Algorithms and the Org Chart

Prior research explains how algorithms reshape different jobs, but limited research has explored how increasing use of algorithms changes organizational structures. To examine this question, I conducted a 9-month field study in the algorithms and merchandising departments of a high-tech retail company, as they developed algorithms that profoundly reconfigured their organizational structure. I found that their organizational structure symbolically communicated and defined specific categories for understanding and making decisions about customers, products, or services -- it was these categorical structures that were called into question and seen as irrelevant and constraining as new and more algorithms were developed. This automation process was not simple work displacement, however. Instead, the merchandising department developed the new work of curating algorithmically-identified categories and recommendations, and explored new organizational structures for this emerging work. My findings contrast with prior studies that theorize and focus on the division of labor encoded and communicated in organizational structure. In this paper, I integrate categorization and organizational design theories to explain this process and its implications for organizations.