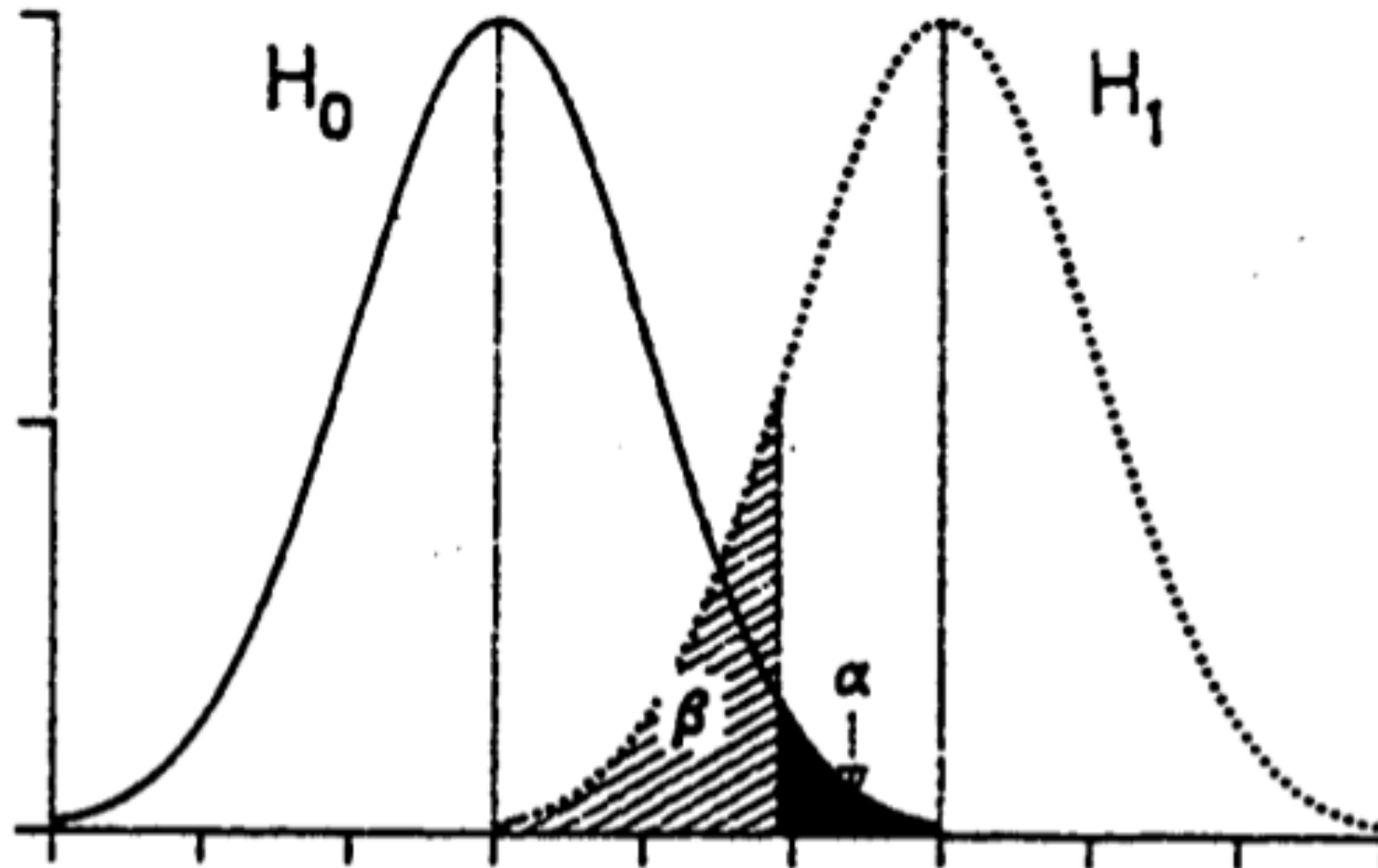


# Is Power That Big a Deal?

- Cohen (1992) describes why power *is* such a big deal (and what can happen if experiments do not have sufficient power). Low powered studies have a lowered chance of finding a real effect, and also a higher chance of suggesting an effect is present when it is not.
- Reports the results of a review of 1960 volume of Journal of Abnormal and Social Psychology that he conducted at the time and the results of a Sedlmeier and Gigerenzer (1989) review of a 1984 volume of of the same journal.
- In 1960, the average power of the experiments reported in JASP to detect medium effect sizes was 0.48. In 1984, it was 0.25 (in other words only a 25% chance of finding an effect even if it was there!)

# Power as a function of $\alpha$



- If we were to increase  $\alpha$ , we would increase power (by reducing  $\beta$ ) but would risk a rise in the probability of a Type I error.