



# 'Sephora Kids' : Reality or Media Hype?

## Using Bayesian Inference to Quantify a Social Media Trend



**I Had A Question:** Beyond the online outrage, is the "Sephora Kids" phenomenon—defined as children aged 9–14 who use adult skincare and makeup routines—a statistical reality?

### 1. First, I looked around in the neighborhood

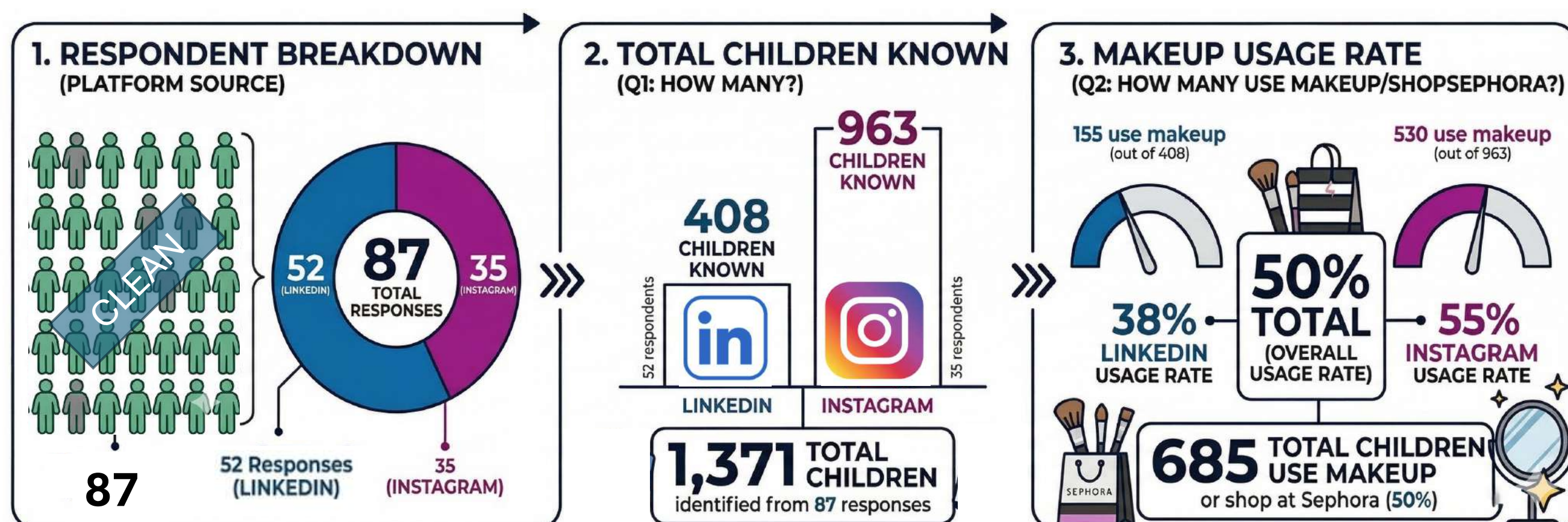
1. How many around us?

2. 43% kids had makeup.

3. Not Conclusive.



### 2. To Collect more data, I did a social media survey

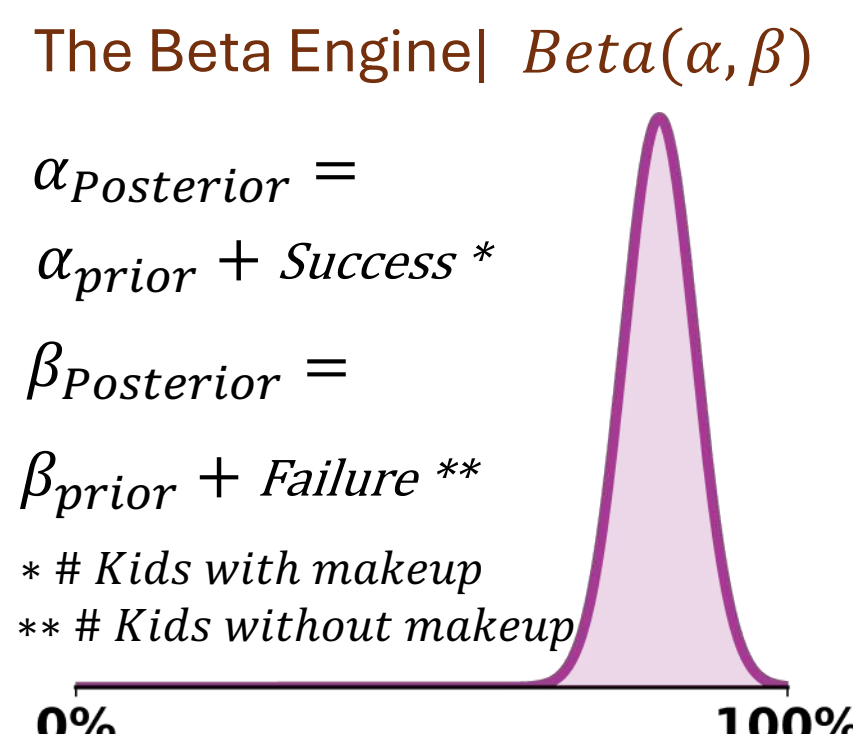
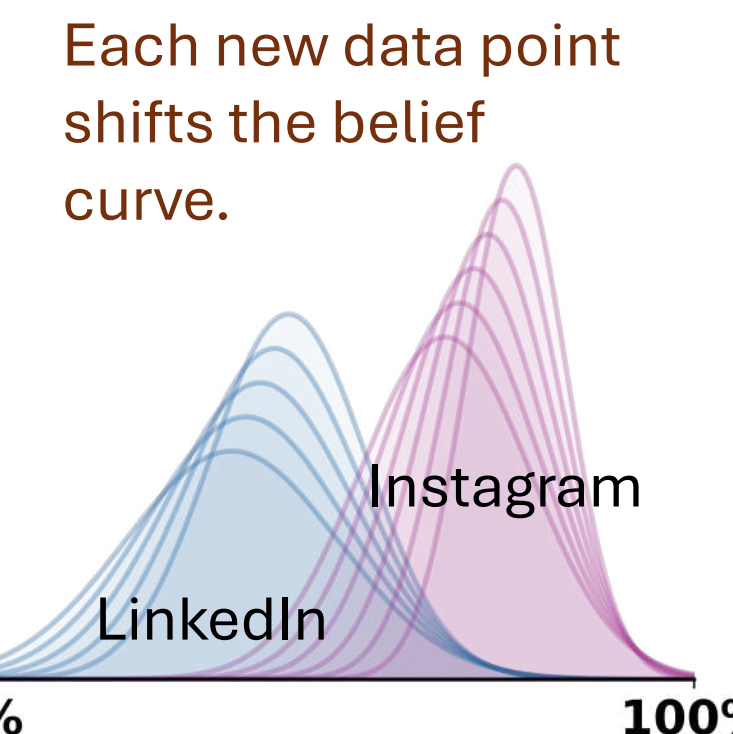
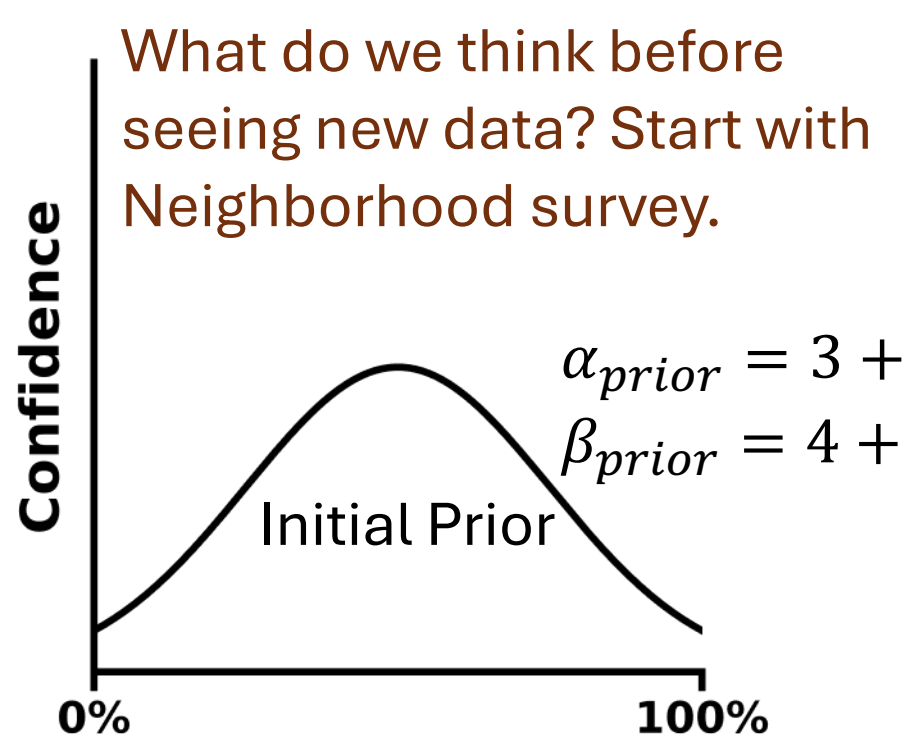


### 3. Method: Beyond the 50%, I used Bayesian Inference to quantify certainty.

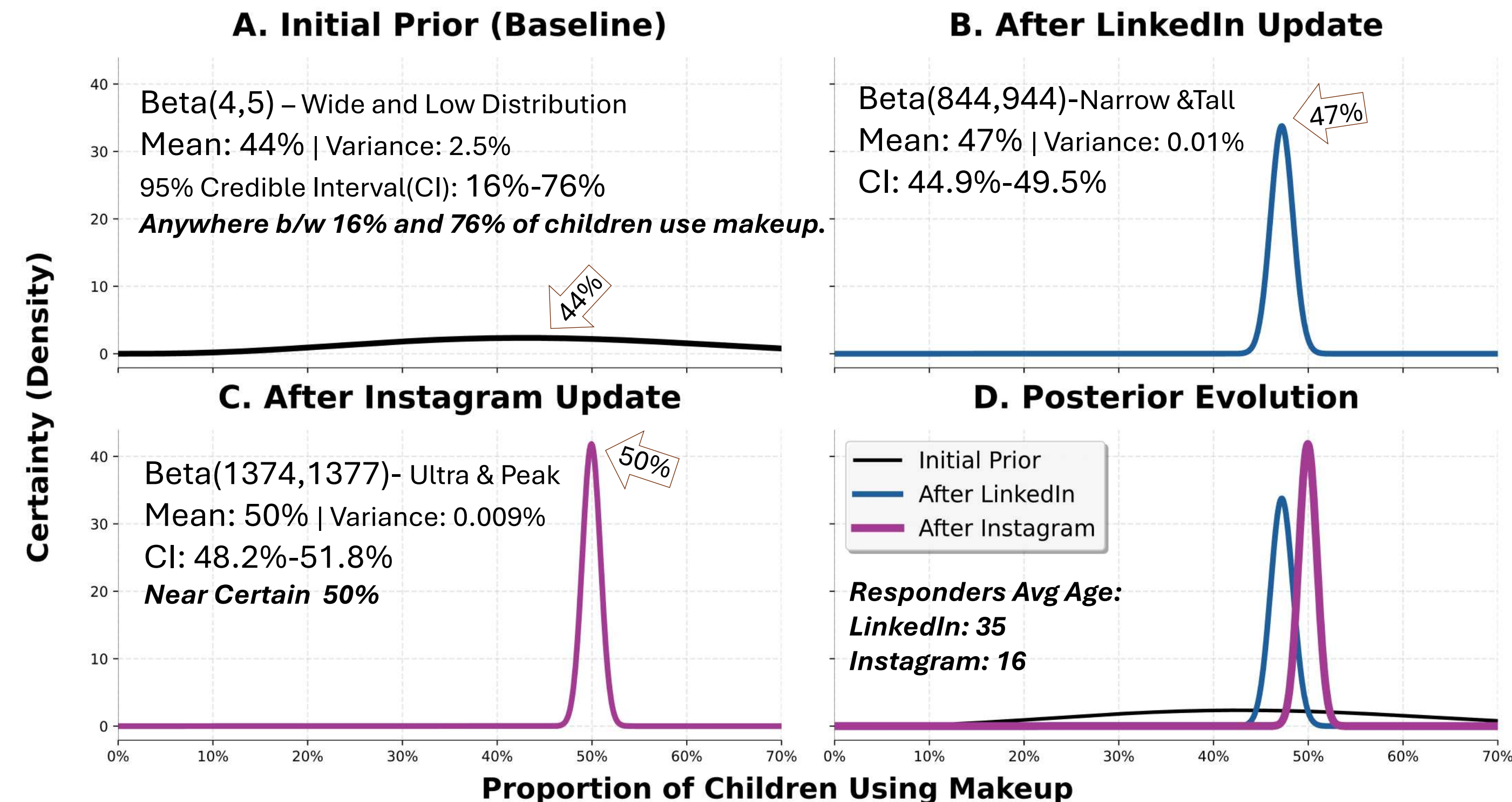
1. START WITH A PRIOR BELIEF

2. UPDATE SEQUENTIALY

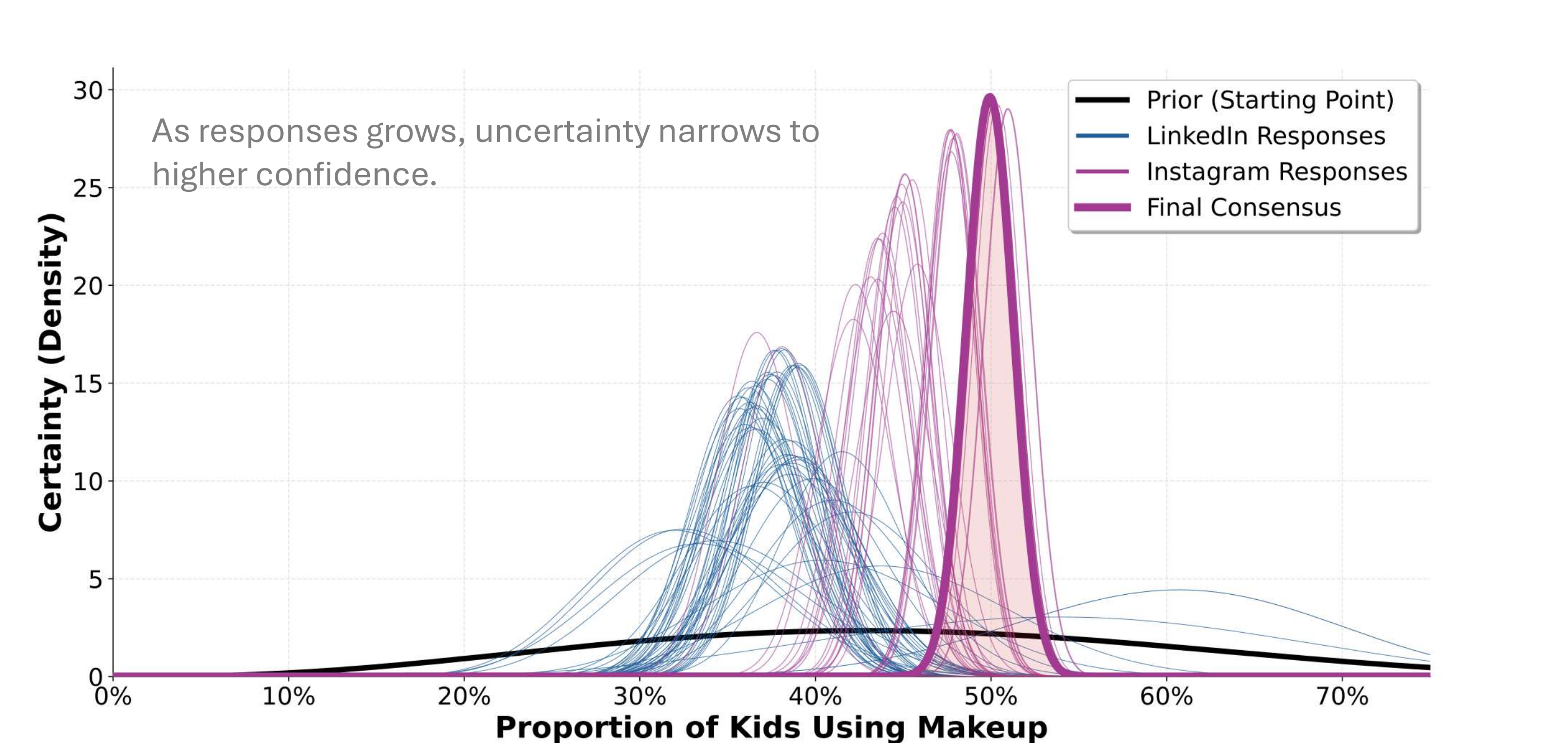
3. END WITH POSTERIOR



### 4. Bayesian Results: Journey from Prior to Posterior



### 5. The Path to Consensus: 87 Sequential Updates



**6. Conclusion:** The analysis estimates a 50% makeup usage rate among 9–14 year olds with a narrow 95% credible interval ( $\pm 1.8\%$ ). Thus, the survey data empirically supports the prevalence of this social media trend.

**Notes:** Computational steps and codes adapted from the book Bayes Rules! (Johnson et al, UC Irvine). Original illustrations by the author. Gemini generated entire code. Results are fully replicable. Datasets and code are publicly available at: <https://github.com/taraakurian-lab/SoculASA>