

Effect of food deprivation on the susceptibility to the attraction effect

Master thesis

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Abstract:

- Need states, such as hunger, can enhance the ability to perceive magnitudes. Having a need state can result in smaller visual biases.
- The attraction effect is an effect that postulates that adding a new alternative, a so-called decoy, to an existing choice set can alter the preferences of the original options. Individuals are more likely to choose the target, the dominating option, over the competitor if the original options are presented with a decoy compared to if the options are presented without a decoy.
- Recent research showed that the attraction effect also arises in simple perceptual decision tasks such as size perception.

Hypotheses:

H1: Individuals having a specific need state are less susceptible to the attraction effect than individuals that do not have this particular need state if a stimulus is related to the need state.

H2: No difference between individuals having a specific need state, respectively, not having this need state in the susceptibility to the attraction effect if a stimulus is unrelated to the need state.

References:

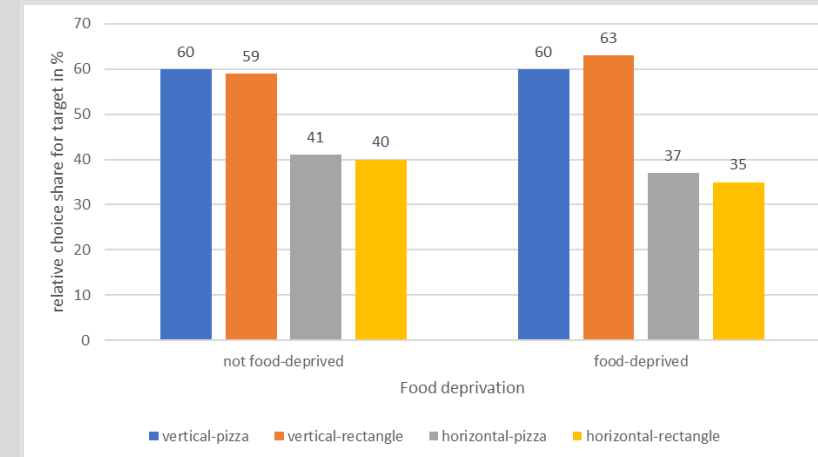
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Method:

- 60 online participants, recruited on MTurk
- Self-report measure for hunger
- Series of 180 perceptual decision tasks, where the participants had to choose the image with the largest area in each trial.
- Each trial consisted of a target, a decoy and a competitor.
- 90 trials were consisting of pizza (food-stimuli), 90 were consisting of black rectangle (neutral-stimuli), the order of the tasks was fully randomized. (see example task for each stimuli type below).
- The orientation of the decoys was half of the time vertical and half of the time horizontal
- Measuring of relative choice shares for targets for the different types of decoys = RST.



Results:



- The graph above shows the RST for the two formed groups of food-deprivation and the different decoy conditions.
- No general attraction effect could be observed.
- A vertical-horizontal illusion appeared. -> Individuals overestimated the vertical line, and therefore the areas of vertically aligned object.
- No significant RST difference between the different groups food-deprived vs. not food-deprived could be observed.
- No significant RST difference between pizza vs. rectangle decoys could be observed.
- Significant difference of RST between horizontal vs. vertical decoy orientation could be observed.