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Dance communication about a location in honeybees: Vector or location?

Randolf Menzel, Andreas Kirbach, Uwe Greggers

A human observer can read the flight vector of a recruited bee from the dance performance it had followed. It has been concluded that vector information is transmitted from the dancing bee to the recruit. An alternative view posits that the dance informs a recruit about the location of an interesting site. Such a view requires an integration of the ego centric vector information from the dance and the learned spatial relations of compass and landmark cues. We used harmonic radar tracking to address this question and conclude from our data that recruits integrate own spatial experience with information from dance communication. Additional experiments exclude the possibility of vector addition between learned flight vectors and dance communicated vectors. Therefore, we conclude that bees integrate information from dance communication in a learned common spatial reference system that stores the spatial relations of landmarks.