

The Stability of Responses to Forced-Choice Questions

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This paper reports the results of a study designed to test the stability of responses to alternative versions of forced-choice questions. Six of the eight pairs of questions tested produced stable response patterns, but for two pairs of questions the alternative versions produced quite different results. In one case this could be explained by a subtle difference in question emphasis caused simply by reversing the choices presented; in the other, the apparent failure to present real alternatives was a possible explanation for the difference observed. The implication for questionnaire designers is that responses to alternative versions of forced-choice questions are generally stable, provided the choices presented are balanced and appropriately worded.

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Introduction

'Agree-disagree' statements are one of the most popular forms of attitude measurement, but researchers have shown them to be particularly prone to question wording effects (Gendall & Hoek 1990) and to acquiescence bias (Schuman & Presser 1981; Converse & Presser 1986). Consequently these researchers have suggested using 'forced-choice' questions, rather than agree-disagree statements, to measure attitudes and opinions.

Forced-choice questions, as their name suggests, present respondents with a choice between alternatives; for example, "Should the government increase taxes or decrease taxes?" Proponents of this question form argue that it is better than "Do you agree or disagree that the government should increase taxes?", or "Do you agree or disagree that the government should decrease taxes?", because of the instability of responses to alternative presentations of agree-disagree items. Some researchers also suggest that forced-choice questions encourage a more considered response than agree-disagree statements (Converse & Presser 1986).

However, there are always alternative ways of constructing forced-choice questions by reversing the order of presentation of the choices given. Thus forced-choice questions may not be immune from the effects observed when responses to alternative versions of agree-disagree statements are compared. This paper reports the results of a study designed to test this possibility.

Method

The vehicle for this research was the 1990 Palmerston North Household Omnibus, which is conducted annually by students from the Marketing Department of Massey University. The survey covers households within the Palmerston North city boundary, and the sample is based on clusters of four interviews (two with males, two with females, 15 years of age or older) around randomly selected starting points. Substitutions are made for households where an interview is refused or where no contact can be made after three attempts. The response rate in 1990 was 54%.

Two versions of the Omnibus questionnaire were used. Each version contained 12 questions concerned with the role of women in society. The responses to each version of the

questionnaire were weighted so that the age-sex distribution of the two subsamples - those who answered Version 1 and those who answered Version 2 were the same. The sample sizes were 335 for Version 1 and 354 for Version 2.

Results

Four of the questions were identical in both questionnaires, and the pattern of responses for these questions was similar for each questionnaire (see Table 1). The maximum absolute deviation for the four pairs of identical questions ranged from 1.8% to 5.5%, with an average of 4.0%.

Table 1. Responses to identical questions

Question	Version	Response			MaxD
		Yes %	No %	DK %	
Do successful women in New Zealand get the recognition they deserve?	1	40.8	49.9	9.3	3.5
	2	38.4	53.4	8.2	
		2.4	-3.5	1.1	
Should there be more women in Parliament?	1	61.2	19.1	19.7	5.2
	2	61.2	24.3	14.5	
		0.0	-5.2	5.2	
Can the country afford to support solo mothers?	1	31.4	55.7	12.9	1.8
	2	33.2	54.3	12.5	
		1.8	1.4	0.4	
Is the position of women better or worse now than it was ten years ago?	1	78.4	8.1	13.5	5.5
	2	83.9	7.9	8.2	
		-5.5	0.2	5.3	

Notes.

1. Figures in the body of the table are responses for each version of the questionnaire and the differences between them.
2. MaxD refers to the largest absolute difference in response proportions between versions 1 and 2.

The remaining eight questions were forced-choice questions, included as 'mirror images' in each version of the questionnaire. In other words, the order of the choices presented to respondents in Version 1 was reversed in Version 2. For example:

"Are women treated as second-class citizens, or are they treated the same as men?" [Version 1]

and

"Are women treated the same as men, or are they treated as second-class citizens?" [Version 2]

Table 2 shows the responses to these questions.

For six of the eight 'mirror image' forced-choice questions the maximum absolute deviation ranged from 1.1% to 5.7%, with an average of 3.4%. This variation is within the range observed for the responses to identical questions on the two versions of the questionnaire and consequently can be attributed to sampling error. However, for two of the questions (questions 7 and 8 in Table 2) the maximum absolute difference was much higher; too large to be attributed to chance. Closer examination of these questions suggested that the two pairs of statements tested were not in fact mirror images.

For the question concerning childcare arrangements the two versions were as follows:

"Should more childcare be provided for working mothers, or should they have to make their own arrangements?" [Version 1]

and

"Should working mothers have to make their own childcare arrangements, or should more childcare be provided for them?" [Version 2]

There is a subtle but important difference in the emphasis placed on the choices in these two questions. The first emphasises the provision of childcare, with working mothers as a secondary consideration, whereas the second question emphasises working mothers first and then the provision of childcare. We concluded that these were two different questions rather than alternative versions of the same question.

For the question concerning the portrayal of women in television advertising the two versions were:

"Do television advertisements show women only as housewives or sex symbols, or do they show them in a variety of roles?" [Version 1]

and

"Do television advertisements show women in a variety of roles, or do they show them only as housewives or sex symbols?" [Version 2]

Table 2. Responses to 'mirror image' forced-choice questions

Question	Version	Response			MaxD %
		Second Class %	Same %	DK %	
1. Are women treated as second-class citizens, or are they treated the same as men?	1	43.9	40.3	15.8	
	2	47.1	38.1	14.8	
		-3.2	2.2	1.0	3.2
		More Men %	Equal %	DK %	
2. Should men be paid more than women for the same jobs they both do, or women get the same pay as men for the same job?	1	5.1	94.6	0.3	
	2	5.1	93.5	1.4	
		0.0	1.1	-1.1	1.1
		Illegal %	Legal %	DK %	
3. Should abortion <i>not</i> be legal under <i>any</i> circumstances, or legal in <i>some</i> circumstances?	1	12.6	82.3	5.1	
	2	16.8	79.0	4.2	
		-4.2	3.3	0.9	4.2
		Go out %	Stay Home %	DK %	
4. Should mothers with young children go out to work, if they want to, or should they stay at home and look after their children?	1	53.7	37.6	8.7	
	2	51.2	43.3	5.5	
		2.5	-5.7	3.2	5.7
		Stay Home %	Work %	DK %	
5. Should women stay at home and care for their families, or should they have more opportunity to work outside the home?	1	26.0	57.7	16.3	
	2	25.7	60.3	14.0	
		0.3	-2.6	2.3	2.6
		Suffer %	Speed Up %	DK %	
6. Should women expect their careers to suffer if they take several years off to look after their children, or should they get special help to speed up their careers when they return to the workforce?	1	38.8	42.7	18.5	
	2	35.4	46.1	18.5	
		3.4	-3.4	0.0	3.4

		Provided %	Own Arr. %	DK %	
7. Should more childcare be provided for working mothers, or should they have to make their own arrangements?	1	58.3	33.6	8.1	
	2	45.5	47.8	6.7	
		12.8	-14.2	1.4	14.2
		Stereotype %	Variety %	DK %	
8. Do television advertisements show women only as housewives or sex symbols, or do they show them in a variety of roles?	1	41.1	51.8	7.1	
	2	58.3	34.3	7.4	
		-17.2	17.5	-0.3	17.5

Note.

1. The questions reported above are version 1.

In this case, explanation of the disparity between the two versions is more difficult. The second alternative in both questions has the highest level of agreement, suggesting a 'recency' effect (the second option chosen more frequently because it is read last). A possible explanation of this recency effect (if that is what it is) is that respondents could disagree with both alternatives presented. Respondents may disagree that television advertisements show women only as housewives and sex symbols and also disagree that they show women in a variety of roles. In other words, this was a badly written question. Consequently, many respondents may have been doubtful about both alternatives, and, as a result, may have simply supported the second option, regardless of its content.

However, while a recency effect provides a plausible explanation for the results observed for this question, if respondents were uncertain about both alternatives, then the proportion of 'don't know' responses might be expected to be high. This is not so; the proportions of 'don't knows' for both samples are higher than for some of the questions tested, but much lower than for others. More detailed examination of all the questions in Table 2 suggests a relationship between the proportion of 'don't knows' and the explicitness of the options presented. The clearer and less equivocal the options, the lower the proportion of 'don't knows', and vice versa. Thus, although the options in the advertising question, may be contradictory, they are relatively clear, and this may explain why the 'don't know' responses are not inflated.

Despite the suggestion of a recency effect in the television advertising question, overall there was no evidence of this phenomenon. For four questions (questions 4, 5, 6 and 7 in Table 2) respondents preferred the first alternative presented, while for the remaining four questions (questions 1, 2, 3 and 8 in Table 2) they preferred the second alternative. In the two instances where differences in the response distributions were too large to have occurred by chance, respondents preferred the first option in one case and the second option in the other.

Discussion

This small study suggests that responses to alternative versions of forced-choice questions are relatively stable, provided the choices presented are balanced and represent real alternatives. However, this is not always as easy as it seems, and the results of our analyses have illustrated the need for caution when wording forced-choice questions.

Two pairs of questions, which appeared to differ only in the order of presentation of the concepts involved in each, were shown not to be interchangeable 'mirror images'. In one case this could be explained by a subtle difference in question emphasis caused simply by reversing the choices presented; in the other, the apparent failure to present real alternatives was a possible explanation for acquiescence bias in the form of a recency effect.

In both instances there was nothing in the alternative question forms to suggest, prior to the study, that reversing them would affect the response distribution. Yet the marginal differences observed were of the order of 15%. The implication for questionnaire designers is that they should always compare the alternative forms of forced-choice questions and consider the possibility that these may not be 'symmetrical' to ensure that the first effect we have highlighted does not occur. But, even if forced-choice questions are 'symmetrical', the choices themselves must be worded appropriately.

References

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