0 2 2 1 1 0 1 0 2 1 0 1 2 ...

$$\mathsf{E}[x_{ij}|T] = 2p_i, \ \mathsf{Var}(x_{ij}|T) = 2p_i$$

$$\operatorname{Var}(x_{ij}|T) = 2p_i (1 - p_i) (1 + f_j),$$

$$\operatorname{Cov}(x_{ii}, x_{ik}|T) = 4p_i (1 - p_i) \varphi_{ik}.$$

$$(1 - F_{\mathsf{IT}}) = (1 - F_{\mathsf{IS}})(1 - F_{\mathsf{ST}}),$$

$$(1-f_j)=\left(1-f_j^{L_j}\right)\left(1-f_{L_j}\right),$$

$$F_{\mathsf{ST}} = \sum_{j=1}^n w_j f_{\mathsf{L}_j},$$

$$\hat{p}_i = \frac{1}{2} \sum_{j=1}^n w_j x_{ij},$$

$$\hat{\varphi}_{jk}^{\text{new}} \xrightarrow[m \to \infty]{\text{a.s.}} \varphi_{jk}.$$

Χ

E. Var, Cov, round, sgn, logit, $\xrightarrow{a.s.}$ x_{ij} , p_i , \hat{p}_i , F_{ST} , F_{IT} , F_{IS} , f_B^A , f_j , $f_i^{L_j}$, f_{L_i} , φ_{jk} , $\varphi_{ik}^{L_{jk}}$, $f_{L_{ik}}$, $f_{L_i}^{L_{jk}}$, R_{ST} , ϕ_{ST} , G_{ST} , G'_{ST} , $\hat{F}_{ST}^{\text{sample}}$, $\hat{F}_{ST}^{\text{indep}}$, \hat{F}_{ST}^{WC} , \hat{F}_{ST}^{Hudson} , $\hat{F}_{ST}^{HudsonK}$, $\hat{\varphi}_{ik}^{std}$, \hat{f}_i^{std} , \hat{f}_i^{stdII} , $\hat{f}_i^{\text{stdIII}}$, \hat{F}_{ST}^{std} , \hat{F}_{ST}^{\prime} , $\hat{F}_{ST}^{\prime\prime}$, $\hat{\varphi}_{ik}^{preadj}$, $\hat{\varphi}_{\min}^{\text{preadj}}$, $\hat{\varphi}_{ik}^{\text{new}}$, \hat{f}_{i}^{new} , $\hat{F}_{ST}^{\text{new}}$, $\hat{\varphi}_{ik}^{L_{jk}, \text{beagle}}$, $\hat{f}_{i}^{L_{j}, \text{beagle}}$, $\overline{p(1-p)}$, A_{ik} , A_{\min} , \hat{A}_{\min}