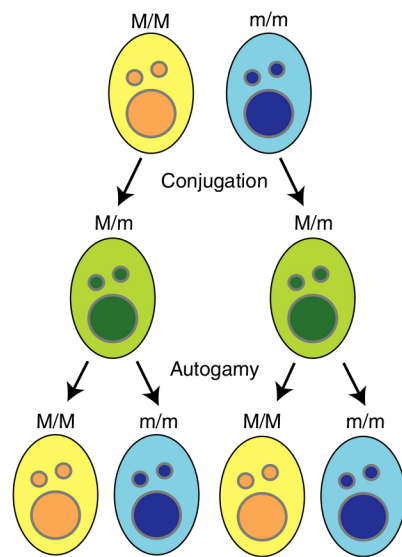
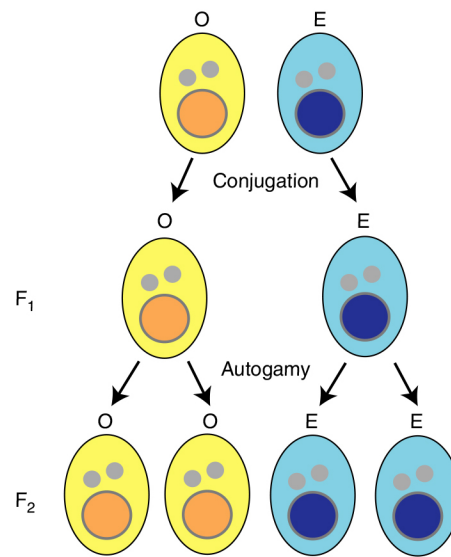


**A** Mendelian segregation of a pair of alleles



**B** Maternal inheritance of mating types



**Figure 10.** Epigenetic inheritance of mating-types in *Paramecium*. (A) Expected Mendelian segregation of genotypes and phenotypes. M and m alleles express yellow and blue phenotype, respectively. M/m F<sub>1</sub> heterozygote conjugation progeny shows green (intermediate) phenotype. F<sub>2</sub> homozygote progeny by autogamy shows either yellow or blue phenotype. (B) Mating type (O or E) is irreversibly determined during the development of the somatic macronucleus (large circle) from the totipotent germline micronucleus (small circle); however, the parental macronucleus directs differentiation of each exconjugant toward maintaining the existing mating type.