CHAPTER 5

DIFFERENT TYPES OF QUESTIONS

In this chapter the focus is on designing questions for *structured* questionnaires. *Structured* questionnaires are more difficult than *semi-structured* questionnaires to get right as they must anticipate exactly what people might say and accommodate their answers. Any faults in the wording and design of a question asked of 1,000 people will produce results which are unintelligible or misleading and which no amount of statistical processing will be able to rectify. Questionnaires used in large surveys have to be right first time!

Getting a feel for the subject

It is difficult to design a good questionnaire without becoming steeped in the subject. One of the best ways to do this is to talk about it. If you are to design a questionnaire to find out people's buying habits on hair conditioner, talk about it with your friends. Do they use a conditioner? How often? Who in the family uses the conditioner? Who buys it? Where do they buy it? Do they use a specific brand? What are the benefits of using a conditioner? What are the disadvantages? This type of discussion helps get into the subject. Points will be raised which may not have been previously considered and which need taking into account in the design of the questionnaire.

If the subject is more esoteric than hair conditioner, it is important to find a knowledgeable person to learn the rudiments. For example, in a survey about

batteries for electric fork-lift trucks, it would be helpful in the first instance to speak to a buyer or a maintenance man in a factory where electric fork-lift trucks are used. This pre-questionnaire discussion should not be totally without structure. A short list of the subjects should be drawn up to be covered in the questionnaire to guide this preliminary interview. One of the discussion points with the fork-lift truck respondent, at the this early stage, should be about the length of life of the batteries - how variable is it? what affects the length of life? etc. This background enables sensible intervals to be determined for answers to questions.

The researcher must now decide whether to use an open ended question, one which is closed (ie with a fixed choice) or a scale.

Getting the question style right - open ended questions

An open question is one where the respondent is left free to give any answer and this is either written down verbatim or the interviewer is armed with a list of anticipated pre-defined answers. An example of where the question is open but the response is closed would be where the respondent is asked to name brands. This would involve the interviewer in a lot of writing and checking of spelling. If the brands are known, it is far better that they are listed and then all the interviewer has to do is circle them as they are mentioned. This speeds up the interview as well as saving time and cost by eliminating the labour of subsequently coding open ended questions.
In the following example, an open ended question with a closed response is used as the listing of names is an aid to the interviewer to sort out possible confusions between companies which sound similar.

Q1 And can I just check whether your company buys any of the following products. **READ LIST:**

Chain and chain slings	1 → Q2
Wire rope and wire rope slings	2 → Q3
Fibre rope	3 → Q4
Lifting tackle	4 → Q5

Q2 **FOR THOSE WHO USE CHAIN AND CHAIN SLINGS OF VARIOUS KINDS ASK:** You said that your company buys chain and chain slings. Which companies come to mind as suppliers of chain and chain slings? **DO NOT PROMPT. CAN MULTI-CODE.**

Bridon or Bridon Ropes	1
British Ropes	2
Coubro-PCT	3
John Shaw	4
Latch & Batchelor	5
Lifting Gear Hire (LGH)	6
Lifting Gear Products (LGP)	7
Lloyds British	8
Midland Wire Cordage	9
Ropequip	10
Sterling Croft	11
Other (WRITE IN)	_____

Two points should be noted about the above question. Firstly, the respondent is likely to know and mention more than one brand (and the question is therefore called multi-response) and secondly a facility is usually provided for additional brands as it is difficult to build a definitive list and, for sure, someone will always mention a name not listed.

In the previous chapter it has been argued that open ended questions with open ended responses should be kept to a minimum in large structured surveys for otherwise they create extra work at the data analysis stage. However, sometimes questions must be asked for which answers cannot be pre-empted or where it is important to capture the exact words which are given in the reply. (Just noting the words that people use in answer to a question can be very revealing).

The example which follows shows an open ended question which has a lead in from a filter question which separates people who have bought a product from those who have not. The second part of the question was left open ended because the range of possible answers was wide and a pre-coded list of responses would have been very lengthy.

Q9A Did you buy any products as a result of the calls?

Yes	1	GO TO 9B
No	2	SKIP TO 10A

Q9B Which products did you buy? **PROMPT:** Any more?

_____

_____

_____

Getting the question style right - closed questions

Closed questions are so called because the respondent is asked to choose between a limited number of answers. They are, therefore, also called *fixed response questions.* The simplest of all closed questions is where there are only two possible answers in which case it known as `dichotomous'. A typical dichotomous question has the answer `yes' or `no'. (In practice there are often cases where `don't know' is a reasonable alternative).

Closed questions have three main benefits to the researcher:

1. They save time during the interview because completing the questions simply involves circling numbers.

2. They assist the respondent because the thinking about the reply options has already been carried out.

3. Data analysis is made easier as there is no requirement to code up a myriad of open ended responses.

The following example is a closed question which was part of a large travel survey involving 500 respondents who were visiting a holiday resort. In a smaller study of 50 to 100 interviews it would have been possible to cope with verbatim responses to an open ended question but with the larger number it was thought advantageous to close the answers down after a pilot study produced a list of likely responses.

Q Please look at this card and tell me which statement best describes why you did not use the train for your journey? **SHOW CARD**

Too expensive by train	1
Stations were inconveniently situated	2
Difficult with the luggage	3
Difficult with children	4
Timing not convenient	5
Needed transport to destination	6
Journey takes too long	7
Dislike trains	8
Never thought of going by train	9
Needed a car when I got there	10
Other (specify) _____	11

Although provision has been left for people to give comments other than those listed on the card, these additional responses will always be under reported compared with the ones on the list. This is because people's minds are drawn to the easy response, the one which is listed, and only if something is very important to them or startlingly obvious by its omission, will it be mentioned. For this reason it is important to make sure that all the possible responses have been listed.

Getting the question style right - scales

Scales are questions in which the limited choice of response has been chosen to measure an attitude, an intention or some aspect of the respondent's behaviour.

Attitudes or opinions are always important in surveys as they are pointers to people's motivations and, therefore, their likely buying habits. They can suffer from being over used and therefore causing frustration to the respondents. It can be sole destroying from a respondent's point of view to answer 20 scalar questions and not have the opportunity of saying in plain words exactly how they feel.

My business partner was recently interviewed over the telephone on the subject of computers and was asked dozens of scalar questions which became boring and seemed irrelevant to his situation. Unfortunately there was no scope to accommodate any variation from the scales and, following the persistence of the interviewer, his objective was to bring the unfortunate experience to a conclusion as quickly as possible. This led him to give any replies which would satisfy the

interviewer since it appeared to him he could not get out of the interview and there was no attempt or interest in finding out what he really thought.

The researcher who designed the questionnaire had been seduced by the attraction of scales. They have the advantage of pinning a respondent down and forcing a view which, when pooled with all the other responses, give benchmarks. The analysis of the results may never expose the fact that many people were answering in a `devil may care' fashion as did my partner. Scales should not be over used and where they are used it should not be at the expense of restricting people's real views.

The key to designing scalar questions is deciding on what should be measured and then determining the right attributes by which they can be rated. This could involve a small number of depth interviews before the questionnaire is designed.

There are five different types of rating scales which researchers commonly use:

1. Verbal rating scales. These are the simplest of all scales in which respondents choose a word or phrase on a scale to indicate the level of their feeling. The scales usually have five choices and such as:

Q Here is a pack design for a new type of Stilton cheese. Please look at it and, using a phrase from this card, tell me how appealing you think it is:

Very appealing	1
Quite appealing	2
Neither appealing nor unappealing	3
Quite unappealing	4
Very unappealing	5

A common verbal rating scale asks about people's likelihood of doing something.

Q And how likely would you be to try this product?

Very likely	1
Quite likely	2
Neither likely nor unlikely	3
Quite unlikely	4
Very unlikely	5

Or the scales may ask the respondent whether or not they agree with a subject or phrase.

Q I am now going to read out a list of things people have said about these pack designs and I shall ask you which of the phrases on this card best describes how much you agree or disagree with each statement. **READ OUT STATEMENTS. ROTATE ORDER OF START. TICK START.**

	Agree Strongly	Agree Slightly	Neither Nor	Disagree Slightly	Disagree Strongly
This pack looks expensive	1	2	3	4	5
This pack looks modern	1	2	3	4	5
This pack is boring	1	2	3	4	5
This pack is for every day use	1	2	3	4	5
This pack looks traditional	1	2	3	4	5

2. Numerical rating scales. This is a very similar approach to the verbal rating except the respondent is asked to give a numerical `score' rather than a semantic response. The scores are often out of 5 (where 5 is best and 1 is worst). Ten point scales are sometimes used but they can be more difficult for the respondent as there are more numbers to choose from. A score out of five fits neatly with the five statements on the semantic scale which ranges from very good to very poor and it yields a good distribution of response and enables researchers to easily pick out differences in opinion.

Q How would you rate the pack on the following?

Very much more convenient 5 4 3 2 1 Not at all convenient

Questions which use numbers for ratings don't have to use scores out of 5, nor does the whole scale need to be laid out. The following example is from a self-completion questionnaire and shows how numerical ratings can be an economical means of laying out rating questions. The numbers in brackets at the end of each line are column numbers for use in the data analysis.

Q Below are two columns of descriptions which some people have used to describe what influences their choice of cars. The left hand column contains general descriptions of cars. The right hand column contains descriptions which could be applied to the inside of a car. Look through each of the columns of descriptions and tell us how important you think each factor is to you, when making your choice. Give each description a score out of 10 - where *10 is very important* and *1 is not important at all.*

GENERAL DESCRIPTIONS

Roomy _____ (7)
Large _____ (8)
Functional _____ (9)
Safety _____ (10)
Suitable for families_____ (11)
Versatile _____ (12)
Well built _____ (13)
Small _____ (14)
Sporty appearance _____ (15)
Stylish _____ (16)
Distinctive _____ (17)
Classy looking _____ (18)
Contemporary looking _____ (19)
Well specified _____ (20)

DESCRIPTIONS OF THE INTERIOR

A modern interior _____ (21)
Hard wearing materials _____ (22)
Attractive colours _____ (23)
Roomy _____ (24)
Good ergonomics _____ (25)
Light & airy _____ (26)
Practical _____ (27)
Comfortable _____ (28)
Good boot capacity _____ (29)
Easy to load _____ (30)

3. The use of adjectives. A variation on the verbal/semantic scale is to ask respondents which words best describe a company, a product or, as in the next example, a person. The adjectives could be a mixture of both positive and negative and they need not be opposites.

Q I would like to read out some words which describe people. You have to choose one word from each pair to describe yourself. If you think neither fits, you must choose the one which is closest. Would you say that you are .....

Introvert	1	or extrovert	2
Traditionalist	1	or an experimenter	2
Stylish	1	or fashionable	2
Ambitious	1	or content	2
Independent	1	or gregarious	2
Intellectual	1	or practical	2

4. The use of positioning statements. The respondent is asked to agree or disagree with a number of statements. It is important that the respondent is readily able to identify with one of the statements and not left feeling that in certain circumstances one would apply and in other circumstances the other would be more appropriate.

Q This next question is simply to help us group your reply along with others of a similar type. I will read out some statements which people have said about the xxx car. Would you give me a score out of 5 to say whether you agree a lot or disagree with the statement. A score of 1 means you disagree strongly. **SCORE 6 FOR DON'T KNOW.**

	Agree strongly				Disagree strongly	Don't know
A car that is a pleasure to look at	5	4	3	2	1	6
A car I hope says something to others about me	5	4	3	2	1	6
A car that is distinctive but not flashy	5	4	3	2	1	6
A rational choice of car	5	4	3	2	1	6
An emotional choice of car	5	4	3	2	1	6
The cheapest suitable car I could find	5	4	3	2	1	6
A car I enjoy driving fast	5	4	3	2	1	6
A car that doesn't attract too much attention	5	4	3	2	1	6
A car with a happy personality of its own	5	4	3	2	1	6
A car that tells people I'm different	5	4	3	2	1	6

5. Ranking questions. A way to find out what is most important to a respondent is to present a number of factors and ask which is most important, which is second most important and so on. Show cards should be used where possible to present the factors. However, to remove any bias in the order in which they are presented, the factors could each be printed on a different card so that they can be shuffled. If this is likely to prove difficult (for example in street interviews) the interviewers could have a number of cards on which the factors are presented in a varying order. In ranking questions it is usually not valid to ask respondents to rank beyond the top three factors. This is because the less important factors become,

the more they tend to merge in the minds of the respondents and the harder it is to assign a level of rank.

Q I will now show you a card on which is listed a number of factors which could be important to you when choosing a combined weed killer and fertiliser. Would you look at the list and tell me which is the most important factor in influencing your choice? **READ LIST. ROTATE START. TICK START. RANK JUST THREE FACTORS.**

And what would be the second most important factor.
And what would be the third most important factor.

FACTOR	RANK
Available in the garden centre	_____
A competitive price	_____
Works at any time of year	_____
Kills weeds *and* moss	_____
Not poisonous to children or pets	_____
Made by a well known company	_____

Ranking questions that are read out must not be two long for otherwise the respondents will forget what has been said.

Sometimes respondents are asked to rank the first two most important factors and the least important. However, this is not really necessary as the least important factor can always be determined at the analysis stage, being the one which receives the fewest number of first, second or third rankings.