

Thurstone scales: The Thurstone scale is made up of statements about a particular issue and each statement has a numerical value indicating the respondent's attitude about the issue, either favorable or unfavorable. People indicate which of the statements with which they agree and the average response is computed. First, you must be very clear about exactly what it is you're trying to measure. Then, collect statements on the topic ranging from attitudes that are favorable to unfavorable. For this example, we will use same sex marriage. Example statements are

- It should be against the law.
- There's absolutely nothing wrong with it.
- Marriage is between a man and a woman.
- It should be a sin.
- It's perfectly appropriate for two consenting adults.
- It should be legalized.
- It can harm children.
- Same sex couples should have the same legal rights as a male/female couple.
- It's just horrible.
- It can't do any harm.

Next, you have judges evaluate, on an 11 point response format (1 very negative to 11 indicating very positive), what kind of attitude each of these statements reflects. For example it's likely that the statement "It should be a sin." would be judged to represent a very negative attitude while the statement "It should be legalized." would be judged to represent a very positive attitude. The idea is that you'd like to develop a set of items that not only reflect the entire continuum between 1 and 11, but that your judges who helped you develop the set of items would have considerable consensus about what level of attitude each of the statements reflected. In this exercise, statements for which there is little consensus would be discarded.

Let's assume that the average ratings among our judges are as below:

	<u>Average</u>
It's should be against the law.	1.7
There's absolutely nothing wrong with it.	6.8
Marriage is between a man and a woman.	2.4
It should be a sin.	1.3
It's perfectly appropriate for two consenting adults.	8.4
It should be legalized	9.1
It can harm children.	2.0
Same sex couples should have the same legal rights as male/female couples.	7.6
It's just horrible.	1.5
It can't do any harm.	6.9

Suppose that there was reasonable consensus among our judges for the above items. When administering the scale, we'd ask individuals to indicate which of the above they agreed with (the average level that our judges had agreed upon would not be indicated on the scale when administered to individuals). Finally, the average of those checked would be calculated to determine the individual's attitude. Problems with developing Thurstone scales include 1) it can be quite time consuming and expensive, and 2) examples for the mid-points of the scale for which there is consensus among the judges can be difficult to obtain.

Guttman scales: With a Guttman scale, you have a set of statements so that a respondent who agrees with any specific statement in the list will also agree with all previous statements. In other words, each statement subsumes the lower order statements. For example, a scale designed to measure Post-Traumatic Stress Syndrome, presented below, was based upon the Guttman technique and was published in the Journal of Clinical Psychology (1323-1328, 1984).

<u>Scale score</u>	<u>Scale item</u>
0	In service 1965-1975
1	Stationed in Vietnam
2	Saw injury or death of US Serviceman
3	Fired weapon/fired upon in combat
4	Responsible for death of enemy military
5	Wounded in combat
6	Responsible for death of enemy civilian
7	Served third tour of duty in Vietnam

Likert, Likert-type, or Summated Rating Scales: Individuals without tremendous expertise are able to develop sophisticated measures using the Likert method for developing scales. Although originally developed with a number of statements in which individuals indicated their extent of agreement with response choices such as 1 = disagree, 2 = disagree somewhat, 3 = neither agree nor disagree, 4 = agree somewhat, 5 = agree, statements with other response choices such as unimportant to important can be used. Additionally, it's been found that if the anchors at each end are good anchors, the choice points in between the end anchors do not need to be labeled. Thus, a scale that measures job satisfaction might look like

	<u>Very Dissatisfied</u>			<u>Very Satisfied</u>	
The actual job itself.	1	2	3	4	5
The degree to which you feel 'motivated' by your job.	1	2	3	4	5
Current career opportunities.	1	2	3	4	5
The level of security in your present job.	1	2	3	4	5
The extent to which you may identify with the public image or goals of your organization.	1	2	3	4	5
The style of supervision that your superiors use.	1	2	3	4	5
Your level of salary relative to your experience.	1	2	3	4	5
The way changes and innovations are implemented.	1	2	3	4	5