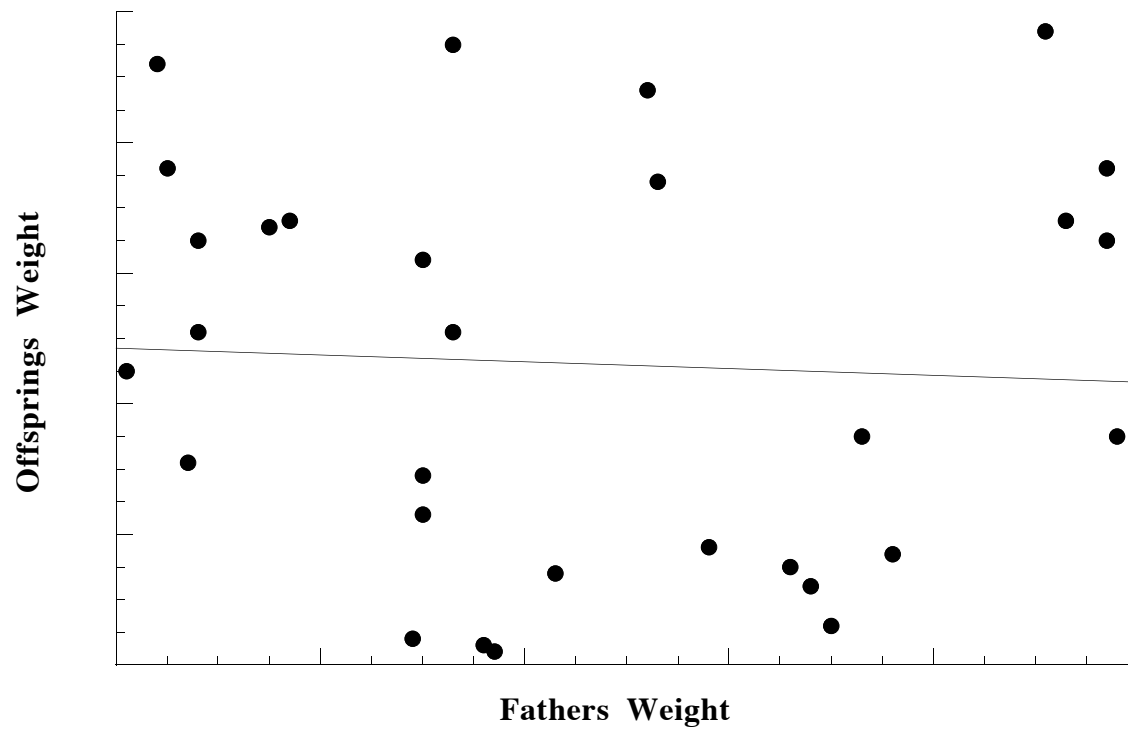
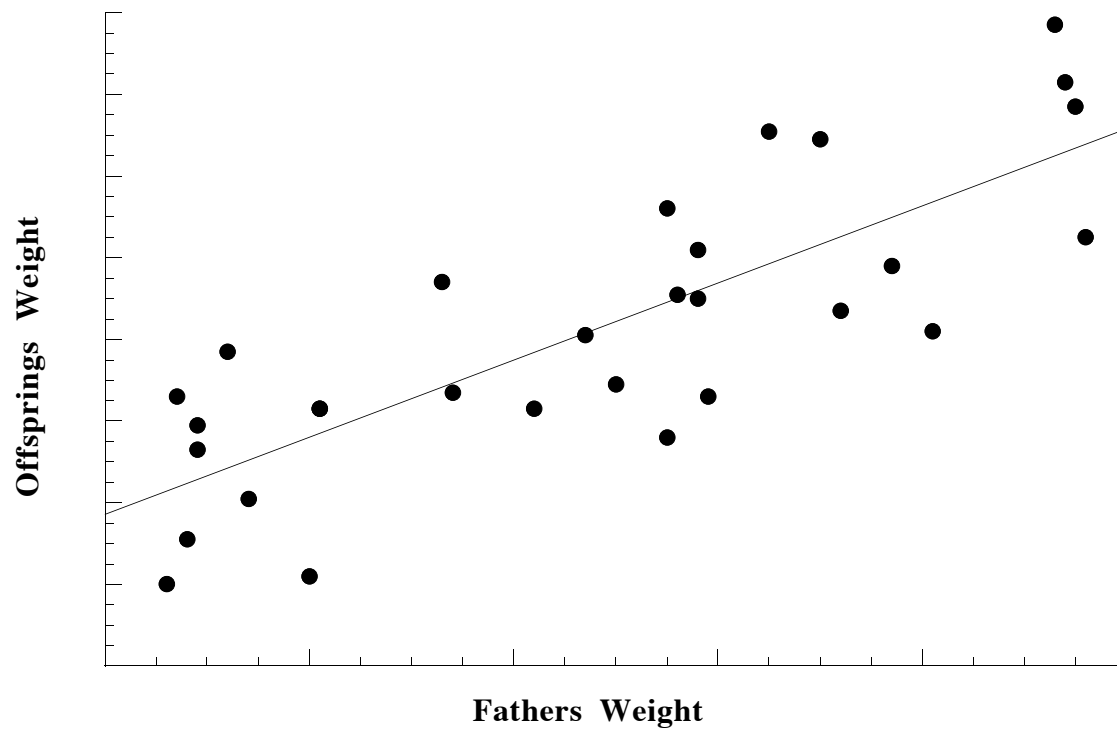


No Correlation



### Strong Correlation



## Additive versus Dominant Effects

		Gene I		
		AA	Aa	aa
Gene II	Additive			
	BB	4 1/16	3 2/16	2 1/16
	Bb	3 2/16	2 4/16	1 2/16
bb	2 1/16	1 2/16	0 1/16	

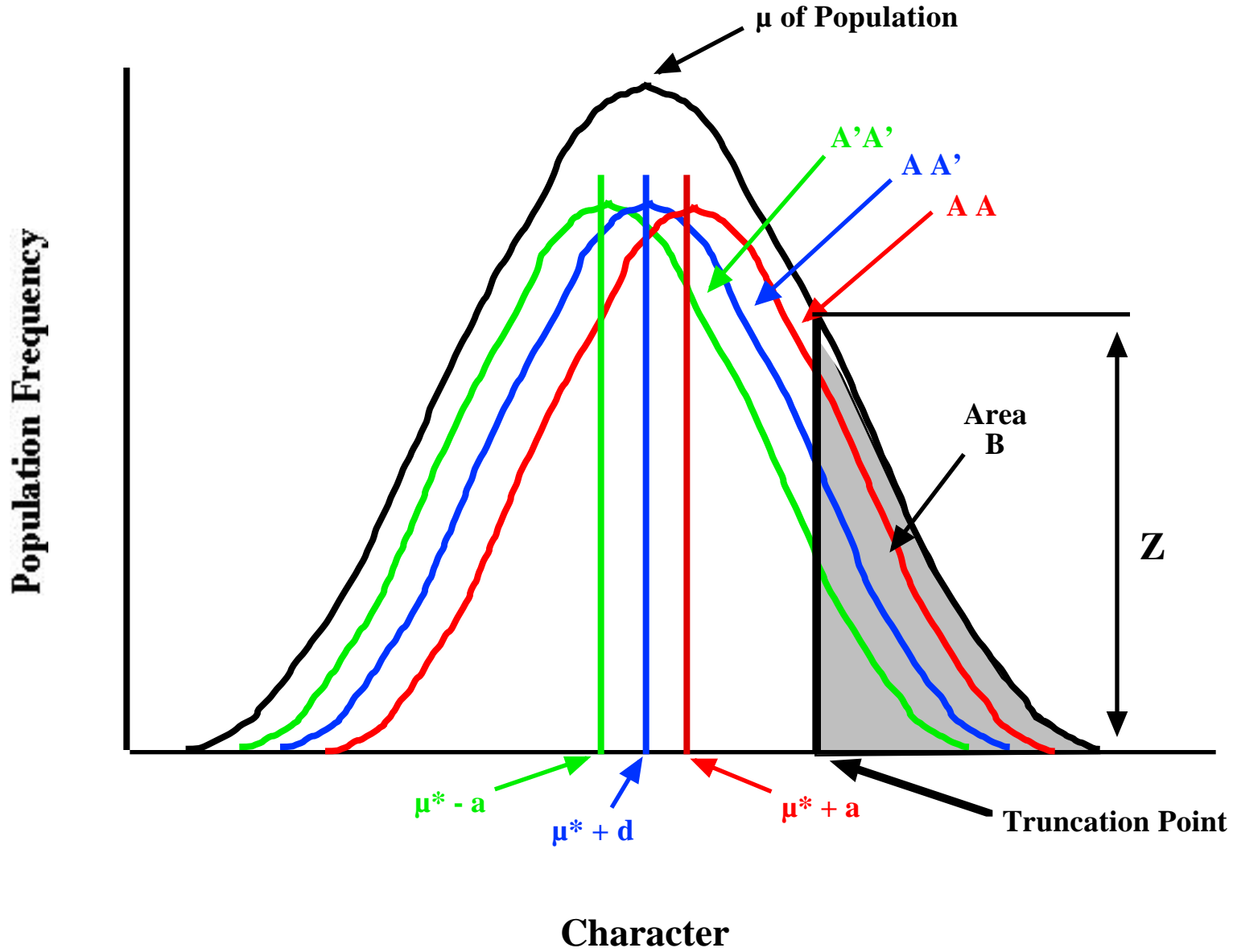
$$P_A = 0.5$$

$$P_B = 0.5$$

heritability = 1

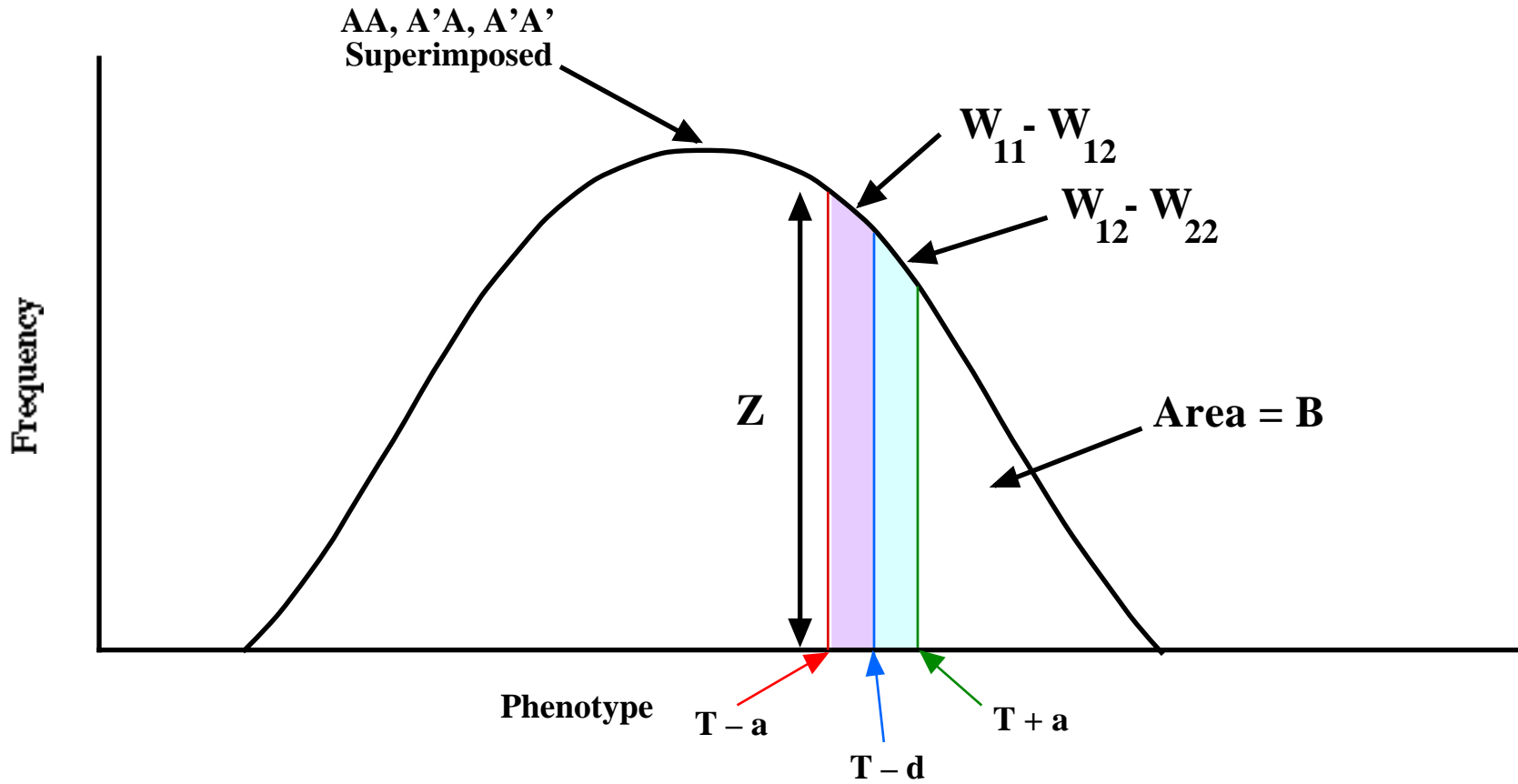
		Gene I		
		AA	Aa	aa
Gene II	Dominant			
	BB	2 1/16	2 2/16	1 1/16
	Bb	2 2/16	2 4/16	1 2/16
bb	1 1/16	1 2/16	0 1/16	

heritability < 1



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

## Change in Allele Frequency with Truncating Selection

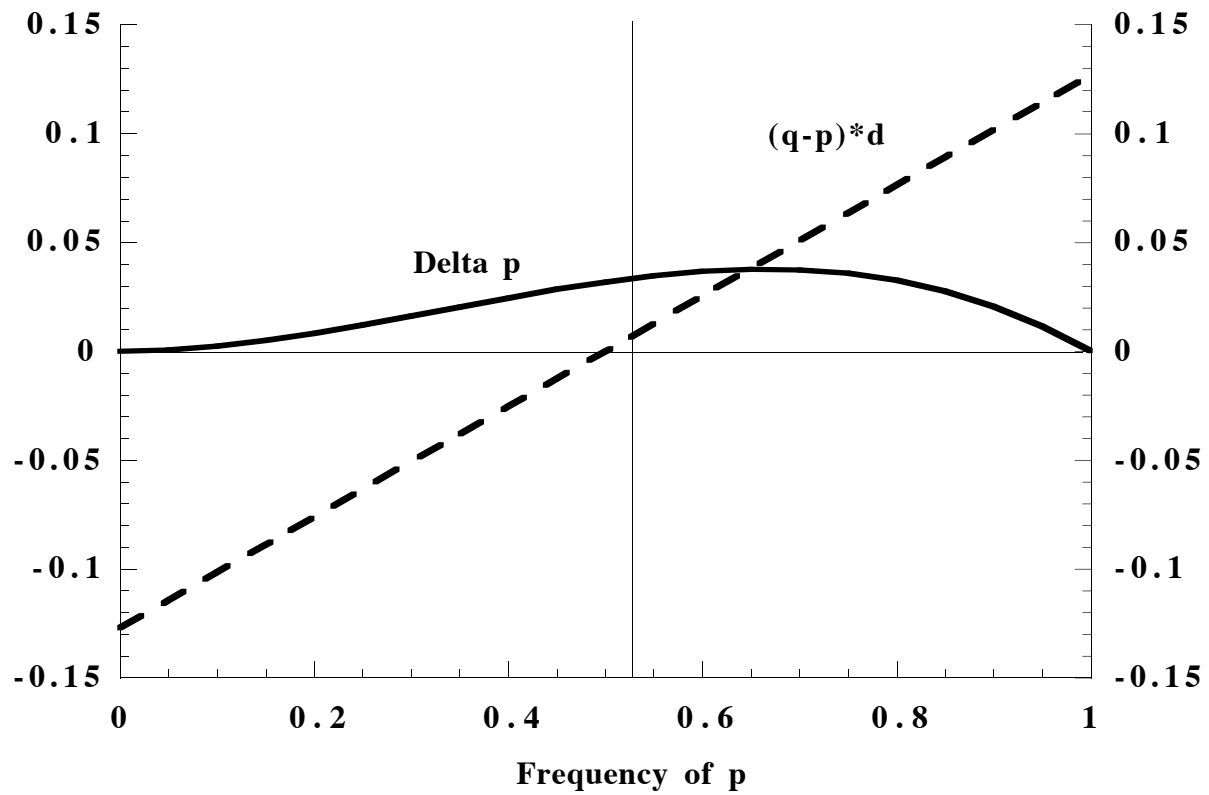


$$W_{11} - W_{12} = Z[(T - d) - (T - a)] = Z(a - d)$$

$$W_{12} - W_{22} = Z[(T + a) - (T - d)] = Z(a + d)$$

$$\bar{W} = B = \text{Proportion Saved}$$

### Change in Allele frequency with Dominance of Q



# Genotype - Environment Interactions

