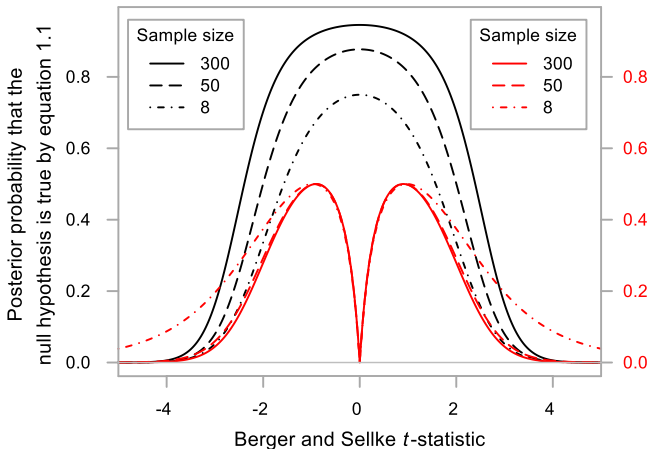


The red lines are the *lower bounds* on the posterior probability. Sellke, Bayarri, and Berger (2001, p. 62) note that the red lines are valid only if the associated  $p$ -value less than  $1/e \approx 0.368$ . That explains the odd behavior of the lines when  $|t| < \sim 1.06$ . But it doesn't explain why the sample-size-8 red line, which should be a lower bound, crosses the three black lines, which is puzzling.



The crossing lines appear to be an example of the point made by Held & Ott (2018, last three sentences in section 4).