

III. Maintenance of Functional Gene Duplicates

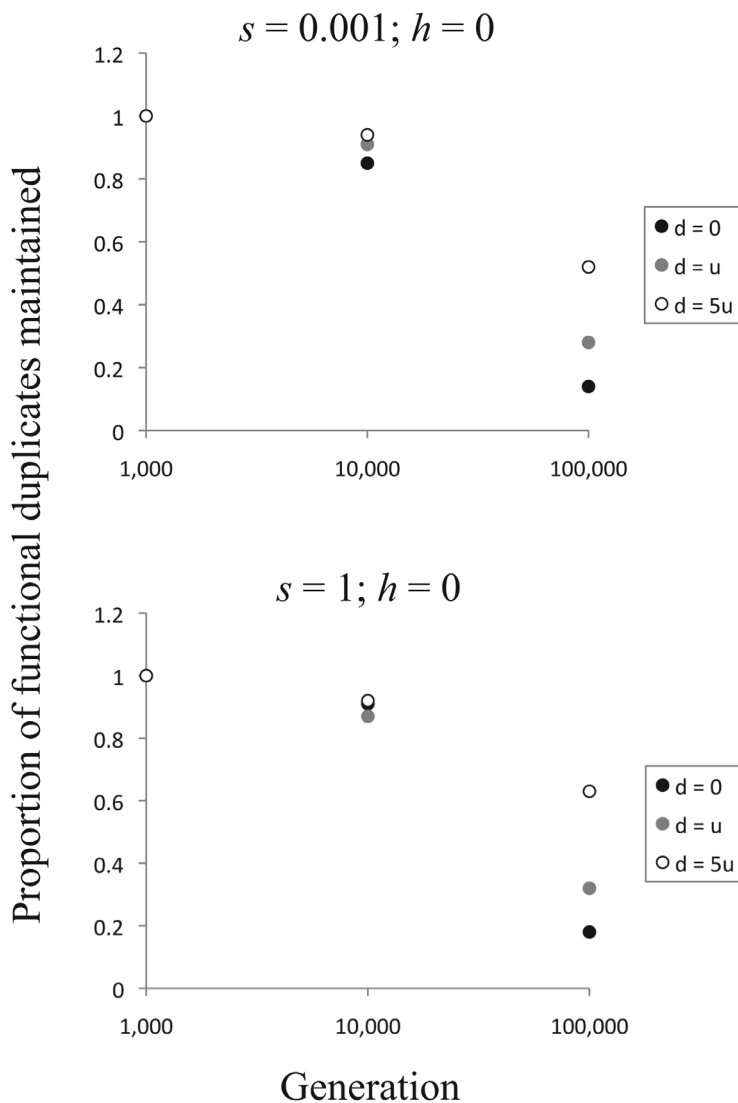


FIGURE S2.—Gene conversion and the maintenance of functionally redundant paralogs. Results are presented for two extremes of selection: gene conversion between paralogs of an essential gene ($s = 1$) and between paralogs of a nonessential gene ($s = 0.001$). In each case, gene conversion is unbiased ($b = 0.5$) and the mutation rate is $u = 10^{-5}$. Under essentiality and non-essentiality, fitness is maximized when at least one of the paralog copies is functional (*i.e.*, masking of knockout mutations is complete: $h = 0$). Each point represents the fraction of 100 simulation replicates where both copies are maintained as functional within the population. For each simulation run, the population is initially fixed for two functional Y-linked genes, and then evolves under mutation, recombination, selection, and genetic drift for 100,000 generations.