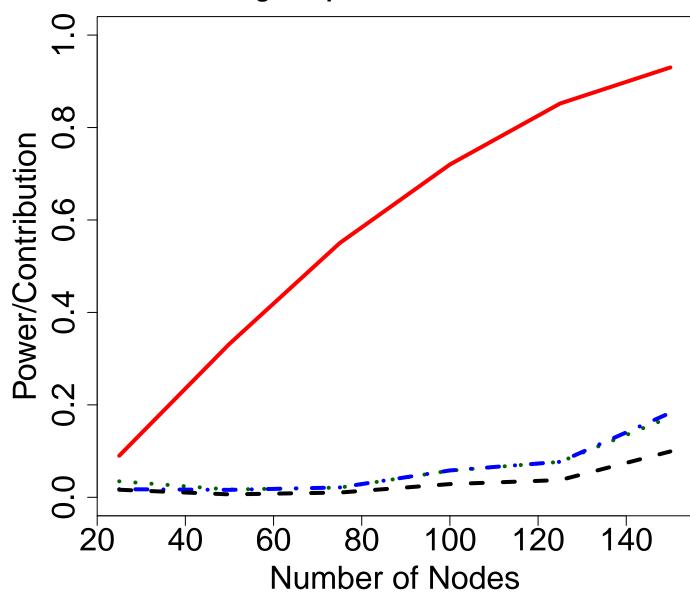MGC for Testing Independence and Node Contribution