

Abstract: This paper investigates the strategic formation of signed networks, addressing the often-overlooked negative relationships such as bullying, polarized debates, and conflicts. We develop a theoretical model to examine the stability and efficiency of networks with signed links, where agents' utility increases with their friends' centrality but decreases with their enemies' centrality. Our findings indicate that all stable networks exhibit strong structural balance when the utility function is concave in both positive and negative degrees, whereas efficient networks are regular, highlighting a tension between stability and efficiency. Conversely, when the utility function is convex in positive and negative degrees, stable networks exhibit a nested structure.