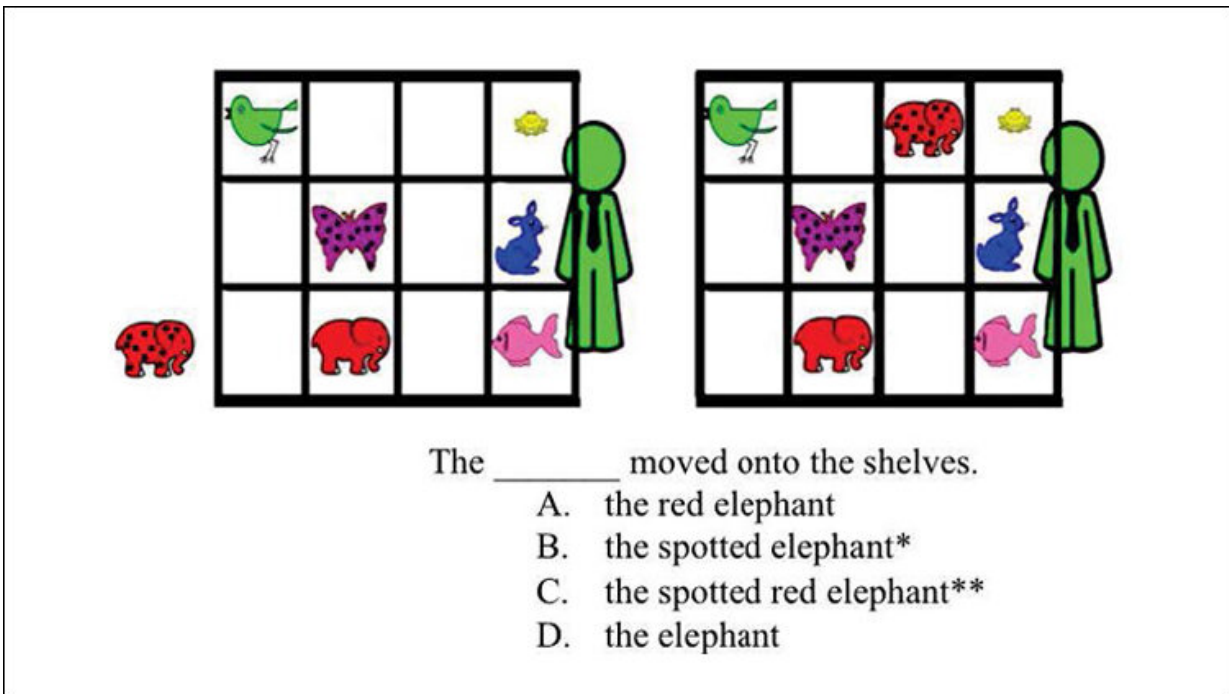


# Social, executive brain functions crucial for communication

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An example image set shown to the participants in the experiment. Credit: Healey et al., *eNeuro* 2019

Impairments in social and executive brain functions hinder effective communication, according to research in patients with dementia recently published in *eNeuro*.

Non-[language](#) brain regions are thought to be critical for effective

language functions, due to the complex, social nature of [communication](#). Frontotemporal dementia affects social and executive [brain](#) functions but does not cause speech impairment, allowing researchers to study the role of non-language functions in communication.

Meghan Healey and colleagues at the University of Pennsylvania showed patients with dementia and healthy participants illustrations of an object near and then on a bookshelf. The participants chose descriptive words from a multiple-choice list in order to communicate which object moved to an imaginary partner, who was said to be colorblind in some rounds.

The patients selected descriptions that were either overdetailed or too vague more often than the healthy participants, even though they had comparable scores on simple language tests. The healthy participants performed best with a colorblind partner, since they knew to avoid color descriptors and chose other adjectives. The patients, on the other hand, were not sensitive to the needs of their conversational partner. These findings demonstrate that social and [executive functions](#) must be integrated during language processing for successful communication.

**More information:** Cognitive and Neuroanatomic Accounts of Referential Communication in Focal Dementia, *eNeuro*, [DOI: 10.1523/ENEURO.0488-18.2019](#)

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