Doing words together: assessing joint problem solving in a Scrabble task

Riccardo Fusaroli
Aarhus University, Aarhus, Denmark

Svend Østergaard
Aarhus University, Aarhus, Denmark

Joanna Raczaszek-Leonardi
University of Warsaw (UW)

Johanne Bjørndahl
Aarhus University, Aarhus, Aarhus, Denmark

Frederik Stjernfelt
Copenhagen University

Kristian Tylén
Aarhus University, Aarhus, Aarhus, Denmark

Abstract: In this paper we test the effects of social interactions in embodied problem solving by employing a Scrabble-like setting. 28 pairs of participants had to generate as many words as possible from 2 balanced sets of 7 letters, which they could manipulate, either individually or collectively. Collaborating makes pairs significantly more productive (M=68.7 SD=16.7) than the best of the two individuals alone (M=63.3, SD=19): F(1,28)=5.66, p=.024, 2=.17. Two parameters have a significant impact on the efficacy of collaboration: i)Pairs, whose performance is more similar in individual trials, gain higher benefit from collaboration: R(1,27)=-0.51, R2=.26, p=.005. ii)Pairs having the collective condition first perform better: F(1,28)=8.55, p=.007, 2=.23. This points to collaboration catalysing optimal solution strategies which can be used in the successive individual trial.