

Background

Consumers could confuse certified labels with product labels of similar color

- Marketers use certified labels to signal premium product features such as sustainability or healthfulness
- Consumers trust and recognize certified labels and are willing to pay price premiums for products featuring certified labels
- Consumers often choose labelled products without direct visual attention to the labels suggesting that they rely on peripheral vision to identify certified labels
- Peripheral vision has
 - decent color discrimination
 - but poor shape detection



The market yields many product labels that resemble the color of certified labels (pilot study)

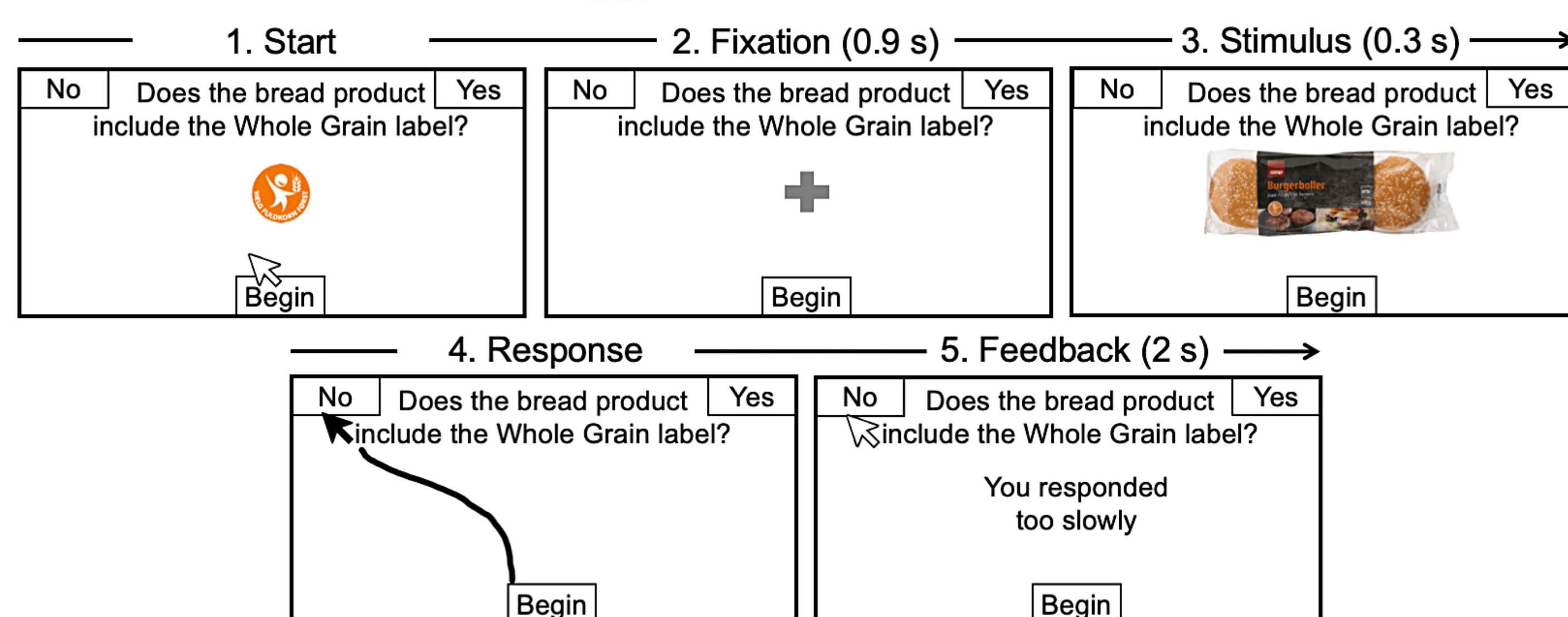
- 12% of 1,366 food (bakery and dairy) products feature copycat labels in DK's two largest retail chains
- Copycat labels have the tendency to appear on products that ...
 - do not feature the resembles certified label
 - are eligible for the resembled certified label



Research paradigm

Participants indicate using the mouse cursor whether a product features a specific certified label

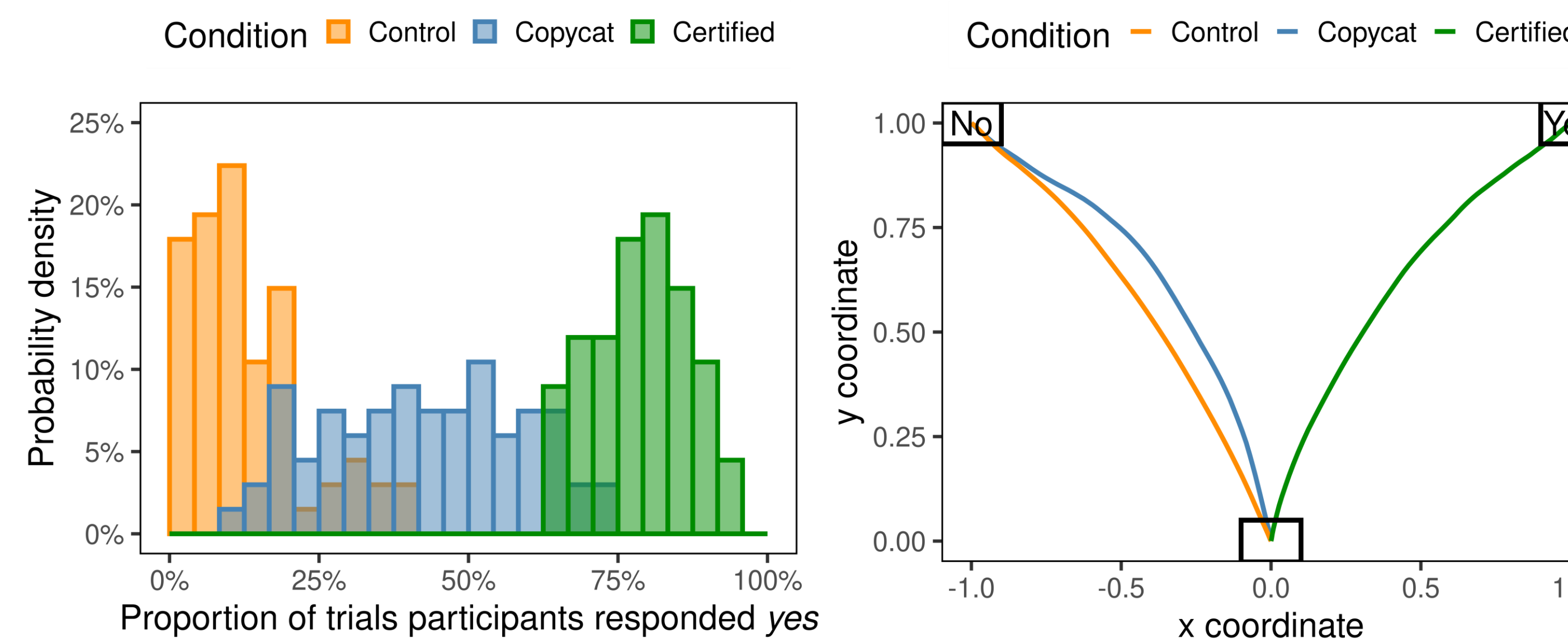
- 96 trials (products) in 24 matched sets (bakery and dairy product categories)



Study 1: Measure consumer confusion

Consumer confusion is reflected in final choice and choice conflict during correct choices

- Preregistered, online study, within-subjects design, $N = 67$

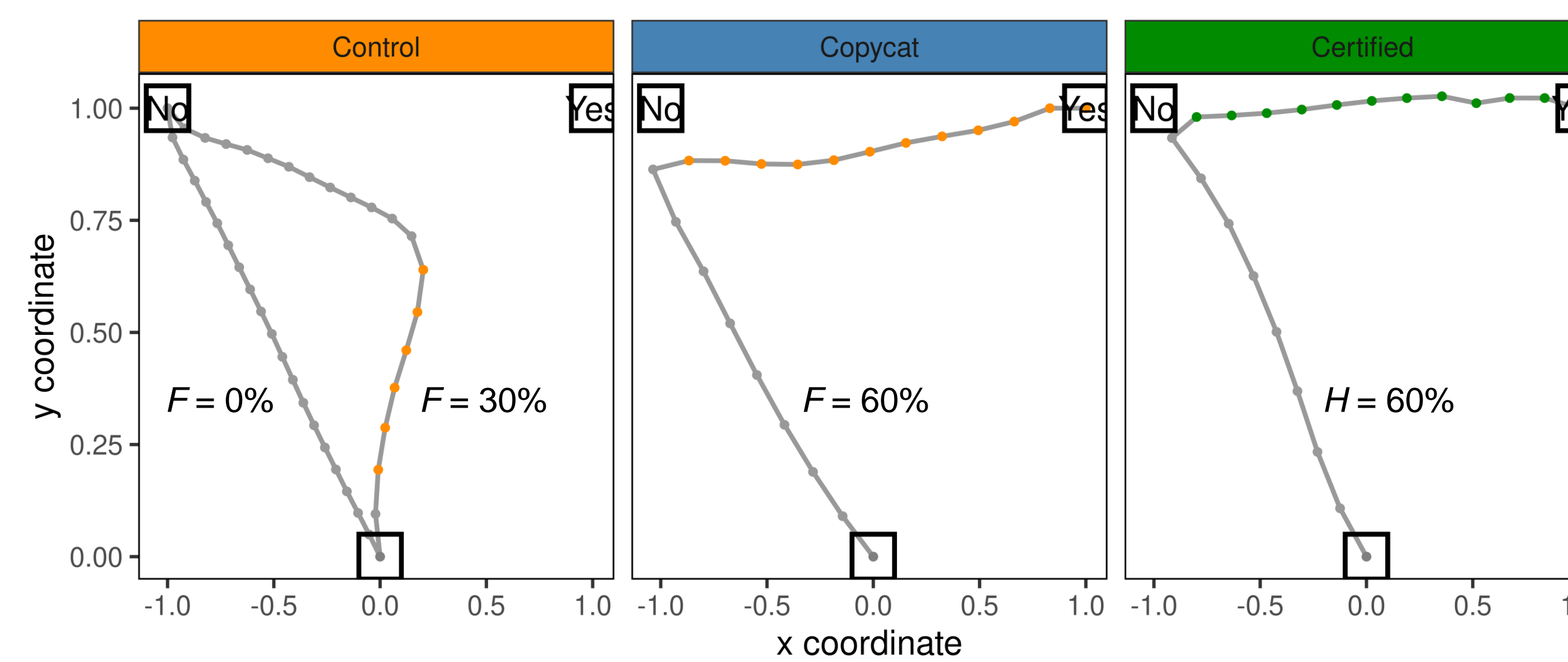


Choice and choice conflict can be integrated by coining the response as a continuous signal detection problem

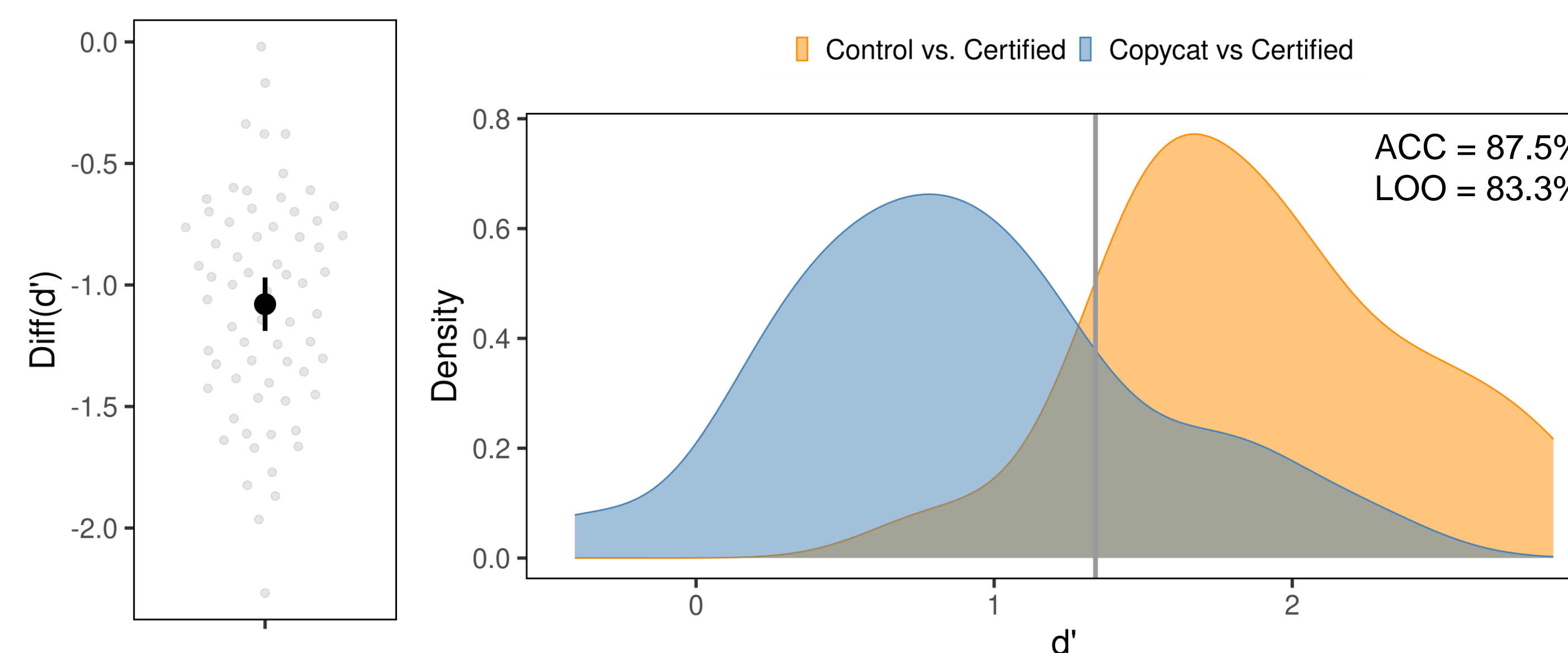
$$d' = \Phi^{-1}(H) - \Phi^{-1}(F), \text{ with}$$

H as hit rate from a certified trial, and

F as false alarm rate from control / copycat trial



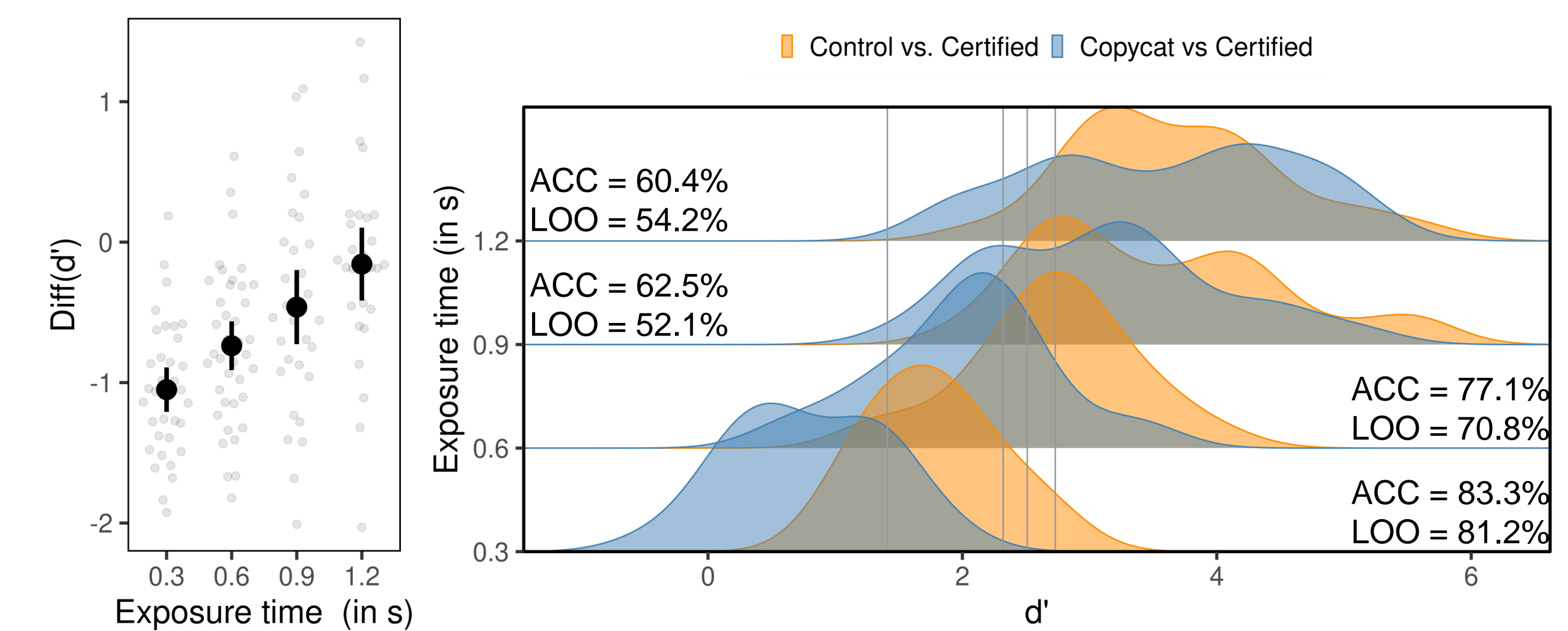
Copycat labels can be classified based on the sensitivity (d') in signal detection theory



Study 2: Validation and generalization

Consumer confusion is reflected in final choice and choice conflict during correct choices

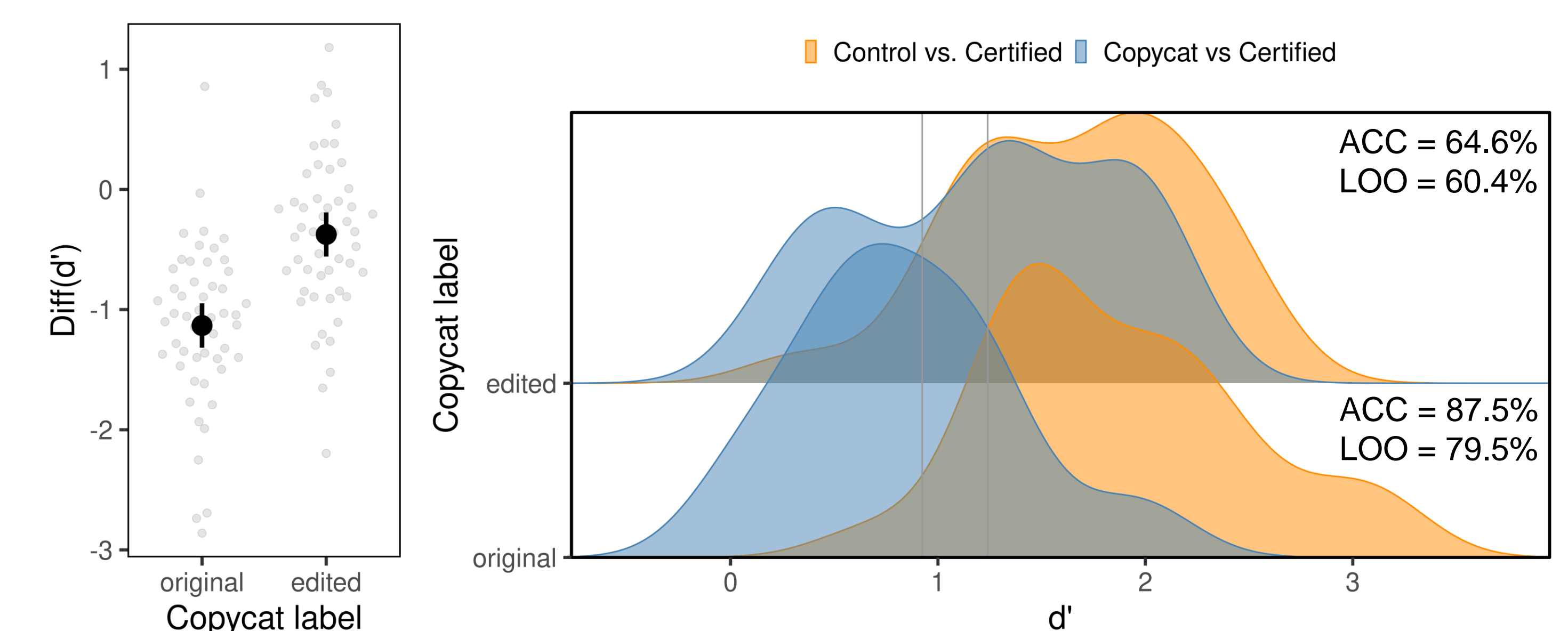
- Preregistered, online study, within-between mixed-subjects design, $N = 135$



Study 3: Testing the mechanism

Consumer confusion is mainly driven by the color

- Preregistered, online study, within-subjects design, $N = 51$



Conclusion and application

Consumer confusion due to product labels can be measured with our 2AFC mouse-tracking paradigm and be used to identify confusing (copycat) labels

- What have we learned?
 - Consumers are confused by product labels that resemble the color of certified labels
 - Confusion persists at longer exposure times
 - Product label color is a key mechanism driving confusion
- What can the metric (and method) be used for?
 - Identify and flag copycat labels
 - Develop new labels that are not confused with existing ones

Relevant literature

Perkovic, S., M. Schoemann, C. J. Lagerkvist, and J. L. Orquin. 2022. "Covert Attention Leads to Fast and Accurate Decision-Making." *Journal of Experimental Psychology: Applied*, 29(1), 78-94. <https://doi.org/10.1037/xap0000425>.

Satomura, Takuya, Michel Wedel, and Rik Pieters. 2014. "Copy Alert: A Method and Metric to Detect Visual Copycat Brands." *Journal of Marketing Research*, 51, 1-13. <https://doi.org/10.1509/jmr.11.0467>.

Schoemann, Martin, Denis O'Hora, Rick Dale, and Stefan Scherbaum. 2021. "Using Mouse Cursor Tracking to Investigate Online Cognition: Preserving Methodological Ingenuity While Moving Toward Reproducible Science." *Psychonomic Bulletin & Review*, 28(3), 766-87. <https://doi.org/10.3758/s13423-020-01851-3>.