Apr 17th, 11:00 AM - 12:00 PM

Using Emotional Framing to Manipulate Anchoring Effect: How Affect Influences Judgment and Perception

Elizabeth M. Waterman
ew111610@umconnect.umt.edu

Let us know how access to this document benefits you.

Using Emotional Framing to Manipulate Anchoring Effect: How Affect Influences Judgment and Perception

Elizabeth M, Waterman, Cognitive Neuroscience, University of Montana

Defining Influences of Framing on Memory

Emotion ≠ Framing

- Unbiased emotion is too involved of a experience to be able to produce in a participant
- Framing is used to expose the participant to words with emotional connotations

Anchoring Effect:

- A cognitive bias causing an individual to rely too heavily on one piece of information when making decisions and forming judgments.
- Investigating whether the anchoring effect can be reduced or even eliminated by using a novel manipulation, such as a frame of emotion
- Could be caused by increased analytical thinking and systematic cortical attention to given to negatively emotional events.
- Will help to further understand the connection and influences of emotion on memory, judgment, and contextual understanding

Formulating the Emotional Framing Questionnaire to test if there will be any effect on Anchoring effect

Four Conditions, 2x2 Between Subjects Design

	Negative Frame	Positive Frame
Low Anchor	NFLA (n=30)	PFLA (n=26)
High Anchor	NFHA (n=26)	PFHA (n=21)

Total N=103

Question Examples:

Others tend to view me as being _____ in situations where they need to rely on me
- Horrible
- Insufficient
- Awful
- Bad
- Mediocre
- Decent

I am _____ at communicating my thoughts and emotions
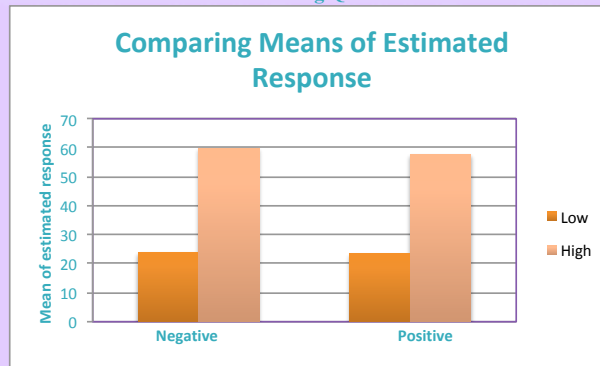- Exceptional
- Outstanding
- Awesome
- Super
- Good
- Decent

Confidence Level:

How likely do you think your answer is correct?
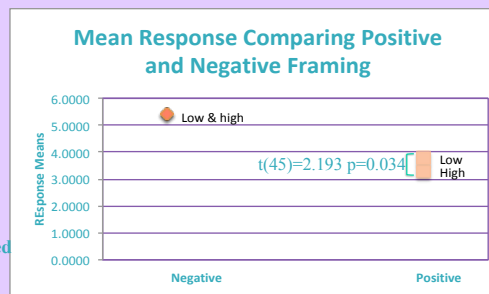%| 0 | 20 | 40 | 60 | 80 | 100

Main Effect by the Anchor

- Framing effect found statistically insignificant
  - There is no effect on the data of the Anchoring Effect that could be due to the Framing Questionnaire

Comparing Means of Estimated Response (bar chart, Mean of estimated response vs Negative/Positive, Low and High)

$(F(1,99)=299.78, p<.001)$

This shows that there is consistent data for the anchoring question, regardless of the Positive and Negative framing

Mean Response Comparing Positive and Negative Framing (scatter chart, Low & high, Low/High)

$t(45)=2.193\ p=0.034$

- If there were no influences by the negative or positive framing, then the distribution of scores should be similar for all four conditions.
- However, scores are not "normally" distributed

  The level of confidence in estimated number of questions answered correctly did not differ between groups

The data for the confidence question was consistent throughout all conditions
- Meaning that regardless of the high or low anchor, or the positive and negative framing, that participants' perception of whether or not they got the math questions correct was unaffected $(p>.55)$

Simple math questions are used to test the anchoring effect
Ex. 27-8=?

Anchoring Question:
Low Anchor-
Do you think you correctly solved more or less than 17 math problems? How many math problems do you think you correctly solved?
High Anchor-
Do you think you correctly solved more or less than 63 math problems? How many math problems do you think you correctly solved?

Actual number of math questions: 40

Method of Analysis

- Comparing Means of Estimated Response:
Used two-way ANOVA and Univariate Analysis of Variance
- Mean Response Comparing Positive and Negative Framing:
Separate t-tests

Interpreting the Patterns in the Data

- There is a significant difference between the Anchor (High and Low), but not between the Framing (Negative and Positive) Questionnaire.
- Shows that there is significant consistency, between groups, of their perception of the math questions asked

Regardless of positive or negative emotionally associated frame, this shows that a frame of emotion does not have any effect on someone's experiences of a situations

Since there was no change on the pattern of data by Anchoring Effect:
- Could be due to the strength of the Anchoring Effect compared to how strong of a manipulation the Framing Questionnaire could have on the perception of the situation.

Implications of the data

This data is supposed to be able to be implied to situations where an individuals contextual memory that involves an emotional response is being tested. So the impact could be applied to eye-witness testimonies of any sort of attack or assault.

- With the results that are seen:
  - We know that there is no deliberate effect by implied emotion on judgment
  - There is also no effect on the person's interpretation of a situation as their confidence of what they perceived is consistent regardless of context

Future Directions:
- Use a standardized list of words for the questionnaires to be able to compare the negative and positive conditions and the mean responses directly

The University of Montana — MISSOULA 1893

dhc — DAVIDSON HONORS COLLEGE