

Attitude Questionnaires

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Introduction

According to Lanthier (2002), a questionnaire is nothing more than a set of questions given to a sample of people. Usually the main reason is to collect information about the people's attitudes, thoughts, behaviors, etc. Researchers compile the answers of the people in the sample because they would like to know how the group as a whole thinks or behaves. A questionnaire is intended to be completed by a number (often a large number) of potential respondents (data) following a similar or identical procedure.

Lanthier (ibid.) characterized the following advantages of using questionnaires during a research:

- “using a questionnaire with a random sample is a good way to find out attitudes, thoughts, and behaviors of a large group of people;
- we can be more confident in generalizing our findings than we can be with a case study;
- in other words, because we have a group of people (random sample) instead of a case, we are more sure that the findings apply to the population”.

Lanthier also mentions two elements of a questionnaire that are not so much disadvantages as potential problem areas.

- “The way a question is worded can change how people answer the question. A question that asks for an opinion about “tax breaks for small businesses” would yield different responses than an opinion question about “corporate welfare.” When you read about the results of a survey or questionnaire, it's important to know exactly how the question was phrased” (Lanthier 2002).
- “Getting a random sample of people from the population can be difficult, so sometimes people doing surveys do not get a random sample. It is much easier to go to a shopping mall or diner and ask people their opinions of a proposed law than to generate a random sample of voters in the state. When you read about the results of a study using a questionnaire, it is important to know whether the participants were a random sample” (Lanthier 2002).

An Attitude Questionnaire

Gene F. Summers defined attitude as a predisposition to respond to an idea or an object. Attitudes, like in marketing, can be divided into three elements (Stoker, 2010):

- beliefs;
- emotional feelings;
- readiness to respond.

These three elements are forming the picture called image and attitude measurement refers to scaling (Stoker, 2010).

An attitude questionnaire is also a set of questions, like questionnaires in general, but the questions in this case are asked to individual people. During the answering process the data can take into consideration his or her personal outlook or approach to answered questions. If the questions of such a questionnaire are constructed in a specific order helps to ensure that the data's opinions are well reflected.

These special questionnaires are used to translate subjective attitudes of people into empirical data. Attitudes themselves are distinguishable from interests and personality traits. Attitudes are usually attached to an object (Hogan 2007).

Cappelli Maurizio, from Sciarra Caterina, University Of Florence, embraced the Eagly and Chaiken definition of attitude (1993), which says that an "attitude is a psychological tendency expressed evaluating a specific entity, with any degree of favour or disfavour".

- by "tendency" he means the disposition to answering;
- by "evaluating" he means the attribution of any degree of positivity or negativity;
- by "entity" he means objects, ideas, people, problems.

According to Maurizio the attitude is multidimensional and it is composed of 3 dimensions:

- *affective;*
- *cognitive;*
- *behavioural.*

A Special Method: Thurstone's Method

L. L. Thurstone was considered to be a U.S. pioneer in the fields of psychometrics and psychophysics. Thurstone originally received a master's degree in Mechanical Engineering. He was responsible for the standardized mean and standard deviation of IQ scores used nowadays. He is mostly well-known for the development of the so called Thurstone's scale.

Thurstone's method is based on the application of the ideas of psychophysical measurement in the field of social values (Thurstone 1927).

But before dealing with Thurstone's scale and his methods we should look at measuring and assignment from a closer point of view. During measuring we are dealing with quantitative features, like in sociometry or in pedagogical methodology and if we are talking about an assignment, usually, we are dealing with a set of elements of phenomena, things and features with numerical values. As a result from this point of view there is equality between measuring and assignment. This "assignment" depends on *empirical relations* of phenomena, so things and features that should be kept and reflected in numbers.

The most important practically verified empirical relations are:

- Arrangement of elements according to size
- Distance existing between elements
- Existing starting point

Thurstone Scaling

According to William M.K. Trochim, a Professor in the Department of Policy Analysis and Management at Cornell University, Thurstone was a very productive scaling theorist. As Trochim says Thurstone invented three different methods:

- the method of equal appearing intervals;
- the method of successive intervals;
- the method of paired comparison.

The method of equal appearing intervals is based on the concept that even though people could not assign quantitative measures to their own attitudes, they could tell the difference between the attitudes represented by two different statements and could identify items that were approximately halfway between the two. The process is the following:

- collecting large number of statements related to the attitude in question;
- having twenty or more judges to sort the statements into eleven groups from the most favorable to the most unfavorable;
- studying the frequency distribution of ratings of each statement and eliminating those statements that were given widely scattered ratings by different judges;
- determining the scale value of each of the remaining statements;
- selecting one of the two statements from each of the eleven piles for the final scale;
- statements with the narrowest range of rating are preferred as the most reliable.

The disadvantages of using this method could be that the ratings can be influenced by the judges' personal attitude; different individuals can obtain exactly the same results; there is no information about the intensity of agreement with the ratings.

According to Cappelli Maurizio, from Sciarra Caterina, University Of Florence, Thurstone's scaling is one of the most popular applications of Thurstone's works in subjective measurement.

Maurizio says that Thurstone formulated the concept of equal appearing intervals, which he extended to the measurement of attitudes through a scale, the Thurstone scale.

"The scale is so constructed that two opinions separated by a unit distance on the base line seem to differ as much in the attitude variable involved as any other two options also separated by a unit distance" (Thurstone–Chave 1929).

The forerunner of the method of paired comparison was Wilhelm Wundt a philosopher and professor known today as of modern psychology. Thurstone was trying to develop Wundt's experiment with psychophysical measurements. Wundt's experiment basically was about the following. There were boxes, almost the same, filled with bullets, while the difference in weight was small. The task of the data was to put the boxes in order without using any measuring tools. The data could only rely on subjective comparison of the pairs of the boxes.

Thurstone's modifications were the following:

- the data must choose one of the compared boxes
(Two outstanding cases:
 1. there is a big difference in weight – all the data are able to put the boxes into order
 2. same weight – the data choose the boxes with the same possibility
- the order is created based on the opinion of lots of data
(Subjective rating of many data → objective proportion of weight difference, like the NASA click - workers)
- the result of measuring is an interval scale

Conclusion

Maurizio stated at the conference held in Poland in 2009: "Although Thurstone scale method has been a remarkable cue for other following surveys it has been criticised over several aspects with reference to the attitudes measurement." (Maurizio 2009)

All the three Thurstone scaling methods are very similar to each other. Trochim says: "All of them begin by focusing on a concept that is assumed to be unidimensional and involve generating a large set of potential scale items. All of them result in a scale consisting of relatively few items which the respondent

rates on Agree/Disagree basis. The major differences are in how the data from the judges is collected. For instance, the method of paired comparisons requires each judge to make a judgement about each pair of statements. With lots of statements, this can become very time consuming indeed. With 57 statements in the original set, there are 1,596 unique pairs of statements that would have to be compared! Clearly, the paired comparison method would be too time-consuming when there are lots of statements initially" (Trochim 2006).

In general the advantages of using one of Thurstone's methods during a research connected with measuring attitude are the following:

- easy to understand;
- easy to match with other indicators, either objective or subjective;
- useful and easily comparable with other parallel questionnaires.

A general disadvantage, one of Thurstone's methods, could be that people very rarely compare two or more different things at the same time in real life. Probably that is why these methods are considered at a theoretical level rather than a practical one.

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