

**UNITED NATIONS STATISTICAL COMMISSION and
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“THE TERM ‘ACCURACY’ IS A HOSTAGE TO FORTUNE”

Submitted by Office for National Statistics, United Kingdom *

1 INTRODUCTION

1. Imagine our surprise and amusement in the ONS Media Relations Office when a senior official came out with the statement: “The term ‘accuracy’ is a hostage to fortune!”.
2. Throughout Census 2001 one of our top-line messages was that this was ‘the most successful and accurate Census yet’. This was built upon the strategy of adopting a so called ‘one-number’ approach to the Census, by which the census figures were adjusted to take account of the numbers and characteristics of the population estimated to have been missed, by comparing with alternative and independent data sources, principally a large scale post-enumeration survey (the Census Coverage Survey).
3. By-and-large this message was correct – but the prophetic words about accuracy came back to bite us fairly soon. We found ourselves mounting a reputation-damage limitation exercise as criticisms of the Census began to take hold. Even as recently as March this year a Member of Parliament described the 2001 Census as being ‘not fit for purpose’.
4. The main thrust of the 2001 communication campaign was to convey confidentiality, the importance to society and the accuracy of the results. This paper looks at some of the communication tactics of the 2001 campaign, subsequent efforts to mitigate criticism when the accuracy was questioned and some of the lessons-learned being taken forward into the 2011 campaign.

2 2001 – COUNT ME IN

5. Considerable planning, thought and effort went in to the communication plan for Census 2001. It followed a largely traditional publicity campaign format of letters, leaflets and TV and poster advertising with a number of other ideas weaved in to make use of the then relatively new medium of the Internet and events designed to attract free publicity through media coverage.
6. The target audience for a Census media campaign has to be whole population but, of course, within that we needed to reach a number of already well-identified hard-to-reach groups segmented within the population. It is not the purpose of this paper to go over in detail the tactics used, but here are some of the elements of the campaign:
 - Branded campaign to recruit 70,000 Census field staff
 - Linked TV and poster advertising campaign with the theme of the raised hand and slogan ‘Count me in’

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- themed website with a special section called Census At School which included a mock census in schools across the country
- beer-mat and bar-poster campaign targeted at student areas using gimmicky but amusing slogans to engage the 'hard-to-count' student population
- baby's-sleepsuit specially branded and issued at maternity hospitals to babies born on Census day. This attracted free publicity through national TV coverage.

7. Census 2001 was carried out against a background of late and hard-to-predict obstacles. A General Election was called and the campaign straddled Census Day. An election period carries restrictions on government promotional activity and on the use of colours that might be similar to one of the political parties. This difficulty was overcome and probably had no substantial effect on the overall quality of the census.

8. Even less predictable was a major outbreak of foot and mouth disease which resulted in movement restrictions for field staff over large areas of the country. This needed particularly sensitive handling by the Census team, but again the problems were surmounted by allowing both post-out and post-back of forms to the affected areas – mainly farming and rural communities.

9. Other issues that threatened the quality of the count included a campaign in Wales to boycott the census because there was no 'tick-box' to allow them to identify their nationality as 'Welsh'. In the end, however, the resulting publicity had the effect of raising the response in Wales to a level higher than the national average for England.

10. There was also a campaign mainly among students to enter 'Jedi Knight' as their religion in the false expectation that if enough people did so it would become a recognised religion. In fact, around 400,000 people did claim to be Jedi Knights. The National Statistician took a relaxed view and considered that the type of people who would make such an entry might easily have been the type of people who would have been hard to get to fill in a form in normal circumstances.

11. The Census was backed up by the Census Coverage Survey referred to earlier – a sample survey that went to over 300,000 households across the country. This was the single largest sample survey carried out in the UK and was designed to identify areas of non-response and help to build towards 'one-number census'.

3 2002-03 'YOU COUNTED'

12. The Census had gone very well considering the difficult circumstances in which it was carried out. The quality of the data was expected to be very high and this was the message we were communicating to the public, largely through the media and user-groups. Coverage was believed to be 98 per cent.

13. It was around this time that the senior official came out with the prophetic words about the term 'accuracy' being a hostage to fortune – counting a large population is obviously not an extremely precise process and trust in the results could easily be damaged by implying a spurious degree of accuracy. The Media Relations Office did rein back on its use of the word 'accurate', qualifying it in the expression 'accurate as possible'.

14. The first hint of the type of issues we were to face came during the enumeration process when a Member of Parliament in London claimed that she knew of roads and blocks of flats in her constituency that had been missed from the count. Although this was a concern and was investigated, it was believed that missed data would be picked up and compensated-for through the Census Coverage Survey/ One-Number Census process.

15. When the data had been captured, there were lengthy discussions about reassurance on quality and avoidance of disclosure, but the big ‘surprise’ that emerged was that the overall population was substantially smaller than anticipated and not in line with the yearly rolling population estimates based on the 1991 Census. Various possible explanations were put forward for this anomaly – many of which cast doubt on the accuracy of the 1991 count, because, after all, the methodology for the 2001 count was, it had been argued, much more robust and was much more likely to be accurate. Others cast doubt on the mid-year population estimate system with the suggestion it had accounted for high inward migration but underestimated outward migration. Furthermore, because of the delays that were experienced in the delivery of the processed data by ONS’s contracted suppliers, these national patterns emerged quite close to the previously announced publication date. Consequently the contingency time that had ONS had put aside to examine and explain such differences were used up in trying to make up the time lost in data processing.

16. A few cracks were appearing in our ability to communicate our belief in the robustness and accuracy of the 2001 count, particular in respect to the phenomenon of the apparent lack of young men in the 2001 count. Historically, males outnumbered females in the population at all ages up to around 40 when the sex-ratio altered in favour of females in later life. The 2001 Census, however, was showing the switch to more females present in the early-20s age-group.

17. This prompted the obvious question of ‘where have all the young men gone?’. In a TV interview at the time of the launch the census output programme a journalist speculated that they were all at a rave in Ibiza and the National Statistician was subsequently quoted in a large section of media as saying the young men were “raving in Ibiza”. This response has entered the folklore to the extent it formed the answer to a question in a highly respected TV quiz show.

18. Although this incident may seem amusing, it underlines two key points about the communication of quality. Firstly, preparation; we had no clear, simple and believable explanation about why there was a substantial apparent shortfall in the number of young men. Secondly, key spokespeople have to be trained and drilled about the wily ways of the media.

19. Notwithstanding this mis-reporting, the media’s reception of the initial census result had been fair. The next step was the dissemination of the detailed analytical findings. Again the media would have a very large part to play in communicating these findings to the public. The Media Relations Office strategy for getting acceptance of the quality and importance of these data involved managing the expectations of the media.

20. The new data would not just be national but would include substantial amounts of detailed local breakdown. This meant that not only national media but the extensive range of regional and local media needed to be addressed and needed to understand what data would be coming out and how they could use it. This was largely addressed by a regional roadshow both before and after the release. The resulting coverage was the best ever achieved by ONS both in its amount and its general accuracy.

4 2003-2006 DARK WHISPERS AND ‘LOST FUNDING’

21. The most dangerous undermining of confidence in the quality of the 2001 Census count began with a particular local authority council claiming their population was being substantially underestimated. It cited various administrative counts within the area as evidence. Furthermore, the Authority claimed this ‘undercounting’ was resulting in a significant loss of funding from central government.

22. A number of other councils began to make similar claims (and even to seek legal redress), and the umbrella group looking after local authorities in England – the Local Government Association –

also took up the issue. Initially, and for about 3-4 months, ONS stuck to its guns and stood by the Census count – believing its own mantra that, with the adoption of a one-number census approach, 2011 was ‘the best census ever’. But it soon became clear that it was important for ONS to respond to the criticisms, but not to be perceived to be responding to those Authorities who were shouting the loudest. It did so by setting up an evaluation programme with both academics and local authority users, and by working with some of the councils to carry out case studies to see whether there were problems with the count. The result was that in a number of cases (15 out of a total number of some 370 districts) the population estimates were revised upwards. The overall rise in populations though still fell within the accepted margins of error.

23. As far as communicating confidence and quality were concerned though this was not, in the immediate short term, good news. Across the media, in many user groups and among influential stakeholders there was a perception that the 2001 Count had been substantially flawed. The evidence though showed that, although there had been a limited number of flaws mainly in areas of high-population density and very mobile populations, in the main the quality of the census had still been high. This was endorsed by independent reviews conducted by the Statistics Commission, the Audit commission and the Local Government Association itself. Nevertheless, communicating the positive messages has been no easy matter.

24. Recently matters have been exacerbated by the accession to the European Union of a number of Eastern European countries and the UK’s decision to accord their citizens the right to work in the UK. The numbers of Eastern Europeans travelling to the UK to work and live – usually for a relatively short period appears to have exposed deficiencies in the methods for accurately counting incoming migrants. The UK uses a substantial port survey to estimate both inward and outward migration. It also uses the agreed UN definition of a migrant as being someone who plans to stay in a country for more than 12 months.

25. This exposed a difficulty in counting short-term migrants, especially when there was a substantial turnover. A number of local authorities made strong cases that they had substantial numbers who were not being officially included in their populations. ONS has responded by again working with some of the local authorities and has set up a new programme to help better count local populations particularly where there is a large amount of ‘churn’. Populations are far more mobile than they once were with people moving both across international borders and within individual countries. ONS is developing new methodology to enable it to better count short-term migrants and is making more use of and integrating various administrative counts that can help provide checks for local population counts.

5 2006-2007 LESSONS LEARNED AND PLANS FOR 2011

26. ONS learned a number of powerful lessons from 2001 and its aftermath and also from the subsequent questioning of its population estimation methods. Probably the key one was a recognition that some areas (if only a few) were undercounted in 2001 beyond expectations, and that the Census Coverage Survey had not been designed to deal with extreme instances of localised census failure.

27. But it must be accepted that the term ‘one number Census’ did not help ONS’s cause - it was widely misunderstood and came back to haunt us when we had to revise some population estimates. It was clear when talking to local authorities that their chief executives did not understand what ONS had done and the role of the Census Coverage survey in the estimation process - and the possible impact on 'accuracy' at small geographies.

28. Thus, a clear lesson is about being transparent and ‘up front’ about the methodology, and getting this understood by local authorities in advance. Opening up our work and working closely

with local authorities will be key. When in 2001 we did so, the message then became not one of accuracy in what ONS had done (and which we felt we had to defend at all times), but rather one of integrity and impartiality - our only interest was in understanding the quality of the estimates, rather than in defending the position. It was interesting that when ONS did publish the revised estimates for the 15 areas, in one sense it reaffirmed that message.

29. But it is important not to overstate this issue - there were no challenges from the vast majority of users, and the data were, and continue to be, widely used. And everyone wants us to do the Census again in 2011 in more or less the same way - albeit taking account of the 2001 lessons. To manage this ONS is proposing three key tactics for 2011:

- *Address lists*
 - It has become abundantly clear to ONS that there is no comprehensive address list that covers all of England and Wales. A number of products are available and ONS has been working with suppliers to see whether these can reach the standard required by 2011. In the absence of complete confidence that such a list will be available ONS has decided to develop its own for 2011. The field work in 2001 showed that there were substantial numbers of households across the country that did not appear on address lists. These included multiple occupancy buildings; new builds, some 'gated' communities, and institutions.
- *Working more closely with local authorities*
 - In 2001, there was a view that working too closely with local authorities could result in a potential skewing of the results because the authorities had a vested interest in seeing their population count maximised. For 2011, ONS has realised that this risk is outweighed by the amount of local knowledge and support that local authorities can help provide. Detailed knowledge of their community will help ONS create more accurate address lists and better targeting of the field staff.
- *More targeted use of field staff*
 - In 2001, ONS recruited around 70,000 field staff for the count. In 2011, it is proposed to use just over half that number. A few eyebrows were raised at this proposal but ONS explains that they will be organised into more effective task-forces or even 'flying-squads'. Large parts of the country are easy to count and the proposed post-out, post-back and online form completion strategies ought to substantially reduce the demand for field staff in most areas. However, difficult-to-count groups and difficult-to-count areas will always exist and the better targeting of resources will help reduce any undercount.

30. A comprehensive strategy to communicate the quality of 2011 Census has been prepared and will make use of the burgeoning number of communication outlets that are becoming available not only to reach audiences more effectively but to disseminate the high standard of results achieved. One of the key issues to emerge was that the Census can no longer be relied on to provide a 'count' in the traditional sense, but should serve more to provide the basis for the best possible estimate. Having big media events with slogans and a branding that implies that we know the exact number of people on a particular day does not help to send the right message as to what the Census is about.

31. While communicating the quality of the 2001 Census proved a bumpy-ride, ONS never lost sight of the fact that the fundamental quality of its product was good. Lessons were there to be learned and new tactics have been put in to place to ensure an even better quality Census in 2011.

6 FURTHER INFORMATION

32. Evaluations of the 2001 Census and other material relevant to this paper can be found in the following documents:

Chappell, R. and Dobbs, J. (2005) *Are densely populated inner city areas easy to measure and estimate?* Lessons learned from the 2001 Census in England and Wales. Paper presented at IAOS satellite meeting, Wellington, New Zealand, April 2005. Available at:
<http://www.stats.govt.nz/about-us/events/satellite-meeting/default.htm>

Local Government Association (2003) *The 2001 One Number Census and its quality assurance: a review*. Research Briefing 6.03. Available at;
<http://www.lga.gov.uk/Documents/Publication/onenumpercensus.pdf>

ONS (2003a) *Method used to revise 2001 Population Estimates for shortfall of men*. Available at:
http://www.statistics.gov.uk/about/methodology_by_theme/Revisions_to_Population_Estimates/downloads/Methodology_for_revision_to_mid-2001.pdf

ONS (2003b) *2001 Census: Manchester and Westminster Matching Studies Full Report*. Available at:
http://www.statistics.gov.uk/downloads/theme_population/ManchesterandWestminster_FullReport.pdf

ONS(2003c) *Local Authority Population Studies: Full Report*. Available at:
http://www.statistics.gov.uk/downloads/theme_population/LAStudy_FullReport.pdf

ONS (2005) *2001 Census: One Number Census Evaluation Report*. Available at:
http://www.statistics.gov.uk/census2001/pdfs/onc_evr_rep.pdf

Statistics Commission (2003) *The 2001 Census in Westminster: Final Report*. Available at:
http://www.statscom.org.uk/media_html/reports/report_022/contents.asp
