Motivation

- Collective Knowledge
  - the knowledge embedded among individuals regarding how to coordinate, share, distribute, and recombine individual knowledge
  - a source of competitive advantage (Grant, 1996; Spender, 1996)

- Complexity of collective knowledge forges strong barriers to internal transfer and replication (Simonin, 1999; Pil & Cohen, 2006; Argote, Ingram, Levine, & Moreland, 2000)

- Among factors facilitating knowledge transfer, the attributes and strategies of source & recipient units (nodes) have been primarily studied (Phelps, Heidl, & Wadhwa, 2012)

- The structure of inter-organizational linkages for knowledge transfer is an important determinant of complex knowledge transfer
  - Coordination of interdependence
  - Distribution of information overload to individuals
Purpose

- Boundary spanner structure has long been deemed as an effective strategy for knowledge transfer (Leifer & Delbecq, 1978; Tushman & Scanlan, 1981)

- Given information overload and cognitive limits, boundary spanner performance is contingent upon knowledge complexity

- Collective bridge is suggested as an effective inter-organizational structure for collective knowledge transfer (Zhao & Anand, 2013)

- This study examines tradeoffs in the cost and effectiveness of the two inter-unit network structures, regarding the performance of complex knowledge transfer

- Two specific types of information overload are considered & modeled:
  - Information volume overload
  - Information scope overload

Conceptual Model of the Performance of Complex Knowledge Transfer: Block Diagram

* Dotted-line boxes are exogenously given or controllable parameters
Boundary Spanner & Collective Bridge Structures

- Boundary spanner structure
- A most studied knowledge transfer structure
- A centralized inter-unit structure characterized by indirect knowledge transfer channels

- Collective bridge structure
- A decentralized structure with inter-unit direct ties (Zhao & Anand, 2013)

Complex Knowledge Transfer Performance

- Boundary spanner structure
- Collective bridge structure
Discussion & Conclusion

- In the context of inter-unit knowledge transfer, N is an important source of complexity with significant performance implications.

- Previous studies on complexity and replication primarily focused on the degree of interdependence (K).

- With individual and inter-unit levels of analysis on knowledge transfer, N and K have different types of impact on two types of information overload:
  - Information volume overload
  - Information scope overload

- The comparative advantage of collective bridge and boundary spanner structures is contingent upon not only K but also N.