Genotypic Values

Genotype	Genotypic Value (V)
G_1G_1	$+a = V_{11}$
G_1G_2	$+d = V_{12}$
G_2G_2	$-a = V_{22}$

Population

- V is a discrek random variable
- Expected value of V:

$$E(V) = V_{11} \cdot f(G_1G_1) + V_{12} \cdot f(G_1G_2) + V_{22} \cdot f(G_2G_2)$$

→ Haroly-Weinberg

$$= a \cdot p^2 + d \cdot 2pq + (-a) \cdot q^2$$

$$= (p^2 - q^2) \cdot a + 2pqd$$

$$= (p-q)a + 2pqd$$

$$= \mu \quad (m u)$$

Population Mean

$(p^2 - q^2)$
$= (p+q)(p-q)$
$= (p-q)$