Why branch attitude questions?

Theoretical and Methodological Considerations
How many points are optimal for a rating scale?

Is it better: a numerical scale, a partially labeled scale, or a fully labeled scale?
How many points are optimal for a rating scale?

Is it better: a numerical scale, a partially labeled scale, or a fully labeled scale?

**With branching format all the answers given to these questions may change!**
What is branching

A branching question instead of asking directly the position in a bipolar scale employs **two steps:**

- Asks **first the direction**
  “Are you satisfied or dissatisfied?”

- and **after the extremity**
  “How much? A little, somewhat, or a lot?”
When branching

Branching is useful for measuring, with a rating scale,

- In general: **Bipolar constructs**
- Specifically: **Attitudes**
Attitude measurement potentially represents the main field of application of branching scales and branching research
Attitudes: Bipolar constructs

- Attitude is a controversial concept, but

- The uncomplicated definition given by Thurstone (1931) included all the 3 elements closely connected to its measurement:

  “Attitude is the **affect** [1] for or against [2] a **psychological object** [3]”
Attitudes: Bipolar constructs

- **Affective-emotive dimension** (Fishbein and Ajzen, 1975)
Attitudes: Bipolar constructs

• **Bidirectional**

  Attitude must be measured by employing “a procedure which *locates the subject on a bipolar affective or evaluative dimension*” (Fishbein and Ajzen, 1975)
Attitudes: Bipolar constructs

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- and not two separate evaluations
  - Positive feeling
Attitudes: Bipolar constructs

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  - Positive feeling
  
  - Negative feeling
Attitudes: Bipolar constructs

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  ![Smiley faces](image)

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  - Positive feeling
  - Negative feeling
Attitudes: Bipolar constructs

- Holistic evaluation of only one entity
Attitudes: Bipolar constructs

- **Holistic evaluation of only one entity**

  - Attitude 1
  - Attitude 2

- and not of multiple subjects, objects or situations.

  - Attitude 1 & 2
  - Attitude 1
  - Attitude 2
Attitudes: Bipolar constructs

- Holistic evaluation of only one entity

- and not of multiple subjects, objects or situations.
Attitudes: Unipolar or Bipolar scales?

Attitude is bipolar and requires bipolar rating scales, so:

- A **unipolar verbally labeled** scale is incorrect
Attitudes: Unipolar or Bipolar scales?

Attitude is bipolar and requires bipolar rating scales

- A bipolar verbally labeled scale is correct

<table>
<thead>
<tr>
<th>Completely dissatisfied</th>
<th>Somewhat dissatisfied</th>
<th>Somewhat satisfied</th>
<th>Completely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td>Somewhat satisfied</td>
<td>Very satisfied</td>
<td>Compmletely satisfied</td>
</tr>
</tbody>
</table>
Attitudes: Unipolar or Bipolar scales?

Attitude is bipolar and requires bipolar rating scales

- A **unipolar numerical** scale measuring satisfaction is incorrect
Attitudes: Unipolar or Bipolar scales?

Attitude is bipolar and requires bipolar rating scales

- A bipolar numerical scale is correct
Why branching?
Why branching: Traditional view

Main reason given to branching:

- **Simplification** the judgment task

  **Decomposition principle** (Armstrong, Denniston, & Gordon, 1975)

  Reducing a complex decision task into a series of **smaller** and **simpler decision tasks** allows people to make better judgments
Why branching: Traditional view

Other reasons:

• **Explore the midpoint** information

• **Less burdensome** for respondents to a **telephone** interview

• Effectiveness of **two-category** scales to reliably capture the **direction** and also of **longer scales** to measure the **intensity** (Alwin, 1992)
Why branching: Hypothesis

The crucial reason here suggested:

• Branching scales might have the

**Same unit of measurement for both sides**
Asymmetry of rating scales

Saris and Gallhofer (2007)

Symmetric scales are less valid and reliable than

Asymmetric scales (fewer negative categories)
Asymmetry of rating scales

That means:

- The **power of discrimination** of the positive side is **different** from the negative because the distance between the categories is different

- There are **two different units of measurement**

Asymmetric scales (considering the unit of measurement)
Asymmetry of rating scales

- **Negative labels**, both **verbal and numerical**, are **not symmetrical** with their positive equivalents.

- The negative part is **conceptualized** and **used** by respondents **differently** compared to the positive part.

- Negative answers, on any scale, belong to a **different system of measurement** from positive answers.
Asymmetry of rating scales

• Employing asymmetric scales, as suggested, is not the best solution, because the two directions have not the same probability to be chosen.

• The bias resulting from the asymmetry might be reduced using branching and removing reference to either the positive or negative direction in the second step.

**FIRST STEP**

| Positive | Negative |

**SECOND STEP**

Intensity

| 1 | 2 | 3 | 4 |

(“a little”, “quite a bit”, “a lot”, “completely”)
Bipolar construct and Bipolar scale

- Visual representation of a bipolar construct in a bipolar scale:
  - Common sense (the same of the theoretical view)
  - Alternative perspective (less natural, never used)
Why branching numerical scales

- Branching solve 2 problems of unipolar numerical scales for measuring bipolar constructs
  1. the **scale is bipolar**, so it is also correct
  2. the **midpoint logic** is the **same** of **respondent’s midpoint** (no errors due to misunderstanding of direction or intensity of the numeric answer)
Why branching numerical scales

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• And solve the main problem of bipolar numerical scales

  3. **no positivity bias** caused by using **negative numbers** (people simply avoid minus numbers because they don’t use them in everyday life)
Branching research
Problem of branching the midpoint

- **Second step for the midpoint** to probe whether respondents in the middle are leaning toward one of the two directions or really in the middle:

  That means *remeasuring the direction* and *not measuring the intensity*

  so the result might be the measurement of *another dimension*

  obtaining a *classification* and not a scale
Improving telephone interviews

- **Satisficing behaviors nonbranching the midpoint:**

  If respondents in the middle receive only one step a larger number of them could choose the midpoint, because less burdensome (Groves and Kahn, 1979)

- **Vulnerability** of branching

  HIGHER AMOUNT OF MISSING DATA VALUES

  generated by the twice more chances that respondents have to answer “don’t know” along two steps (Miller, 1984)
Branching reliability and validity

Krosnick & Berent (1993)

• Study 5, 7 and 8 compared for the first time one- and two-step versions of fully verbally labeled scales

Branching format showed higher reliability (test-retest) and validity (correlation with other variables criteria)
How branching

1. Do not branch the midpoint to improve the scale
   (you will obtain a classification and not a scale)
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Thanks

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