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Organizational Communication & Information Systems

Forming and Performing: How Group Structure Evolves in Successful Multiteam Systems

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Multiteam systems are a unique organizational form in which two or more traditional teams must interface in order to achieve goals beyond the scope of the local units. These systems are important components of many modern organizations, from military to business to emergency response. This study presents a novel approach to understanding how the performance of a multiteam system is impacted by the underlying behavioral patterns of individuals. Specifically, we examine how groups or clusters are formed over time. Small communities within a broader system represent cohesive units that communicate, coordinate, and plan more effectively than the group as a whole. The composition of these units, relative to the predefined roles within the multiteam system, can affect outcomes at both the proximal and distal levels. Data is collected from a series of 17 experiments in which participants played a simulated war game and communicated electronically. In order to accommodate this unique data source – a series of time-stamped interactions – we apply a novel method for identifying communities within social networks in which the observable data is entirely transactional. Using the results of this analytical framework, we develop metrics which represent behavioral patterns within the multiteam system. These measures strongly predict performance at both the team and system level, which we illustrate via a series of regression models.

[Community Detection](#) [Group Structure](#) [Multiteam systems](#)

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