

# Social distance of family and friends: Socio-economic and socio- demographic patterns

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Part of work on 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/>

# (1) What do we mean by social relations, social connections and social distance, and why are they worth studying?

*We use these interlinked terms to refer to the tools for sociological understanding of social support and social positioning:*

## •Social relations

- Links between actors, particularly when expressed in terms of recognised, consequential social positions
  - Social relations can be used to exclude and deprive others, but, more often, they are used with beneficence (e.g. advice and resources)
  - Granovetter, M. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78(6), 1360-1380.

## •Social connections

- Measureable links between actors
  - e.g. two people are friends, are married, etc
  - e.g. have a friend who is a lawyer / events manager / bouncer
  - e.g. indirect links (e.g. 'bridged' via mutual friends; models of 'contagion')

# Social distances

- *Generically, social distance = how far away A is from B, on the basis of {likely} levels of social contact*
- *A and B are usually social units; we typically see several empirical dimensions that characterise the pattern of social contacts*

- Previous research on social distance between occupational categories

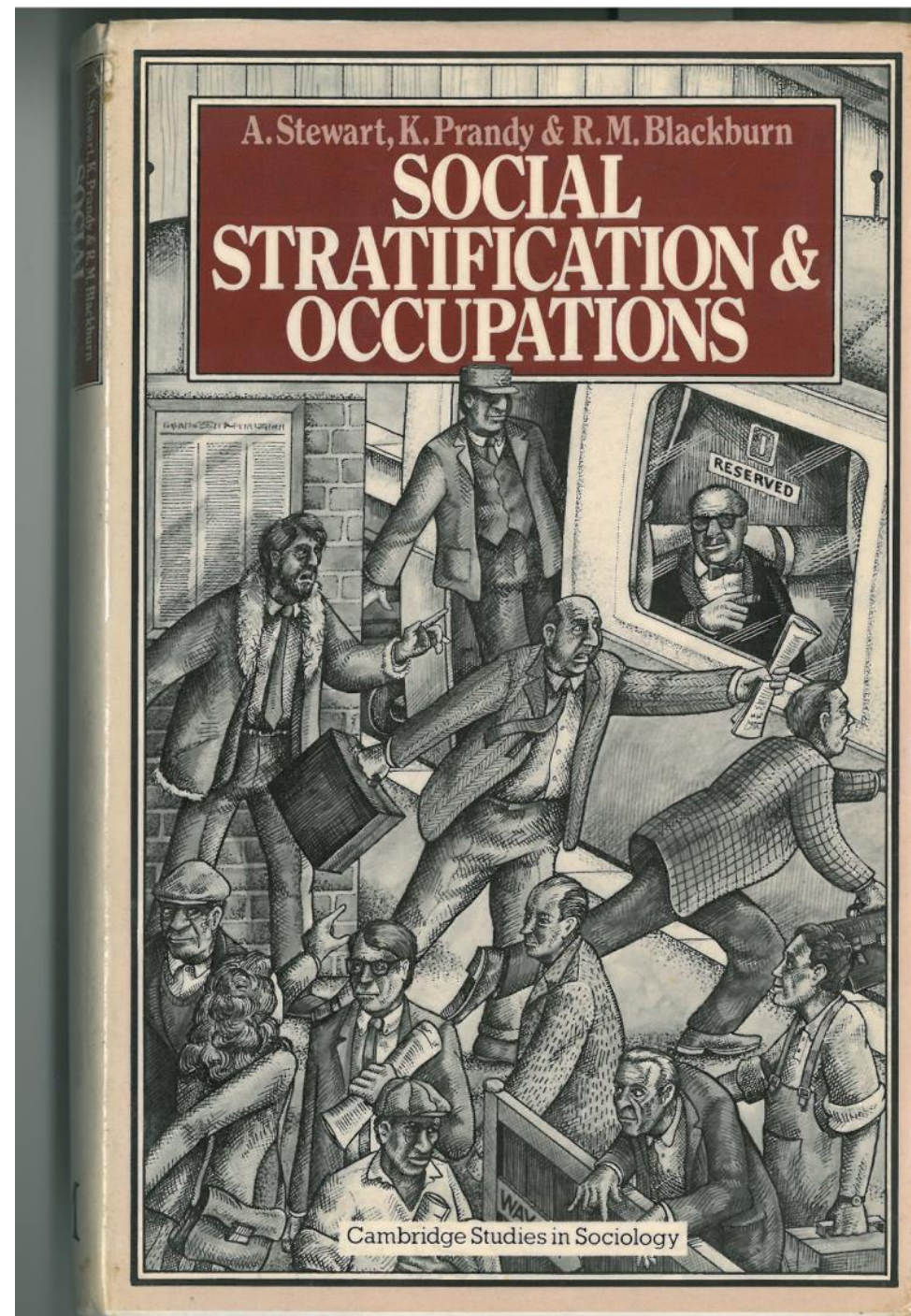
- e.g. [www.camsis.stir.ac.uk](http://www.camsis.stir.ac.uk) ; growth of recent interest (e.g. Chan 2010)

- Can equally review social distance between

- Educational categories (see educational homogamy literature)
- Gender, age/life-course stage, ethnicity, religion (e.g. Lauman 1973)
- Political values and orientations
- Health-related behaviours... ...etc

- Social relations = character of the tie
- Social connections = measurement of the tie

**Social distance** = social structure that is revealed through analysing ties

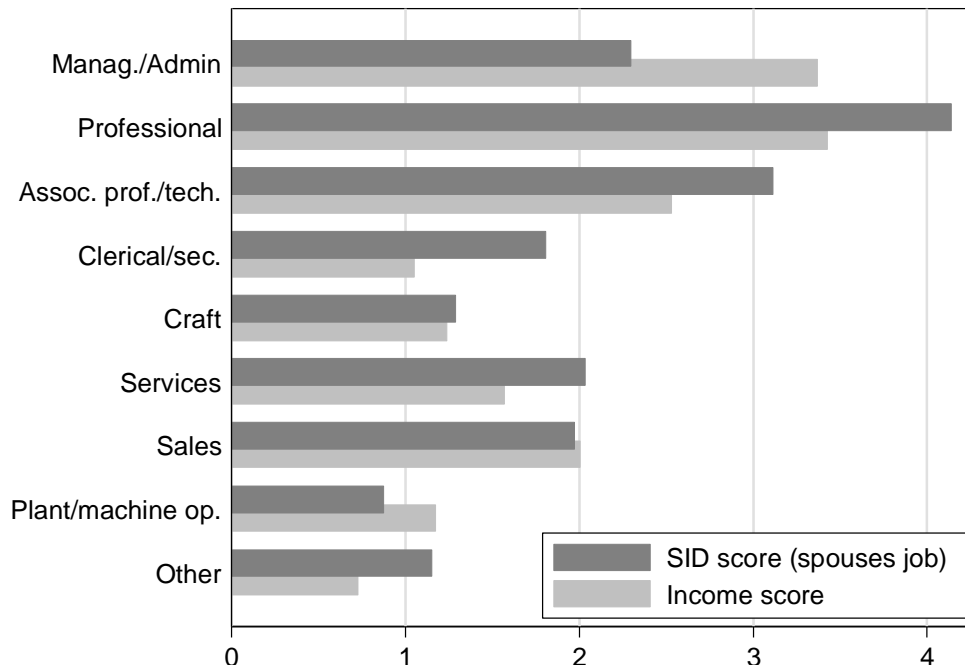


# Why study social relations, social connections and social distance?

## (a) Consequential individual level outcomes correlate data on alters

- Strong empirical effects of spouses, parents, friends, etc
- Recent increase in data on alters

Bivariate correlation*100 to... (UKHLS 2009) ( <u>ul</u> =sig. effect net of own characteristic)				
	Inc.	Health	GHQ	Green
Spouse has degree	<u>21</u>	<u>16</u>	<u>5</u>	<u>14</u>
Father's job	<u>15</u>	<u>14</u>	3	<u>9</u>



Source: Analysis of married males in BHPS. Scores mean standardised plus 2.

## (b) Social structure as defined by social distance is revealing

- Interaction structure not identical to other structures
- Interaction structure is theoretically interesting (?the trace of social reproduction)
- Other measures of structure may not be available

## *(2) Comparisons from the analysis of social connections*

- (i) What characterises the main dimensions of social association patterns according to categories of occupations, educational levels, ethnicity, religion, age and gender?
- (ii) Are there any patterns of variation in these?  
Temporal trends? National differences?  
National differences in temporal trends?

# Microdata covering households and/or other social connections

- Some surveys and other data sources ask proxy info on friends
- Complex contemporary surveys with longitudinal and household designs often allow interlinking of extra data
  - Current household sharers; previous household sharers (& their new alters)
  - Questions on friends or other alters
  - Admin data on shared institutions (e.g. Workplaces)

	pid	year	hid	sppid	age	sex	educ4	mcamsis	hlghq1
43.	10029133	1991	1002449	10029168	29	2. female	2	52.5	8
44.	10029133	1992	2002019	0. spouse not in hh	30	2. female	2	52.1	11
45.	10029168	1991	1002449	10029133	38	1. male	.m	38.1	.m
46.	10040331	1991	1003372	0. spouse not in hh	38	2. female	1	.	.m
47.	10040331	1992	2002086	0. spouse not in hh	39	2. female	1	.	8
48.	10040366	1991	1003372	0. spouse not in hh	20	2. female	2	.	6
49.	10040366	1992	2002086	0. spouse not in hh	21	2. female	2	.	8
50.	10040404	1991	1003372	0. spouse not in hh	18	2. female	2	.	4
51.	10040404	1992	2002086	0. spouse not in hh	18	2. female	2	.	3
52.	10040439	1992	2002086	0. spouse not in hh	16	1. male	1	.	14
53.	10042571	1991	1003569	0. spouse not in hh	59	1. male	1	.	11
54.	10043691	1991	1003658	0. spouse not in hh	70	2. female	1	25.6	13
55.	10047069	1991	1003933	10047093	30	1. male	3	.	19
56.	10047069	1992	2002507	10047093	31	1. male	3	.	8
57.	10047093	1991	1003933	10047069	29	2. female	2	.	22
58.	10047093	1992	2002507	10047069	29	2. female	2	.	31
59.	10048189	1991	1004026	10048219	47	1. male	.m	38.9	.m
60.	10048189	1992	2002728	10048219	48	1. male	.m	36.3	.m
61.	10048219	1991	1004026	10048189	43	2. female	1	43.5	7
62.	10048219	1992	2002728	10048189	43	2. female	1	43.5	14
63.	10048243	1991	1004026	0. spouse not in hh	21	2. female	3	43.5	7

# Big comparative coverage of family connections data..

IPUMS International - Windows Internet Explorer provided by University of Stirling

File Edit View Favorites Tools Help

Address <https://international.ipums.org/international/samples.shtml> Go

MINNESOTA POPULATION CENTER, UNIVERSITY OF MINNESOTA

# IPUMS International

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## IPUMS Sample Information

<a href="#">Argentina</a>	1970·1980·1991·2001	<a href="#">Ghana</a>	2000	<a href="#">Palestine</a>	1997
<a href="#">Armenia</a>	2001	<a href="#">Greece</a>	1971·1981·1991·2001	<a href="#">Panama</a>	1960·1970·1980·1990·2000
<a href="#">Austria</a>	1971·1981·1991·2001	<a href="#">Guinea</a>	1983·1996	<a href="#">Philippines</a>	1990·1995·2000
<a href="#">Belarus</a>	1999	<a href="#">Hungary</a>	1970·1980·1990·2001	<a href="#">Portugal</a>	1981·1991·2001
<a href="#">Bolivia</a>	1976·1992·2001	<a href="#">India</a>	1983·1987·1993·1999	<a href="#">Romania</a>	1977·1992·2002
<a href="#">Brazil</a>	1960·1970·1980·1991·2000	<a href="#">Iraq</a>	1997	<a href="#">Rwanda</a>	1991·2002
<a href="#">Cambodia</a>	1998	<a href="#">Israel</a>	1972·1983·1995	<a href="#">Slovenia</a>	2002
<a href="#">Canada</a>	1971·1981·1991·2001	<a href="#">Italy</a>	2001	<a href="#">South Africa</a>	1996·2001·2007
<a href="#">Chile</a>	1960·1970·1982·1992·2002	<a href="#">Jordan</a>	2004	<a href="#">Spain</a>	1981·1991·2001
<a href="#">China</a>	1982·1990	<a href="#">Kenya</a>	1989·1999	<a href="#">Uganda</a>	1991·2002
<a href="#">Colombia</a>	1964·1973·1985·1993·2005	<a href="#">Kyrgyz Republic</a>	1999	<a href="#">United Kingdom</a>	1991·2001
<a href="#">Costa Rica</a>	1963·1973·1984·2000	<a href="#">Malaysia</a>	1970·1980·1991·2000	<a href="#">United States</a>	1960·1970·1980·1990·2000·2005
<a href="#">Ecuador</a>	1962·1974·1982·1990·2001	<a href="#">Mexico</a>	1960·1970·1990·1995·2000·2005	<a href="#">Venezuela</a>	1971·1981·1990·2001
<a href="#">Egypt</a>	1996	<a href="#">Mongolia</a>	1989·2000	<a href="#">Vietnam</a>	1989·1999
<a href="#">France</a>	1962·1968·1975·1982·1990·1999	<a href="#">Netherlands</a>	1960·1971·2001		

# *Today's data sources*

- UK Data on friends

- Using proxy data from the UK (questions on friends) (1972; 1974; 1991->)
- Options for other countries to be explored in the future
  - Online survey datasets
  - Longitudinal household surveys allow linkage to previous household sharers (e.g. GB, DE, CH, AU, US)
  - Possible proxy data sources forthcoming: Finland (online survey), Netherlands, Germany (random surveys)
  - Administrative data in Sweden on shared institutions/workplaces/previous household ('quasi friends'?)
  - Studies used by Wright 1997 from USA, France, Sweden, Japan in 1980's

- IPUMS-I data on spouses

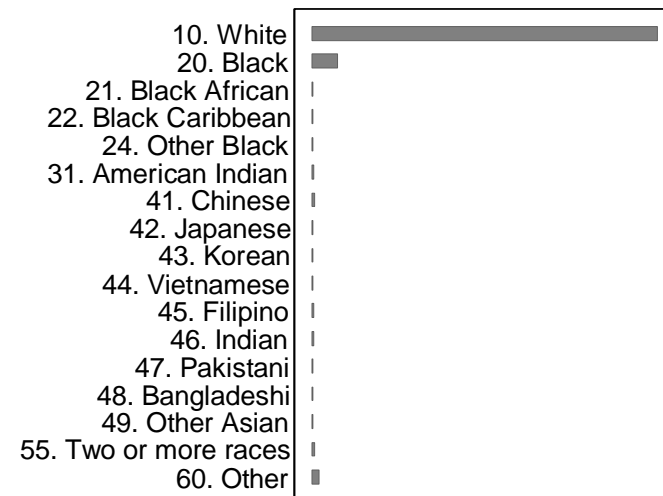
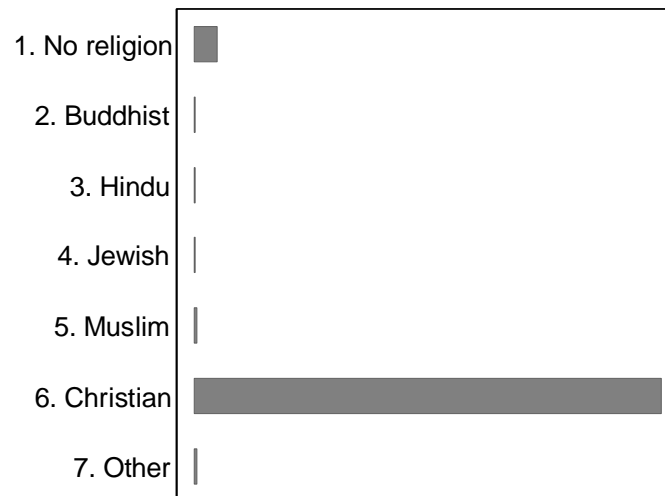
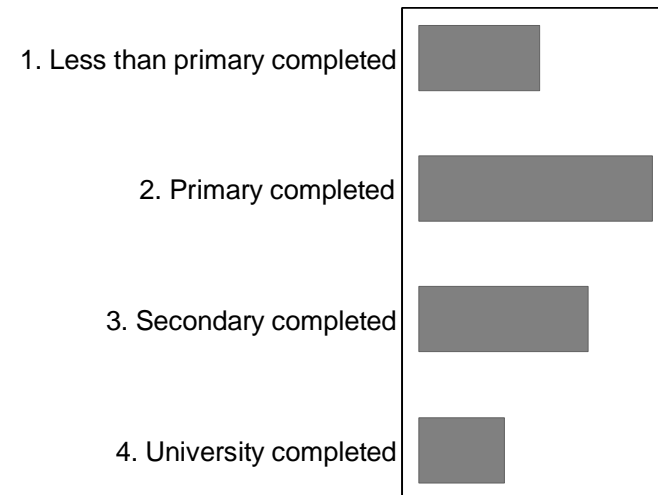
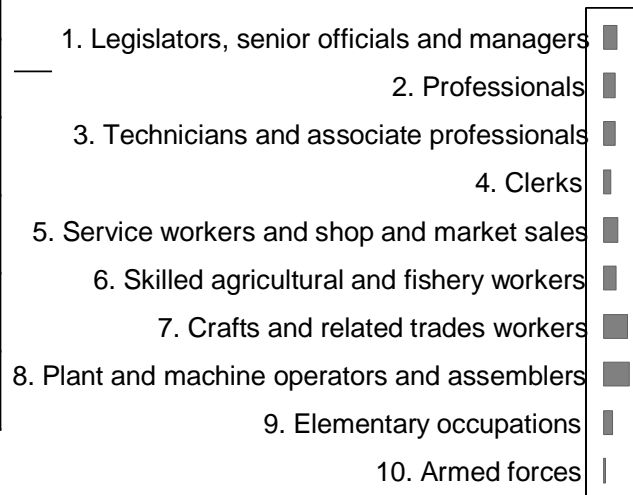
- IPUMS-I records on self and spouse using, for convenience, harmonised measures of occupations (ISCO 1-dig), education, ethnicity and religion

## *More on data: ego-alter pairs*

- BHPS analysis
  - Dataset (a) is of main respondent interviewee with associated proxy information on their nominated best friend (average of 15k ego-alter pairs per year).
  - Dataset (b) is of main respondent male interviewee with associated information on a co-resident female spouse (average 5k both-working spouses each year).
  - Dataset (c) is of main respondent interviewees with associated information on a co-resident same-sex adult (average 2k both-working same-sex sharers each year)
  - Also make comparisons with c30000 friends from Oxford Mobility Survey 1972, and c25000 friends from Social Status in Great Britain 1974
- Comparative analysis with IPUMS-I data
  - Datasets of adult males with associated information on a co-resident female spouse (average  $N \sim 250000$  per society)
  - Could also construct datasets of adults with information on other co-residents, e.g. a same-sex adult – work to follow

	# catgeg
Occupation (1)	371
Occupation (2)	10
Education	12
Religion	14
Ethnicity	10
Age (band)	8
Gender	2
Age*Gender	16
BHPS 1991-2008.	

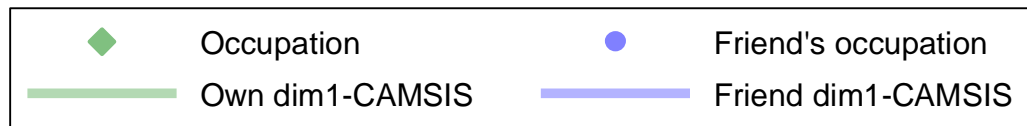
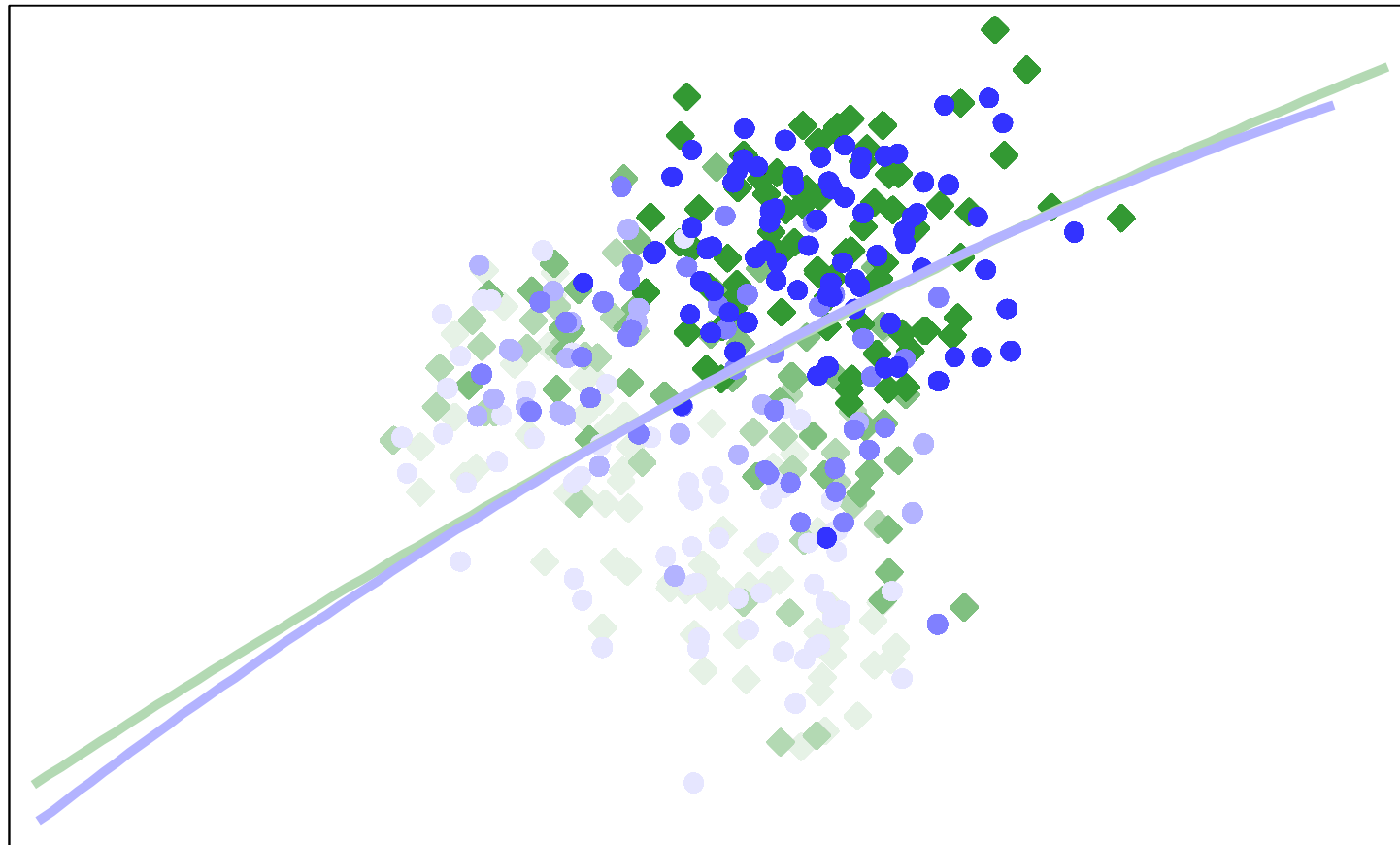
## More on data: Categorical measures used



(1) What characterises the main dimensions of social association patterns according to categories of occupations, educational levels, ethnicity, religion, age and gender

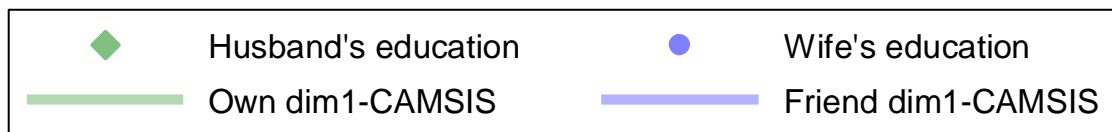
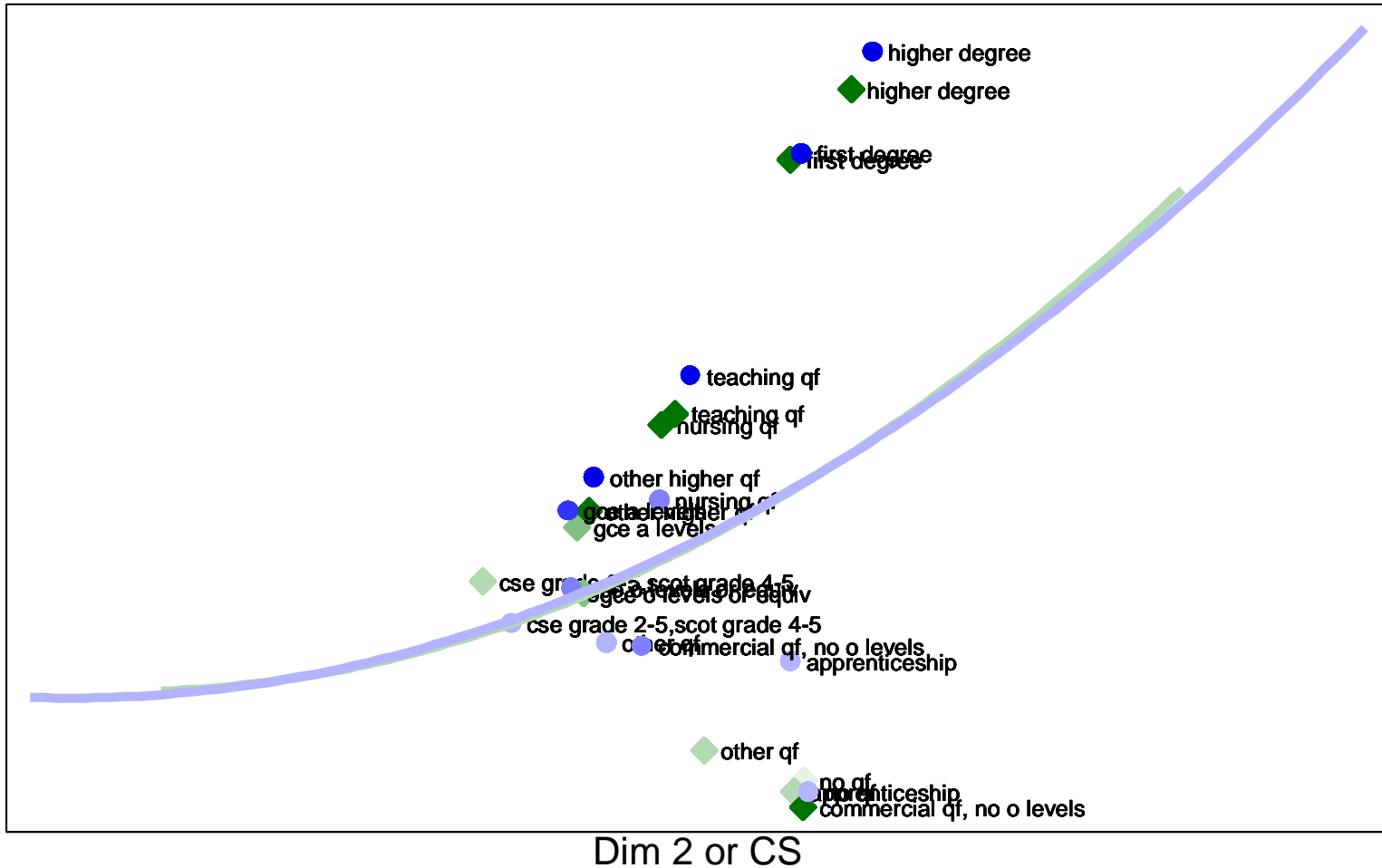
- Use a social interaction distance analysis to characterise the own-alter relationship between categories (here use correspondence analysis)
  - Overall strength of the relationship ('inertia' / Cramer's V)
  - Dimensional structures that depict the relationship (how many dimensions account for at least 50% of association pattern)
  - Correlations with the dimensional structure
  - Start with the UK

*For occupations, first dimension is usually stratification; various subsidiary dimensions typically reflect sectoral cleavages, feminised occupations, microclasses, rurality*



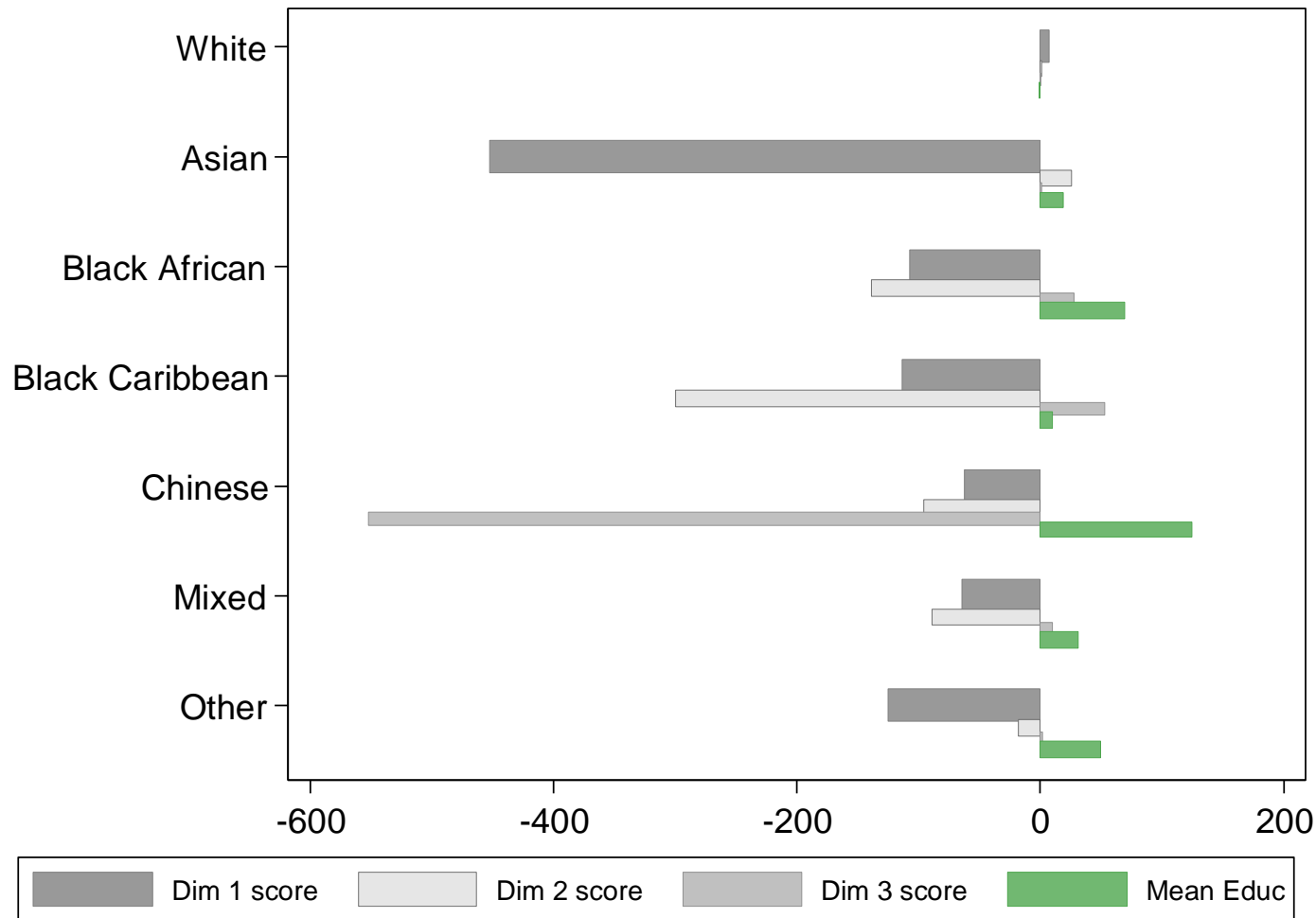
*Here and elsewhere:  
light shading = less  
advantaged; dark  
shading = more adv.*

*For educational qualifications, first dimension is usually stratification; subsidiary dimensions are not so clear, but might reflect age cohort differences in prevalence*



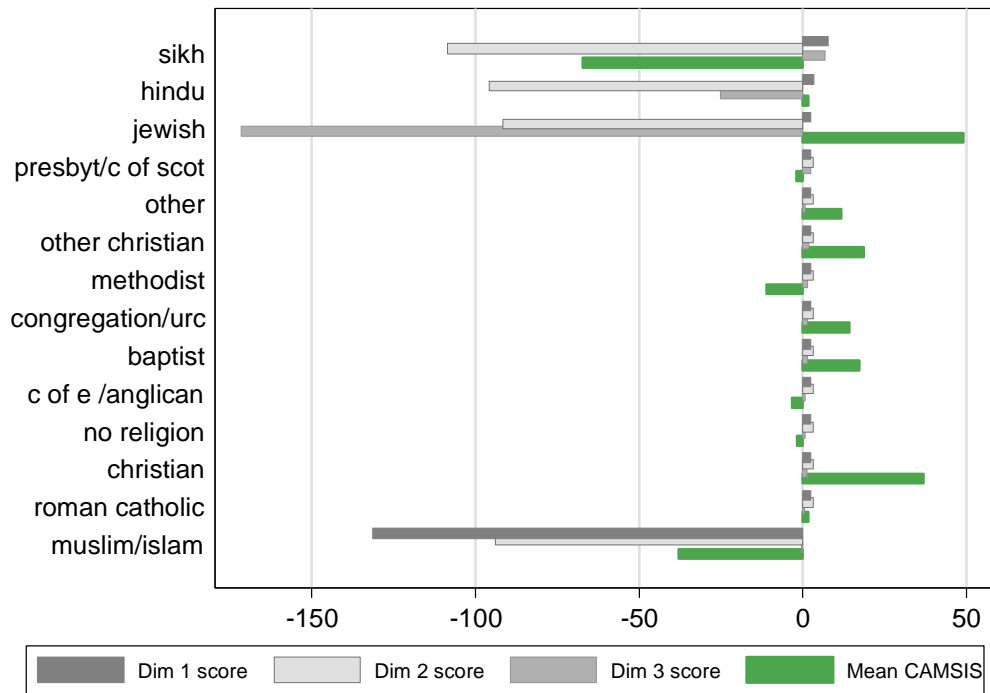
# Own ethnicity – Friend's ethnicity

*For ethnicity, so far, all of the main dimensions reflect separation of just one or two groups from all others; don't seem to correlate stratification etc in any obvious way*



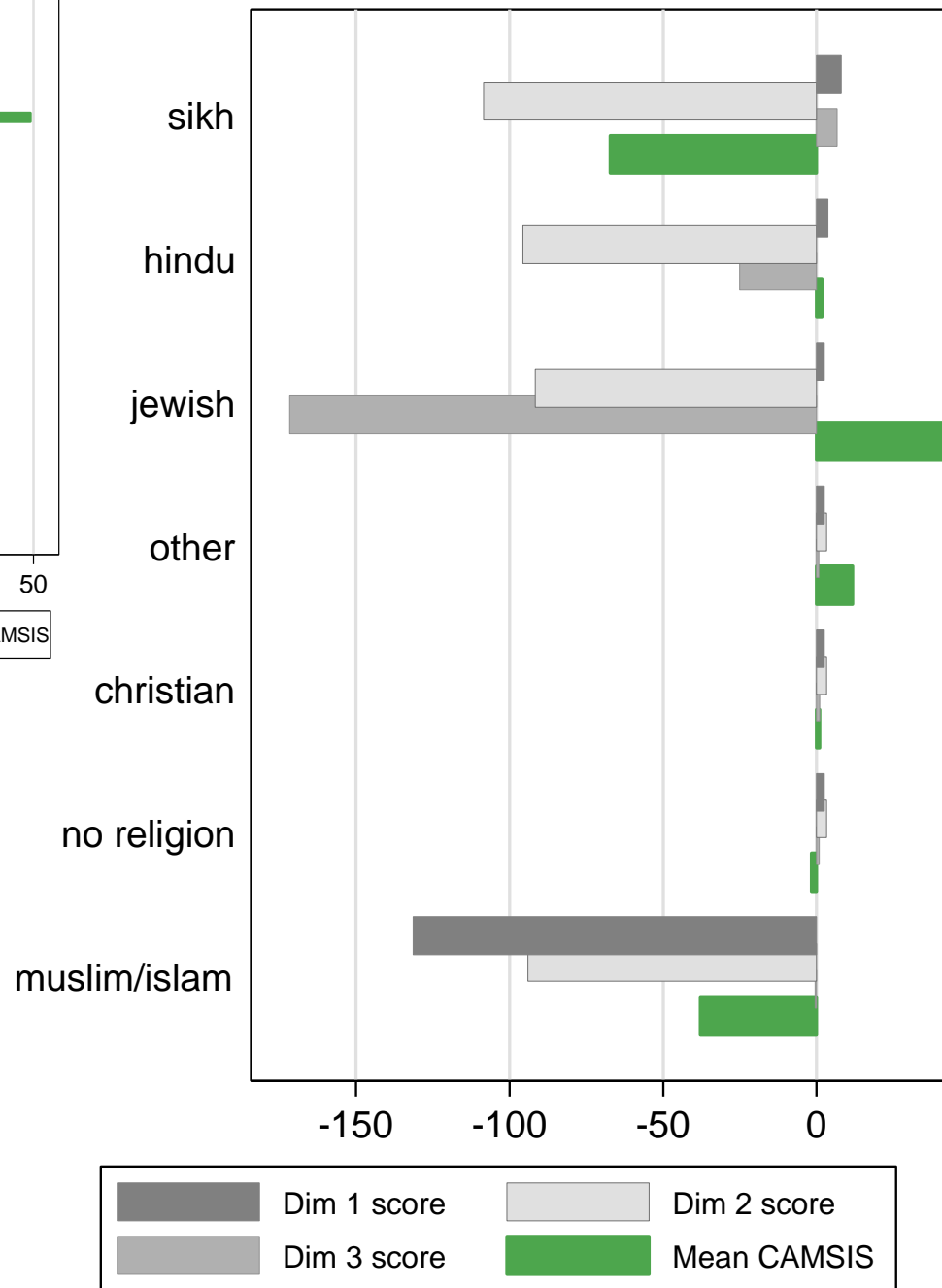
*Lauman 1973:  
1<sup>st</sup> dim. =  
assimilation, further  
dims unclear, maybe  
catholicism*

*P50: "Our efforts to  
determine the role of  
socio-economic  
status, ...,  
occupational status,  
and school years  
completed... in  
structuring the space  
have been  
unsuccessful"*

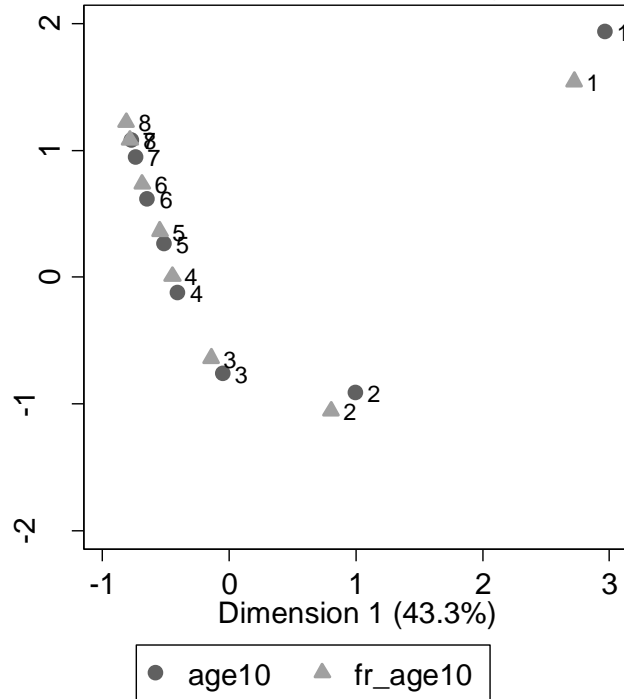


## Own religion – Alter's religion

*A similar conclusion as ethnicity. Main empirical patterns with groups linked to immigration. Dim 2 might perhaps be 'visibility' but this seems tenuous.*

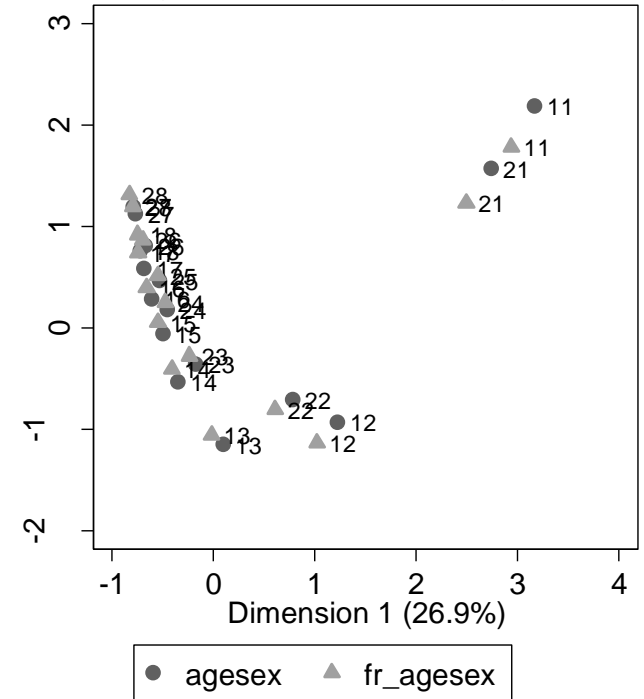


Own age band / Friend's age band

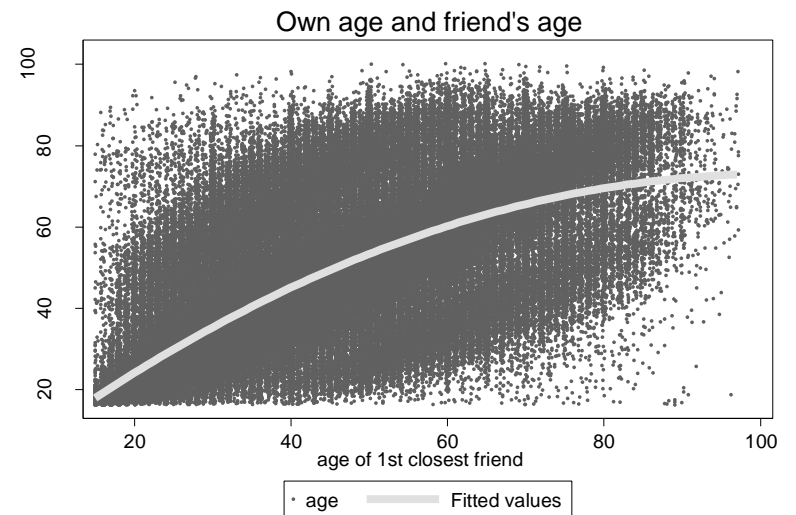
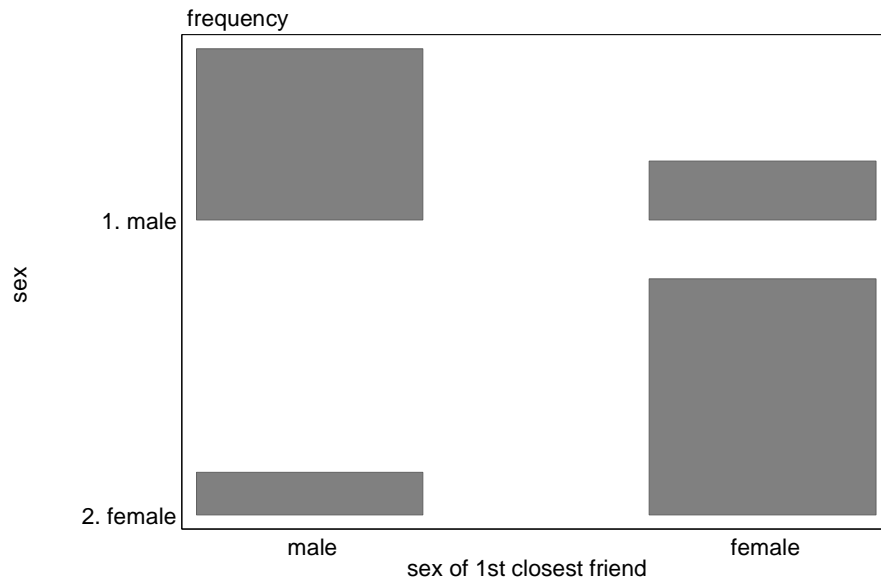


coordinates in symmetric normalization

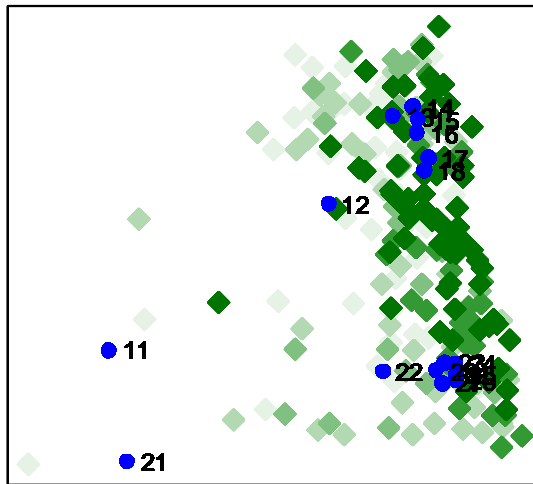
Own age\*sex / Friend's age\*sex



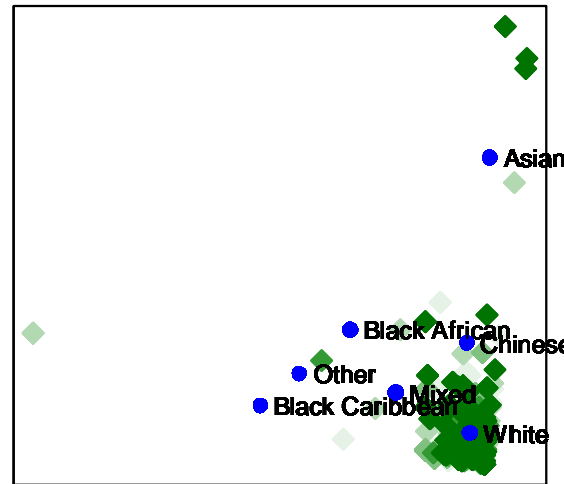
ric normalization



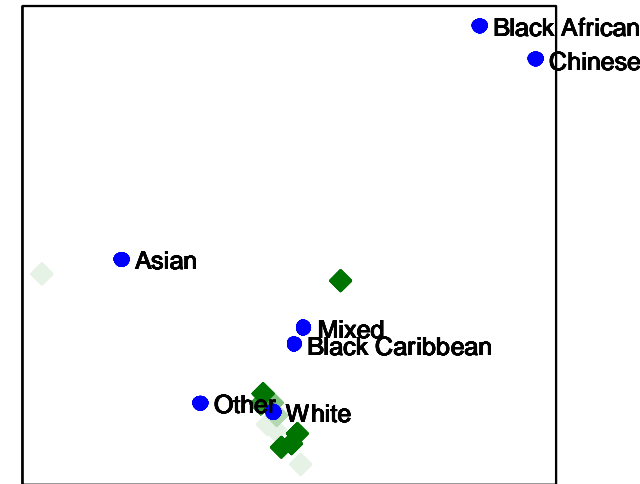
# Selected relations between dimensions: ego-friend



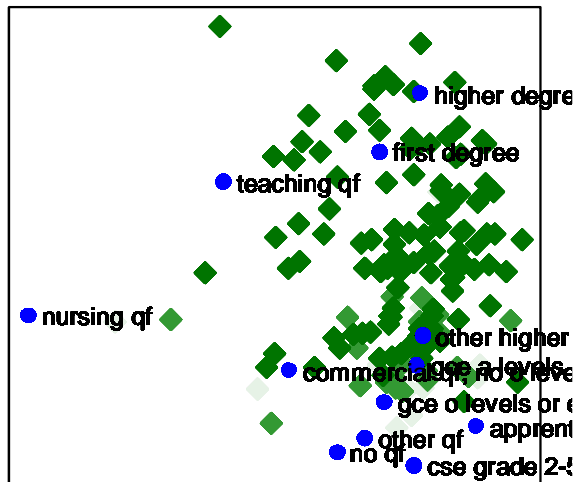
◆ Occupation      ● Friend Age\*Gender



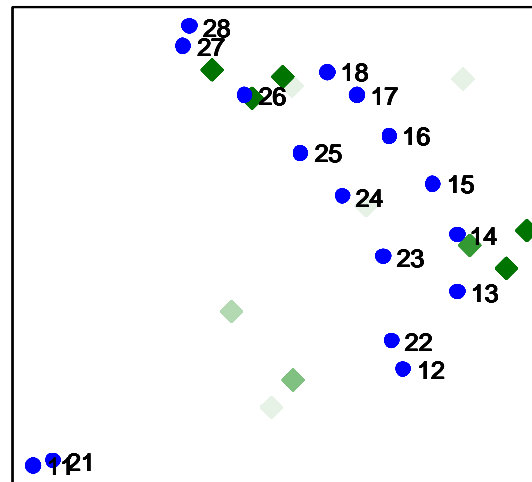
◆ Occupation      ● Friend's Ethnicity



◆ Education      ● Friend's Ethnicity



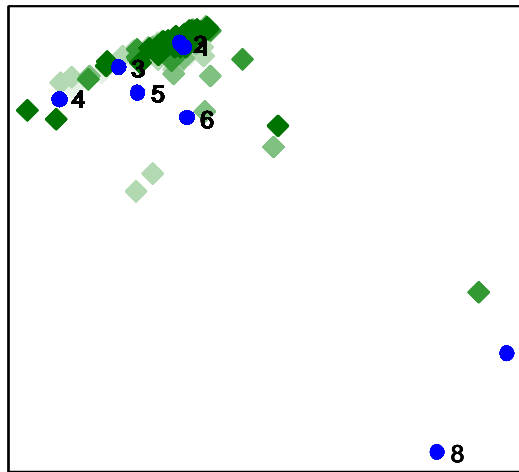
◆ Friend's occupation      ● Education



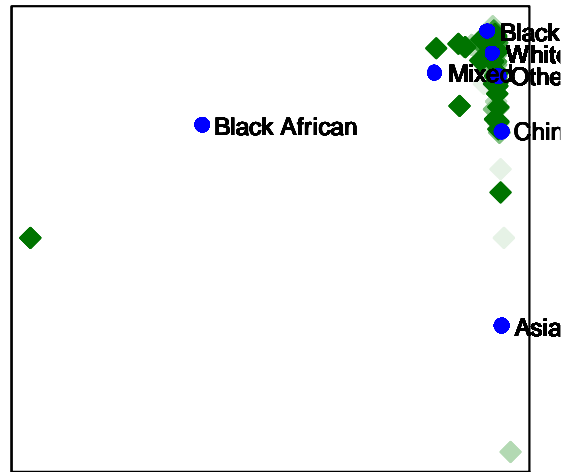
◆ Education      ● Friend's Age\*Gender

Nothing exciting –  
seems just to show  
that friend's  
characteristics are  
related in similar ways  
as are own

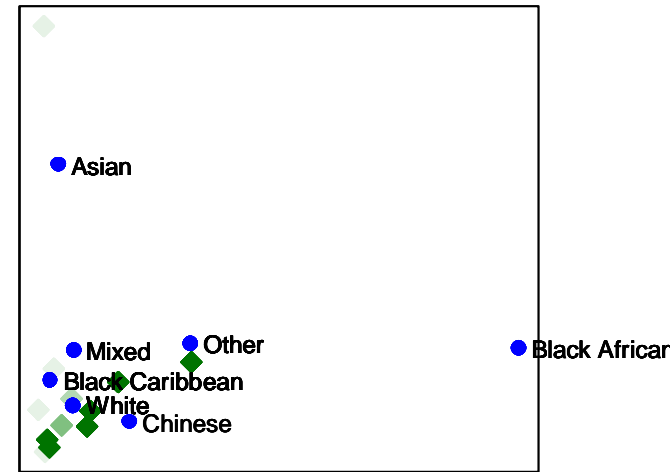
# Selected relations between dimensions: ego-alter



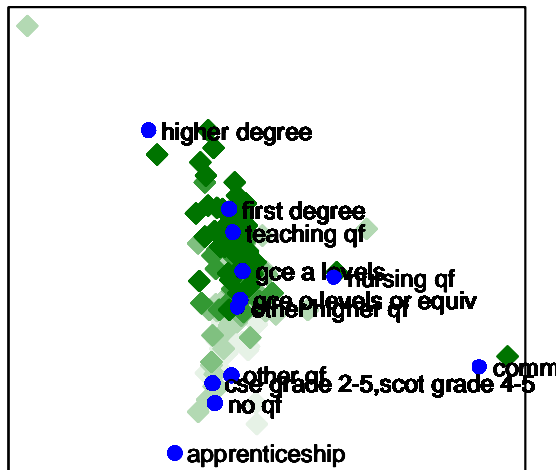
◆ Occupation      ● Alter's Age



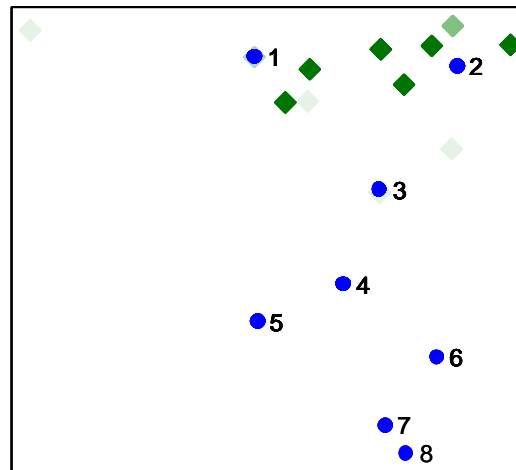
◆ Occupation      ● Alter's Ethnicity



◆ Education      ● Alter's Ethnicity



◆ Occupation      ● Alter's Education

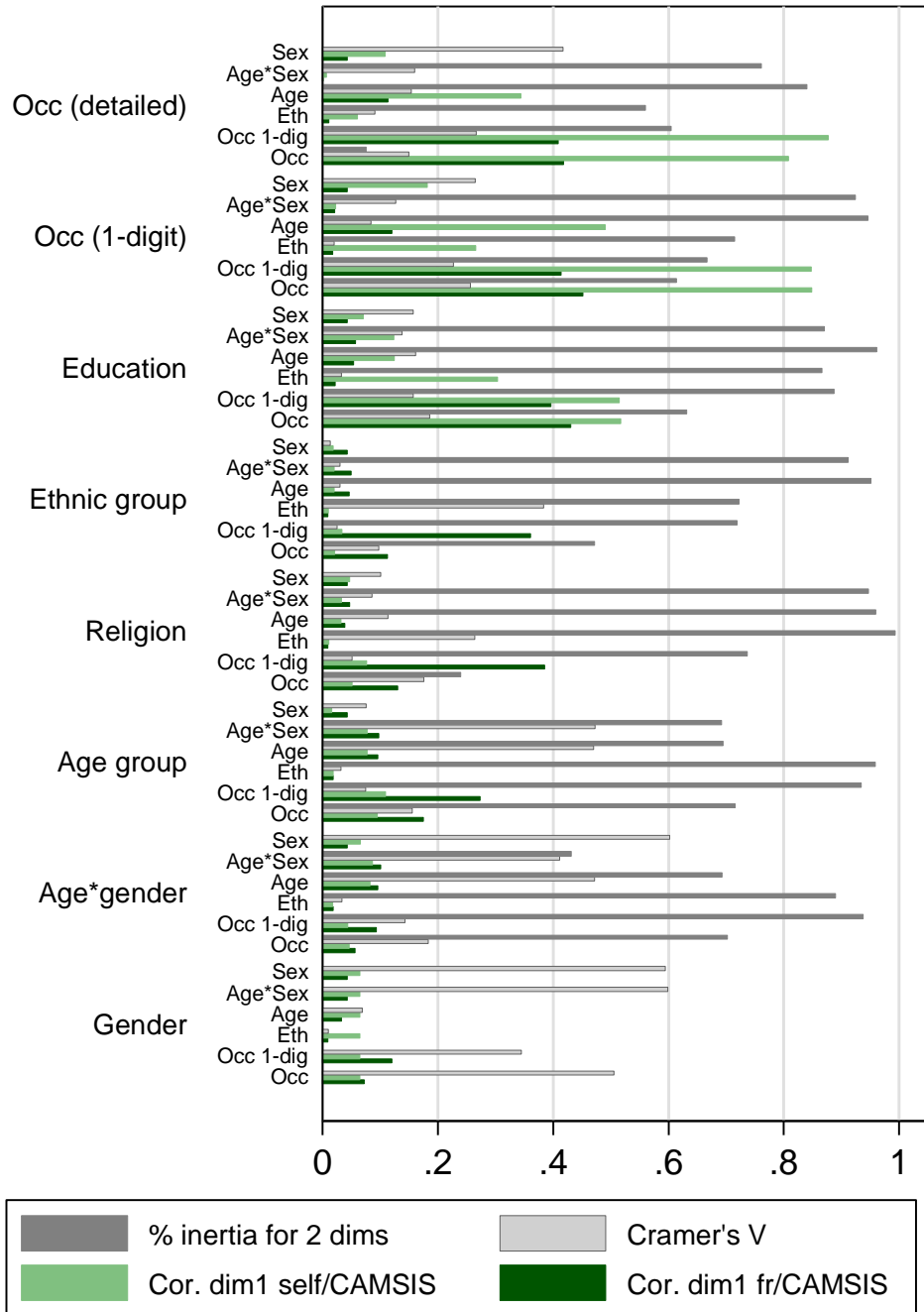


◆ Education      ● Alter's Age

Likewise for own-alter (household sharer) relations – though patterns are generally weaker / less strongly structured.

Occupation and education shaded by mean CAMSIS. Age\*Gender coded 1\*/2\*=m/f; \*1-\*8=age.

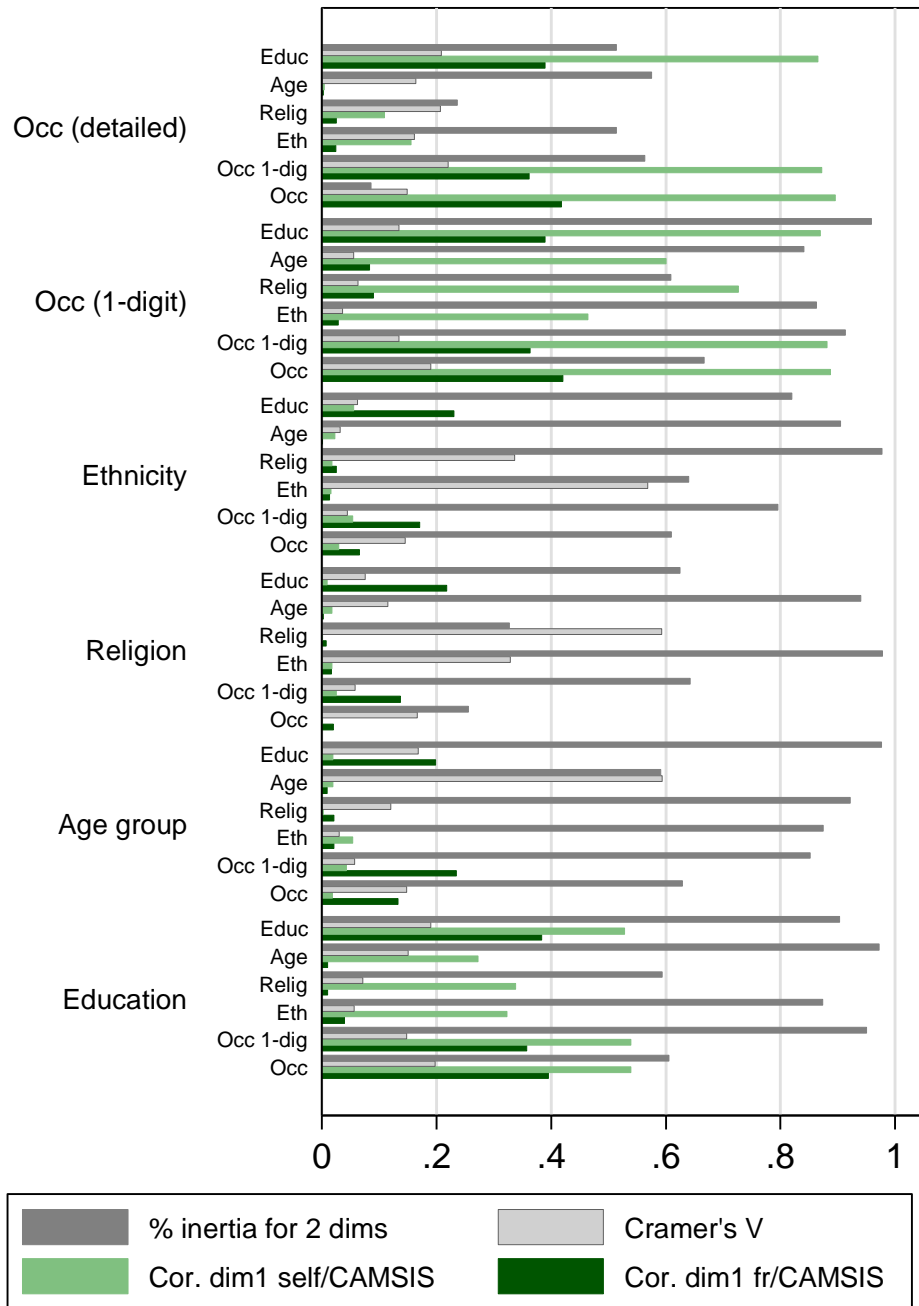
# Self-Friend associations



## Self-friends relations feature:

- An influence of stratification (e.g. occ and educ dimensions correlate CAMSIS)
- Interactions are frequently well described by a low-dimensional space
- Moderate but not perfect associations between same items (e.g. own ethnicity and friend's)
- Modest associations often found between different items (e.g. gender and occupation)

# Husband-wife associations



Husband-Wife relations feature:

- An influence of stratification (e.g. occ and educ dimensions correlate CAMSIS)

- Interactions are frequently well described by a low-dimensional space

- Moderate but not perfect associations between same items (e.g. own ethnicity and friend's)

- *Relatively more common to seen moderate associations between different items (e.g. age and occupation)*

(ii) Are there any patterns of variation in the dimensions of social distance between important categories?  
Temporal trends? National differences?  
National differences in temporal trends?

- Social association models from country to country, time to time
  - Descriptive / subjective judgments about differences to structure
  - Highly dependent upon categories used / recodes of categories
  - Difficult to decide upon appropriate comparisons
  - {Model evaluation – relative fit in predicting outcomes}

# Patterns and trends: Occupations in the UK

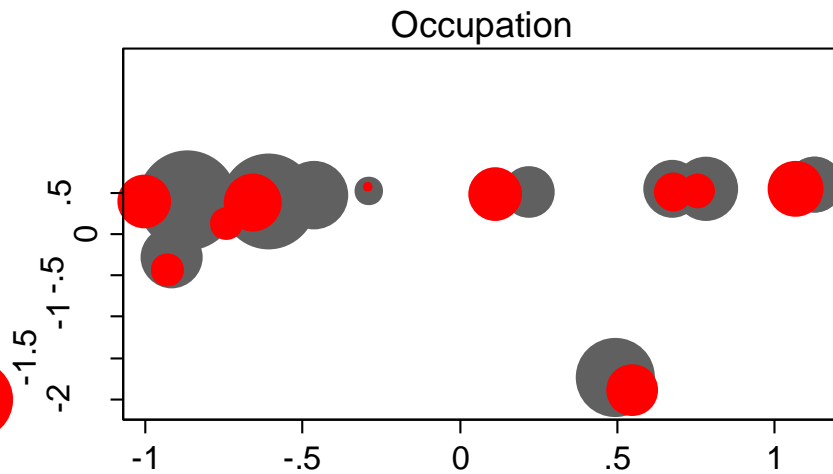
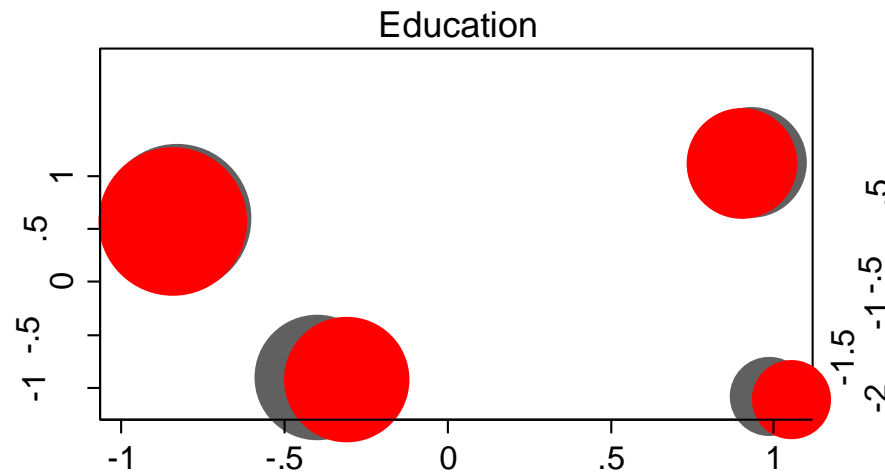
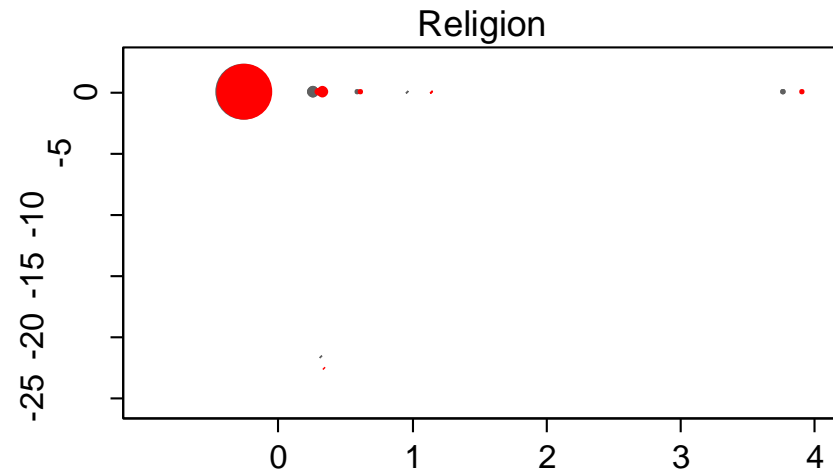
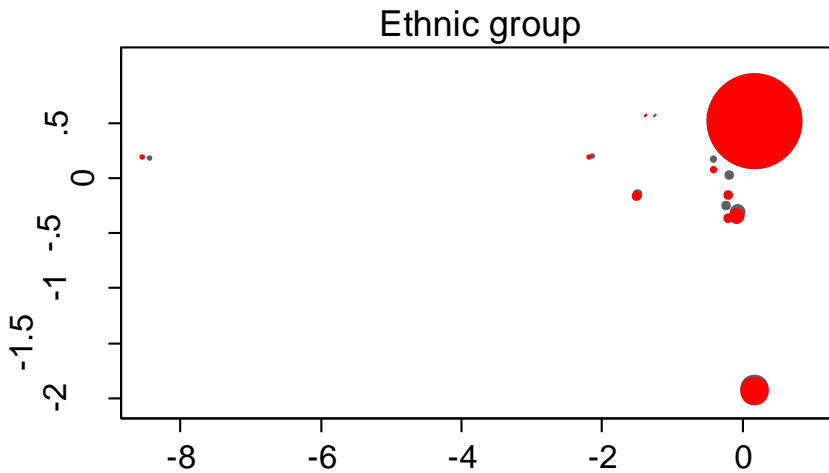
	Male-male friendships		Husband-wife combinations (~4k/y)		Male-male household sharers (~2k/y)	
	Cramer's V	CAMSIS correlation	Cramer's V	CAMSIS correlation	Cramer's V	CAMSIS correlation
<b><i>SOC90</i></b>						
BHPS 2004	0.337	0.476	0.347	0.375	0.454	0.277
BHPS 2000	0.322	0.494	0.312	0.388	0.420	0.305
BHPS 1998	0.356	0.486	0.337	0.403	0.451	0.294
BHPS 1994	0.375	0.511	0.392	0.401	0.493	0.329
BHPS 1992	0.399	0.541	0.371	0.414	0.462	0.297
(~10k/y)						
<b><i>OUG 1970</i></b>						
SSGB 1974	0.262	0.635				
Oxford 1972	0.236	0.521				
(~25k/y)						

- This might suggest that stratification influence is slightly weakening whilst occupational identities are strengthening
- Tenuous so far – but not consistent with 'Britain pulling apart'

# Data from IPUMS-I: Males from selected samples with valid data on at least one harmonised measure for spouses

Year	USA	Mexico	France	Greece	Hungary	Spain	Switzerland	UK	Total
1960	405,768	0	0	0	0	0	0	0	405,768
1962	0	0	528,821	0	0	0	0	0	528,821
1968	0	0	569,997	0	0	0	0	0	569,997
1970	443,605	73,376	0	0	129,767	0	71,445	0	718,193
1971	0	0	0	193,085	0	0	0	0	193,085
1975	0	0	620,916	0	0	0	0	0	620,916
1980	480,336	0	0	0	134,216	0	75,035	0	689,587
1981	0	0	0	235,966	0	0	0	0	235,966
1982	0	0	642,975	0	0	0	0	0	642,975
1990	478,472	373,774	574,790	0	121,971	0	83,864	0	1,632,871
1991	0	0	0	245,099	0	457,935	0	133,311	836,345
1995	0	60,819	0	0	0	0	0	0	60,819
1999	0	0	551,878	0	0	0	0	0	551,878
2000	493,511	335,456	0	0	0	0	85,970	0	914,937
2001	0	0	0	256,139	120,172	474,794	0	0	851,105
2005	677,610	0	0	0	0	0	0	0	677,610
2006	0	0	499,577	0	0	0	0	0	499,577
2010	692,017	326,879	0	0	0	0	0	0	1,018,896
Total	3,671,319	1,170,304	3,988,954	930,289	506,126	932,729	316,314	133,311	11,649,346

# Global orders of social interaction distance...



● Husband ● Wife

# Patterns and trends: husband-wife ethnicity

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960	0.813	14; 23; 37; 99	France 1962		
USA 1970	0.723	13; 15; 36; 99	France 1968		
USA 1980	0.751	10; 8; 33; 97	France 1975		
USA 1990	0.765	7; 6; 31; 95	France 1982		
USA 2000	0.771	7; 6; 30; 92	France 1990		
USA 2005	0.756	2; 1; 29; 92	France 1999		
USA 2010	0.758	7; 3; 30; 92	France 2006		
Mexico 1970			Greece 1971		
Mexico 1990			Greece 1981		
Mexico 1995			Greece 1991		
Mexico 2000			Greece 2001		
Mexico 2010			Hungary 1970		
Switzerland 1970			Hungary 1980		
Switzerland 1980			Hungary 1990		
Switzerland 1990			Hungary 2001		
Switzerland 2000			Spain 1991		
UK 1991	0.772	1; 1; 38; 96	Spain 2001		

# Patterns and trends: husband-wife ethnicity

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960	0.813	14; 23; 37; 99	France 1962		
USA 1970	0.723	13; 15; 36; 99			
USA 1980	0.751	10; 8; 33; 97			
USA 1990	0.765	7; 6; 31; 95			
USA 2000	0.771	7; 6; 30; 92			
USA 2005	0.756	2; 1; 29; 92			
USA 2010	0.758	7; 3; 30; 92			
Mexico 1970					
Mexico 1990					
Mexico 1995					
Mexico 2000			Greece 2001		
Mexico 2010			Hungary 1970		
Switzerland 1970			Hungary 1980		
Switzerland 1980			Hungary 1990		
Switzerland 1990			Hungary 2001		
Switzerland 2000			Spain 1991		
UK 1991	0.772	1; 1; 38; 96	Spain 2001		

## Overview:

- H-W ethnicity is strongly associated
- The first dimension for H and W is the same
- The first dimension isn't stratification
- No clear temporal trend in US

# Patterns and trends: husband-wife religion

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960			France 1962		
USA 1970			France 1968		
USA 1980			France 1975		
USA 1990			France 1982		
USA 2000			France 1990		
USA 2005			France 1999		
USA 2010			France 2006		
Mexico 1970	0.704	5; 5; 52; 82	Greece 1971		
Mexico 1990	0.736	3; 1; 49; 78	Greece 1981		
Mexico 1995			Greece 1991		
Mexico 2000	0.715	3; 3; 51; 92	Greece 2001		
Mexico 2010	0.774	1; 0; 43; 100	Hungary 1970		
Switzerland 1970	0.722	6; 5; 51; 82	Hungary 1980		
Switzerland 1980	0.727	5; 9; 49; 85	Hungary 1990		
Switzerland 1990	0.752	11; 12; 40; 85	Hungary 2001		
Switzerland 2000	0.712	11; 10; 37; 87	Spain 1991		
UK 1991			Spain 2001		

# Patterns and trends: husband-wife religion

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960			France 1962		
USA 1970			<b>Overview:</b> <ul style="list-style-type: none"> <li>▪ H-W religion is strongly associated</li> <li>▪ The first dimension for H and W is the same</li> <li>▪ The first dimension is moderately correlated to ICAM</li> <li>▪ No clear temporal trends</li> </ul>		
USA 1980					
USA 1990					
USA 2000					
USA 2005					
USA 2010					
Mexico 1970	0.704	5; 5; 52; 82			
Mexico 1990	0.736	3; 1; 49; 78			
Mexico 1995					
Mexico 2000	0.715	3; 3; 51; 92	Greece 2001		
Mexico 2010	0.774	1; 0; 43; 100	Hungary 1970		
Switzerland 1970	0.722	6; 5; 51; 82	Hungary 1980		
Switzerland 1980	0.727	5; 9; 49; 85	Hungary 1990		
Switzerland 1990	0.752	11; 12; 40; 85	Hungary 2001		
Switzerland 2000	0.712	11; 10; 37; 87	Spain 1991		
UK 1991			Spain 2001		

# Patterns and trends: husband-wife education

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960	0.434	48; 54; 37; 59	France 1962	0.389	50; 55; 50; 53
USA 1970	0.428	51; 54; 36; 58	France 1968	0.360	54; 57; 49; 51
USA 1980	0.438	50; 50; 33; 59	France 1975	0.402	57; 59; 48; 57
USA 1990	0.433	49; 47; 31; 56	France 1982	0.423	59; 60; 51; 69
USA 2000	0.432	51; 49; 30; 56	France 1990	0.423	62; 60; 49; 60
USA 2005	0.419	51; 48; 29; 55	France 1999	0.396	61; 58; 46; 58
USA 2010	0.425	51; 49; 30; 55	France 2006	0.415	57; 56; 40; 59
Mexico 1970	0.367	49; 64; 52; 60	Greece 1971	0.455	58; 74; 70; 67
Mexico 1990	0.448	51; 62; 49; 66	Greece 1981	0.490	62; 79; 69; 70
Mexico 1995	0.446	54; 56; 50; 65	Greece 1991	0.528	58; 70; 60; 72
Mexico 2000	0.469	57; 70; 51; 67	Greece 2001	0.502	53; 64; 58; 69
Mexico 2010	0.469	50; 60; 44; 66	Hungary 1970	0.437	70; 64; 53; 60
Switzerland 1970	0.378	5; 7; 51; 45	Hungary 1980	0.445	55; 66; 50; 62
Switzerland 1980	0.391	9; 11; 49; 43	Hungary 1990	0.459	50; 64; 48; 62
Switzerland 1990	0.487	11; 14; 40; 60	Hungary 2001	0.482	54; 63; 45; 66
Switzerland 2000	0.523	15; 18; 37; 62	Spain 1991	0.580	38; 46; 58; 83
UK 1991			Spain 2001	0.562	33; 39; 38; 77

# Patterns and trends: husband-wife education

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960	0.434	48; 54; 37; 59		
USA 1970	0.428	51; 54; 36; 58		
USA 1980	0.438	50; 50; 33; 59		
USA 1990	0.433	49; 47; 31; 56		
USA 2000	0.432	51; 49; 30; 56		
USA 2005	0.419	51; 48; 29; 55		
USA 2010	0.425	51; 49; 30; 55		
Mexico 1970	0.367	49; 64; 52; 60		
Mexico 1990	0.448	51; 62; 49; 66		
Mexico 1995	0.446	54; 56; 50; 65		
Mexico 2000	0.469	57; 70; 51; 67		
Mexico 2010	0.469	50; 60; 44; 66		
Switzerland 1970	0.378	5; 7; 51; 45		
Switzerland 1980	0.391	9; 11; 49; 43		
Switzerland 1990	0.487	11; 14; 40; 60	Hungary 1990	0.485 55; 57; 45; 62
Switzerland 2000	0.523	15; 18; 37; 62	Hungary 2001	0.482 54; 63; 45; 66
UK 1991			Spain 1991	0.580 38; 46; 58; 83
			Spain 2001	0.562 33; 39; 38; 77

## Overview:

- H-W education is moderately strongly associated
- In many countries, HW endogamy seems to increase slightly through time
- The first dimension for H and W is usually moderately correlated to ICAM
- H-W educational endogamy is stronger than H-W stratification endogamy
- Extremes might be:
  - Lowest association: France;
  - Strongest: Spain; Greatest change: Switzerland;

# Patterns and trends: spouse's occupation (1-dig ISCO)

	CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1		CV	HDim1-HICAM; WDim1-WICAM; HICAM-WICAM; HDim1-WDim1
USA 1960	0.179	89; 96; 37; 40	France 1962	0.456	23; 34; 50; 93
USA 1970	0.153	96; 98; 36; 38	France 1968	0.437	21; 33; 49; 93
USA 1980	0.167	96; 97; 33; 34	France 1975	0.400	18; 28; 48; 91
USA 1990	0.153	96; 97; 31; 33	France 1982	0.399	16; 28; 51; 87
USA 2000	0.139	96; 97; 30; 31	France 1990	0.349	16; 24; 49; 76
USA 2005	0.146	95; 96; 29; 32	France 1999	0.270	66; 64; 46; 53
USA 2010	0.148	95; 96; 30; 31	France 2006	0.223	89; 85; 40; 45
Mexico 1970	0.313	58; 70; 52; 65	Greece 1971	0.447	81; 87; 70; 80
Mexico 1990	0.267	58; 81; 49; 54	Greece 1981	0.467	44; 58; 64; 87
Mexico 1995	0.294	60; 70; 50; 64	Greece 1991	0.409	51; 65; 60; 77
Mexico 2000	0.287	53; 71; 51; 63	Greece 2001	0.358	38; 55; 58; 83
Mexico 2010	0.252	57; 78; 44; 53	Hungary 1970	0.279	77; 80; 53; 62
Switzerland 1970	0.401	23; 19; 51; 83	Hungary 1980	0.216	91; 96; 50; 54
Switzerland 1980	0.385	25; 27; 49; 83	Hungary 1990	0.228	94; 96; 48; 51
Switzerland 1990	0.297	23; 24; 40; 73	Hungary 2001	0.246	91; 91; 45; 49
Switzerland 2000	0.237	35; 36; 37; 54	Spain 1991	0.332	67; 76; 58; 67
UK 1991	0.205	91; 92; 38; 39	Spain 2001	0.239	94; 95; 48; 51

# Patterns and trends: spouse's occupation (1-dig ISCO)

	CV	HDim1-HICAM; WDim1- WICAM; HICAM-V HDim1-WDim1		CV	HDim1-HICAM; WDim1-
USA 1960	0.179	89; 96; 37; 40	<b>Overview:</b> <ul style="list-style-type: none"> <li>▪The first dimension is usually stratification (sometimes farming)</li> <li>▪H-W occupations are moderately associated and declines through time (higher when farming matters more to the structure)</li> <li>▪The national specific dimensional correlation is somewhat greater than the ICAM correlation</li> <li>▪National and temporal trends: <ul style="list-style-type: none"> <li>▪ Highest association: Greece, early France, early CH</li> <li>▪ Highest assoc. when dim1 is stratification: Greece</li> <li>▪ Biggest gap stratification/ICAM: early Greece, Hungary, Spain</li> <li>▪ Greatest decline through time in association: France, Switzerland</li> </ul> </li> </ul>		
USA 1970	0.153	96; 98; 36; 38			
USA 1980	0.167	96; 97; 33; 34			
USA 1990	0.153	96; 97; 31; 33			
USA 2000	0.139	96; 97; 30; 31			
USA 2005	0.146	95; 96; 29; 32			
USA 2010	0.148	95; 96; 30; 31			
Mexico 1970	0.313	58; 70; 52; 65			
Mexico 1990	0.267	58; 81; 49; 54			
Mexico 1995	0.294	60; 70; 50; 64			
Mexico 2000	0.287	53; 71; 51; 63			
Mexico 2010	0.252	57; 78; 44; 53			
Switzerland 1970	0.401	23; 19; 51; 83			
Switzerland 1980	0.385	25; 27; 49; 83			
Switzerland 1990	0.297	23; 24; 40; 73			
Switzerland 2000	0.237	35; 36; 37; 54	Hungary 2001	0.246	51; 51; 45; 49
UK 1991	0.205	91; 92; 38; 39	Spain 1991	0.332	67; 76; 58; 67
			Spain 2001	0.239	94; 95; 48; 51

# Observations and assertions

- *Britain isn't pulling apart!*
- *World isn't so complex and ever changing!*
- There are interesting low-dimensional structures in all social interaction distances
- The leading dimensions are often but not always influenced by stratification
- Cross-national comparisons at present are dubious – question of categorisation to scheme within country
- Temporal trends may be plausible, need to elaborate with birth-cohort comparisons
- *Thanks for your attention! ....Updated versions of this analysis will emerge at [www.camsis.stir.ac.uk/pullingapart](http://www.camsis.stir.ac.uk/pullingapart) ...*