

Parametric link functions for binary response models: A Fisherian Holiday

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The familiar logit and probit models provide convenient settings for many binary response applications, but a larger class of link functions may be occasionally desirable. Two parametric families of link functions are suggested: the Gossett link based on the Student t latent variable model with the degrees of freedom parameter controlling the tail behavior, and the Pregibon link based on the (generalized) Tukey λ family with two shape parameters controlling skewness and tail behavior. Implementation of the methods is illustrated in the R environment.