UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Using eye fixations in probabilistic categorization to predict declarative retrieval on relevant exemplar features

Permalink

https://escholarship.org/uc/item/6cr202rx

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

Authors

Montesinos, Martín

Olguí, Antonia

soto, vicente

et al.

Publication Date

2024

Copyright Information

Peer reviewed

Using eye fixations in probabilistic categorization to predict declarative retrieval on relevant exemplar features

Martín Montesinos
Universidad Adolfo Ibáñez, Santiago, Chile

Antonia Olguí
Universidad Adolfo Ibáñez, Santiago, Chile

vicente soto
Universidad Adolfo Ibáñez, Santiago, Chile

Sergio Chaigneau
Adolfo Ibanez University, Santiago, Chile

Nicolas Marchant
Universidad Adolfo Ibáñez, Santiago, Región Metropolitana, Chile

Abstract

Probabilistic categorization (PC) has been used mostly to distinguish between memory systems (declarative vs. procedural). Most literature on PC has relied on the Weather Prediction Task. However, this task doesn't provide the flexibility in assigning probabilities to exemplar features that is often required in more ecological settings. Recently, Marchant and Chaigneau (2021) developed a PC task that allows flexible classification probabilities by computing p(category|feature). In this study, we implemented Marchant and Chaigneau's PC task under two feedback conditions (i.e., 70% and 90%) counterbalanced by three features' relevance conditions. In the transfer phase, subjects rated exemplars' category membership. During learning, we implemented eye-tracking to capture the number of fixations to each exemplar's features. Our work in progress shows that fixations on relevant features predict transfer responses, suggesting that people show declarative knowledge of critical features according to their relevance. Interestingly, declarative retrieval varies with the reliability of feedback.