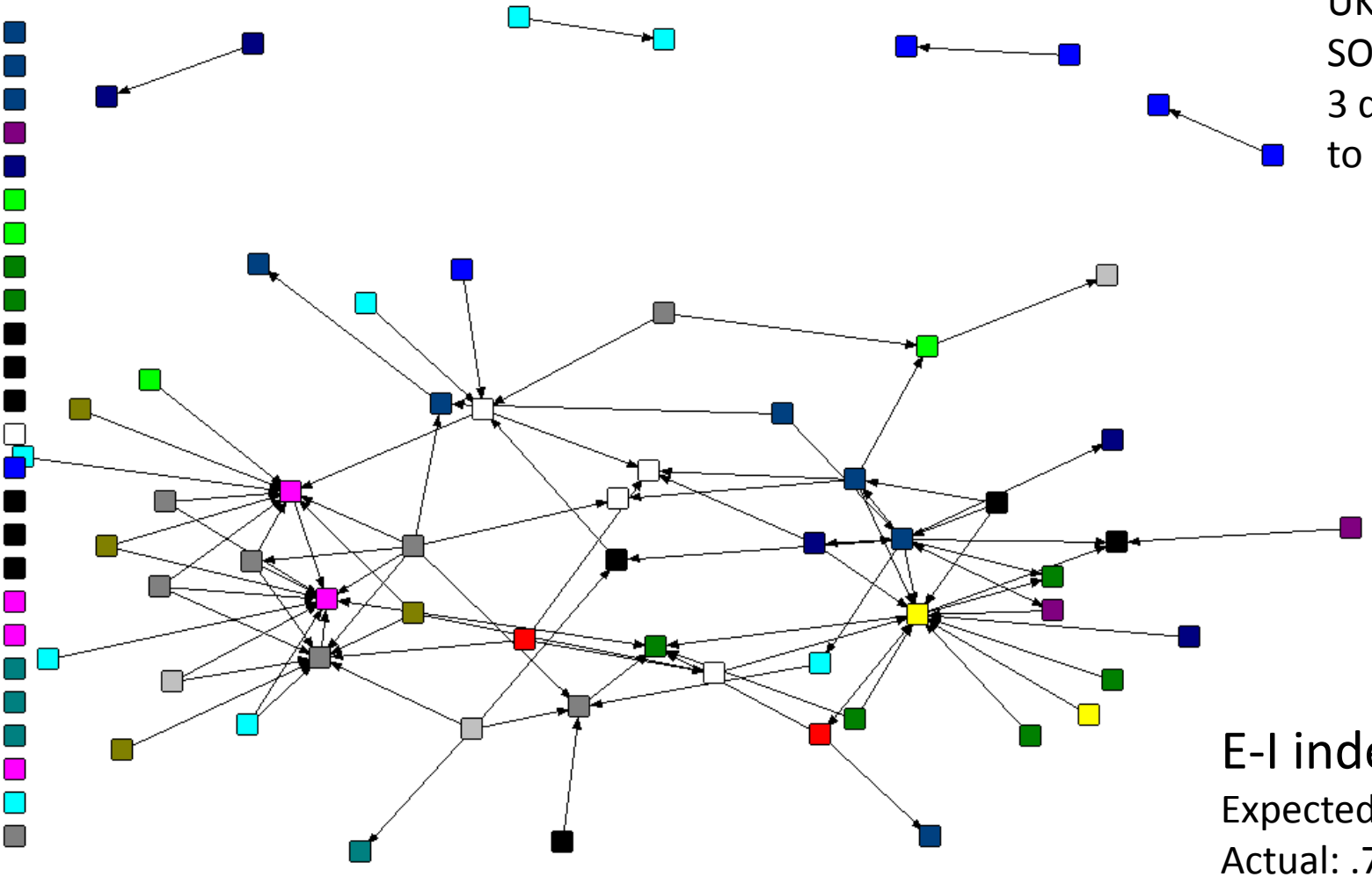
- Couples are strongly grouped by religion
- Couples also strongly group by conviction of religion within their faith
- Britain is strongly apart in terms of religion of couples

- But, is there a growing tendency for homophily in apathy towards religion to matter more than which religion for those groups?

Occupations

- SOC00 – 3 digit
  - 7.7% of couples in same job
- SOC00 – 2 digit
  - 12% of couples in same job

UKHLS Wave B
SOC00 by couple
3 digit (compared
to 2 digit)



QAP
Correlation: .049
Significant clustering at .01% level

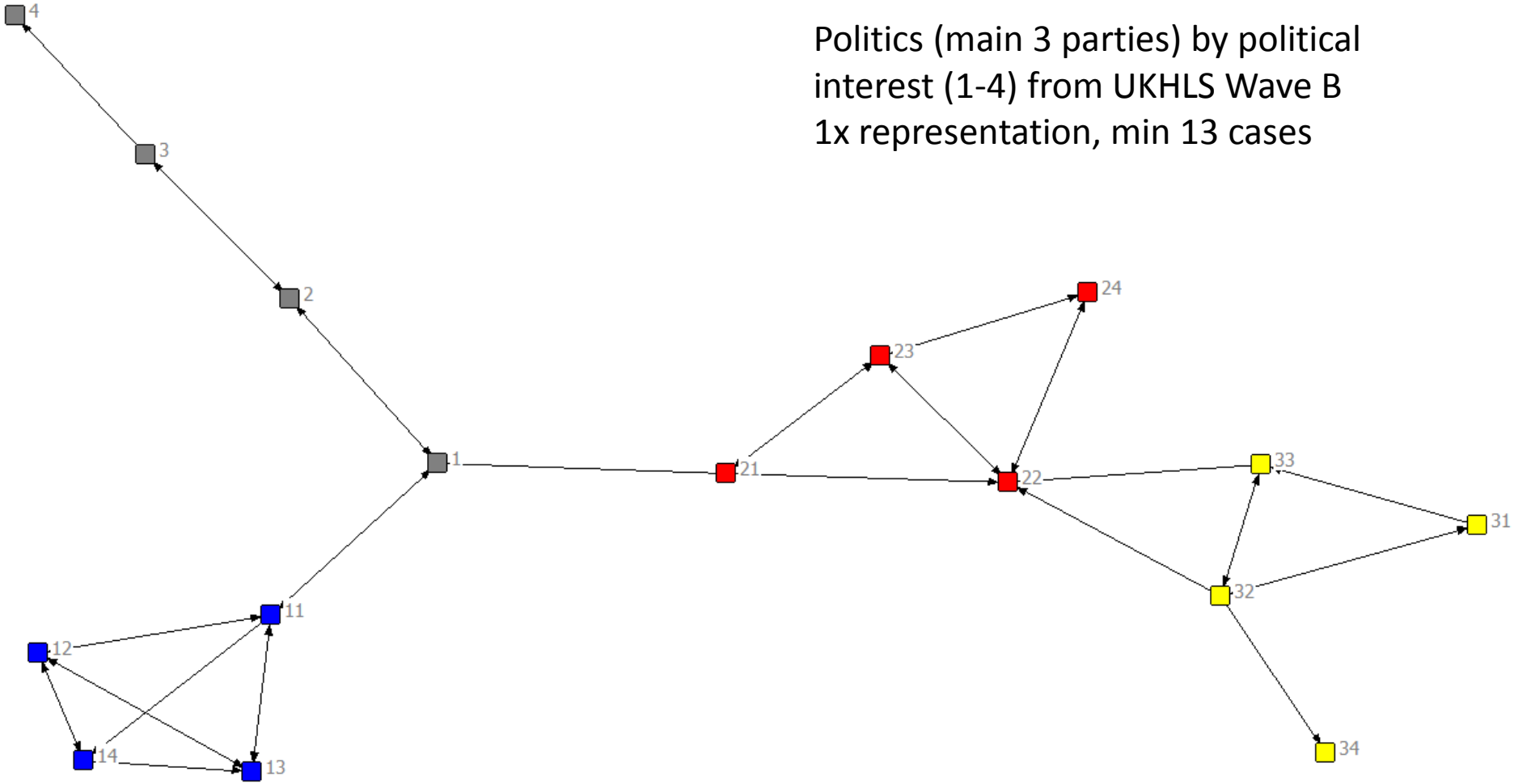
E-I index

Expected: .916
Actual: .733
Significant clustering
of 3 digit SOC00 into
2 digit

Politics

- Couples
  - 65% support same of the three major parties
  - 41% view politics same on 1-4 scale
  - 29% hold same views on both

Politics (main 3 parties) by political interest (1-4) from UKHLS Wave B
1x representation, min 13 cases



QAP correlaton

Correlation: .0710
Significant P=0.000

E-I index

Expected: .600
Actual: =.636
Significant at 5% level

	Religion	Birthplace	Sport	Politics	Job
% diagonals	47%	56%	15%	29%	8%
2n ties threshold	18.8	1.36	1.22	1.91	2.04
E-I index	YES	YES	YES	YES	YES
QAP correlation	YES	YES	YES	YES	YES

Conclusions

- Differences certainly occur between groups in contemporary UK, but are they problematic?
- Tendency towards weaker association within religion, which is a stronger element in generating social distances?
- People grouped by political interests more than shared interests in sports
  - Do processes which bring people together only connect those with other shared interests (‘Catnets’)

Possible further work

- Trends through time: different patterns for age groups and also relating to earlier surveys
- Relationship to social stratification: correlation between isolation/extreme categories and measures such as education or occupation
- Prescriptions about social distance – what could be recommended for harmonious societies… [implications for communities]