2 Chapter 2: Using Bayes' Rule

Problem 2.2 ***Imagine you have collected data about reported sightings of the dodo throughout history. We will call these data S. Suppose you are interested in the time the dodo went extinct, denoted E. Then the likelihood function of interest to you is***

(a) p(E | S) as a function of S: not likelihood function, but posterior

(b) p(E | S) as a function of E: not likelihood function, but still posterior probability

(c) p(S | E) as a function of S: not the correct likelihood function to estimate E

(d) p(S | E) as a function of E: this is the CORRECT likelihood function, where E is the unknown parameter and is computed as how likely the S are given a specific extinct time.