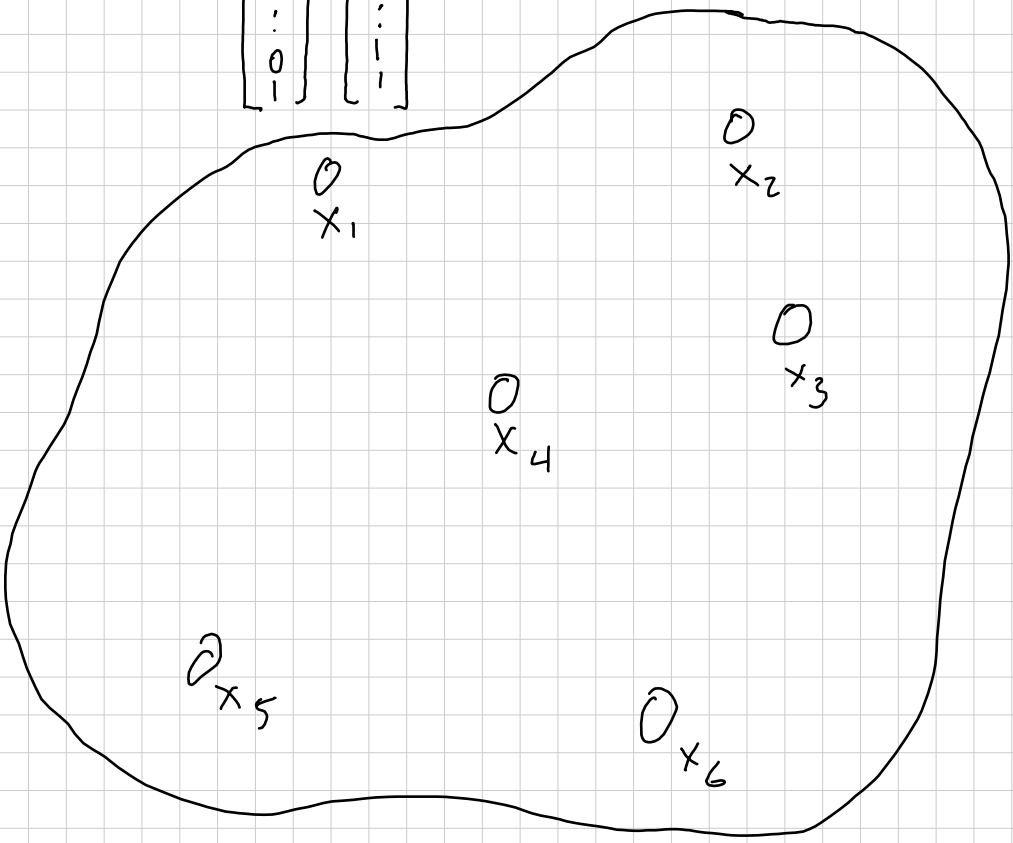
$CH_1(x_i)$ $CH_2(x_i)$, L loci

$$\begin{bmatrix} 1 \\ 1 \\ 0 \\ \vdots \\ 0 \\ 1 \end{bmatrix} \quad \begin{bmatrix} 1 \\ 0 \\ 1 \\ \vdots \\ 1 \\ 1 \end{bmatrix}$$



$$CH_i(x_j) \sim \begin{bmatrix} \text{Bern}(p_1(x_j)) \\ \vdots \\ \text{Bern}(p_L(x_j)) \end{bmatrix}, \quad p_\ell(x) = \text{allele freq @ locus } \ell \text{ \& @ location } x$$

$$p_\ell(x) \sim \text{Beta}(\alpha_\ell, \beta_\ell), \quad \text{Corr}\left(p_i(x), p_j(y)\right) = M(\|x-y\| \mid \nu_{ij}, \xi_{ij})$$