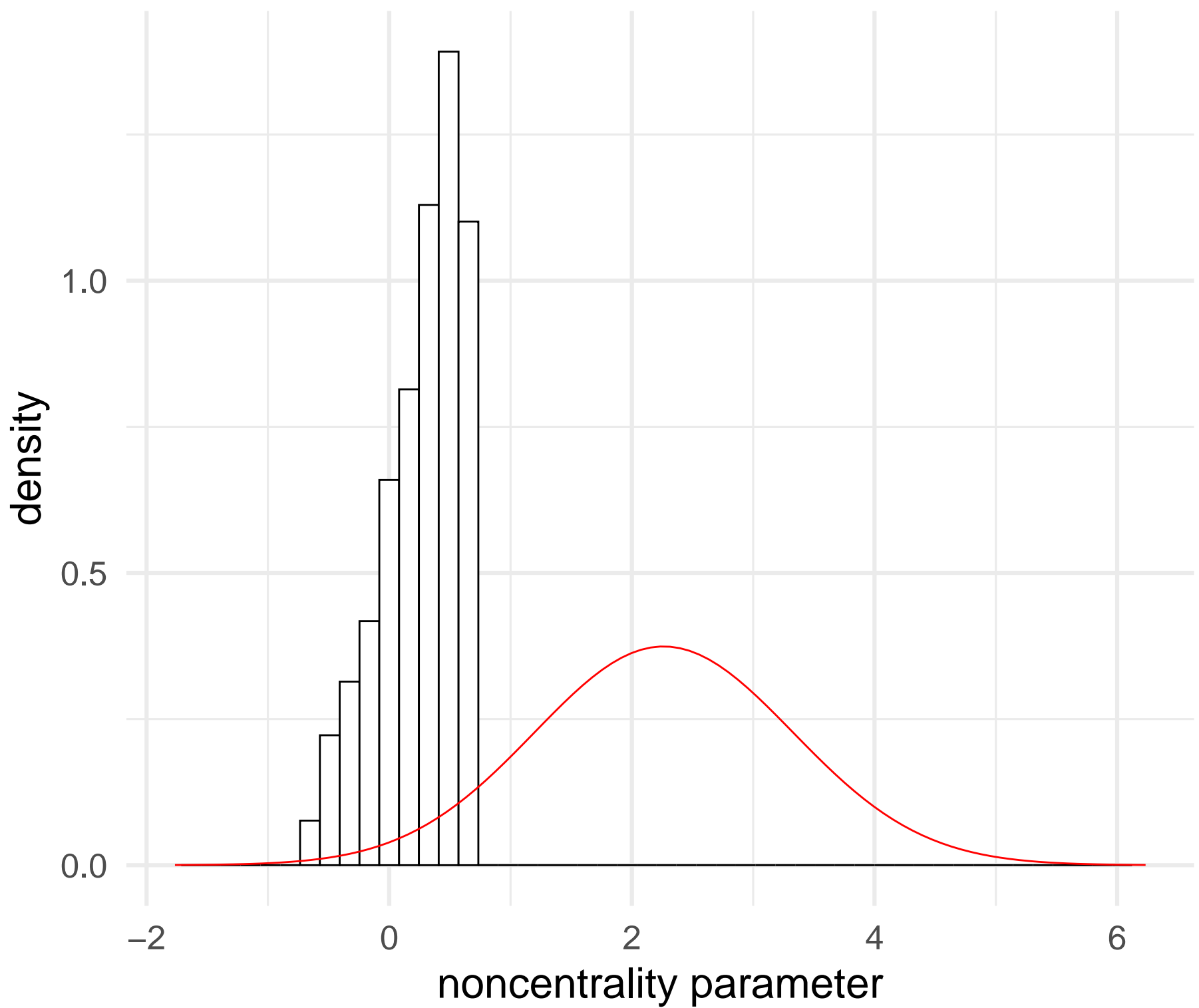histogram of 4740 noncentrality parameters