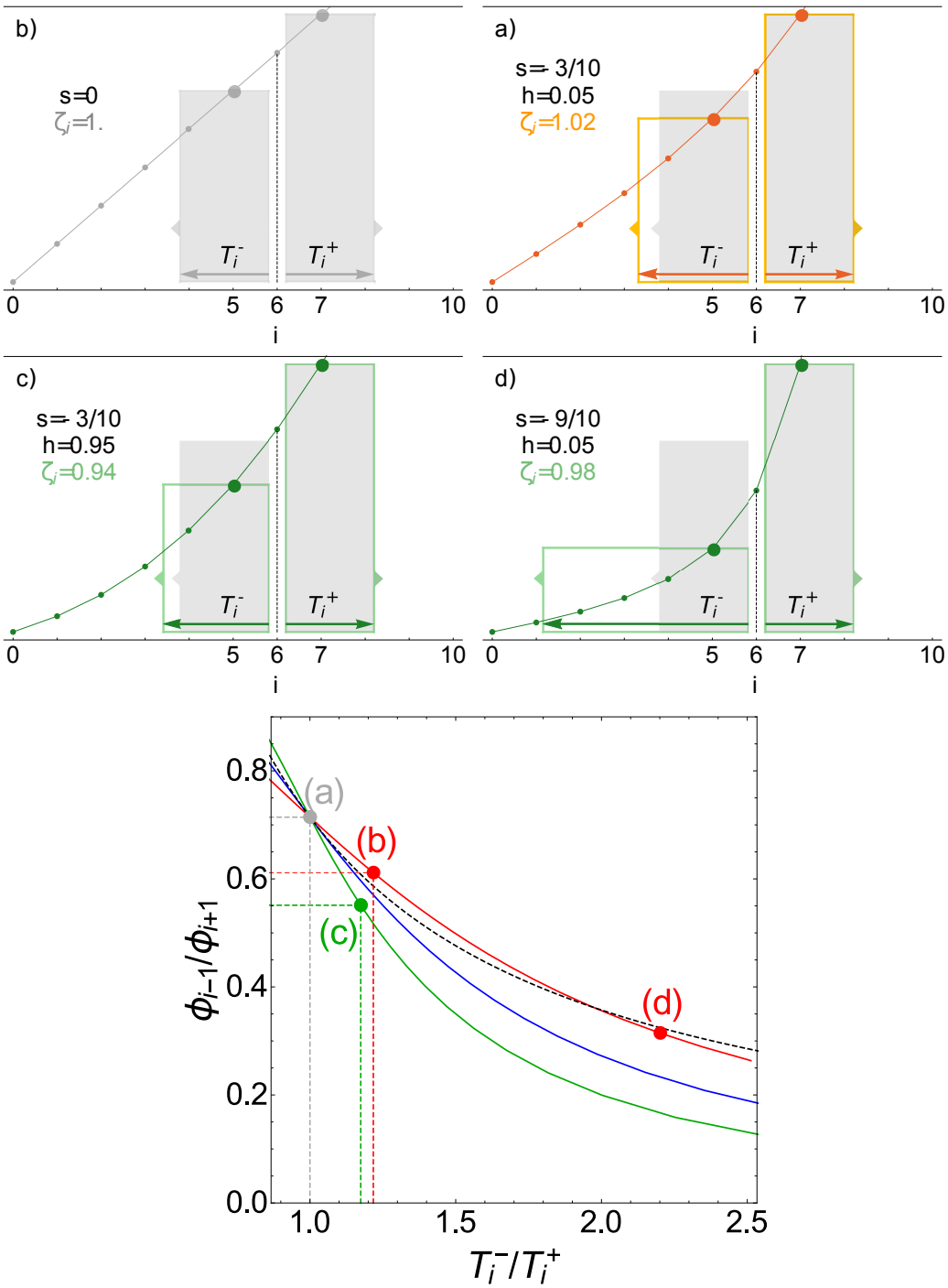

Figure S4: Jump process with $2N_e$=10 for i=6 (black vertical line) a deleterious A-alleles. Fig.(a-d) compare the probabilities of decreasing in frequency ($i \to i-1$, left-rectangles) or increasing ($i \to i+1$, right-rectangles) given fixation, when A is neutral (a), weakly selected and recessive (b) or dominant (c), and strongly selected and recessive(d). For all figures colored silhouette refers to the different values of h and s, while full gray rectangles indicates neutrality, as in figure 2. (e) Why can the left-rectangle be larger than for neutrality? Recessivity hides the effects of a deleterious alleles comparatively more at lower frequencies, hence as an allele becomes more deleterious and $|s|$ increases from 0, (moving away from the gray dot along the curves), the relative probability of fixation at $i-1$ and $i+1$ (y-axis) increases more rapidly than the the probability of a decrease in i (x-axis, chance for step i=6→5 relative to 6→7). The colored curves indicate varying selective coefficients s (increasing from bottom to top) for $h = 0.95$ (red),$h = 0.5$ (blue) and $h = 0.05$ (green), while points (a-d) correspond to the respective figures. Hence as s becomes more deleterious from zero (gray dot), the red curve goes above black curve (neutrality). Dotted lines coincides with the ratio of the areas of the rectangles in (a-d), i.e. P_i^-/P_i^+, hence the neutrality curves indicate combinations of T_i^-/T_i^+ and ϕ_i^-/ϕ_i^+ that provide equivalent P_i^-/P_i^+ to the neutral case.