Moody, J. (2004). The structure of a social science collaboration network: Disciplinary cohesion from 1963 to 1999. *American Sociological Review*, *69*(2), 213–238. https://doi.org/https://doi.org/10.1177/000312240406900204

Research specialties can be described as a central cluster of collaborating scientists, responsible for producing a significant number of innovative concepts and ideas.

Moody's 2004 paper offers a comprehensive analysis of collaboration structures in the social sciences, specifically focusing on coauthorship patterns. The paper outlines three key types of network structures: "Small-world," "Cohesive Core," and "Star." In a "Small world" network, local clustering is high, but the average number of steps between actors is minimal. This is in contrast to a "Star" structure, where there is a significant inequality in collaborative offers, as a limited number of scientists or scholars receive disproportionate offers to collaborate. Finally, Moody describes a "Cohesive Core," where a growing number of authors show a tendency toward collaboration across different specialties. Moody then proposes two theoretical frameworks to understand these collaborations: one based on "permeable theoretical boundaries" (Abbott 2001) and the other on network conduits for the flow of ideas and information (Friedkin 1998). The paper concludes by discussing the potential for scientific consensus through these collaboration structures.

*Discussion and Application to Our Research*

Three Distinct Collaboration Structures: Moody's identification of these structures provides valuable benchmarks against which we could measure the structural cohesion of our own SNAP research network. For the long-term success of our project, aiming for a cohesive core structure might be beneficial, considering its potential for an integrated, interdisciplinary approach.

Network Structures and Idea Spaces: The paper emphasizes that one's position in a social setting, structured by interaction patterns, influences one's ideas. This has immediate implications for our research, especially if we target an increase in grant proposals that align with the grand challenges. It would be interesting to investigate whether the adoption of grand challenge themes follows the patterns discussed by Crane (1972) or takes on the network shapes highlighted by Martin (2002).

Interdepartmental Collaboration in Grand Challenges: Moody's analysis can also inform hypotheses about the structure of interaction networks in grant proposal scenarios at BSU. Given Moody's observations, one might speculate that a "Star" structure may emerge, where faculty with longer tenure or higher positions may receive a disproportionate number of collaboration offers.