

# Moving apart or moving together? A snapshot of residential segregation from the 2011 Census

**Ian Shuttleworth and Chris Lloyd**

## **Introduction**

It is well known that Northern Ireland is a divided society. The interesting questions therefore are ‘by how much?’ and ‘along which dimensions?’, and in establishing whether Northern Ireland has become more or less segregated through time. The Census of Population which is taken every ten years (those that end with a ‘1’) is often used as health check for community relations to summarise and benchmark segregation in comparison with earlier years. The Census is good for analysing residential segregation because it captures demographic and social information on people at their place of usual residence but it is less good at capturing segregation in other dimensions (eg employment and education), in understanding population dynamics such as how people move every year since it is a ‘snapshot’ every ten years, and it does not deal at all with opinions and perceptions. To get a more complete picture of Northern Ireland, the Census therefore has to be used with other data sources which deal with these other aspects. Nevertheless, the Census has a wealth of useful information, and recent developments mean it can be used in combination with other official data to get a much more complete picture of Northern Ireland than has been possible until now.

The 2011 Census differs significantly from its immediate predecessors on two counts. Firstly, the political and media speculation about the numbers of Catholics and Protestants, and about segregation, that preceded (and followed) the 1991 and 2001 Censuses was much less intense. This is interesting in its own right and might be attributed to the political context of 2011 which differed from that in 1991 or even ten years ago. Secondly, unlike in 1991 and 2001 where the Census was used for alarmist reports to show that segregation had increased with claims, for instance, of ‘apartheid’, the 2011 Census showed, perhaps surprisingly for some, that residential segregation had decreased since 2001. However, this decrease was not a surprise given other available evidence which indicated that at worst, levels of segregation had remained roughly

constant since 2001. This short article takes up this second point and concentrates upon residential segregation presenting some headline statistical figures from the 2011 Census data, and setting them in their wider context.

### **Residential segregation in 2011**

The analysis of segregation was undertaken using electoral wards, one of the geographies used to release Census data. There are 582 of these in Northern Ireland, and there was a good reason for this choice: the number of wards and their shapes was the same in 2011 as in 2001. This eliminated one source of error in analysing Census data through time, since changes in the numbers and shapes of the units used to report Census data mean that it is often impossible to compare 'like with like' and to understand how far observed changes are real or just because of these statistical changes. The analysis concentrates on rates and numbers, and it also uses a simple and commonly-used indicator of segregation. This is the Index of Dissimilarity (known as *D*). This describes how evenly two populations are distributed in comparison with each other. Scores nearer zero indicate that the populations are fairly evenly distributed, whereas values nearer one indicate unevenness and greater segregation. There are a couple of cautionary notes about *D*. Firstly, it is well recognised in the academic literature<sup>1</sup> that there are other dimensions of segregation that can be captured using other indicators. These include isolation and exposure. Secondly, *D* assumes that spatial unevenness and separation are related to greater social separation. This assumption may, of course, be warranted but contemporary social networks are not bounded as much by our neighbourhoods as in the past so *D* (and other statistical segregation indicators) might not present a full picture of social interactions. Nevertheless, it remains a good indicator to use since it describes population patterns in 2011 in the same way as in earlier Censuses and it deals with an important dimension of segregation.

The headline results from the 2011 Census are that segregation fell between 2001 and 2011. In 2001, *D* was 0.617 for religion and 0.601 for community background. In 2011 it was 0.581 for religion and 0.561 for religion or religion brought up in (equivalent to community background in 2001). This shows a small but clear decrease in residential segregation during the first decade of the 21st Century. This was probably surprising for some people who, despite the lack of advance speculation about the results of the 2011 Census, probably assumed that segregation would have increased since 2001 given media coverage about the 'failure of the peace' earlier in the decade. However, when set in a wider context, the observed decrease in segregation as measured by *D* is consistent with other sources and not surprising at all.

Some of this evidence is provided by Shuttleworth and Lloyd (2009) who analysed residential segregation 1971-2001 using *D*. They found that segregation had indeed increased over that time period but that all the increase had been between 1971 and 1991; the decade between 1991 and 2001 saw stability and possibly a slight decrease in segregation. What is new is that for the first time since 1971 segregation in Northern Ireland has fallen but it is old news that residential segregation has stopped rising. Over the last forty years, segregation grew between 1971 and 1991 but between 1991 and 2011 it ceased to rise and indeed began to fall back over the last decade.

Other evidence comes from the Northern Ireland Longitudinal Study (NILS). A 28% sample of the population from health cards that is linked to the Census, it provides some of the insights into population dynamics that are lacking in the Census when used on its own. Work on the NILS<sup>2</sup> showed that internal migration in Northern Ireland, that is to say residential moves arising from changes of address after 2001, was insufficient to increase segregation (or decrease it for that matter). This showed that there was no reason to expect residential segregation to increase, and every reason for the status quo to be continued. It does, however, raise questions about the causes of the fall in segregation that have been observed between 2001 and 2011. If internal migration is ruled out as a major cause for changes in the geographical distribution of population, it leaves three candidate causes; differences in births and deaths; migration that starts or ends outside Northern Ireland; and variations in the way that people report their religion between 2001 and 2011. Unravelling how and why segregation has decreased is far from easy.

### **Why did segregation levels fall 2001-2011?**

International immigration had a significant impact on the population composition of some places (see Table 1) where 2011 saw large proportional Protestant decreases from 2001 in wards which had high proportions of foreign born by 2011. Because most of the 'new immigrants' from the countries that joined the EU after 2004 are Catholic, this led to growth in the Catholic population especially in those wards with high shares of A8 immigrants. This explains why some wards which were highly Protestant in 2001 became much less Protestant by 2011. Increasing Catholic proportions in these places could be interpreted as mixing except in this case, this increase in these neighbourhoods is a consequence of international immigration. Arguably this is not really mixing in the sense it is understood by many, and if the decrease in segregation is solely a consequence of this, it is hard to say that the segregation of the Northern Ireland population really decreased between 2001 and 2011. There is no doubt that immigration has significantly changed the

demographics of some places. But do these shifts explain the observed general decrease in segregation? One test of this is to examine residential segregation discounting wards with (a) high proportions born outside the UK or the Republic of Ireland and (b) with high proportions of immigrants from the new EU accession states – the post-2004 migrants.

Discounting the top ten wards for all foreign born, *D* for religion is 0.586 and 0.563 for religion or religion brought up in; discounting the top ten wards in terms of A8 immigrants it is 0.584 for religion and 0.563 for religion or religion brought up in. The values are very close to those for the analysis when done for all wards. Segregation is very marginally higher than for the all-wards analysis but it remains substantially lower than the values reported using 2001 Census data. This suggests that the decrease in residential segregation between 2001 and 2011 cannot be attributed fully to international migration. Most of it appears to be caused by changes in the spatial structure and geographical patterning of the Northern Ireland born population rather than that of immigrant communities which, despite their growth over the past decade, still remain numerically and proportionally small.

Further insights into the changing population of Northern Ireland can be gained by looking at Figure 1. This shows the count of wards by religious makeup (in this case, the percentage Catholic by community background in 2001 and religion or religion brought up in in 2011). Ten classes are defined, 0%-10% Catholic, 10%-20% Catholic and so on. What is interesting about this is that the numbers of wards that fall into the extremes (90%-100% Catholic and 0%-10% Catholic) decreases between 2001 and 2011. There are, in 2011, fewer very Catholic wards and very Protestant wards than there were 10 years earlier. Conversely, there are more wards than ten years ago in the middle of the distribution although these remain still in the minority. Nevertheless, there is some evidence that the middle ground is growing.

Maps 1 and 2 make an attempt to locate this growing 'middle ground'. They show, respectively, majority Protestant wards (less than 40% Catholic) that have become more Catholic and majority Catholic wards (more than 60% Catholic) that became more Protestant. Wards are marked in black that changed classes (as defined by the deciles in Figure 1) between 2001 and 2011. The maps show that far more majority Protestant wards became more Catholic over this period than Catholic wards became more Protestant. The wards that saw a substantial shift towards being more Catholic are scattered throughout Northern Ireland but there is quite a substantial concentration in the South and East of the Greater Belfast area as well as in some of the wards that fringe Belfast. Majority Catholic wards that became more Protestant are far sparser although there are

several that made this transition. This simple analysis suggests that the contexts for demographic change are varied with moves towards greater Catholic shares being seen in both rural areas and also in parts of Greater Belfast. This type of demographic shift could lead to greater demographic mixing and thus decreases in statistical indicators of segregation although, of course, questions remain about social processes on 'the ground' in these wards and the extent to which there really is more cross-community interaction. Moreover, it is likely that there are many different stories to explain local population change across Northern Ireland, ranging from immigration in some areas, to new housing build, and planning policies. Detailed local work is needed to understand better why some wards appear to have changed their religious demography.

Table 2 offers a different perspective by comparing and contrasting proportions and absolute numbers by religion or religion brought up by the decile in which a ward was placed in 2001. This enables some consideration of the ways in which the differences in which people reported their religion in 2001 and 2011 influenced demographic balances across Northern Ireland. Some Protestants in 2001, for instance, might have declared themselves to be 'nones' (eg to have no religion) in 2011, and this could have led to apparent Protestant decreases and Catholic proportional growth. The population of some areas might thus appear to change, and this could lead to apparent falls in segregation, but in reality might remain the same but differently described. The table has a lot of information and needs careful interpretation.

There are several remarkable features in the table. At the extremes (wards which are classed as being highly Protestant (eg 0%-10% Catholic) or highly Catholic (90%-100% Catholic), there have been proportional and absolute decreases in the majority population and growth in the minority population. Across wards that are 0%-10% Catholic there has been an average increase in the share of Catholics of 2.76 percentage points and an average absolute increase of 119. In highly Catholic wards (more than 90% Catholic), an average fall of 3.42 percentage points for Catholics is observed and this is combined with a Protestant increase on 2.12 percentage points and an average absolute increase of 76. There is thus some evidence that there really is an increase in the absolute size and shares of minority communities in wards dominated by the other between 2001 and 2011. It also seems that majority populations have fallen in places where they had over 90% of the population in 2001. However, this simple story must be qualified. In wards that were very Protestant in 2001 (eg 0%-10% Catholic) there has been a growth in the proportion of people stating in 2011 that they were 'nones' with no religion. In fact, the percentage point growth of those stating that they were 'nones' increases as the proportion of Protestants decreases. This suggests that most 'nones' in 2011 were

Protestants in 2001. This has exaggerated Protestant proportional and absolute decrease especially in wards where in 2001 they were in a majority. Nevertheless, there appears also to be a real increase in the numbers of Catholics living in wards where they were a minority in 2001 and also an increase in Protestant numbers in wards where Catholics were a clear majority in 2001.

### **Interpretations**

As usual, population change is complex. Between 2001 and 2011 there were a lot of things going on including immigration, changes in the way people reported their religion, and what might perhaps be understood as genuine falls in residential segregation. So what are the main summary points that can be taken away from this preliminary and short analysis of the 2011 Census? The first conclusion is that there does appear to have been a decrease in segregation as measured by *D*. This is the first time that segregation has fallen since 1971 but with a longer-term historical perspective the results should not be surprising. Shuttleworth and Lloyd (2009) observed stability in segregation between 1991 and 2001, and the fall seen between 2001 and 2011 follows this. In the very long term, periods of stability and even decreases in segregation are not unheard of since Boal (2002) notes in his work on Belfast large segregation increases in politically turbulent periods followed by quiescence. It may well be that currently we happen to be living through one such quiet period.

Secondly, this decrease may well be socially and politically meaningful because it appears that there has been absolute and proportional increase in the Catholic population living in areas that were Protestant in 2001, and some growth of Protestants in areas with Catholic majorities in 2001. Further work is needed to understand this. The Census on its own cannot tell us about whether these increases are due to differences between Protestants and Catholics in births and deaths, or whether they have arisen from people moving house nor can it tell us about the motivations for address changes. The NILS will be able to shed some light on the relative contribution of births, deaths, and internal migration in changing local population balances but the only way to get information on moves and address changes is through survey evidence and in-depth work. Important questions about perceptions, safety and the structure and operation of the housing market remain to be answered. These lead into questions about ‘mixing’, how it can be most appropriately defined, and when, where and how it is achievable.

Thirdly, some of the decrease in segregation is ‘apparent’ and can be attributed to the different ways in which people, particularly Protestants, described their religion in 2001 and 2011. Again more work is needed on this

issue. It is important to understand more about the ‘nones’. Questions remain about their social and political attitudes, where they live, and to what extent people in this category transcend the accepted structure of the ‘two communities’ with which Northern Ireland has so long lived. Longitudinal data from the NILS will permit more detailed analyses of how people report their religion and give a far better profile of those who in 2011 stated they had no religion. But, once again, to deal with questions about identity and attitude there is a clear requirement for detailed in-depth studies. These will give us a much better picture of how the Northern Ireland population is changing.

Finally, there is the issue of immigration and particularly the arrival of immigrants from the countries that joined the EU after 2004. Many of these immigrants are Polish and Lithuanian who describe themselves usually as Catholics and to these may be added the mainly Catholic Portuguese. The establishment of immigrant communities has had a high impact on a relatively few areas but in these places it seems to have altered local demographic balances substantially. This has contributed a small amount to the reduction of segregation as measured by *D*. It could be claimed that immigrants have not led to a real reduction in segregation because they are not Northern Ireland born and thus they cannot be understood in terms of the binary Catholic/Protestant divide. But this is perhaps to dismiss them unjustly. It is perhaps difficult to argue that their arrival has led to less Protestant/Catholic segregation as it is usually understood but there are stronger grounds to argue that they have led to greater social and cultural diversity and that this will ultimately, if given the right support, promote a more mixed and tolerant society. Once again, the Census and other official data sources can reveal much about immigrants – where they live and their social and economic profile. However, there remains a need to understand much more about these communities – the reasons why, in Belfast for instance, they have located in largely Protestant communities in the East of the city, and how they relate to these communities. Immigrants give every appearance of being a replacement community in these areas. They have perhaps moved there because these communities are declining, and because of the growth of private-rented housing. This seems plausible but is speculation at this stage because, once again, detailed local studies are needed to reveal more about how Northern Ireland society has changed.

### **Conclusion**

Beyond the patterns and possible causes that have led to the fall in residential segregation between 2001 and 2011 there are wider forces at work and broader demographic developments. Two in particular require further consideration. Firstly, the question on national identity that appeared for the first time in the

2011 Census offers the chance for further analysis to understand more about Northern Ireland. Religion – whether Catholic or Protestant – has usually been understood as a proxy for national identity but now this information has been asked directly. Besides the British and the Irish, there is a large group of Northern Irish. Survey evidence, for example from the Northern Ireland Life and Times Survey, had suggested the existence of this group but the 2011 Census has provided population-wide data that permits local mapping and analysis. The Northern Irish seem to be fairly equally spread between Catholic and Protestant wards and they are not highly segregated from the British or the Irish (the latter two groups are about as segregated from each other as Catholics and Protestants). The chief questions about this group include their political and cultural identity and their detailed demographic background. It might be that they are genuinely a middle group between those with a strong Catholic/Irish identity and a strong British/Unionist identity. Alternatively, as in the case of the old joke, the main point might be if they are either Catholic or Protestant Northern Irish. Time and further work on the Census and other research will tell. The second factor concerns the demographic balance of Northern Ireland and its consequences for community relations. Protestants as an ageing community have, everything else being equal, higher numbers of deaths and fewer births than Catholics who as a younger community have fewer deaths and more births. The 2011 Census shows that there are now more Catholics in younger age groups than Protestants. This ‘demographic momentum’ probably underlies some of the decrease in segregation between 2001 and 2011 since Catholic numbers have grown in general and this has tended to make the population balance more even in some places. Northern Ireland therefore appears to be on a trajectory towards a more pluralistic society than in the past. It is one in which neither Catholics or Protestants will be a large majority but fairly evenly matched populations albeit with different profiles and social needs, in which besides the British and the Irish there are substantial numbers of Northern Irish, where there are established immigrant communities, and where Catholics and Protestants are living closer together in some areas than in the past. This offers substantial challenges to the political class but, optimistically, also significant opportunities for positive political and social change where Northern Ireland can move on from its older focus on the Catholic/Protestant divide and majoritarian politics based on demographic blocs.

## Notes

<sup>1</sup> Massey and Denton, 1988

<sup>2</sup> Shuttleworth et al, 2013

## References

Boal, F., (2002), ‘Belfast: walls within’, in *Political Geography*, 21, 687-694

Massey, D., and Denton, N., (1988), ‘The dimensions of residential segregation’ in *Social Forces*, 67, 281-315

Shuttleworth, I., Barr, P., and Gould, M., (2013), ‘Does internal migration in Northern Ireland increase religious and social segregation? Perspectives from the Northern Ireland Longitudinal Study (NILS) 2001-2007’ in *Population, Space and Place*, 19, 72-86

Shuttleworth, I., and Lloyd, C., (2009), ‘Are Northern Ireland’s communities dividing? Evidence from geographically consistent population data 1971-2001’ in *Environment and Planning A*, 41, 213-229

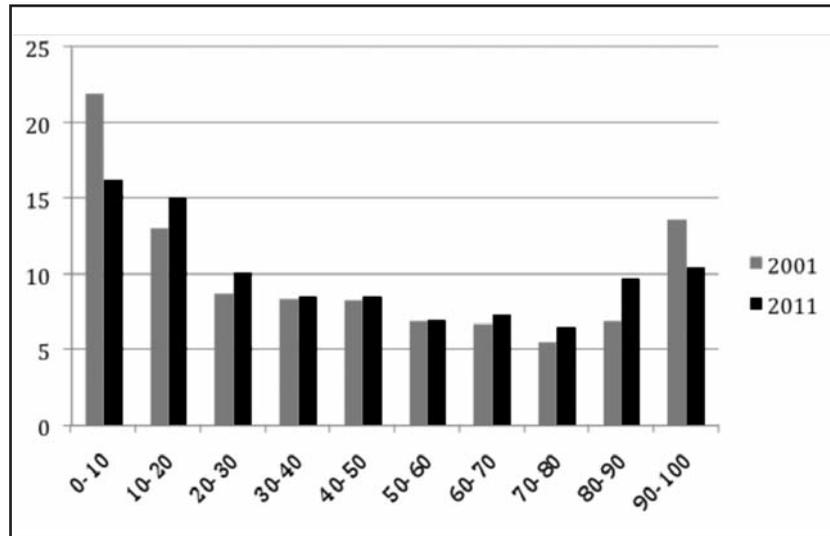
**Table 1: The ten wards with greatest Protestant decrease 2001-2011**

Ward Name and Code	Percentage Protestant 2001	Percentage point Protestant decrease 2001-2011	Percentage point Catholic increase 2001-2011	Percentage born outside UK or RoI 2011	Percentage born in A8 Accession states 2011
95GG20 Duncairn	90.24	-26.36	18.05	10.33	4.96
95OO13 Coolhill	75.76	-24.03	19.89	30.30	18.63
95GG50 Woodstock	86.67	-23.36	13.22	14.67	7.75
95GG44 The Mount	89.69	-21.37	12.16	12.59	8.10
95LL21 Parklake	60.71	-21.07	16.46	8.99	6.60
95GG37 Ravenhill	67.35	-20.45	14.10	9.62	5.00
95GG10 Blackstaff	91.40	-19.89	10.77	12.83	7.28
95GG29 Island	89.51	-19.73	8.55	13.00	5.40
95GG11 Bloomfield	87.65	-17.93	11.01	10.09	6.31
95LL07 Church	93.81	-17.79	11.07	12.02	9.43

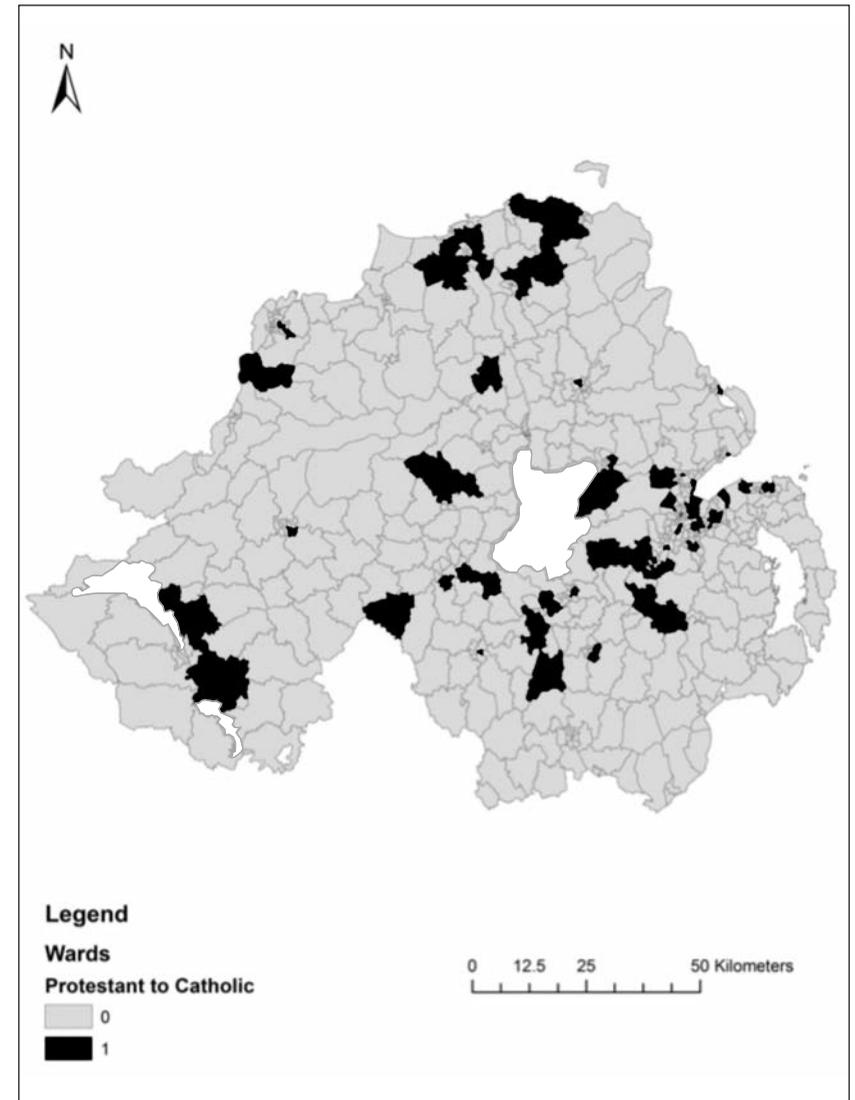
**Table 2: Average percentage and absolute difference in religious composition by ward religious group in 2001**

Percentage Catholic 2001 – classed in groups of 10%	Percentage point Catholic difference	Percentage point Protestant difference	Percentage point Other difference	Percentage point none difference	Catholic difference – absolute numbers	Protestant difference – absolute numbers	Other difference – absolute numbers	None difference – absolute numbers
0-10	2.96	-8.37	0.66	4.75	118.6	-126.66	22.80	161.96
10-20	2.48	-6.75	0.62	3.66	118.25	-6.96	19.39	121.39
20-20	3.20	-7.05	0.53	3.32	137.06	-116.84	16.12	96.53
30-40	3.01	-6.50	0.69	2.80	218.16	-43.27	27.88	97.86
40-50	1.88	-4.57	0.46	2.23	158.67	-8.79	18.85	79.42
50-60	2.49	-4.97	0.49	1.99	201.45	-72.58	17.85	73.65
60-70	1.37	-3.30	0.39	1.55	303.08	12.95	14.23	63.56
70-80	0.08	-1.81	0.24	1.49	181.63	7.09	7.75	46.72
80-90	-1.60	-0.12	0.25	1.48	275.88	43.73	8.45	49.38
90-100	-3.42	2.13	0.25	1.04	-78.77	76.01	8.66	36.53
Total	1.36	-4.65	0.49	2.80	137.41	-33.78	17.22	94.96

**Figure 1: The percentage distribution of wards by religious group 2001 and 2011**



**Map 1: Wards becoming more Catholic (marked in black) 2001-2011**



**Map 2: Wards becoming more Protestant (marked in black) 2001-2011**

