



Hierarchical Prior Example

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Example - Therapeutic Touch

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- Healthcare practitioners sweep their hands over a patient's body at a distance of 5-10 cm and sense whether and where the patient has depleted energy
- If depletion is found, the practitioners then attempt to “repattern” the patient's energy field
- 28 practitioners participated in a study of this technique (Rosa, Sarner, & Barrett, 1998)
 - A TT practitioner held out both of her hands palm up with the view of her hand blocked by a screen
 - The tester randomly put her right hand over one of the practitioner's hands and the practitioner had to say which of her hands was near the tester's hand
 - Each TT practitioner had 10 trials
- By random selection, the practitioners would get five right, on average.



Hierarchical Model for the Example

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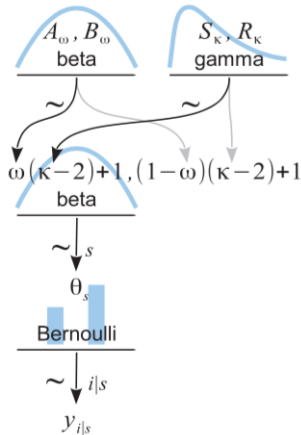
- All the practitioners come from a common group trained in this practice, so assume a common group mean ω
- Suppose we use a flat prior for the group mean,
 $\omega \sim \text{Beta}(1, 1)$
- The dependence of individual abilities on the group mean or training is given by κ
- For κ , assume a mean of 10 and a standard deviation of 10, which allows for variation among practitioners
- Apply sampling to get an estimate for the
 $\theta_j, j = 1, \dots, 28$



Hierarchical Priors

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(Kruschke, 2015)