WHAT HAPPENS WHEN INTERNATIONAL MIGRANTS SETTLE? AN ANALYSIS OF THE DEMOGRAPHIC FUTURE OF ETHNIC MIXING IN THE UK

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Background paper: Ethnic projections Chapter for UPTAP Vol3.pdf at:
http://www.geog.leeds.ac.uk/research/projects/migrants/publications.html

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What happens when international migrants settle? Ethnic group population trends and projections for UK local areas
AIMS & OUTLINE

- To present experimental results of a projection of the populations of UK ethnic groups
- To focus on the Mixed and Other groups and so assess the future of mixing for the UK population

Outline:
- Ethnicity concepts
- Summary of the projection model
- Input components: fertility, mixing, mortality, internal migration, international migration by ethnicity
- Projections of the total UK population
- Projections of the ethnic groups
- Projected ethnic shares in the population
- Projected spatial distributions
- Concluding remarks
ETHNICITY CONCEPTS

- Self-reported ethnic identities, based on combined racial and national origin categories not country of birth or nationality (European projections) or race (American projections, New Zealand projections)
- 16 detailed ethnicities from the 2001 Census
- Most previous work (Coleman and Scherbov 2005, Rees and Parsons 2006, 2009) has used four or five broad groups
- These broad groups hide crucial variation
PROJECTION MODEL SUMMARY

- **Coverage:** whole of the United Kingdom
- **Spatial units:** 352 local authorities in England with Wales, Scotland & Northern Ireland
- **Hierarchy:** UK pops=$\Sigma$ local ethnic pops (bottom up)
- **Age-time:** cohort-component with single ages to 100+
- **Migration:** bi-regional model to overcome small number issue of multi-regional model and isolation issue of single-region model
- **Group interaction:** parallel ethnic groups except mothers can give birth to children who have different ethnicities
- **Computation:** one step per time interval through use of probabilities of migration given survival within the country
- **Software:** programmed in R!
ETNICH FERTILITY IN 2001

TFR 2001 (England and Wales)
## Mixing matrix

### Sending percentages

% of children under one with ethnic group mothers by ethnicity of child

<table>
<thead>
<tr>
<th>Ethnic group of mother: percentages</th>
<th>Totals</th>
<th>British</th>
<th>Irish</th>
<th>Other White</th>
<th>White and Black Caribbean</th>
<th>White and Black African</th>
<th>White and Asian</th>
<th>Other Mixed</th>
<th>Indian</th>
<th>Pakistani</th>
<th>Bangladeshi</th>
<th>Other Asian</th>
<th>Black Caribbean</th>
<th>Black African</th>
<th>Other Black</th>
<th>Chinese or Other Ethnic Group</th>
<th>Other Ethnic Group</th>
<th>% net gain or loss</th>
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Key to percentage classes

- **Shade** 0% to 1%<br>Shade 1-2%<br>Shade 2-5%<br>Shade 5-10%<br>Shade 10-25%<br>Shade 25-50%<br>Shade 50-80%<br>Shade >80%
ETHNIC GROUP OUT-MIGRATION PROBABILITIES

Probability of out-migration
given survival within the UK, 2000-1 (2001 Census)

Percent
Ethnic Differences in Life Expectancy

Life expectancy at birth 2001, UK

- All groups
- White British
- White-Irish
- Other White
- White-Black Caribbean
- White-Black African
- White-Asian
- Other Mixed
- Indian
- Pakistani
- Bangladeshi
- Other Asian
- Black Caribbean
- Black African
- Other Black
- Other Ethnic
- Chinese

Mean e0
INTERNATIONAL MIGRATION BALANCES FOR ETHNIC GROUPS

persons in 1000

Persons in 1000

0 2 4 6 8 10 12

WBR WIR WHO WBC WBA WAS OMI IND PAK BAN OAS BLC BLA OBL CHI OTH
UK POPULATION PROJECTION BENCHMARKED FOR 2001
ETHNIC GROUP PROJECTED POPULATIONS

- White British
- White Irish
- White Other
- W & B C'bean
- W & B African
- White & Asian
- Other Mixed
- Indian
- Pakistani
- Bangladeshi
- Other Asian
- Black Caribbean
- Black African
- Other Black
- Chinese
- Oth. Ethnic Group

Years

UK population in 1000
# Ethnic Shares of the UK Population

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>2001</th>
<th>2031</th>
<th>2051</th>
<th>% Change in pop 2001-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>87.1</td>
<td>80.9</td>
<td>77.0</td>
<td>-9%</td>
</tr>
<tr>
<td>White &amp; Black Caribbean</td>
<td>0.4</td>
<td>1.0</td>
<td>1.4</td>
<td>+242%</td>
</tr>
<tr>
<td>White &amp; Black African</td>
<td>0.1</td>
<td>0.3</td>
<td>0.5</td>
<td>+249%</td>
</tr>
<tr>
<td>White &amp; Asian</td>
<td>0.3</td>
<td>0.8</td>
<td>1.2</td>
<td>+271%</td>
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<tr>
<td>Other Mixed</td>
<td>0.3</td>
<td>0.6</td>
<td>0.9</td>
<td>+255%</td>
</tr>
<tr>
<td>Asian</td>
<td>4.0</td>
<td>6.7</td>
<td>8.6</td>
<td>+120%</td>
</tr>
<tr>
<td>Black</td>
<td>2.0</td>
<td>3.2</td>
<td>3.8</td>
<td>+98%</td>
</tr>
<tr>
<td>Chinese or Other</td>
<td>0.8</td>
<td>1.9</td>
<td>2.5</td>
<td>+214%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>+3%</strong></td>
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<tr>
<td>Not White British</td>
<td>12.9</td>
<td>19.1</td>
<td>23.0</td>
<td>+83%</td>
</tr>
<tr>
<td>Not White</td>
<td>8.0</td>
<td>14.6</td>
<td>18.9</td>
<td>+144%</td>
</tr>
<tr>
<td>Mixed &amp; Other Groups</td>
<td>4.6</td>
<td>7.7</td>
<td>9.5</td>
<td>+111%</td>
</tr>
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</table>
THE CHANGING SPATIAL DISTRIBUTIONS OF MIXED ETHNIC GROUPS – LOCATION QUOTIENT

- 2001
  - W&BC’bean
  - W&Bfrican
  - W&Asian
  - Other mixed

- 2051
  - W&BC’bean
  - W&Bfrican
  - W&Asian
  - Other mixed
CONCLUDING REMARKS

- We have presented some experimental projections benchmarked for 2001.
- They show that substantial change is in prospect to mid-century in the ethnic mix of the UK’s population.
- Mixed ethnic group populations increase more rapidly than any other groups. This is our future.
- Over the next six months we will (1) write up our results in all their spatial detail, (2) carry out projections aligned to 2001-2008 estimates, (3) develop Trend, Sensitivity, Impact, Convergence and Variant projections building on the Benchmark projections to gain knowledge of what is likely to affect the future UK population.