

To earn full credit for Journal 5, you must choose 1 of the following options.

Option 1

Watch the “How Juries are Fooled by Statistics” TED talk (link and PDF of the transcript available on Moodle). Identify two topics that Peter Donnelly mentions that we also discussed in class.

1. For each topic, write about what you liked in his discussion. For instance, did his explanation help you understand the concept more thoroughly? Were you able to make connections between a realistic scenario and our theoretical definitions?
2. Additionally, write about what you would like to see done differently. For instance, would you like to see him expand on a particular topic?
3. Donnelly states "It's very well documented that people get things wrong. They make errors of logic in reasoning with uncertainty. We can cope with subtleties of language brilliantly – and there are interesting evolutionary questions about how we got here. We are not good at reasoning with uncertainty." Can you think of any other times where you or someone else misinterpreted a statement about probability?

Option 2 (Topics: US Presidential Election)

Read CNN's “What data journalists say about the election models giving Trump slim chance of winning” article (link and PDF available on Moodle).

1. Do you think that the data journalists in the article are adequately explaining probability?
2. Think about how predictions regarding the presidential election in 2016 were communicated to the general public. Do you feel like communication has improved?
3. We have briefly mentioned how assumptions can shape our probability calculations—for example, when we ignore step- or half-siblings in the distribution for the number of siblings a person has or when we ignore people with two different eye colors in the global distribution of eye color. What assumptions have the data journalists been making when calculating their forecasts?
4. Is the outcome of the 2020 election consistent with what you thought would happen?

Option 3

Read Vox's “The ‘500-year’ flood, explained” article (link and PDF available on Moodle).

1. What probability distribution do you think scientists use to predict the probability of a 500-year flood? Why do you think it is this distribution? Does the 500-year flood satisfy the conditions for that distribution?
2. The article discusses a lot of the assumptions scientists make in order for the 500-year flood predictions to work. Do you think the author does a good job of discussing whether the assumptions are reasonable?

Option 4

Find a news article that relates to a topic we discussed in class and write a brief paragraph on why you think it relates to this week's material.