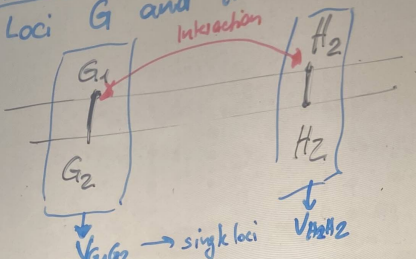
## Extension

- Two Loci G and H




Animal k with genotyp $G_1G_2H_1H_2$

Genotype frequencies:

$f(G_1G_1\ H_1H_1) =$

$f(G_1G_1\ H_1H_2) =$ ⋮

- Genotypic values

$V_{G_1G_1H_1H_1} = \ldots$

In general, $V_{G_iG_jH_kH_\ell} = \underbrace{V_{G_iG_j} + V_{H_kH_\ell}}_{\text{analogons to single locus}} + \underbrace{I_{GH}}_{\text{interaction between loci G and H}}$

- Computation of $I_{GH}$:

$I_{GH} = V_{G_iG_jH_kH_\ell} - V_{G_iG_j} - V_{H_kH_\ell}$

- (it is possible that $I_{GH} = \emptyset \Rightarrow$ there is no interaction between G and H)