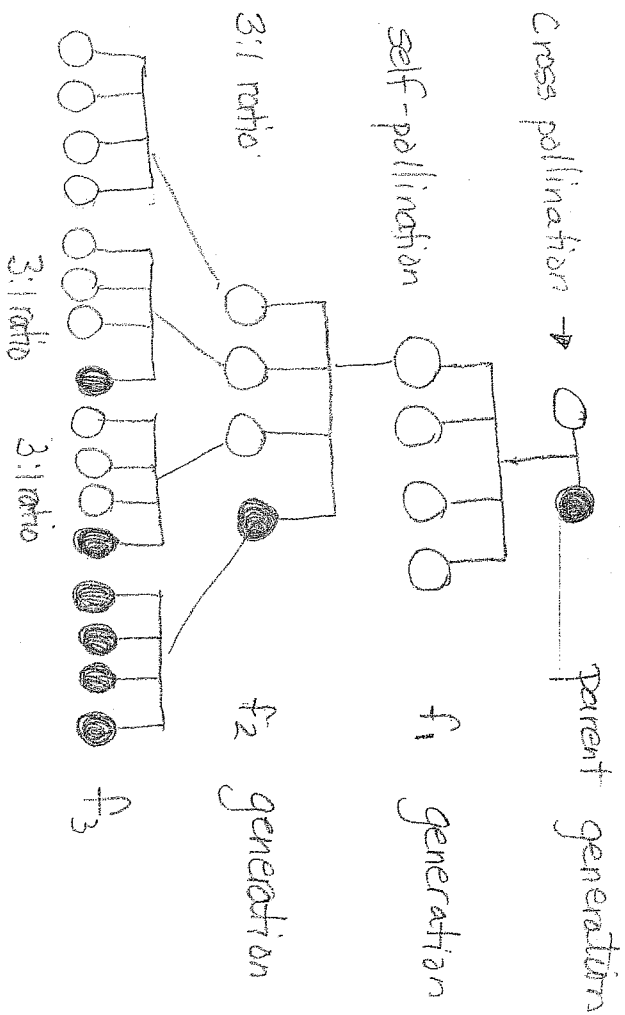


Mendel (yellow & green peas)



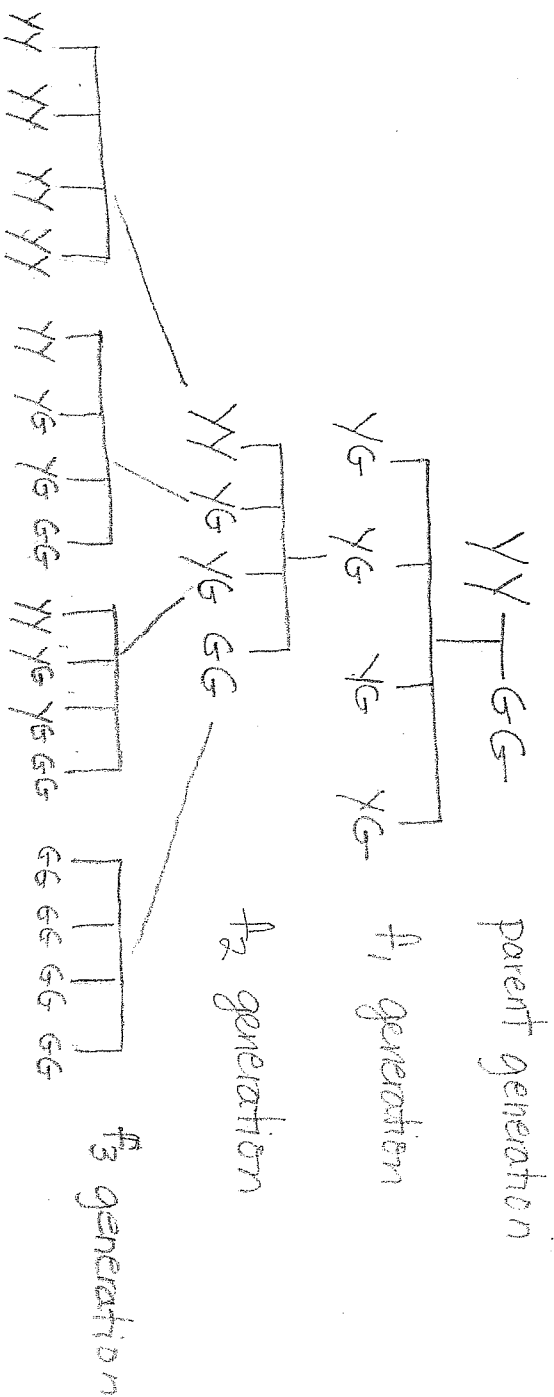
3 important conclusions from these experiments:

1. that the inheritance of a trait is determined by "units" or "factors" that are passed on to descendants unchanged. (These units are now called genes.)
2. that an individual inherits one such unit from a parent for each trait
3. that a trait may not show up in an individual but can be still passed on to the next generation

Note:

- ① starting parent plants were homozygous for pea color. (Ee)
had 2 identical forms (alleles) of the gene for this trait -
2 yellow or 2 greens.
- ② Plants in F₁ generation were all heterozygous - (Ee) had
inherited 2 different alleles - 1 from (E) parent.

It becomes clearer when you look @ actual genetic makeup (genotype)
instead of phenotype (observable physical characteristics).



w/ all the 7 pea plant traits Mendel examined
one form appeared dominant over the other (masked
the presence of the other allele. (EX: when genotype
for pea color is Yy (heterozygous) the phenotype
is yellow-). Remember though, the dominant
yellow allele does not alter the recessive green one
in any way. Both alleles can be passed on
to the next generation unchanged.

Mendel's observations from these experiments can be
summarized in 2 principles:

- ① Principle of segregation
- ② principle of independent assortment

Y Y

G	Y/G	Y/G
G	Y/G	Y/G

F₁ generation

Y G

Y	YY	Y/G
G	Y/G	G/G

F₂ generation