

The structure of open-ended and closed survey items

So far we have discussed the basic form of requests for an answer, but often they are placed in a larger textual unit called a "survey item," which consists of an entire text that requires one answer from a respondent (Sarlis and de Pijper 1986). Andrews (1984) defined a survey item as consisting of three different parts of text or components, namely, an introduction, one or more requests for an answer, and a response scale. Molenaar (1986) uses quite similar components. In this chapter we propose distinguishing even more components of a survey item. First, we will describe the components and thereafter we will present different structures of survey items for open and closed requests. The structure of batteries of requests for an answer, such as those using stimuli or statements will be the topic of Chapter 7. We close this chapter with a discussion of the advantages and disadvantages of the different forms of open-ended and closed survey items.

6.1 DESCRIPTION OF THE COMPONENTS OF SURVEY ITEMS

Figure 6.1 shows the basic components of a survey item. The reader should notice that we make a distinction between parts embedded in the request for an answer as discussed before and parts that can be juxtaposed before or after the request for an answer.

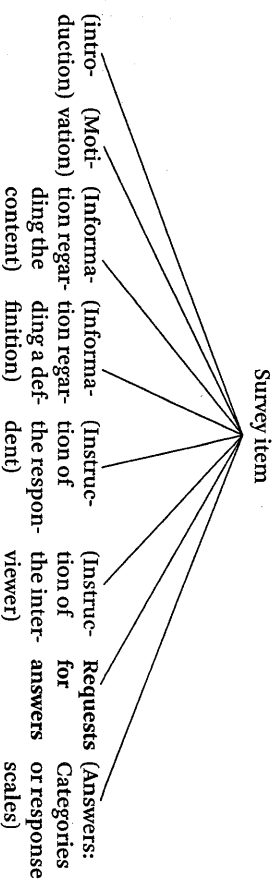


FIGURE 6.1: *Decomposition of a survey item into its components*

In our opinion the following parts can be added: an introduction, a motivation, an information regarding the content, information regarding a definition, an instruction of the respondent, an instruction for the interviewer, the request for an answer and response categories or scales, as shown in Figure 6.1. The components indicated within parentheses in Figure 6.1 are optional. This implies that the request for an answer is the core unit of a survey item, and it also means that the simplest form of a survey item is just an open request for an answer and nothing more. The figure also demonstrates that a survey item can consist of many more components. How many and which ones, will be discussed further. But, first, we begin with a description and illustration of the different components.

Introductions (INTRO) are meant mainly to indicate the topic of the request for an answer to the respondent. In general they consist of one or more sentences. Examples are as follows:

- 6.1 *Now, a couple of questions follow about your health.*
- 6.2 *The next question is on the subject of work.*

Sometimes two requests for an answer are formulated and the first request functions just as an introduction because no answer is asked for it. The second request for an answer is the one to be answered that is indicated by the answer categories. Examples 6.3 and 6.4 are an illustration:

- 6.3 *Would you mind telling me your race or ethnic origin (INTRO)? Are you white, black, Hispanic American, Alaskan native, Asian, or Pacific Islander?*
 - 1. *White but not Hispanic*
 - 2. *Black but not Hispanic*
 - 3. *Hispanic*
 - 4. *American Indian or Alaskan native*
 - 5. *Asian or Pacific Islander*
- 6.4 *What is your opinion on each of the following proposals (INTRO)? Could you tell me if you are for or against it?*
 - 1. *For it*
 - 2. *Against it*

The next component of a survey item we introduce is called *motivation (MOTIV)*. This part of text explains the broader purpose of the research to stimulate the respondent to answer the question(s). It consists of one or more sentences and contains keywords like "purpose," "research," "representative." Examples 6.5 and 6.6 demonstrate our point:

- 6.5 *We are doing research to find out the best way to ask questions.*
- 6.6 *For the statistical processing of a survey, it is important that the research be representative for the entire population. In order to obtain this, we need to know the general range of incomes of all people whom we interview.*

Information regarding the content (INFOC) clarifies or explains something about the content of the survey item. It is included in a survey item because many people do not have an opinion about many issues (Converse 1964). Linguistically it consists of one or more sentences. Examples 6.7-6.9 illustrate this concept:

- 6.7 *The European Political Union may include a common defense the arrangement involving the member states of the European Community. Successful Irish governments have accepted that moves toward the European Political Community could mean scrapping Ireland's policy of military neutrality.*
- 6.8 *There are different ways by which people can show their disagreement with the measures employed by the government.*

Frequently the explanation or the clarification contains arguments for and/or against a point of view. Kay (1998) has used this approach to test the stability or strength of opinions. Example 6.9 is an illustration:

- 6.9 *Since the crime rate among young people has been drastically increasing over the last few years, some citizens and political parties think that the government has to take strong action against crime.*

However, example 6.9 provides only one-sided information. Using such information, one can get very different results depending on the information given. If arguments are given, they should include arguments for both points of view (Sniderman and Theriault 2004), as is done in example 6.10:

- 6.10 *As you probably know some politicians fear that within a few years they will have to deal with an energy shortage. They therefore propose building more nuclear reactors. Other politicians warn about the dangers of nuclear energy and therefore suggest that no new reactors should be built.*

Saris et al. (1984) have developed a choice questionnaire using this approach in order to solicit *well-considered opinions* from respondents. For an elaborate discussion of this approach and its evaluation, we refer the reader to Neijens (1987).

We also defined a component about *information regarding a definition (INFOD)*. This part of text defines some "concept" used in the survey item like "abortion" or "euthanasia" or some scales. It can consist of one or more sentences but frequently it is shorter than a sentence, implying that it is embedded in another component, which is often an instruction to the respondent or a request for an answer. Illustrations of this component type might look like examples 6.11-6.13:

- 6.11 *By abortion we understand the deliberate termination of a pregnancy by a physician.*
- 6.12 *The "net income" is the amount you receive after tax deduction.*
- 6.13 *You get a ladder with steps that goes from 0 at the bottom to 10 at the top, 5 is the middle step at the ladder. At the top of the ladder are the very best feelings you might expect to have, and at the bottom of the ladder are the worst feelings.*

The next two components relate to *instructions*. Researchers can give instructions to the respondents or the interviewers. Linguistically they are characterized by sentences in the imperative mood or polite variations of it. Here we discuss only instructions that are used outside the request for an answer. Instructions can also be used within the request for an answer that has already been discussed in Chapter 3. Examples 6.14 and 6.15 illustrate instructions to the respondents (INSTRR):

- 6.14 *What do you think of President Bush? Express your opinion in a number between 1 and 0, where 0 is very bad and 10 very good.*
- 6.15 *Look at the card and tell me which answer seems to fit your situation.*

In the first example the survey item begins with a request for an answer and continues with an instruction for the respondent (INSTRR). In the second example the positions are reversed. Examples of instructions of interviewers (INSTR) are as follows:

- 6.16 *Hand over the show card. Only one answer is possible.*
- 6.17 *Read out the following text. If unclear, repeat instructions.*

The next component of a survey item indicated in Figure 6.1 is the *request for an answer (REQ)*. We will not repeat our discussion of this form because it has already been done detailed in Chapter 3.

The last component of a survey item presented in Figure 6.1 relates to *answer categories or response scales (ANSWERS)*. They are optional, as open requests for an answer do not require them and respondents have to give their own answers. Since Chapter 5 is entirely devoted to this topic, we only wish to alert you the presence of this component at this time.

6.2 DIFFERENT STRUCTURES OF SURVEY ITEMS

In this section we will discuss some different structures of survey items occurring in questionnaires as a consequence of researchers' choices. We will also indicate the position of the components in the item as far as possible. First we present the structures encountered in a number of selected questionnaires. For this purpose we used a sample of 518 Dutch survey items selected on the basis of a random procedure from a larger sample of 1527 survey items by Molenaar (1986: 34–44). Since this sample contains only requests for an answer with

closed answer categories, we added a sample of 103 open-ended Dutch requests for an answer from a database of the Steimmetz archive collected by Wouters (2001). A convenience sample of factual requests for an answer is studied on the basis of a collection of questionnaires from the Dutch Gallup institution NIPO, the Telepanel, and The Dutch Bureau of Statistics of the late 1980s and early 1990s. In order to compare these Dutch survey items with structures of English survey items, we collected 200 closed and open-ended requests for an answer that actually do not constitute a representative sample, from the Institute of Social Research (ISR, Ann Arbor, MI) questionnaires from the period 1979–1981, the Eurobarometer (1997) and survey items from Sniderman et al. (1991). Factual requests for an answer were also collected from Sudman and Bradburn (1983). A similar collection of 250 German survey items coming from surveys from the IFES Institute in Austria was also used for comparative purposes.

The abovementioned databases of survey items serve as an overview of different structures that occur in practice. At the end of the chapter we present a quantitative estimate of the frequency of occurrence of the structures for subjective variables on the basis of the random sample of survey items collected by Molenaar (1986).

In this chapter we will separately discuss two groups of survey items: open-ended requests for an answer and closed ones. This distinction is made because we expected a considerable difference between them.

6.2.1 Open-ended requests for an answer

First we illustrate the structure of an open-ended survey item that consists only of a request for an answer. There are no answer categories or rating scales mentioned since the request for an answer is open-ended. Examples 6.18–6.20 illustrate this type of structure:

- 6.18 *What is, in your opinion, the most important problem with which our country is confronted nowadays (REQ)?*
- 6.19 *Please, give me the reasons why you changed your job last year (REQ)?*
- 6.20 *How many hours a day do you watch television (REQ)?*

It will be obvious that the first two examples (6.18 and 6.19) are open-ended subjective requests for an answer where respondents are free to give their answers. Example 6.20 is a factual request for an answer, where the respondent provides the appropriate answer in terms of a number, which we also consider as open-ended since no answer categories are provided (Tourangeau et al. 2000). The following structures of open-ended requests for an answer contain two components. The first one that we illustrate consists of an introduction and a request for an answer.

- 6.21 *Now we would like to ask a question about your job (INTRO).
What do you think of your present job (REQ)?*

In this example the first sentence is a typical introduction while the second sentence is an open request. Sometimes the introduction is also formulated as a question:

- 6.22 *What do you think about the political situation in Europe (INTRO)?*
Do you think that the developments go in the right direction (REQ)?

The first request in this example must be seen as an introduction because no answer is expected from it. The second request in example 6.22 indicates that an evaluation is requested but as it is an open-ended request for an answer, answer categories are not provided.

Another structure of an open-ended survey item is used in combination with a closed request for an answer. This structure consists of three components, namely, a preceding closed request for an answer with answer categories either embedded or specified separately where an open-ended request for an answer follows. In this case an answer to both requests is expected. We mention this type of question because the closed question is normally used only as an introduction, while the actual open request is not complete as its content relates to the closed question. This can be shown by the following open-ended examples such as, “could you explain your answer?” or “could you tell me why?” which are not sufficient alone. An example of this combination is as follows:

- 6.23 *Do you think that in our country many or few people (ANSWER categories) make easy money (closed REQ)?*
1. *Many people*
 2. *Few people (ANSWER categories)*

How did you get this idea (REQ open-ended)

It is also obvious that this open-ended request for an answer relates to the specific answer given and asks for more detailed information.

6.2.2 Closed survey items

We first will discuss the structure of a closed survey item that consists only of a request for an answer with explicitly mentioned answer categories. Examples could be as follows:

- 6.24 *Do you think that we should have a world government for all countries (REQ)?*
1. *Yes*
 2. *No (ANSWER CATEGORIES)*
- 6.25 *Please tell me if your parents were members of a church (REQ)?*
1. *Yes*
 2. *No (ANSWER CATEGORIES)*

These structures are rather normal in mail surveys or other self-completion surveys. In such surveys the response categories are presented after the

request for an answer and are not embedded in the request for an answer. In oral surveys presented by an interviewer such forms are rather unusual, except very simple requests for an answer with clear “yes” or “no” answer categories. In surveys presented by an interviewer the answer categories are also often presented on a card given to the respondent (showcard) or embedded in the request for an answer. This latter structure is the next case to be discussed.

In interviewer-administered surveys closed survey items consist of a request for an answer in which answer categories are embedded. They are mentioned in the interview form again after the request. The interviewer does not repeat them again. These second set of answer categories are presented for administrative purposes. Therefore in these cases we indicate their presence in the printed form of the questionnaire by enclosing them in parentheses. Examples 2.26 and 2.27 illustrate this structure:

- 6.26 *Do you own or rent your home? (REQ + ANSWERS)*
1. *I rent the home*
 2. *I own my home (ANSWER CATEGORIES)*
- 6.27 *Please tell me whether you consider our President a good or bad leader or neither good nor bad? (REQ + ANSWERS)*
1. *Good leader*
 2. *Neither good nor bad*
 3. *Bad leader (ANSWER CATEGORIES)*

After some discussion of the simplest structures of closed survey items, we will show how structures of survey items can be expanded by adding components between the request for an answer and the answer categories.

The structures earlier mentioned can be expanded by inserting, for instance, an instruction for the respondent between the request for an answer and the answer categories:

- 6.28 *Are you working in the household or do you have a paid employment (REQ + ANSWER categories)?*
Please, mark only one answer category. If you engage in both activities choose the one you consider most important (INSTRR).
1. *Works in household*
 2. *Has paid employment (ANSWER CATEGORIES)*

The inserted component can also be an instruction to the interviewer that leads to the following example:

- 6.29 *What is the main reason why you might not go and vote at the next European elections (REQ)?*
Interviewer show card, one answer only (INSTRI).
1. *I am not interested in politics.*
 2. *I am not interested in the European elections.*
 3. *I am against Europe.*
 4. *I am not well enough informed to vote.*

5. *Other reasons.*
(ANSWER categories on card)

The added component can also be information regarding a definition, for example:

- 6.30 *Are you a member of a public library (REQ)?*
By "public library" we understand a library other than at a school or university (INFOD)
1. Yes
 2. No (ANSWER categories)

The examples just mentioned demonstrated that survey items can be expanded by inserting an instruction for the respondent, an instruction for the interviewer, or information regarding a definition after the request for an answer before the answer categories.

The next examples will present extensions of survey items by inserting components such as an introduction, information regarding the content, an instruction for the interviewer, or a motivation for the researcher before the request for an answer. Typical examples are as follows:

- 6.31 *The next question concerns the upcoming elections (INTRO).*
Please, tell me, if there were elections tomorrow, would you go to vote (REQ)?
1. Yes
 2. No (ANSWER CATEGORIES)
- 6.32 *People look for different things in their jobs. Some people like to earn a lot of money. Others prefer an interesting work (INFOC).*
Which of the following 5 items do you most prefer at your job (REQ)?
1. *Work that pays well*
 2. *Work that gives a feeling of accomplishment*
 3. *Work where you make most decisions yourself*
 4. *Work where other people are nice to work with*
 5. *Work that is steady with little chance of being laid off*
- (ANSWER CATEGORIES)
- 6.33 *Interviewer: Ask this question also when the respondent did not answer the previous question (INSTRI).*
Is the monthly income of your household higher than \$ 10,000 (REQ)?
1. Yes
 2. No (ANSWER CATEGORIES)
- 6.34 *We need the information about income of your household to be able to analyze the survey results for different types of households. An income group is enough.*
It would help us a lot if you would be able to state what income group your household belongs to (MOTIV).

Please, tell me, to which one of the following income groups your household belongs after tax and other deductions (REQ).

1. \$ 20,000 – \$50,000
 2. \$ 50,000 – \$ 100,000
 3. Higher than \$ 100,000
- (ANSWER CATEGORIES)

One also can find more complex structures with three components by inserting more components before the request for an answer. Typical examples are as follows:

- 6.35 *The following request for an answer deals with your work (INTRO).*
Some people think that work is necessary to support themselves and their families (INFOC).
Do you like your work or do you do it as a necessity to earn money? (REQ + answer categories)
1. *Likes his work*
 2. *Work is a necessity to earn money (ANSWER CATEGORIES)*
- 6.36 *Now I would like to talk about abortion (INTRO).*
"Abortion" means the deliberate termination of a pregnancy by a physician (INFOD).
Are there in your opinion situations that justify an abortion (REQ)?
1. Yes
 2. No (ANSWER CATEGORIES)

In the same way an instruction for the respondent or a motivation for an answer can be used.

Other structures with four components are also possible. For example, starting with an introduction followed by a request for an answer, an extra instruction or information and were the answer categories are at the end. An example could be

- 6.37 *In the following requests for an answer we would like to ask you about your leisure activities (INTRO).*
Please, tell me which of the following activities you prefer most in your spare time? (REQ)
Indicate only one activity (INSTRI).
1. *Sports*
 2. *Watching TV*
 3. *Reading*
 4. *Going shopping*
 5. *Talking with people*
 6. *Something else*
- (ANSWER categories in request for an answer)

Finally, even more complex structures can be found in the literature such as inserting several components before and after the request for an answer, for example:

- 6.38 We want to ask you about your education (INTRO). It is very important for us to get a good picture of the education of our citizens (MOTIV). By "education" we understand the schools you finished for a degree and we want to know the highest education you finished with a degree (INFOD).
- What was the highest level of educational training that you finished with a degree (REQ)?
1. Primary school
 2. Lower vocational training
 3. High school
 4. Higher vocational training
 5. University
 6. Other (ANSWER CATEGORIES)

Here follows another example:

- 6.39 Now we would like to ask you about issues that are frequently discussed in the media (INTRO). When a physician assists a patient at his/her own request to die, we call this euthanasia (INFOD).
- Some people and political parties think that euthanasia should be forbidden. Others are of the opinion that a physician always must comply with a patient's request to die. However, there are also people whose opinion lies in between (INFOC).
- What is your opinion about euthanasia (REQ)?
- Interviewer present the card (INSTRI).
- People who favor euthanasia should choose the number 7, which means that "a physician has to comply with a patient's request." People who are against euthanasia should choose the number 1, which means that "euthanasia should be forbidden. People who are neither for or against it should choose the number 4 (INSTRR)

Where would you place yourself on the scale (REQ)?

1	4	7
Euthanasia should be forbidden (ANSWER scale on card)	Neither for nor against it	A physician has to comply with a patient's wish

This type of request is not used often, because the text becomes very complex and it is unclear whether respondents can answer these questions at all.

6.2.3 The frequency of occurrence

After having introduced various structures of closed survey items on the basis of selected data, we can now investigate the frequency of occurrence of the

different structures of survey items, as in Table 6.1.

The frequency of occurrence of survey items relating to subjective requests for an answer is studied on the basis of Molenaars sample. Table 6.1 summarizes the structures of closed survey items that we encountered in this data set. This table shows clearly that structures where answer categories are embedded in the request for an answer are more frequent than structures without embedding them. This is because most interviews were still interviewer-administered in The Netherlands at that time. With the increase of the number of self-administered interviews like mail and WEB surveys this distribution might change quite rapidly.

The table also shows that researchers avoid highly complex survey items. Although complex items are possible as we have shown, they are seldom used in market and opinion research. Most frequently the items consist of two components. An inspection of the English and German survey items we had collected also confirmed that the structures mentioned in Table 6.1 were similar. Survey items consisting of more than three components were infrequent. Also, the most common extension of a basic structure of a survey item is to start with some information about the content of the following survey item. Another possibility is the use of an introduction. These two structures may be substitutes of one other as they seldom occur simultaneously.

Table 6.1: Overview of structures of closed survey items encountered in the sample of requests for answers for subjective variables with closed response categories

Structure of closed survey items relating to subjective requests	Number of components	Frequency Absolute
REQ + answer categories	2	8
REQ + embedded answer categories	2	39
REQ + embedded answer categories + answer categories	2	3
INFOC + REQ + embedded answer categories	3	30
INFOC + REQ + answer categories	3	5
INTRO + REQ + answer categories	3	1
INTRO + REQ + embedded answer categories	3	2
INTRO + REQ + embedded answer categories + answer categories	3	10
INTRO + REQ + answer categories	4	1
INTRO + INFOD + REQ + embedded answer categories	4	1
Total		100
		181

