HYPOTHESES 1 AND 2
▸ There will be an interaction effect between vCertainty and vStrength when certainty is the primary attribute. The accuracy of width will not vary significantly with different vCertainties. Hue and saturation will have much lower accuracy when certainty is encoded using lightness compared to other alternatives.

▸ Lightness was less accurate when paired with hue than with width or saturation.

HYPOTHESES 3 AND 4
▸ There will be an interaction effect between vCertainty and vStrength when strength is the primary attribute. Accuracy of width will not vary significantly with different vStrengths. Lightness and saturation will have much lower accuracy when certainty is encoded using lightness compared to other alternatives.

▸ Fuzziness turned out to have a stronger negative impact on the perception of width than the other three certainty visual variables.

HYPOTHESIS 6
▸ Accuracy will be the same on the visual search tasks as on the comparison tasks.

▸ Participants were generally more accurate on the comparison tasks than on the visual search tasks.

HYPOTHESIS 8
▸ There are no significant interaction effects between task type and vStrength or between task type and vCertainty.

▸ Visual search task: participants were most accurate with width and were significantly more accurate at interpreting width than saturation.

▸ Comparison task: participants were least accurate with width and were significantly less accurate at interpreting width than hue.
HYPOTHESES 5 AND 7
▸ Accuracy will be lower under the low-discriminability condition than the high-discriminability condition. There will be no significant interaction effects between difficulty and vStrength in edge certainty tasks or between difficulty and vCertainty in edge strength tasks.

TARGET TYPE STRENGTH
Lower discriminability meant higher accuracy to the vStrength = width and vCertainty = fuzziness.

CONCLUSIONS AND RECOMMENDATIONS
▸ Lightness is an effective visual variable for depicting uncertainty; but lightness should not be combined with hue.
▸ Fuzziness, grain, and transparency are all robust to encode the secondary dimension. However, fuzziness has a strong negative impact on the perception of width.
▸ Consider user tasks at the earlier stage of choosing visual variables.
▸ Perception of one of the variables of a pair can be made easier either by increasing its discriminability or by reducing the discriminability of the other visual variable.

CUTIQUE
▸ They don’t justify the graph size chosen (18 nodes and 25 edges). Too small and simple, and graph size matters to readability. How applicable are these results to larger graphs?
▸ Wrong use of the term piloting for discriminability definition?
▸ Background colour for tasks screens examples is light orange in the paper. I guess they didn’t use it like that on the experiment, so it is confusing.

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