

# Questions I Have

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**Here are some of the questions I have. I have more than 3. I will list the most pressing ones first, and still add in my other ones here.**

1. In chapter 3 they talk about sampling to summarize. There are 3 examples: intervals of defined boundaries, intervals of defined mass, and PI and HPDI. I would like a better conceptual understanding of these three types of summarizing and their purpose. (pg. 53)
2. how does dSE show us which model is “better” and what is the relationship between  $n_{\text{eff}}$  and the warmup sequence (chapter 8 and 9)?
3. what are the features of a regularizing prior? (I think it means a flat  $\alpha$  and narrow  $\beta$  - pg. 214 and 215)
4. Can we go over the five types of uncertainty that go into a model again? (from demo 5)

## **Other questions:**

5. For the counter-factual models in chapter 5, they say that  $A$  is manipulated in the example code. However, I am confused on how? What does it mean to manipulate a variable in the code? (pg. 141)
6. can we go over backdoor paths? I thought that that meant when  $X$  is the outcome not the predictor, but later on he discusses controlling for things when  $X$  is the predictor and there are colliders or confounders etc.
7. I need more clarification on how Bayes theorem works.
8. Why do/when do we use splines (and what really are they)?
9. What does it mean to “average over the posterior” (page 138).
10. Can we go over training deviance vs. test deviance? I don’t understand the difference or what those two concepts really mean. (chapter 7)

11. how does WAIC have greater bias than PSIS and CV? (also chapter 7)
12. Can we go over what main effects are?