

Binary GLMs come from trying to model outcomes that can take only two values. Some examples include: survival or not at the end of a study, winning versus losing of a team and success versus failure of a treatment or product. Often these outcomes are called Bernoulli outcomes, from the Bernoulli distribution named after the famous probabilist and mathematician.

If we happen to have several exchangeable binary outcomes for the same level of covariate values, then that is *binomial* data and we can aggregate the 0's and 1's into the count of 1's. As an example, imagine if we sprayed insect pests with 4 different pesticides and counted whether they died or not. Then for each spray, we could summarize the data with the count of dead and total number that were sprayed and treat the data as binomial rather than Bernoulli.