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CORRECTION

CONSISTENCY AND ASYMPTOTIC NORMALITY OF THE MAXIMUM LIKELIHOOD ESTIMATOR IN GENERALIZED LINEAR MODELS

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On page 350 of the above paper, it is stated that our formulation of asymptotic normality,

$$F_n^{T/2}(\hat{\beta}_n - \beta_0) \to_d N(0, I), \tag{1}$$

and the formulation of Haberman (1977), given in our paper as (3.5) for any $\lambda \neq 0$, are equivalent. The implication (1) $\Rightarrow$ (3.5) for any $\lambda \neq 0$ is correct. The arguments for the converse implication are not sufficient, since the orthogonal transformation P_n used there, with $\lambda_n = P_n\lambda$, depends on λ. Statement (3.5) should be replaced by the stronger statement

$$\frac{\lambda'_n(\hat{\beta}_n - \beta_0)}{(\lambda'_n F_n^{-1}\lambda_n)^{1/2}} \to_d N(0,1), \quad \text{for any nonzero sequence } \{\lambda_n\}. \tag{2}$$

Then it can be shown that (1) and (2) are equivalent. The conditions of Haberman (1977) imply also the stronger claim (2).

For the probit model, the first derivative u' of the link function is unbounded, in conflict with statements in the introduction and on page 362. Indeed, the condition assuring consistency and asymptotic normality of the maximum likelihood estimator must be strengthened to

$$\max_{1 \leq i \leq n} \|z_i\|^2 z_i' F_n^{-1} z_i \to 0;$$

see Fahrmeir and Kaufmann (1986).

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