

Scaling

The branch of measurement that involves the construction of an instrument that associates qualitative constructs with quantitative metric units.

Measurement

- a data point

Measurement (response) scale

vs.

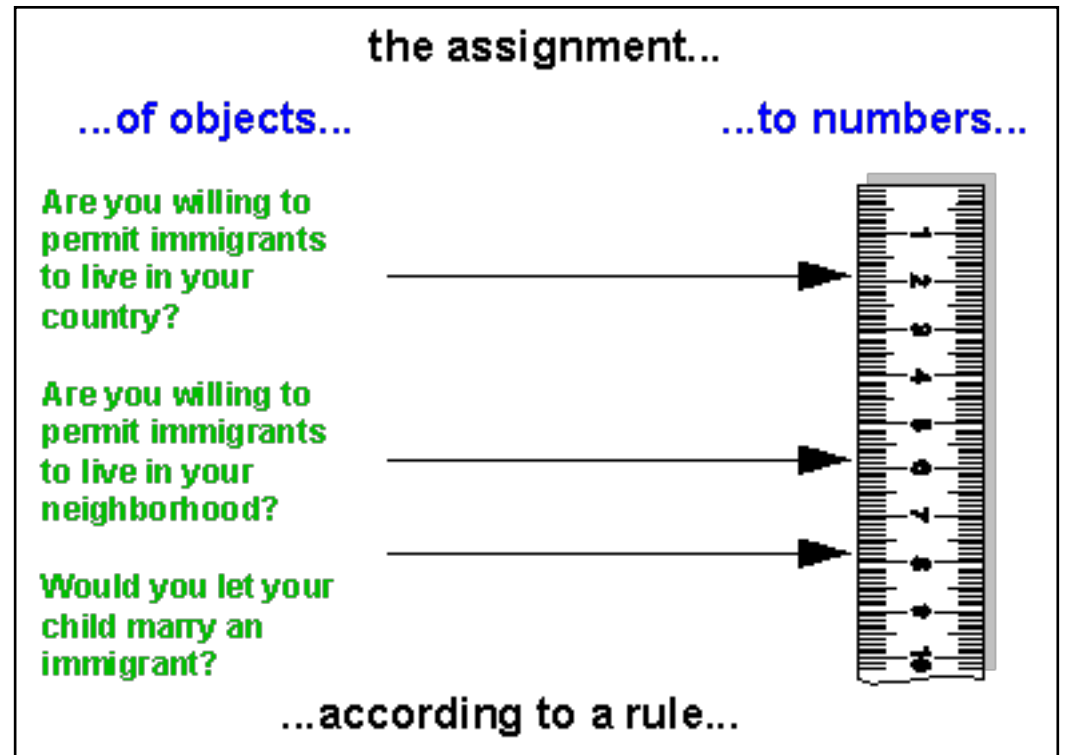
Scaling

Measurement scale (response scale)

- instrument used to collect responses (measurements) for an item
- item not associated with scale value
- used for a single item

Scaling

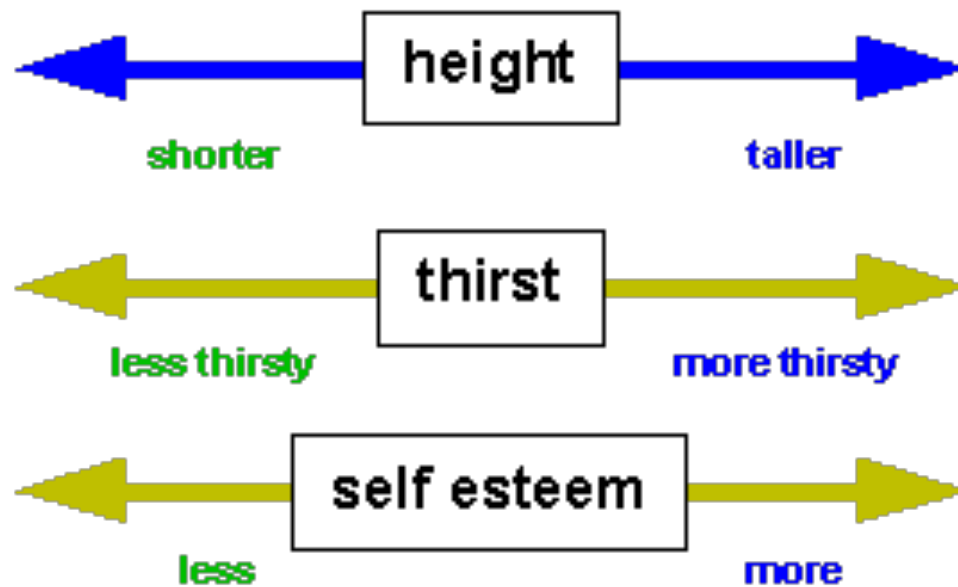
- assignment of objects to numbers according to a rule
- results from a process
- each item on scale has a scale value
- refers to a set of items
- scale can have any number of dimensions



Dimensionality

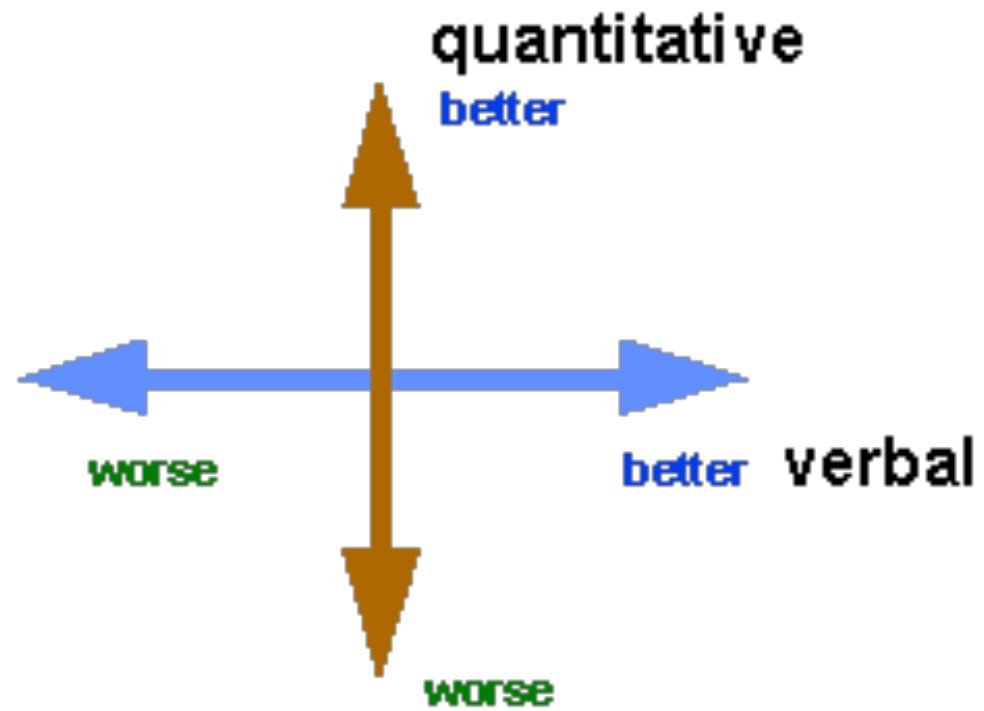
- Unidimensional
- Multidimensional

One-dimensional (unidimensional)



Two-dimensional

- IQ



Common Unidimensional Scale Types

- Thurstone
- Likert
- Guttman

Thurstone (1929)

Process

- Develop focus
- Generate potential scale items
- Rate the scale items
- Compute **scale score values** for each item
- Select the final scale items
- Administer scale (agree or disagree)

Total scale score = sum/average the scale scores of all the items person agrees with

Likert* (1932)

- Response scale (1-to-5; 1-to-7, etc.) from ***Strongly Disagree*** to ***Strongly Agree***
- Most often odd-numbered (middle value becomes 'neutral' or 'undecided').
- Even-numbered is 'forced-choice'.
- A summative scale

Final score = sum/average of ratings for all items

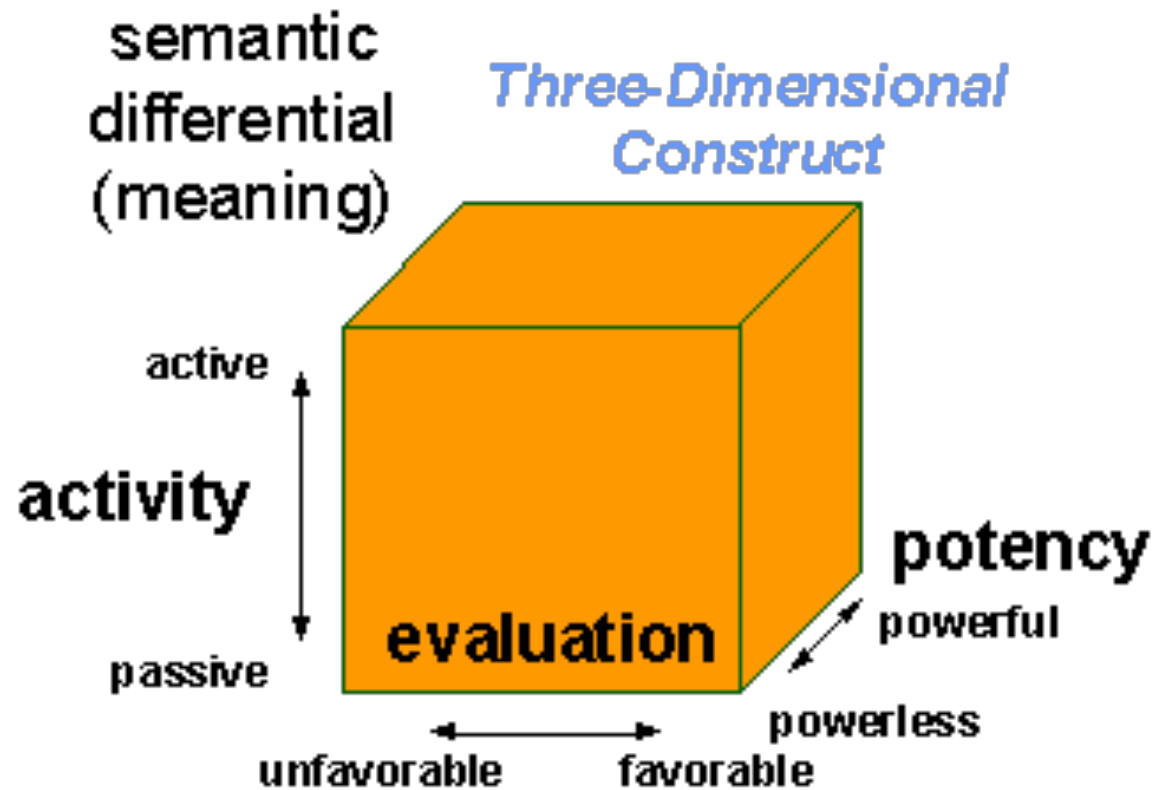
Guttman

- Develop scale items on a continuum based on agreement
- Scalogram analysis
- Cumulative scale

Total scale score = sum/average the scale scores of all the items person agrees with

Three-dimensional scale

- Meaning (activity, evaluation, potency)
- Semantic differential (1957)



Heavy

___ : ___ : ___ : ___ : ___ : ___ : ___

Light

Weak

___ : ___ : ___ : ___ : ___ : ___ : ___

Strong

Active

___ : ___ : ___ : ___ : ___ : ___ : ___

Passive

Good

___ : ___ : ___ : ___ : ___ : ___ : ___

Bad

Unpleasant

___ : ___ : ___ : ___ : ___ : ___ : ___

Pleasant

Large

___ : ___ : ___ : ___ : ___ : ___ : ___

Small

Dull

___ : ___ : ___ : ___ : ___ : ___ : ___

Sharp

Fast

___ : ___ : ___ : ___ : ___ : ___ : ___

Slow

Beautiful

___ : ___ : ___ : ___ : ___ : ___ : ___

Ugly

Dirty

___ : ___ : ___ : ___ : ___ : ___ : ___

Clean

Valuable

___ : ___ : ___ : ___ : ___ : ___ : ___

Worthless

Negative

__ 1__ : __ 2__ : __ 3__ : __ 4__ : __ 5__ : __ 6__ : __ 7__

Positive

Positive

__ 7__ : __ 6__ : __ 5__ : __ 4__ : __ 3__ : __ 2__ : __ 1__

Negative

Evaluative

Heavy _____ : _____ : _____ : _____ : _____ : _____ : _____

Light

Weak _____ : _____ : _____ : _____ : _____ : _____ : _____

Strong

Active _____ : _____ : _____ : _____ : _____ : _____ : _____

Passive

Good _____ : _____ : _____ : _____ : _____ : _____ : _____

Bad

Unpleasant _____ : _____ : _____ : _____ : _____ : _____ : _____

Pleasant

Large _____ : _____ : _____ : _____ : _____ : _____ : _____

Small

Dull _____ : _____ : _____ : _____ : _____ : _____ : _____

Sharp

Fast _____ : _____ : _____ : _____ : _____ : _____ : _____

Slow

Beautiful _____ : _____ : _____ : _____ : _____ : _____ : _____

Ugly

Dirty _____ : _____ : _____ : _____ : _____ : _____ : _____

Clean

Valuable _____ : _____ : _____ : _____ : _____ : _____ : _____

Worthless

Potency

Heavy

_____ : _____ : _____ : _____ : _____ : _____ : _____

Light

Weak

_____ : _____ : _____ : _____ : _____ : _____ : _____

Strong

Active

_____ : _____ : _____ : _____ : _____ : _____ : _____

Passive

Good

_____ : _____ : _____ : _____ : _____ : _____ : _____

Bad

Unpleasant

_____ : _____ : _____ : _____ : _____ : _____ : _____

Pleasant

Large

_____ : _____ : _____ : _____ : _____ : _____ : _____

Small

Dull

_____ : _____ : _____ : _____ : _____ : _____ : _____

Sharp

Fast

_____ : _____ : _____ : _____ : _____ : _____ : _____

Slow

Beautiful

_____ : _____ : _____ : _____ : _____ : _____ : _____

Ugly

Dirty

_____ : _____ : _____ : _____ : _____ : _____ : _____

Clean

Valuable

_____ : _____ : _____ : _____ : _____ : _____ : _____

Worthless

Activity

Heavy

_____ : _____ : _____ : _____ : _____ : _____ : _____

Light

Weak

_____ : _____ : _____ : _____ : _____ : _____ : _____

Strong

Active

_____ : _____ : _____ : _____ : _____ : _____ : _____

Passive

Good

_____ : _____ : _____ : _____ : _____ : _____ : _____

Bad

Unpleasant

_____ : _____ : _____ : _____ : _____ : _____ : _____

Pleasant

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_____ : _____ : _____ : _____ : _____ : _____ : _____

Sharp

Fast

_____ : _____ : _____ : _____ : _____ : _____ : _____

Slow

Beautiful

_____ : _____ : _____ : _____ : _____ : _____ : _____

Ugly

Dirty

_____ : _____ : _____ : _____ : _____ : _____ : _____

Clean

Valuable

_____ : _____ : _____ : _____ : _____ : _____ : _____

Worthless

Some common unidimensional scales (in semantic differential format)

Attitude Toward the Ad (A_{ad})

"predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure situation" (MacKenzie, Lutz and Belch 1986, p. 130).

good	1	2	3	4	5	6	7	bad
like	1	2	3	4	5	6	7	dislike
interesting	1	2	3	4	5	6	7	boring
creative	1	2	3	4	5	6	7	uncreative
informative	1	2	3	4	5	6	7	uninformative

MacKenzie, Scott B. and George E. Belch (1986), "The Role of Attitude Toward the Ad as a Mediator of Advertising Effectiveness: A Test of Competing Explanations," *Journal of Marketing Research*, 23 (May), 130-43.

Attitude Toward the Brand (A_B)

Includes beliefs formed from ad brand attribute information and inferences based on ad content (Gardner 1985)

bad	1	2	3	4	5	6	7	good
dislike quite a lot	1	2	3	4	5	6	7	like quite a lot
unpleasant	1	2	3	4	5	6	7	pleasant
poor quality	1	2	3	4	5	6	7	good quality

Gardner, Meryl Paula (1985), "Does Attitude to the Ad Affect Brand Attitude Under a Brand Evaluation Set?" *Journal of Marketing Research*, 22 (May), 192-8.