Interpreting color-coding systems: the effects of concept activation on color inference

Kathleen Foley1,2, Laurent Lessard2,3, Karen B. Schloss1,2

University of Wisconsin-Madison,1 Department of Psychology, 2Wisconsin Institute for Discovery, 3Department of Electrical and Computer Engineering

Background

People interpret messages from colors, and those interpretations vary with context.

How do people interpret colors in a particular context? Based on color-object associations with that color? Or more complex inferences?

Evidence suggests that interpreting color-coding systems involves assignment inference.

Researchers have evaluated color-coding systems using a recycling paradigm.

Research Question:

Do color inferences change, depending on activation of concepts in the scope?

Varying activation of objects in the scope

One Object Scope (1-1)
Test 1 object (1 paper or trash)

One-Partial Object Scope (2-1)
Test 2 objects (1 paper and trash)

Two Object Scope (2-2)
Test 2 objects (2 paper objects)

Background and Hypotheses

Inferences for color-object assignment

Where should the object be discarded?

Informed meaning of colors changed, depending on contextual color.

Hypotheses for color-object assignment

Global assignment hypothesis

Local assignment hypothesis

Picture of objects in the scope?

Depending on activation of non-target objects?

Prediction: color inferences change depending on activation of non-target

Color inferences change depending on degree to which contextual concepts are activated in people’s minds.

Conclusions

Color inferences change depending on contextual objects that are activated in people’s minds.

Changes in color inferences are predicted by a model that solves the assignment problem with different scaling on the non-target edges.

These results emphasize the importance of considering both colors in the display and concepts that are activated in people’s minds when creating color-coding systems.

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References

For more information, please visit: [Website URL]