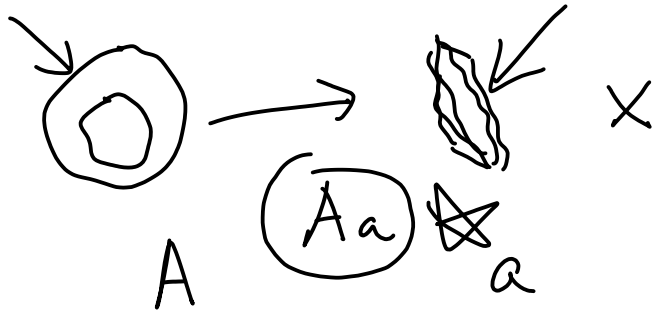


Review of Hardy - Weinberg

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Sickle cell. syndrome.



"a" → syndrome. , HWE ✓

$$P(\text{syndrome}) \approx 9\%$$

$$P(A) ? \quad P(a) ?$$

$$0.3$$

$$0.7$$

$$P(\text{no syn.}) = 91\%$$

$$\parallel$$
$$P(A)^2$$

$$\Downarrow$$
$$P(A) = 0.3 \Rightarrow P(a) = 0.7$$

Punnett Square

	A	a
A	p^2	$2pq$
a	$2pq$	q^2

Punnett Sq. multiple alleles

		A_1 p	A_2 q	A_3 r
A_1 p		p^2	pq	pr
A_2 q		pq	q^2	qr
A_3 r		rp	rq	r^2

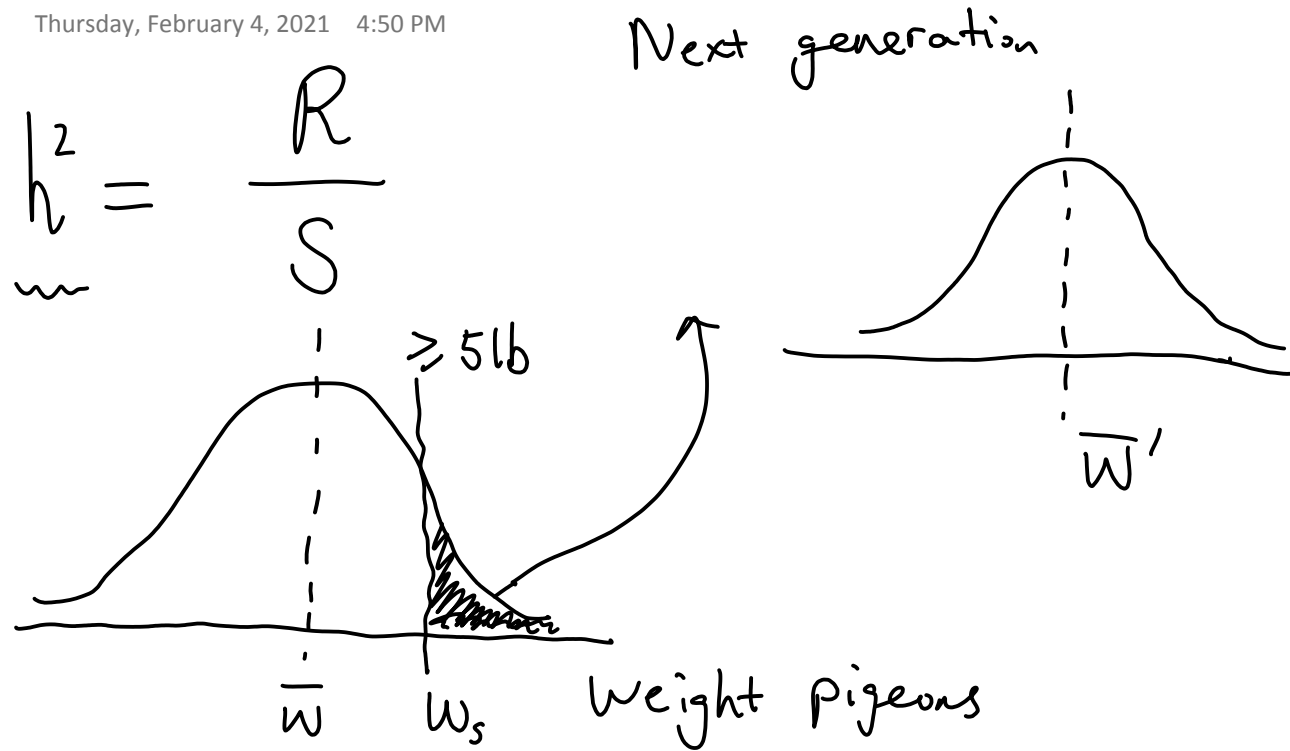
$$\text{freq}(A_1A_1) = p^2$$

$$\text{freq}(A_2A_3) = 2qr$$

\vdots

Review of heritability

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$$R = \bar{w}' - \bar{w}$$
$$S = w_s - \bar{w}$$

$$R \leq S$$
$$h^2 = \frac{R}{S} \begin{cases} h^2 = 1 \\ h^2 = 0 \end{cases}$$

breeders in plant

"breeder's equation"

