



The stability of ethnic group and religion in the Censuses of England and Wales 2001-2011

CoDE Working Paper March 2014

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1. Introduction

When a change in a population is recorded, for example a decrease in long-term limiting illness of the Caribbean group, or an increase in the part-time employment of Bangladeshi men, these comparisons are fair and accurate as descriptions of how the group is different at two points in time.

This report digs a little deeper and asks the extent to which such change can occur because an ethnic group or religious group is made up of different people, rather than the same people having changed their characteristics.

This report is intended to answer the most urgent practical questions for analysts of ethnicity and of religion from the censuses. After a summary of findings and a recap of population change 1991-2001-2011, for each ethnic group and religion category this report identifies for 2001-2011:

- How much population change between two censuses is due to people joining or leaving the population through being born, dying, moving into or out of England and Wales, or being not counted (section 4)?
- For those who were recorded at both 2001 and 2011 Censuses, the extent to which people did not change their ethnic group (section 5), and whether amalgamating ethnic groups appreciably increases the stability of responses (section 6).
- The comparisons between ethnic groups across 1991, 2001 and 2011 which are most valid because least subject to instability (section 7).
- The implications for analysts of ethnic group from census datasets (section 8).
- The extent to which people did and did not change their religion (section 9).

Religion has been asked in two successive censuses, and ethnic group in three successive censuses. The questions at each census are reproduced in Appendices A and B. The voluntary question on religion asked in 2011 was in essence the same as that asked in 2001. The ethnic group question has various wording and category changes between 1991 and 2011 but is still broadly comparable¹. A question on main language and English proficiency was included for the first time in 2011, placed directly between the 2001 ethnic group and religious group questions in the 2011 Census questionnaire.

The report uses the ONS Longitudinal Study, consisting of anonymised individual records for about 1% of the population of England and Wales, linked across Censuses since 1971.

Further reports will address other questions, including:

- Are age, birthplace, household composition and other characteristics that may have changed during the decade, associated with more or less stability in ethnic group and religion?

¹ ONS (2012a) provides a comparison of all Census questions between 2001 and 2011.

- What can be learned when comparing our results for stability of ethnic group over ten years, with the stability of ethnic group when measured across shorter time periods – from the Labour Force Survey, the Census Coverage Survey and the Census Quality Survey?
- What is the impact of imputing ethnic group, and should analysts of census microdata exclude records where the person's ethnic group has been imputed?
- When an individual's recorded ethnic group, or their recorded religion, changes over ten years, the instability may be due a variety of factors. To what extent is this instability the result of fluidity of people's personal identity that cannot be pinned down by a simple question, or the result of procedures in the censuses including question changes, or due to proxy reporting by someone on behalf of another person, or the result of conscious and meaningful changes in affiliation?

However, the numbers involved in these changes between groups are small and analysis may not be able to give reliable answers to all of these questions.

Disclosure control for data from the Longitudinal Study

In order to minimise the risk of disclosure of personal information, all counts of fewer than ten people from the Longitudinal Study are represented by the symbol '..', and these counts are excluded from the totals of the tables in which they are found. Where possible in this report, rates and proportions have been computed from tables without suppression of small counts to give greatest accuracy. For this reason, numbers will not match in every table.

Ethnic group categories and their labels

This report will shorten the terms used on the Census form for ethnic group, and often use 'White British' to refer to the 'White: British' of the 2001 Census, the 'White: English / Welsh / Scottish / Northern Irish / British' of the 2011 Census in England, and the 'White: Welsh / English / Scottish / Northern Irish / British' of the 2011 Census in Wales.

2. Summary

Linkage of census records 2001-2011

- Analysis of the stability of ethnic group and religion across the 2001 and 2011 Censuses can only include those recorded at both censuses and linked in the Longitudinal Study. It excludes those born or immigrating during the decade, as well as non-respondents in either census. Individuals with records linked between 2001 and 2011 are fewer than 30% of the African, Arab and Other White groups resident² in England and Wales and recorded in the 2011 Census, and between 35% and 60% for all other ethnic groups except White Irish (71%) and White British (80%). Among religions, linked records are the smallest proportion of 2011 records for Muslim (41%) and Buddhist (46%) residents.

Reasons why a person may change ethnic group or religion

- The same person can choose a different response to the ethnic group and religion question at each census. For ethnic group, past studies have suggested that the main reason for doing so is that the person's affiliation does not fit closely to a single category, and so they will be more likely than others to choose a different category on each occasion they are asked the same question (Simpon and Akinwale, 2007). Thus those not born in a country associated with their family origins have been shown by Simpson and Akinwale (2007) to be less likely to name those origins reliably (eg someone with ancestors born in the Caribbean but not born there themselves, is less likely to always state 'Caribbean' than someone born in the Caribbean. Other reasons for census responses to ethnic group or religion to change include question changes, a change in the person's ethnic or religious affiliation, imputation of ethnic group on one or more occasions (religion was not imputed), and errors in recording or scanning an intended response.

Ethnic group categories: stability of individuals' response from the 2001 to 2011 Censuses

- The largest ethnic group is most stable: 98.8% of those who identified as 'White British' in 2001 identified as the close equivalent 'White English/Welsh/Scottish/Northern Irish/British' in 2011. 1.2% chose a different ethnic group category in 2011.
- The 'single' ethnic minority groups Bangladeshi, Pakistani, Chinese, Indian, African, Caribbean and White Irish had progressively less stability than White British, with between 3.5% (Bangladeshi) and 26.2% (White Irish) of those who identified with the group in 2001 moving to another group in 2011.
- The Mixed categories White & Caribbean, White & African and White & Asian had relatively low stability between 57% and 76%. Between 43% and 23% changed to a different group over the decade.
- The full movement between ethnic group categories is given in a matrix in Table 3.
- Overall, stability dropped from 98.0% in the period 1991-2001, to 96.0% in the period 2001-2011. This was partly due to the growth of ethnic minority groups, which have less stability in

² In all our analyses we include only those who were resident, and exclude visitors.

answering the ethnic group question. It is probably also due to specific identities which do not fit clearly one of the offered categories being more often claimed, resulting in more write-in responses (such as 'Turkish', or 'Nigerian'). The latter phenomenon would also contribute to the net growth of the 'Other' residual categories.

The net impact of changes in ethnic group on a group's population

- The movement between categories resulted in a net growth for the Asian: Other group (+48%), Black: Other (+30%), Mixed White & Caribbean (+16%), Mixed: Other (9%), and Bangladeshi (+5%) groups, and a reduction of more than 5% for the White: Other (-18%), Mixed White & African (-11%), White Irish (-8%), and African (-5%). Other groups grew or reduced by less than 5% from changes in individuals' ethnic origin.
- The impact of individual changes in ethnic group on a group's population size is, with the exception of the White Irish, generally much smaller than the overall change between 2001 and 2011 when taking into account migration, births and deaths. The White Irish reduction of 8% due to change between ethnic groups was almost half of its overall population change of -18% between 2001 and 2011.

Recommended comparisons of categories over time

- Some groups have exchanges between them such that the amalgamations of categories are more stable than any of the individual groups. This is true of the groups that make up 'White' and 'Black' and also 'Caribbean, Mixed White & Caribbean, and Black: Other'. However, the extent of increased stability is insufficient to invalidate the separate identity of each category. Wherever possible, comparison of ethnic groups from the census in 2001 and 2011 should use the individual groups, because they have distinct socio-economic characteristics.
- Recommended comparisons across time of ethnic group categories from the 1991, 2001 and 2011 censuses are provided in Section 7, with warnings about the categories with least reliability. 7 categories are reliably compared from 1991 to 2011, and 12 categories from 2001 to 2011, if a group where at least 50% of its members remain in the group ten years later is considered reliable.
- The decreased stability of the ethnic group question does not necessarily mean that it is less relevant to the UK. It may indicate a greater tendency to identify with more specific origins, and therefore the importance of using the ethnic group, language, religion and country of birth questions in combination.

Religion

- The census question on religion was not compulsory, and did not change between 2001 and 2011 except for a renaming of the category 'None' to 'No religion', although in 2011 the new question on language was inserted between the ethnic group and religion questions.
- The full matrix of changes is given in Table 7. The 'No religion' category gained from net transfers from each other religion except Buddhist, and in particular from Christian.

- The overall stability of stating religion the same in 2011 as in 2001 was 74.3% (ethnic group: 96.0%). Even when excluding those who on either occasion chose not to answer the question, stability was 83.5%.
- The stability of the largest group Christian was 79%, and accounted for more than half of these moving to 'No religion'. The stability of other religions in order of most to least stability was Sikh (94%), Muslim (91%), Hindu (90%), Jewish (82%) and Buddhist (55%).
- In comparison to those moving between specific religions and No religion, Other religion, or 'Not stated', the numbers moving between specific religions was very small.

3. Population change estimated from successive censuses

For context for the rest of this report, the two tables below provide the best estimates of population change for England and Wales for each ethnic group and religion, taken from successive censuses. The growth of minority populations as quantified by the censuses has been discussed extensively since the 2011 Census results were released, for example by Jivraj (2012) and ONS (2012b) for ethnicity, and ONS (2012c) for religion.

Table 1 Ethnic group population change, England and Wales 1991-2001-2011

Ethnic group	Population at three censuses						Population change over two decades			
	1991		2001		2011		1991-2011		2001-2011	
	N	%	N	%	N	%	Change	% Change	Change	% Change
White British	-	-	45,721,236	87.3%	45,134,686	80.5%	-	-	-586,550	-1.3%
White Irish	-	-	646,616	1.2%	531,087	0.9%	-	-	-115,529	-17.9%
White Other	-	-	1,379,499	2.6%	2,485,942	4.4%	-	-	1,106,443	+80.2%
White Gypsy or Irish Traveller	-	-	-	-	57,680	0.1%	-	-	-	-
All White	47,429,019	93.5%	47,747,351	91.2%	48,209,395	86.0%	780,376	+1.6%	462,044	+1.0%
Mixed White-Caribbean	-	-	240,438	0.5%	426,715	0.8%	-	-	186,277	+77.5%
Mixed White-African	-	-	80,705	0.2%	165,974	0.3%	-	-	85,269	+105.7%
Mixed White-Asian	-	-	192,229	0.4%	341,727	0.6%	-	-	149,498	+77.8%
Mixed Other	-	-	158,582	0.3%	289,984	0.5%	-	-	131,402	+82.9%
All Mixed	-	-	671,955	1.3%	1,224,400	2.2%	-	-	552,445	+82.2%
Indian	891,827	1.8%	1,053,302	2.0%	1,412,958	2.5%	521,131	+58.4%	359,656	+34.1%
Pakistani	494,973	1.0%	727,727	1.4%	1,124,511	2.0%	629,538	+127.2%	396,784	+54.5%
Bangladeshi	176,912	0.3%	286,693	0.5%	447,201	0.8%	270,289	+152.8%	160,508	+56.0%
Chinese	173,184	0.3%	233,346	0.4%	393,141	0.7%	219,957	+127.0%	159,795	+68.5%
Other Asian	211,199	0.4%	247,157	0.5%	835,720	1.5%	624,521	+295.7%	588,563	+238.1%
All Asian	1,948,095	3.8%	2,548,224	4.9%	4,213,531	7.5%	2,265,436	+116.3%	1,665,307	+65.4%
Caribbean	569,621	1.1%	572,212	1.1%	594,825	1.1%	25,204	+4.4%	22,613	+4.0%
African	255,336	0.5%	494,669	0.9%	989,628	1.8%	734,292	+287.6%	494,959	+100.1%
Other Black	221,040	0.4%	98,068	0.2%	280,437	0.5%	59,397	+26.9%	182,369	+186.0%
All Black	1,045,997	2.1%	1,164,949	2.2%	1,864,890	3.3%	818,893	+78.3%	699,941	+60.1%
Arab	-	-	-	-	230,600	0.4%	-	-	-	-
Other	324,922	0.6%	227,497	0.4%	333,096	0.6%	8,174	+2.5%	105,599	+46.4%
All other than White	3,319,014	6.5%	4,612,625	8.8%	7,866,517	14.0%	4,547,503	+137.0%	3,253,892	+70.5%
All other than White British	-	-	6,638,740	12.7%	10,941,226	19.5%	-	-	4,302,486	+64.8%
Total population	50,748,033	100.0%	52,359,976	100.0%	56,075,912	100.0%	5,327,879	+10.5%	3,715,936	+7.1%

Source: 1991, 2001, 2011 Censuses (1991 and 2001 enhanced to complete population estimates; Sabater and Simpson 2009)

Note: Comparisons over time should be treated with caution for the reasons described in this report. The 'Mixed: Other', 'Other: Asian', 'Other: Black', and 'Other' categories are particularly unreliable, each have less than 50% people choosing the same category from one census to the next.

Table 2 Religious group population change, England and Wales 2001-2011

Religion	2001		2011		2001-2011	
	N	%	N	%	Change	% Change
Christian	37,338,486	71.7%	33,243,175	59.3%	-4,095,311	-11.0%
Buddhist	144,453	0.3%	247,743	0.4%	103,290	71.5%
Hindu	552,421	1.1%	816,633	1.5%	264,212	47.8%
Jewish	259,927	0.5%	263,346	0.5%	3,419	1.3%
Muslim	1,546,626	3.0%	2,706,066	4.8%	1,159,440	75.0%
Sikh	329,358	0.6%	423,158	0.8%	93,800	28.5%
Other religion	150,720	0.3%	240,530	0.4%	89,810	59.6%
No religion	7,709,267	14.8%	14,097,229	25.1%	6,387,962	82.9%
Religion not stated	4,010,658	7.7%	4,038,032	7.2%	27,374	0.7%

Source: 2001 and 2011 Censuses

4. People without census records linked between 2001 and 2011: births, deaths, migration, non-response and unlinked records

Figures 1 and 2 on the following pages summarise the relationship between the 2001 and 2011 populations. They are based on linking 2001 and 2011 Census records from the 1% ONS Longitudinal Study.

Each census record is 'traced' against the NHS Central Register, with a success rate of 99.3% in 2001 and 99.2% in 2011. This allows the records from each census to be linked to the same person, if they have been enumerated in both censuses. When an individual with a census record for one census cannot be linked with a record for the same individual in the other census, a reason is sought from the data on the NHS Central Register. While births and deaths are recorded directly from vital registrations data, immigration and emigration are measured from GP health records when this information is recorded. GP health records tend to undercount immigration and severely undercount emigration, as the accuracy of the GP registration system relies on people registering when they immigrate, and deregistering when they emigrate. The processing and quality of these data are described by Blackwell et al. (2003) and ONS (2014).

Figures 1 and 2 show substantial numbers of records which are neither linked nor have a definite reason for the lack of linking (shown by the lighter shades of purple and green).

The population enumerated by the census in 2011 is represented by the main block in Figures 1 and 2, between the marks for 0% and 100%. Those who were enumerated in 2001 but not linked to any census record from 2011 appear to the left of the main block.

The topmost bar of each Figure describes the population as a whole and is the same in both Figures. A little under three quarters (72%) of the 2011 population had also been enumerated in the 2001 Census. Among the 28% who were not linked to a person enumerated in the 2001 Census, 10% had been born during the decade. A further 6% are recorded on health records as immigrants during the decade and for that reason were not in the population in 2001. The remaining portion, some 12%, represents records for other residents enumerated in 2011 who were not linked to any record in 2001 or to births or immigrants.

This 12% includes a small amount of immigration not recorded in health registers, probably less than 1%³. Of those enumerated in 2011 but not linked to 2001, 7% were present in the LS in the decade before the 2001, and constitute LS attrition due to non-response in 2001⁴. A further 1 % of cases were present in the LS prior to 1991 but were not found at the 1991 or 2001 census. Adding these sources of non-linkage accounts for 9%. The remaining 3% entered the LS for the first time at 2011 and were traced on the NHS Central Register; however 85% of these cases were recorded on the NHS registration system with a different (non LS) date of birth. The lack of matching dates of birth between census and NHS is a significant source of attrition in the LS.

³ 2011 Census table QS 801EW records 6.7% of the population as entering the UK in 2001 or more recently, only a small amount more than the evidence from the LS linkage.

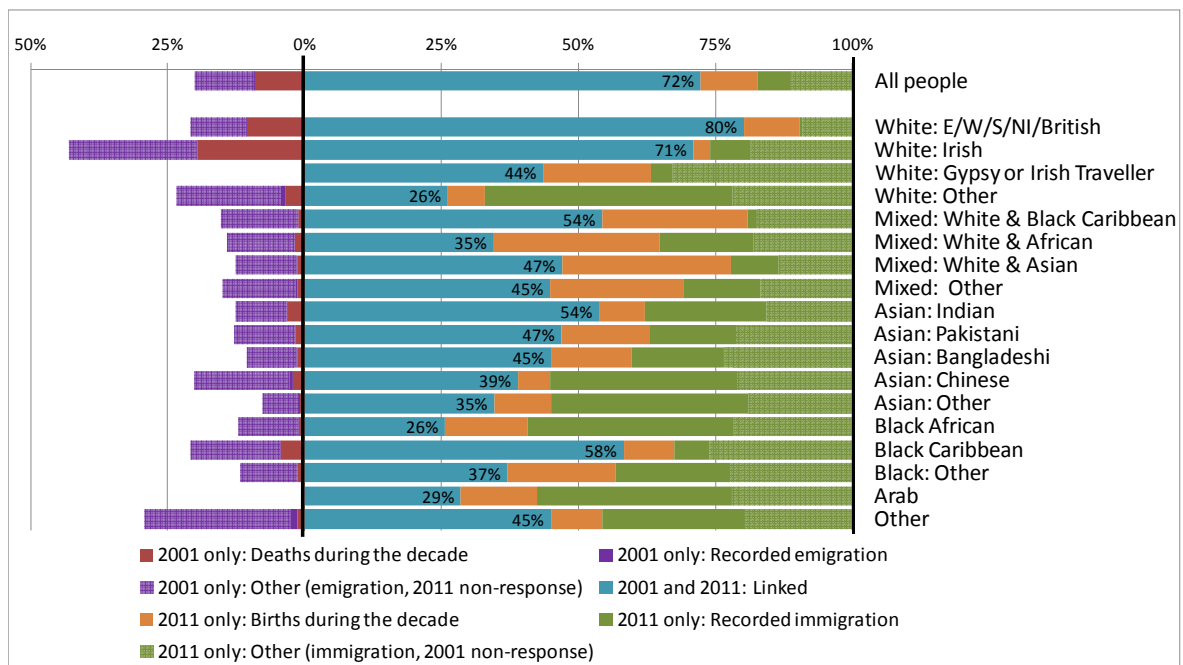
⁴ This 7% is made up of those who (a) didn't respond to the 2001 Census (2001 non-response) ; (b) left England and Wales in the 1991-2001 decade returning in time for the 2011 Census, but didn't notify the NHS when they left (unrecorded embarkations); (c) did complete the 2001 Census but their LS date of birth wasn't entered or captured correctly on the 2001 Census (not included in the LS extract).

On the left side of Figures 1 and 2 are those residents in the 2001 Census that were not linked to 2011 records, made up mainly of deaths and emigration. For the population as a whole (the top bar), the number of deaths has been a little less than the number of births during the decade. Unlike immigration, the great majority of emigration is not registered by the health system and so the darker-shaded purple portion is so small that it is hardly visible in the Figures. The lighter-shaded purple represents all other people in enumerated 2001 who were not linked to 2011 records. This may be mostly emigration but also includes those who responded in the 2001 Census but not in 2011 even though usually resident then, and other non-linkage as discussed in the previous paragraphs.

The representation of change in the figures below does not include those were not enumerated in either census. It would be possible to estimate their number by comparing the Longitudinal Study with full population estimates, but that task is beyond the current study.

The following paragraphs summarise this picture of population change for ethnic groups and religions.

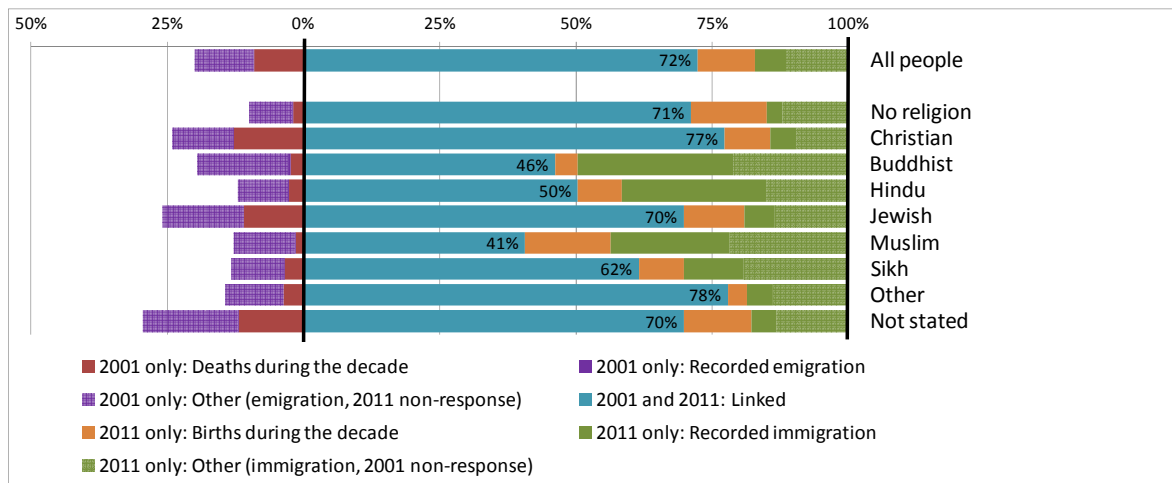
Figure 1. How the population of each ethnic group changed 2001-2011: linkage and reasons for non-linkage



Source: ONS Longitudinal Study, an approximately 1% sample. All usual residents enumerated in either 2001 or 2011.

Notes: The darker purple and darker green areas are recorded emigration and immigration; the lighter purple and lighter green are unlinked individuals who are assumed to have emigrated, immigrated or be non-respondents. Ethnic group is as in the 2011 Census, except for those only in the 2001 population, for whom it is as recorded in the 2001 Census.

Figure 2. How the population of each religion changed 2001-2011



Source: ONS Longitudinal Study, an approximately 1% sample. All usual residents enumerated in either 2001 or 2011.

Notes: The darker purple and darker green areas are recorded emigration and immigration; the lighter purple and lighter green are unlinked individuals who are assumed to have emigrated, immigrated or be non-respondents. Religion is as in the 2011 Census, except for those only in the 2001 population, for whom it is as recorded in the 2001 Census.

(a) Ethnic group

Below the graphical representation of change over the decade 2001-2011 for the whole population that has been discussed so far, Figure 1 shows change for each ethnic group recorded in 2011. The level of linkage, and the main reasons preventing linkage, vary between the ethnic groups.

Most groups other than White British and White Irish can be seen in the figure to have a relatively high proportion of their 2011 population born during the decade, a lower proportion of deaths during the decade, and higher levels of immigration and emigration. Where the unrecorded 'immigration or non-response' is relatively high this represents unknown reasons for someone enumerated in 2011 not being linked to a 2001 record. It is likely to include many who were not enumerated in 2001 but did respond in 2011. The rates of non-response to the 2001 Census varied between ethnic groups more than two-fold, and is least for White British. Similarly, the higher 'emigration or non-response' represents records from 2001 that were not linked to 2011 with unknown reason, and is higher in most ethnic minority groups⁵.

The overall result of these differences between ethnic groups is that all ethnic minority groups have fewer than three-quarters of their 2011 population linked to a 2001 record, and for some the proportion linked is considerably less than half. Ethnic groups with a relatively high proportion of births, or of immigrants, or of non-response in 2001, tend to have a smaller proportion enumerated in both censuses.

⁵ Census response rates in 2011 for each ethnic group are estimated by ONS (2012d).

The White Irish group for example has fewer births but considerably more immigration than the average during the decade, so that its proportion linked to 2001 is 71% compared to the White British 80%.

For the African, Arab and Other White groups, for which immigration has been the major factor in their growth in England and Wales, the proportion of the 2011 population which was also recorded in the 2001 Census is only just above one quarter.

All other ethnic groups are represented in the linked records by between 35% and 60% of their 2011 population: Mixed White-African 35% ; Other Asian 35% ; Other Black 37% ; Chinese 39% ; White Gypsy or Irish Traveller 44% ; Mixed - Other 45% ; Other 45% ; Bangladeshi 45% ; Pakistani 47% ; Mixed White-Asian 47% ; Indian 54% ; Mixed White-Caribbean 54% ; Black Caribbean 58%.

An individual's ethnic group in 2001 may not be the same as in 2011, and therefore the sizes of deaths and emigration on the left of the figures are not strictly comparable with the categories that they are shown against to their right. The two new tick-boxes added for the first time in the 2011 Census, 'Arab' and 'White: Gypsy or Irish Traveller', do not have an equivalent in 2001, because non-linkage due to deaths, emigration and other reasons are not known. But most pertinently for this report, when a person's recorded ethnic group changes from one census to the next, this will change the bar to which they are allocated in Figures 1 and 2. The percentages in this section are therefore be interpreted as approximations with this ambiguity in mind.

(a) Religion

Figure 2 shows the same results for each religion group. As described for some minority ethnic groups, one can observe for the Buddhist, Hindu, and Muslim and Sikh religions higher proportions of immigration, and lower proportions of deaths.

The number of those born in the decade with a particular religion does not follow the same pattern. Children under ten are often omitted from this question by their parents or recorded as having No religion. For that reason those two categories (No religion, and Not stated) have relatively high proportions born during the decade.

The proportion that has died during the decade is highest for the Christian religion, reflecting their older age structure. The reasons are not clear yet for the high proportion dying among those not stating a religion in 2001.

The proportion of each religion represented in the linked records – enumerated in both censuses – varies between 41% and 78%. This is not as much variation as for ethnic groups but sufficient to be aware that our analyses of changes between religions are also based on a subset of all people, excluding those who were either not usual residents, i.e. those who had been living in the UK for at least a year or planned to stay for 12 months or more, in both 2001 and 2011 or were residents but not enumerated in both censuses.

5. Stability of ethnic group for those counted in both 2001 and 2011

For the individuals who were enumerated in both censuses and linked in the ONS Longitudinal Study sample as described above, we now examine their responses to the ethnic group question in 2001 and 2011. Section 9 examines religion. Responses in each census may be different because of changes to the ethnic group question, and because individuals are free to move from one group to another when answering the question on two separate occasions. This section examines the degree of stability for each ethnic group, giving the complete matrix of individuals' ethnic group in 2001 and 2011, some measures of stability for each ethnic group, and analysis of the stability of aggregate groups. The section finishes with a discussion of the possible reasons for stability and instability in the past intercensal period and in the future.

Matrix of individuals' ethnic group in the 2001 and 2011 censuses

On the following page in Table 3 is the complete matrix of ethnic group as recorded for individuals enumerated in both 2001 and 2011, from the 1% sample in the ONS Longitudinal Study for England and Wales.

For example, of the total sample of 4,069 people who were in both Censuses and identified as 'White: Irish' in 2001:

- 3,026 identified again as 'White: Irish' in 2011.
- A little over one thousand identified as 'White: English/Welsh/Scottish/Northern Irish/British'
- Others were recorded in eight of the other categories.

This means that only 74% of the White Irish of 2001 remained with that category. On the other hand, in the 2011 Census 727 respondents had moved to White Irish from the White British and the White: Other categories (and from a few other categories with counts too small to show), so that overall there were 3,753 recorded in 2011 as White Irish. The marginal change from one Census to the next was a net reduction.

The matrix of ethnic group in each census shows changes to and from each category. It warrants detailed examination and raises questions about the reasons for each change, that may differ for each pair of groupings considered. In this report we do not consider each cell of the table but use summary measures to describe the stability of each category.

Table 3. Ethnic group 2001 and ethnic group 2011

Ethnic group 2001		Ethnic group 2011																		Totals for 2001
		White				Mixed/Multiple ethnic groups				Asian/Asian British					Black/African/Caribbean/Black British			Other ethnic group		
		1. English / Welsh / Scottish / Northern Irish / British	2. Irish	3. Gypsy or Irish traveller	4. Other White	5. White and Black Caribbean	6. White and Black African	7. White and Asian	8. Other Mixed	9. Indian	10. Pakistani	11. Bangladeshi	12. Chinese	13. Other Asian	14. Black African	15. Black Caribbean	16. Other Black/ African/ Caribbean	17. Arab	18. Any other ethnic group	
White	1. White: British	366,144	689	216	1,539	423	71	252	315	170	144	75	35	89	67	141	48	47	204	370,669
	2. White: Irish	1,008	3,026	..	24	..	..	..	11	..	..	..	..	..	..	..	..	..	..	4,069
	3. Other White	2,373	38	15	4,785	17	12	62	166	35	14	..	..	82	36	18	12	127	308	8,100
Mixed	4. White and Black Caribbean	210	..	..	14	1,372	17	..	65	..	..	..	..	..	..	72	17	..	..	1,767
	5. White and Black African	57	..	..	12	22	332	..	48	..	..	..	..	..	58	..	..	22	10	561
	6. White and Asian	218	..	..	38	10	..	877	94	36	49	16	..	73	..	..	..	26	36	1,473
	7. Other Mixed	185	..	..	71	87	30	117	328	22	..	..	17	74	19	13	14	37	79	1,093
Asian or Asian British	8. Indian	77	..	..	17	..	..	37	10	9,033	69	37	14	540	12	..	11	..	386	10,243
	9. Pakistani	79	..	..	17	..	..	28	..	86	6,040	34	..	243	..	..	..	..	11	6,538
	10. Bangladeshi	30	..	..	..	..	..	..	..	12	20	2,556	..	11	..	..	..	..	..	2,629
	11. Other Asian	43	..	..	35	..	..	35	26	342	193	35	..	1,007	10	12	16	119	143	2,016
Black or Black British	12. Black Caribbean	88	..	..	16	113	..	..	32	14	..	..	..	23	35	2,929	330	..	13	3,593
	13. Black African	41	..	..	20	..	35	..	14	34	..	..	..	31	2,383	32	193	28	31	2,842
	14. Other Black	40	..	..	..	17	..	..	33	..	..	..	..	..	79	258	193	11	..	631
Chinese or other	15. Chinese	38	..	..	..	..	..	14	18	..	..	..	1,386	38	..	..	..	..	..	1,494
	16. Any Other	62	..	..	49	..	..	39	43	25	16	..	48	784	..	..	..	158	173	1,397
	Totals for 2011	370,693	3,753	231	6,637	2,061	497	1,461	1,203	9,809	6,545	2,753	1,500	2,995	2,699	3,475	834	575	1,394	419,111

Source: ONS Longitudinal Study, England and Wales, usual residents enumerated in both 2001 and 2011. Cells less than 10 are represented by .. , according to ONS rules to minimise the risk of disclosure of personal information. They are excluded from the totals in this table. Values for ethnic group imputed into enumerated resident records are included.

Measures of stability of ethnic group 'affiliation'

Three summary measures⁶ are given for each group in Table 4, calculated from the total number in each category in 2001 and 2011, and the number in the category in both years, which are also given in the table.

- Stability – of the total in the category in 2001, the percentage remaining in that category in 2011. Values lower than 100% show instability: people moving away from the category.
- Movers in – of the number in a category in 2011, the percentage already in it in 2001. Values lower than 100% show instability: people moving into the category.
- Marginal change – the 2011 population as a percentage higher or lower than the 2001 population for the same category. This is the net result of the two types of stability reflected in the first two measures. Values away from 0% show an overall change in the category's population due to individuals moving between categories.

The first and third of these measures are given graphically in Figure 3, and for the period 1991-2001 in Table 5 (Simpson and Akinwale, 2007: Table 5)

Table 4. Ethnic group categories: stability for individual responses 2001 to 2011

		2001	2011	Both years	Stability: Of 2001, % remaining in the group (Both/2001)	Movers in: Of 2011, % already in the group (Both/2011)	Marginal change (2011/2001)
White	British (English/Welsh/Scottish/N Irish /British)	370,669	370,693	366,144	98.8%	98.8%	+0.0%
	Irish	4,102	3,788	3,026	73.8%	79.9%	-7.7%
	Other	8,106	6,654	4,785	59.0%	71.9%	-17.9%
Mixed	White & Black Caribbean	1,795	2,076	1,372	76.4%	66.1%	+15.7%
	White & Black African	584	520	332	56.8%	63.8%	-11.0%
	White & Asian	1,491	1,486	877	58.8%	59.0%	-0.3%
	Other	1,109	1,212	328	29.6%	27.1%	+9.3%
Asian	Indian	10,262	9,832	9,033	88.0%	91.9%	-4.2%
	Pakistani	6,573	6,569	6,040	91.9%	91.9%	-0.1%
	Bangladeshi	2,649	2,781	2,556	96.5%	91.9%	+5.0%
	Other	2,025	2,999	1,007	49.7%	33.6%	+48.1%
Black	Caribbean	3,611	3,503	2,929	81.1%	83.6%	-3.0%
	African	2,866	2,722	2,383	83.1%	87.5%	-5.0%
	Other	662	857	193	29.2%	22.5%	+29.5%
Other	Chinese	1,524	1,522	1,386	90.9%	91.1%	-0.1%
	Any Other	1,427	1,417	173	12.1%	12.2%	-0.7%
	Gypsy or Irish Traveller		240				
	Arab		584				
All people		419,455	419,455	402,564	96.0%	96.0%	0.0%

Source: ONS Longitudinal Study, England and Wales, usual residents enumerated in both 2001 and 2011. This table is calculated from a version of Table 3 without suppression of small-number cells, to provide more accurate indicators than if calculated directly from Table 3. The counts are therefore slightly higher than in Table 3.

Notes: Categories are matched with those using the same labels in each Census except: White – British in 2001 is matched with White – English/Welsh/Scottish/Northern Irish/British in 2011. Gypsy or Irish Traveller, and Arab, are new categories in 2011, and have not been matched with any of those in 2001 for the calculation of stability.

⁶ Other measures are possible, including Cohen's Kappa for the reliability of nominal measures. The measures used here are chosen for their simplicity and for comparison to results for 1991-2001. We could have excluded usual residents who chose one of the two new categories, and will explore this and other options in other reports; this would slightly increase the measures of stability above.

Figure 3. Stability and marginal change for ethnic categories 2001-2011

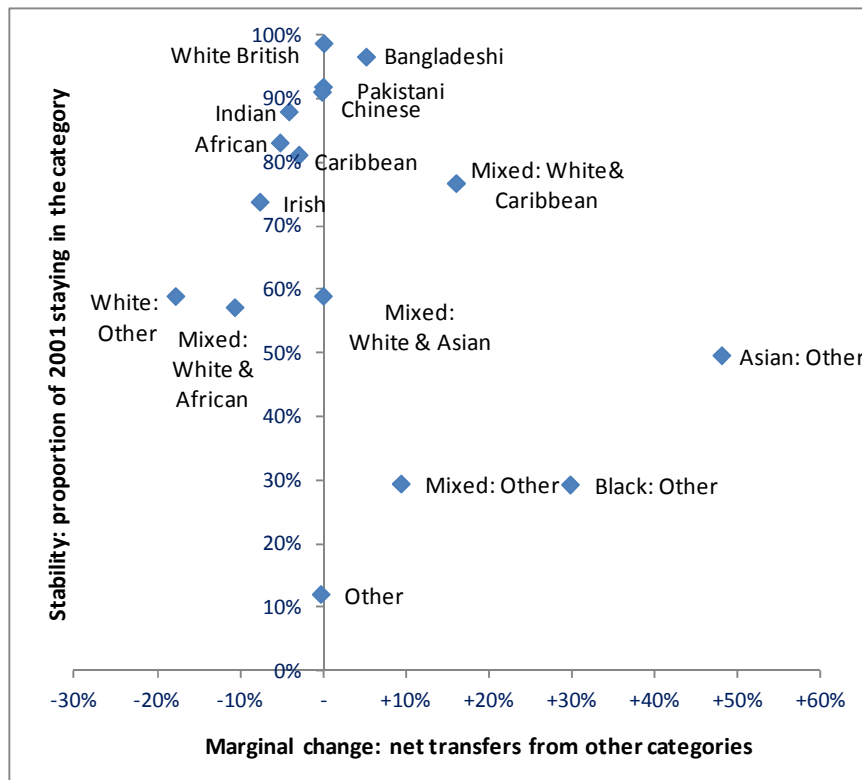


Table 5. Stability of ethnic group categories 1991-2001

	Stability: Of 1991, % remaining in the group in 2001	Marginal change, 1991 to 2001
White	99.5%	-0.2%
Indian	91.0%	-2.8%
Pakistani	91.9%	-0.6%
Bangladeshi	93.4%	-1.5%
Chinese	91.0%	-4.2%
Other Asian	33.6%	+2.7%
Caribbean	77.2%	-6.8%
African	77.4%	-6.7%
Other Black	8.3%	-58.3%
Other	7.0%	-63.4%
All people	98.0%	0.0%

Source: Longitudinal Study, reported in Simpson and Akinwale (2007: Table 6).

In the population as a whole, 96.0% of the 2001 population that were enumerated again in 2011 reported the equivalent category. This level of stability was less than the 98.0% for the period 1991-2001. This is partly due to the growth of minority groups which all had lower stability than the White or White British groups in both periods. The level of stability varied greatly between ethnic groups in the period 2001-2011 as it had in 1991-2001, and was again particularly low for residual, 'Other', groups.

The White British category shows the highest stability on all these measures. 98.8% of its 2001 population that were enumerated again in 2011 reported the equivalent category, White English/Welsh/Scottish/N Irish/British. It was a little less than the stability of the White category as a whole in 1991-2001.

The Asian categories Indian, Pakistani and Bangladeshi and Chinese are less stable (88%-97%) than the White British category. The Chinese category moved between broad categories from 'Other' to 'Asian or Asian British' on the census form (see Appendix A), but maintained the same stability, 91%. The Indian, Pakistani, and Bangladeshi categories maintained their ordering of stability but the Indian group became less stable (91% down to 88%), the Pakistani maintained the same stability (92%), while the Bangladeshi group increased stability (93% up to 97%).

From Table 3, residents recorded as Indian and Pakistani in 2001 are most likely to have moved into Other Asian in 2011 (5% and 4%, respectively); fewer moved in the opposite direction. More people joined the Bangladeshi category than left it, so that the group increased by its size by 5% from the net movement of people identifying as Bangladeshi.

The Black categories Caribbean and African are less stable (81% and 83% respectively) than the Asian categories, but more so than during 1991-2001 (each 77%). This may be due to the inclusion of Mixed categories in 2001, which attracted 6% of those who had been recorded in 1991 as Black Caribbean and 4% of those recorded as Black African (Simpson and Akinwale, 2007: Table 5).

The Mixed categories White&Caribbean, White&African, White&Asian are still less stable (76%, 57% and 59% respectively). The nature of this instability varies (Table 3). The White&Asian in 2001 were more likely to move in 2011 into White British, than were White&Caribbean and White&African. The White&Caribbean in 2001 were less likely to move into another Mixed group than the other Mixed groups. Moreover, White&Caribbean in 2011 were more likely to be added to *from* those who were White British in 2001 rather than contribute to it. All in all, these movements result in highest stability for the White&Caribbean group and an addition 16% to its numbers by net movement from other groups.

White Irish also has a relatively low stability, at 74%. The great majority move from or to the White British group (Table 3). White Irish lost more than it gained, a net loss of 8% simply from the same population switching ethnic groups.

The residual 'Other' categories are unstable (12%-50%, and White: Other 59%). Mixed: Other, Asian: Other and Black: Other have each grown from net changes in individuals' ethnic group, by 9%, 48% and 30% respectively. This growth is at odds with the period 1991-2001 when the 'Black Other' and 'Other' categories reduced because many people in them moved to the new Mixed categories and the new White: Other category.

The Asian: Other category has been particularly affected by question changes since the ethnic group question was first introduced:

- a. In 1991 it was a category entirely constructed from answers written in to the final 'Other' option on the form.

- b. In 2001 it was a separate category that could be chosen by respondents. In spite of the loss to Mixed groups, and that only one third of its 1991 population remained with it, the category grew from others who chose it for the first time in 2001.
- c. In 2011, Chinese was moved into the Asian broad heading, and many chose Asian: Other who had not done so before, including substantial numbers previously in the Indian and Pakistani groups. From Table 4 it grew by 48% simply from a net transfer from other categories.

The Asian: Other group also grew very fast from other causes – immigration and new births – so that it more than trebled in the period 2001-2011 (Table 1).

The White: Other category reduced from moves to other groups, in contrast to other residual categories. The main exchange was with the White British group. Nearly one third of those who chose White: Other in 2001 had moved to White British in 2011. Fewer moved in the opposite direction. This marginal reduction is also in contrast to the growth of the White: Other category from migration to England and Wales (Figure 1). The reduction through switching is likely to reflect the labelling of the White British group as White – English/Welsh/Scottish/Northern Irish/British in 2011 which meant those who felt strongly about, for example, their White Scottish ethnic identity could place themselves in the White British group.

In general, the growth of some residual categories from the net impact of moves from other groups that has been discussed here is a small component in the overall growth of these populations between 2001 and 2011. This suggests that new and existing populations are finding it difficult to place themselves in a specific category on the census form. A person of Turkish origin for example, may be clear in his or her identity, but make changing choices of which ethnic category on the census form they fall into. Faced with an increasing number of categories, more may feel inclined to choose an 'Other' category in order to say 'none of the above'.

6. Do amalgamated groups of categories have greater reliability?

The previous section shows substantial moves between categories. Some pairs or groups of categories appear to swap people between them, suggesting that the boundary between them is less clear for those answering the question. It is worth asking whether amalgamating some categories might give more stability to comparisons over time⁷. Some amalgamations of categories may improve stability over time but lose the detail of ethnic group that is the purpose of the question. The section ends with recommendations for comparison of groups across censuses, incorporating the evidence for 2001-2011 with previous work for 1991-2001.

Table 6 shows the same indicators of stability as above, for the broad groups used in both the 2001 and 2011 Census questions in England and Wales. Some other combinations of groups are also shown, including the impact of including Chinese in either of the two broad groups between which it was moved on the Census form: Other and Asian.

⁷ The matrix between individual categories of ethnic group also lends itself to measures of 'distance' between each pair of categories. This may provide an alternative way of picturing the closeness of categories to one another, and the distance between groups of categories.

Table 6. Aggregated ethnic group categories: stability for individual responses 2001 to 2011

					Stability: Of 2001, % remaining in the group (Both/2001)	Movers in: Of 2011, % already in the group (Both/2011)	Marginal change (2011/2001)
<i>Broad categories</i>		2001	2011	Both years			
	White	382,877	381,375	379,863	99.2%	99.6%	-0.4%
	Mixed	4,979	5,294	3,415	68.6%	64.5%	+6.3%
	Asian	21,509	23,703	20,285	94.3%	85.6%	+10.2%
	Black	7,139	7,082	6,432	90.1%	90.8%	-0.8%
	Other	2,951	2,001	336	11.4%	16.8%	-32.2%
	Total staying within broad categories	419,455	419,455	410,331	97.8%	97.8%	0.0%
<i>Other aggregates of categories</i>							
	Asian excluding Chinese	21,509	22,181	20,258	94.2%	91.3%	+3.1%
	Asian including Chinese	23,033	23,703	21,722	94.3%	91.6%	+2.9%
	Black, Mixed White&Caribbean, Mixed White&African	9,518	9,678	8,518	89.5%	88.0%	+1.7%
	Caribbean, Mixed White&Caribbean	5,406	5,579	4,486	83.0%	80.4%	+3.2%
	Caribbean, Mixed White&Caribbean, Black: Other	6,068	6,436	5,301	87.4%	82.4%	+6.1%
	African, Mixed White&African	3,450	3,242	2,808	81.4%	86.6%	-6.0%
	African, Mixed White&African, Black:Other	4,112	4,099	3,287	79.9%	80.2%	-0.3%
	All other than White British	48,786	48,762	44,237	90.7%	90.7%	-0.0%
	All other than White	36,578	38,080	35,066	95.9%	92.1%	+4.1%

Sources and notes: as for Table 4.

The White broad group's stability rises to 99.2%, better than any of the groups making it up (see Table 4). This reflects the moves between the different White groups, seen in Table 3, of people who presumably feel they can legitimately record themselves as more than one of those options. This greater stability is at the cost of a slightly worse marginal fit (-0.4%) than for White British on its own (0.0%), reflecting the net loss from Other White to non-White groups.

The Mixed broad group is not clearly cohesive. Its stability as a whole is less than the stability of the Mixed White & Black Caribbean group on its own (Table 4). There is more movement between the Mixed groups and other 'non-Mixed' groups, than within them.

Similarly the Asian group (whether including Chinese or not) is not more stable than some of the individual groups.

The Black broad group is however more stable than its individual categories, rising to 90% for both measures of stability, and a net loss of less than 1% in the decade rather than much larger losses and gains to the individual groups.

The stability of the broad groups overall is 97.8% – the percentage staying within those broad groups from the 2001 Census to the 2011 Census. As one would expect, this is higher than the percentage staying within individual categories, 96.0% from Table 1. Thus a little less than half the movement between individual categories is due to movement within broad categories. There is considerable movement between the broad categories.

There is some movement between the Black categories and the Mixed categories involving Black Caribbean or Black African. However, adding these two Mixed categories to Black does not improve the stability of ethnic group, reducing from the stability of the broad group (from 90.1% to 89.5%).

There is sufficient movement between Caribbean and Mixed White & Black Caribbean to make its amalgamated stability (83.0%) greater than either of the individual categories. The stability is further

increased (87.4%) when adding Black: Other. From Table 4, 469 people in the Longitudinal Study sample who recorded Black: Other in 2001 did not do so in 2011 (662 minus 193). From Table 3, more than half of these, 258, moved from Black: Other to Caribbean. 330 people moved in the opposite direction, from Caribbean to Black: Other. There is clearly a considerable exchange between these three categories.

There is not such a strong link between African, Mixed White & Black African, and Black: Other. There is some movement between them, but stability of the amalgamated groups is less than that of the African group alone.

Most reliable comparisons across time

The analysis shows that the 'White' and 'Black' and 'Caribbean-MixedWhite&Caribbean-Black:Other' amalgamations have exchanges within the ethnic group categories that make them up, such that the reliability of the amalgamated group between censuses is slightly greater than any of the individual groups. However, the extent of change is sufficient neither to invalidate the separate identity of each category, nor to suggest that a comparison of ethnic groups from the census in 2001 and 2011 should use the amalgamated groups.

For the decade 1991 to 2001 four Mixed categories were introduced for the first time. Analysis of the Longitudinal Study at that time searched for amalgamations that might include a 2001 Mixed category with another, for example to compare the 1991 Caribbean category with the 2001 Caribbean and MixedWhite&Caribbean. But no such amalgamations were successful in producing reliable comparisons (Simpson and Akinwale, 2007: 203).

7. Recommended comparisons of ethnic group categories across time

Comparisons of ethnic groups across time should generally avoid amalgamating groups so that the socio-economic and demographic differences between groups are not lost. However, the groups with lower reliability across time despite the same or similar category labels, should not be compared without the caution that their composition has changed not only due to migration, births and deaths but because of moves between ethnic group categories.

1991-2001-2011 comparisons

A seven-group categorisation is recommended for 1991-2001-2011 comparisons of ethnic group populations. The first seven categories below were found to be the most stable when individual responses to the 1991 and 2001 Censuses were compared (Simpson and Akinwale 2007 and ONS 2006). This report finds that they continue to have relatively high stability between 2001 and 2011.

1. White
2. Caribbean
3. African
4. Indian
5. Pakistani
6. Bangladeshi

7. Chinese
8. Other (A residual category for completeness, but not comparable over time)

'White' is that named category in 1991, and all the categories in the 'White' heading in 2001 and 2011. The other six categories are alone in each of 1991, 2001 and 2011. All the 'Other' categories and 'Mixed' categories are omitted. They can be presented as an eighth 'other' residual category for completeness, but this residual category changes in its composition and therefore is not comparable over time. The eighth residual category may be shown to provide the complement that adds to a population total, with its lower reliability clearly indicated.

2001-2011 comparisons

A twelve-group comparison is recommended for 2001-2011 comparisons of ethnic group populations. As there were more categories in both 2001 and 2011 than in 1991, with fewer changes than in the previous decade, one can include more than the seven comparable categories available for a 1991-2011 comparison. In particular the 'Mixed' ethnic group categories introduced in 2001 were unchanged in 2011 and can be compared either as a whole or as the four individual categories. The 12 possible reliable comparisons are listed below, each with stability of over 50% whether calculated as a proportion of the 2001 or 2011 category.

1. White British
2. White Irish
3. White: Other (Include 'White: Gypsy or Irish Traveller' in 2011).
4. Mixed White-Caribbean
5. Mixed White-African
6. Mixed White-Asian
7. Indian
8. Pakistani
9. Bangladeshi
10. Chinese
11. Caribbean
12. African
13. Other: Mixed (though retaining the same name, less than 30% remained in the category across the two censuses)
14. Other: Asian (though retaining the same name, less than 50% remained in the category across the two censuses)
15. Other: Black (though retaining the same name, less than 30% remained in the category across the two censuses)
16. Other (a residual category for completeness, but not comparable across time. Less than 15% remained in the category across the two censuses. In 2011, include Arab)

The four residual 'Other' categories at the bottom of this list have much lower reliability, which should be clearly indicated if they are used to report comparisons 2001-2011. These four categories may usually be omitted from analyses of change over time, or amalgamated into one category to provide the complement that adds to a population total, with its lower reliability clearly indicated.

8. Ethnicity in the census: interpretation and future

To a large extent, the measures of stability show how well the ethnic group question categories capture the individuals' sense of ethnic identity in a stable way. This may be an emotionally felt cultural identity or a sense of family origin, or simply an acceptance of an official labelling.

Changes of identity may occur for various reasons. These include imputation of ethnic group which will often not be the ethnic group that the person recorded ten years before, whether or not they would have chosen it again themselves. Errors in completing the census form that result in an unintended record, and errors when scanning hand-completed forms, will add a small amount of noise to the data that will induce some instability. Changes from one census to the next in the allocation of write-in responses have produced small amounts of instability too.

A genuine change in an individual's perception of their ethnic identity may occur. But it is likely that most instability in an individual's ethnic group are due to three causes: question changes offering more choices, more than one response being a suitable answer for the individual's sense of ethnic identity, or a weak sense of ethnic identity on the part of the individual.

One might hope that the question will 'settle in' over three censuses, but the overall stability has decreased from 98.0% to 96.0%; 4.0% of 2001 residents changed their response in 2011, compared to 2.0% in the 1991-2001 period. This is in spite of fewer changes in the categories in the second decade.

The greater number of people in minority groups, which are least likely to keep to the same category from one census to another, accounts for some of the increased instability. Some instability also arises when answers are made by someone other than the individual concerned in one of the censuses. This is likely to happen in particular as children leave the parental home and answer the following census from their own household, and vice versa when older people move from an independent household to greater dependency in a home.

The behaviour of the residual groups is of particular relevance in judging the success of the questions. That three of the 'Other' groups grew by net transfers from other groups suggests a growing difficulty with the question. On the other hand, White: Other experienced a net decrease by a similar number of people as the total of the other groups' net increase.

The increased instability could also be a result of respondents becoming more confident about expressing specific ethnic identities that do not fit one of the offered categories. Writing in 'Nigerian', or 'Turkish', or 'Indo-Caribbean', or 'Jewish', for example, would usually result in allocation to one of the residual categories. The campaign to express a Kashmiri identity rather than Pakistani would also result in a larger 'Asian: Other' population in 2011.

Thus it could be argued that the question is very good at allowing people to identify in the way that they choose. But from the perspective of developing social policy a shift toward the residual categories emphasises Britain's growing confidence in its diversity while providing less information in the most prominent census outputs to respond to that diversity and less reliable indication of

trends over time. The question has become less discerning at the same time as there is greater diversity in the population.

Categories in a census may always lag behind the changing diversity of the UK population, and may increase in number in the future to capture the growing diversity, but there is a limit to such a response. At some point in the future, official statistics may be forced to further reconsider the measurement of ethnic group.

For analysts of the current and past census, growing diversity suggests that more attention should be paid to census outputs that give a more detailed view of ethnicity. These include the most detailed description of ethnic groups including many write-in answers (Table CT0010), and cross-tabulations of ethnicity with religion, language and country of birth. The ability to commission further cross-tabulations, and to analyse anonymised microdata from the census allows a range of research questions to explore ethnicity in more diverse manifestations than the standard 18 categories used in 2011.

The shifts and instability in identity that are highlighted by this report should also be taken in the context of population change summarised in Table 2 and analysed in section 3. The growth of the residual 'Other' groups as the net result of births, deaths and migration, is considerably more than changes resulting from people changing ethnicity. Nonetheless the marginal change due to shifts in identity (Table 5) was considerable for the White Irish, Mixed, Bangladeshi, African and Caribbean groups, and should be borne in mind when considering their population change.

For example, the White Irish group reduced in size by 18% between 2001 and 2011 according to the Census (Table 2). Nearly half of this reduction, 8%, was due to the net impact of individuals who were resident at both census points but chose a different ethnic group in each Census (Table 5). The Mixed White and Black Caribbean population grew in size by 78% between 2001 and 2011 (Table 2). A significant part of this growth, 16%, was due to residents choosing a different ethnic group (Table 5), but most was due to many more births than deaths (Figure 1).

Users of the Longitudinal Study for many different social investigations will use ethnicity to account for variation in their topic of interest. The question arises of which year's recording of ethnic group is the most suitable to use. The study of instability cannot answer this question, but suggests that those who have unstable ethnicity may have different sense of their ethnic identity from others. The context of the investigation may suggest a particular year for the recorded ethnic group as most suitable, and it may not be the most recent census. In all cases one could usefully include tests of the sensitivity of results to excluding those who have changed their recorded ethnic group.

9. Stability of religion for those counted in both 2001 and 2011

Table 7 is a matrix of religious group as recorded for individuals enumerated in both 2001 and 2011. By far the greatest movement between separate categories was respondents identifying as Christian in 2001 identifying with No religion in 2011. There are considerably fewer respondents, in relative terms, who moved to No religion from all other religious categories with the exception of Buddhist, Other and Not stated.

Table 7. Matrix of individuals' religion in the 2001 and 2011 censuses

Religion 2001	Religion 2011									Total
	1. No religion	2. Christian	3. Buddhist	4. Hindu	5. Jewish	6. Muslim	7. Sikh	8. Other	9. Not stated	
1. None	45,063	11,594	268	34	54	98	20	417	4,531	62,079
2. Christian	44,788	239,163	212	24	33	101	18	689	17,053	302,081
3. Buddhist	231	97	573	..	..	..	..	12	109	1,022
4. Hindu	125	34	10	4,618	..	12	50	143	166	5,158
5. Jewish	140	20	..	..	1,584	11	..	..	178	1,933
6. Muslim	340	104	..	..	..	12,349	..	12	772	13,577
7. Sikh	62	22	..	17	..	..	3,595	38	74	3,808
8. Other	341	232	29	40	..	11	..	474	165	1,292
9. Not stated	9,449	12,929	120	168	173	850	140	239	4,512	28,580
Total	100,539	264,195	1,212	4,901	1,844	13,432	3,823	2,024	27,560	419,530

Source: ONS Longitudinal Study, England and Wales, usual residents enumerated in both 2001 and 2011. Cells less than 10 are represented by .., according to ONS rules to minimise the risk of disclosure of personal information. They are excluded from the totals in this table.

Table 8 provides the same summary measures (stability, movers in and marginal change) as for ethnic group. Sikh had the highest stability across each measure. 94.2% of those who said they were Sikh in 2001 also said they were Sikh in 2011. Muslim (90.8%) and Hindu (89.5%) had the next

Table 8. Measures of stability of religion group 'affiliation'

				STABILITY: Of 2001, % remaining in the group	Movers in: Of 2011, % already in the group	Marginal fit
	2,001	2,011	Both years	(Both/2001)	(Both/2011)	(2011/2001)
1. No religion	62,079	100,539	45,063	72.6%	44.8%	+62.0%
2. Christian	302,081	264,195	239,163	79.2%	90.5%	-12.5%
3. Buddhist	1,038	1,215	573	55.2%	47.2%	+17.1%
4. Hindu	5,158	4,915	4,618	89.5%	94.0%	-4.7%
5. Jewish	1,941	1,857	1,584	81.6%	85.3%	-4.3%
6. Muslim	13,599	13,445	12,349	90.8%	91.8%	-1.1%
7. Sikh	3,815	3,838	3,595	94.2%	93.7%	+0.6%
8. Other	1,304	2,031	474	36.3%	23.3%	+55.8%
9. Not stated	28,580	27,560	4,512	15.8%	16.4%	-3.6%
Total	419,595	419,595	311,931	74.3%	74.3%	0.0%
Total, excluding those who did not state a religion in one or both years						
	367,967	367,967	307,419	83.5%	83.5%	0.0%

Source: ONS Longitudinal Study, England and Wales, usual residents enumerated in both 2001 and 2011. This table is calculated from a version of Table 7 without suppression of small-number cells, to provide more accurate indicators than if calculated directly from Table 7. The counts are therefore slightly higher than in Table 7.

Notes: The 2001 category 'None' is matched with the 2011 category 'No religion'.

highest stability, followed by Jewish (81.6%) and Christian (79.2%). Buddhist, comprising a high proportion people who are not part of organised groups (Henry, 2013), including Western converts, has lower stability (55.2%).

Overall, the stability of the religion categories was 74.3%, with a quarter changing their category from one census to another. When excluding all those who did not answer the question at one or both censuses (Not stated), the stability of religion answers for the rest of the population rises only to 83.5%, much lower than the ethnic group question's 96.0%.

The large increase in numbers stating 'No religion' hides instability in the category, such that only 72.6% stayed with it from 2001 to 2011. It is unlikely that the change on the Census form from 'none' in 2001 to 'No religion' in 2011 induced instability as the cognitive testing of the religion question in preparation for the 2011 Census "has not provided any evidence of an effect on comparability" (ONS, 2009: p50; see also section 6.3.1).

The vast majority of those moving to No religion were from Christian, but this is partly due to its large size in the whole population. The proportion of those moving from Christian to No religion (15%) was exceeded by those moving to No religion from Buddhist (23%) and Other religion (26%). The relationship between instability and age (analysis not presented here) among those who said they were Christian in 2001 shows that people aged 10-19 in 2001 were less likely to remain Christian in 2011 than at any other age. There was a pattern of greater stability in religion at older ages for all categories, with the exception of the No religion category. There are also significant flows from both Not stated and No religion to Christian as well as in both directions between No religion and Not stated.

The category for 'Other' religion experienced a substantial net increase from changes in recorded religion, of 55.8%. This net impact involved 64% of those who had been included in this category in 2001 moving to another category, but far more moving in the opposite direction, to 'Other'. The stability of Other was low, only 36.3% of those in 2001 also said Other in 2011.

The least stable religious category was 'Not stated', which is those people who chose not to answer the voluntary religion question. 15.8% of those who did not answer the question in 2001 also refused to answer the questions in 2011. This will include a fresh sense of religious identity, including No religion, of those who were not old enough to affiliate to a category in 2001. The almost even balance of respondents moving into and out of the Not stated category suggests that some of those with a religious identity or No religion in 2001 have become indifferent to their affiliation or decided that they do not wish to declare it.

Interpretation and future

There is movement away from all religions, but especially from Christian to No religion or Not stated. The lower levels of movement to No religion from Sikh, Muslim, Hindu and Jewish suggests that there is a stronger bind to religious affiliation in these groups or a more tentative movement away from religion. It could also reflect the campaigns by religious groups to increase the recognition of their importance in contemporary society.

The growth of the No religion category may reflect societal changes as well as probing in the questionnaire. The religion question followed the ethnic group question in 2001, however, in 2011 a

language question was added between the two. This may have weakened the link between ethnicity and religion, and therefore provided less encouragement to White British people to feel they should describe themselves as Christian.

Despite the net reduction of 12.5% in the number of people who said they were Christian between 2001 and 2011, there were large absolute flows to Christian from No religion and Not stated. The growth from No religion may reflect people rekindling their religion in later age whereas the growth from Not stated may reflect people coming of age and defining their own affiliation. Further investigation of the LS is required to understand the effect of age and other determinants on change in religious identity.

Very few people move between religions (e.g. Hindu to Christian). The low levels of conversion between religions is not surprising because religious identity has shown to be relatively persistent throughout the life course and to change more rapidly between rather than within generations (Hayward and Krause 2013). The only notable conversion between religious groups is people switching to and from Buddhist as well as Other. This suggests that these identities are not permanent for many and that their usefulness in providing reliable estimates of the numbers in these groups between censuses is low.

Acknowledgements

Sian Bradford directed us to relevant ONS work; David Voas highlighted incomplete linkage for us to investigate; Kevin Lynch helped us investigate it. We are grateful for their and Pam Spicer's comments on a draft of this working paper. This work contains statistical data from ONS which is Crown Copyright. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

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Appendix A. Questions for ethnic group, England and Wales

1991

2001

2011

Ethnic group	
Please tick the appropriate box	<div> <input type="checkbox"/> White 0 <input type="checkbox"/> Black – Caribbean 1 <input type="checkbox"/> Black – African 2 <input type="checkbox"/> Black – Other <i>please describe</i> </div> <div> <input type="checkbox"/> Indian 3 <input type="checkbox"/> Pakistani 4 <input type="checkbox"/> Bangladeshi 5 <input type="checkbox"/> Chinese 6 <input type="checkbox"/> Any other ethnic group <i>please describe</i> </div>
If the person is descended from more than one ethnic or racial group, please tick the group to which the person considers he/she belongs, or tick the 'Any other ethnic group' box and describe the person's ancestry in the space provided.	

8 What is your ethnic group?

Choose ONE section from A to E, then tick the appropriate box to indicate your cultural background.

A White

☐ British ☐ Irish

☐ Any other White background, *please write in*

B Mixed

☐ White and Black Caribbean

☐ White and Black African

☐ White and Asian

☐ Any other Mixed background, *please write in*

C Asian or Asian British

☐ Indian ☐ Pakistani

☐ Bangladeshi

☐ Any other Asian background, *please write in*

D Black or Black British

☐ Caribbean ☐ African

☐ Any other Black background, *please write in*

E Chinese or other ethnic group

☐ Chinese

☐ Any other, *please write in*

16 What is your ethnic group?

Choose one section from A to E, then tick one box to best describe your ethnic group or background

A White

☐ Welsh/English/Scottish/Northern Irish/British

☐ Irish

☐ Gypsy or Irish Traveller

☐ Any other White background, write in

B Mixed/multiple ethnic groups

☐ White and Black Caribbean

☐ White and Black African

☐ White and Asian

☐ Any other Mixed/multiple ethnic background, write in

C Asian/Asian British

☐ Indian

☐ Pakistani

☐ Bangladeshi

☐ Chinese

☐ Any other Asian background, write in

D Black/African/Caribbean/Black British

☐ African

☐ Caribbean

☐ Any other Black/African/Caribbean background, write in

E Other ethnic group

☐ Arab

☐ Any other ethnic group, write in

The questions used in Scotland and Northern Ireland are reproduced at <http://www.ethnicity.ac.uk/census/Census-Ethnic-Group-questions-in-the-UK.doc>

Appendix B. Questions for religion, England and Wales

2001

10 What is your religion?

◆ This question is voluntary.

◆ ✓ one box only.

☐ None

☐ Christian (including Church of England, Catholic, Protestant and all other Christian denominations)

☐ Buddhist

☐ Hindu

☐ Jewish

☐ Muslim

☐ Sikh

☐ Any other religion, *please write in*

2011

20 What is your religion?

↻ This question is voluntary

☐ No religion

☐ Christian (including Church of England, Catholic, Protestant and all other Christian denominations)

☐ Buddhist

☐ Hindu

☐ Jewish

☐ Muslim

☐ Sikh

☐ Any other religion, write in