

(a) **Sample space**
(must sum to 1)

Mating Type
negative assortative random
 A $1-A$

Genotype	kk P	$kk \cap \text{assort}$ PA	$kk \cap \text{random}$ $P(1-A)$
	Kk H	$Kk \cap \text{assort}$ HA	$Kk \cap \text{random}$ $H(1-A)$
	KK Q	$KK \cap \text{assort}$ QA	$KK \cap \text{random}$ $Q(1-A)$

Six mutually exclusive genotype-mating type combinations comprise the sample space.

Their probabilities must sum to 1.

This sample space can be broken down into assortative mating and random mating subspaces with total probability of A and $1 - A$.

(b) **Assortative mating subspace**
(must sum to A)

This study

Black parent

Kk Kk
 $H/(H+Q)$ $Q/(H+Q)$

Gray parent

kk
 1

$\frac{AH}{H+Q}$	$\frac{AQ}{H+Q}$
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(c) **Random mating subspace**
(must sum to $1-A$)

Parent 1

kk $K-$
 P $H+Q$

Parent 2

$\frac{kk}{P}$	$P^2(1-A)$	$P(H+Q)(1-A)$
$\frac{K-}{H+Q}$		$(H+Q)^2(1-A)$

$P(H+Q)(1-A)$

Hedrick et al.

Parent 1

kk $K-$
 P $H+Q$

Parent 2

$\frac{kk}{P}$	$AP(H+Q)$	$AP(H+Q)$
$\frac{K-}{H+Q}$		

$AP(H+Q)$

Outcomes missed by Hedrick *et al.* (2016)

Both studies model randomly mating individuals identically