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How do People Perceive Collaborative Conversational Agents?

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Abstract

As society embraces technology to support collaboration anywhere and at anytime, there is a growing opportunity for artificial agents to support such collaboration. However, little seems known about how such agents impact the behavioural performance of human teams. To answer this, we devised a Wizard of Oz study where teams of 3 participants located and corralled targets into a containment area in a virtual desert environment. The Wizard played the role of an artificial intelligent operator who had a map view showing the location of participants, targets and the containment area, and could verbally communicate this information. The Wizard operated under two conditions: they could solely use the map view to decide what responses to utter (non-responsive interaction) or could also listen to participant queries (responsive interaction). The results revealed that participant performance was unaffected by responsive interaction condition, despite having a significantly more favourable perception of a responsive agent.