

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Coupled - for better or worse? How do coordination dynamics shape group performance?

Permalink

<https://escholarship.org/uc/item/1qn528mw>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 45(45)

Authors

Miles, Lynden K.
Macpherson, Margaret
Allsop, Jamie S.

Publication Date

2023

Peer reviewed

Coupled - for better or worse? How do coordination dynamics shape group performance?

Lynden Miles

University of Western Australia, Perth, Western Australia, Australia

Margaret Macpherson

University of Western Australia, Perth, Australia

Jamie Allsop

Kilgore College, Kilgore, Texas, United States

Abstract

Working with others creates interdependencies – individual-environment couplings that constrain behaviour but allow for new action possibilities. Teamwork, in this sense, demands behaviour is coordinated appropriately to achieve desired outcomes. The current research investigated whether the dynamics that govern interpersonal coordination also shape group productivity. In pairs, participants ($n = 136$) performed an object movement task while their behaviour was tracked. We varied task-relevant affordances that restricted the potential for coordination, along with social context (i.e., competitive or cooperative). Results indicated that productivity was enhanced by coordinated behaviour but only when participants were instructed to cooperate and affordances for task completion were restricted. Examination of the underlying dynamics revealed that parameters governing coordination accounted for unique variance in task performance. This suggests that (i): the dynamics governing interpersonal coordination do indeed shape group productivity, (ii) the interdependencies that accompany teamwork help determine whether coordination will benefit (or impede) group performance.