

## **BUILDING HOUSES ON STRAW POLLS: A BRIEF LOOK AT SOME CURRENT STATISTICAL REPORTING BY JOURNALISTS IN NEW ZEALAND**

Warren Palmer and Anthony Crawford  
University of Otago, New Zealand  
wpalmer@maths.otago.ac.nz

*This paper considers how New Zealand journalists report political polls. Two recent newspaper articles are featured. Perhaps not surprisingly we have detected a tendency for journalists to focus on sample size, to misunderstand the concept of margins of error, and to have little idea as to whether a result is generalisable. We also consider the importance of non-respondents. We wonder if journalists question the validity of survey results they have been given. We ask the question: could a “non-random” convenience survey have as much validity as a more formal survey conducted by a specialist research company?*

### **INTRODUCTION**

Statistical investigations can be vexing for journalists, trained to string salient words together coherently, but often at a complete loss when numerical data needs to be presented. How do reporters cope when told to whip up a front page story about an upcoming local election? How do they report on professionally organised political polls?

For this paper we concentrate on two articles selected from major daily New Zealand newspapers during September 2004. The articles have not been randomly selected. This is, if you like, a straw poll looking at some recently published polls.

### **ARTICLE 1: STREET SURVEY, LOCAL BODY ELECTIONS, SEPTEMBER 2004**

The first article featured appeared at the foot of the front page of the *Otago Daily Times* on 23 September, 2004. Six candidates were standing for the mayoralty of Dunedin in the upcoming local body elections and, in a move designed to make statisticians cringe, a reporter took to the streets to interview shoppers about their preferred candidate.

This convenience sample was not, apparently, convenient for the reporter. Local rumour has it that he experienced difficulties with the potential subjects. At one stage he was seen calling out to patrons on buses as they were paying their fare and several participants apparently told him how “unstatistical” the survey was.

In the end, 72 people took part, and 40 of them, a response rate of 56%, indicated their preference. The others had either not decided their choice, did not know the candidates, or simply declined to answer the question.

On the positive side, the article provided colour in a campaign which was not enthusing voters. For example, in an accompanying article (page 4 of the newspaper), photographs of 14 respondents were displayed, along with answers to such questions as “Do you know what Dunedin City Council ward you live in?” (Five knew the answer.)

However, there are clearly issues concerning sampling technique and response rate. Questions may also be raised concerning the presentation of results. The second paragraph of the article alluded to these difficulties, calling the whole operation “an informal survey,” but the heading, presumably written by an enthusiastic sub-editor with a liking for puns (Peter Chin was the ultimate winner), implied some sort of assumed statistical validity:

*Chin leads, but race looks close*

In the end the figures given in the article proved to be reasonably accurate! The percentages (of those who indicated their voting preference) supporting the six candidates as their first choice were, in rank order, 45%, 35%, 12.5%, 5%, 2.5%, and 0%. Without calculating any confidence intervals, the survey figures were “close” to the subsequent election result and were also fairly consistent with two telephone polls published in the same paper.

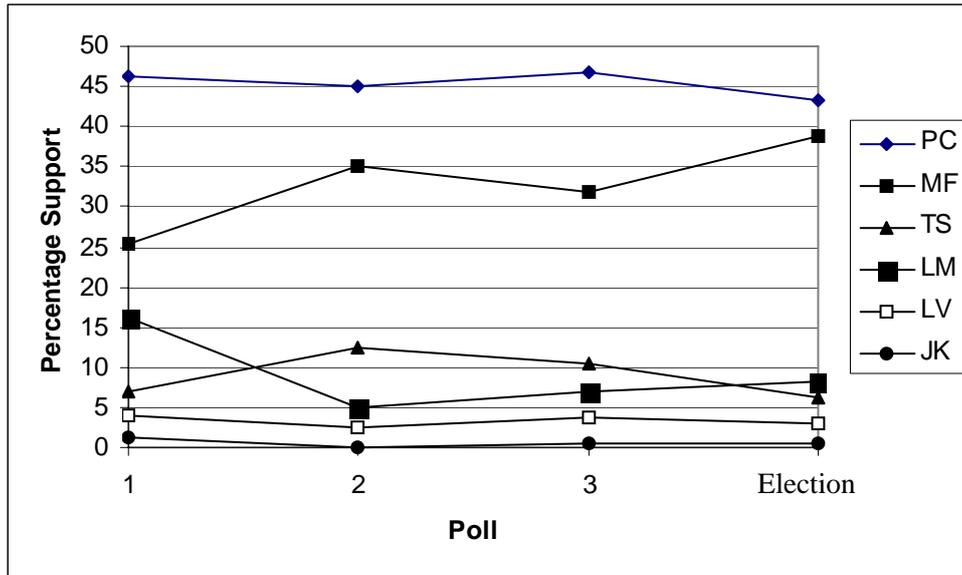


Figure 1: Three poll results reported in the *Otago Daily Times*, and the first choice election figures for the six candidates. Polls 1 and 3 were telephone polls conducted by the Otago Polling Research Centre, while Poll 2 was carried out by a reporter “on the streets.”

Was this a lucky fluke, or could it be argued that a non-random informal survey has about as much validity as a “professionally” conducted poll?

#### “SHOTS” POLLS

Concern must be growing in marketing research firms about the low response rates achieved through telephone surveys. Brennan (2005) cites seven reports between 1991 and 2003 which provide evidence of falling response rates across all forms of market research, and examples are common in the popular media. A mail survey, for example, reported in the *Otago Daily Times* (23/9/05) stated that of 3000 political surveys sent out nationally, 390 were returned, a 13% response rate. (At least this article reported the response rate!)

An enthusiastic reporter chasing shoppers might end up surveying the sort of people often unavailable by phone. This might have some “sort” of validity if the voting patterns of the two groups (“Stay-Homes” and “On-The-Streets” or “SHOTS”) are similar.

Of course the two groups might display different voting patterns. For example, the candidate “TS” gained her highest ranking in the “OTS” poll. There is evidence (explained in an earlier report) that she appealed to younger voters. If younger voters were less likely to be “Stay-Homes,” then her support could be under-estimated in a telephone survey.

From the newspaper’s perspective the “OTS” survey results were not dissimilar to the previously published telephone results (Poll 1 in Figure 1). Admittedly the second candidate, MF, had an increased (+10%) level of support in Poll 2, but this had been anticipated according to the Poll 1 article, and he had been running an extensive campaign. From the editor’s viewpoint, the non-random street poll might have been similar enough to the earlier telephone poll to influence the decision to run with the story, “unstatistical” as it was. (There is no evidence for this conjecture. We have no idea at all if anybody at the newspaper considered Poll 1 when they were deciding whether to publish Poll 2.)

To add depth to data provided by telephone (or other) polls, editors could seriously consider combining poll results with an informal qualitative street survey, although this would of course miss out one other important group, the PAs (Party Animals).

## ARTICLE 2: MARAE–DIGIPOLL ON MAORI SEATS, SEPTEMBER 2004

On the 6<sup>th</sup> of September, 2004, the New Zealand Herald reported the results of a TVNZ Marae–DigiPoll phone survey which had been released the previous day. Five hundred ninety eight respondents on the Maori roll were interviewed. (In New Zealand seven electorates are available for Maori voters who choose to enrol in this way, although they can vote on the general roll if they prefer.) and 35.7% indicated their support for candidates from the newly formed Maori Party, although at that time the party did not yet have candidates or, indeed, policies.

The newspaper stated that the Maori Party was ahead of all other parties in three of the seven Maori seats. Although the reporter admitted that the sample was “very small” (assuming an equal distribution between the seven electorates, fewer than 100 voters from each electorate would have been surveyed), the statement was made that the Maori party was ahead in three of the seats, and the Maori party co–leader, Tariana Turia, suggested that the party was building towards a “clean sweep” of all seven seats.

## RESPONSE RATE

In what we believe is fairly common practice in the reporting of “formal” survey results, the response rate was not reported. Response rates for telephone surveys overseas have been falling. In an article promoting online surveys, Rubin (2000) reported a marked (40% in the early 90s to 14% in 2000) decline in the response rate in telephone surveys in the USA. The response rate in New Zealand may be higher (54% to 64%; Brennan, Benson, Kearns, 2005), but then the Maori rate could be different from (lower than?) the general rate. A reasonable conjecture could be that there is a different proportion of phones in the home for Maori compared to non-Maori.

Interviewed for the article, Labour Party president Mike Williams stated that a phone survey “would not reach working–class Maori because many had no home phones ... They have pre–paid phones.” There is no evidence provided for this claim, but if justified it would cast doubt about the validity of phone surveys, particularly for Maori voters.

## VARIABILITY

Article 2 made no mention of variability in the stated proportions, although a follow-up article the following day stated that “the poll of 938 Maori voters had a margin of error of plus or minus 3.2 per cent.” (The first article had only mentioned 598 voters. Presumably 340 of the respondents were Maori voters who chose to register in a general electorate.) No distinction was made between this value and a “margin of error” for any individual electorate. For example, in the Te Tai Tokerau electorate, the Maori Party supposedly received 42% support. Using the article’s 3.2%, this suggests between 38.8% and 45.2% support, quite a narrow range (6.4%). But assuming a conservative figure of 100 voters for this electorate, a 95% confidence interval for the Maori Party support in this electorate is (0.323, 0.517), a much wider range (19.4%).

Either the reporter did not appreciate the misleading nature of a “margin of error,” or he assumed that the reader wouldn’t understand. The convenient “margin of error” hides a considerable amount of statistical fudging. The Prime Minister, Helen Clark, raised this issue on talkback radio the next day and was quoted in the follow–up article. Her emphasis was on sample size (“if you divided fewer than 600 people by seven you don’t get a statistically valid sample”) rather than on margin of error, so she seems to have made the common assumption that bigger is better. Despite shortcomings in her argument she did raise questions about validity, at least in how the poll had been interpreted.

## SHOULD UNCOMMITTED VOTERS BE COUNTED?

For the 2004 local body election the polls published in the *Otago Daily Times* included the percentage of voters who were undecided. The general trend however appears to be moving away from including uncommitted voters in published results. Article 2 appears to have taken a strange middle ground, indicating 35.7% support for the Maori party, 26.3% for the Labour party, and 9.7% for NZ First, but making no mention of the remaining 28.3% of respondents. Were they all uncommitted, or did some of them support other parties? In this article we are simply not told.

Are uncommitted voters really that important? For an answer just ask John Kerry, the unsuccessful Democratic Party candidate in the 2004 USA presidential election. In Reuters/Zogby polls summarised by the *Otago Daily Times* prior (27/10/04) to the election, the percentage support for the main candidates was consistently between 44% and 48%, yet the actual election popular vote percentages were, according to <http://en.wikipedia.org>, 50.7% and 48.3% respectively. The voters who appeared to be uncommitted in the surveys may have made all the difference in the final poll.

The move away from reporting uncommitted voters may have some basis in logic. If the purpose of the survey is to determine “if an election were held today, who would you vote for?,” at *that point in time* the uncommitted respondent’s “vote” would not count.

However there are inconsistencies apparent with the approach being adopted by journalists. While uncommitted voters are often not reported, they still appear to be included in the sample sizes and “margins of error,” leading to an underestimation of the error of the poll. If uncommitted voters are not included in the results, they should not be counted in the sample size.

Uncommitted voters however can provide a valuable insight into the uncertainty of the results in correctly predicting the outcome of an election. Article 2 suggests that the difference between the Maori party and Labour is 9.4%. Using the “margin of error” of 3.2%, this difference looks to be conclusive in favour of the Maori party, at least at that moment in time. However if it is assumed that the vast majority of the 28.3% unaccounted for are uncommitted, a difference of 9.4% is hardly conclusive. This implies that there would still be much to be gained for both parties by targeting the Maori voters.

Surveys are an indication of the support within the population at a particular moment in time. Predicting future human behaviour is difficult, if not impossible. For example, for the 2004 Dunedin elections, Poll 1 (10/10/04) found that 76% “intended to vote.” With a sample size of 564 this figure has a 95% confidence interval of (0.725, 0.795), implying that it could be expected that 72.5% to 79.5% of eligible voters would actually vote. However the *Otago Daily Times* (30/10/04) reported that only 54.15% of eligible voters actually did. (Ironically, this was reasonably close to the 56% indicated in the “On The Streets” Poll 2.)

In the reporting of surveys, journalists need to appreciate that there is always some uncertainty and error associated with the results. They should report the findings as such.

## DISCUSSION

Apart from the headline which might suggest some sort of statistical validity, the “On The Streets” poll conducted by the *Otago Daily Times* did not try to be something it was not. There were undoubtedly pitfalls, but at least the article stated that it was an “informal survey” and insights into the methods used were provided.

The Marae-DigiPoll telephone survey was conducted by a specialist research company. There appears to be an acceptance among journalists that if a poll is conducted by an independent organisation, then the results must be valid. But this is not necessarily the case. At the very least journalists need to provide essential details (such as methodology, response rate, and the proportion of uncommitted voters) so that an interested reader has the opportunity for critical analysis.

We automatically question the validity of a reporter running around the streets asking questions. Should we not be asking similar questions about “professional” telephone surveys? Some politicians are beginning to question the statistical validity of survey findings. It should be journalists asking the questions. After all, it is their job.

## REFERENCES

- Brennan, M., Benson, S., and Kearns, Z. (2005). The effect of introductions on telephone survey participation rates, *International Journal of Market Research*, 47(1).  
Rubin, J. (2000). Online marketing research comes of age. *Brandweek* 26, 41(42).