Supplementary materials of the article Response threshold distributions to improve best-of-n decisions in minimalistic robot swarms

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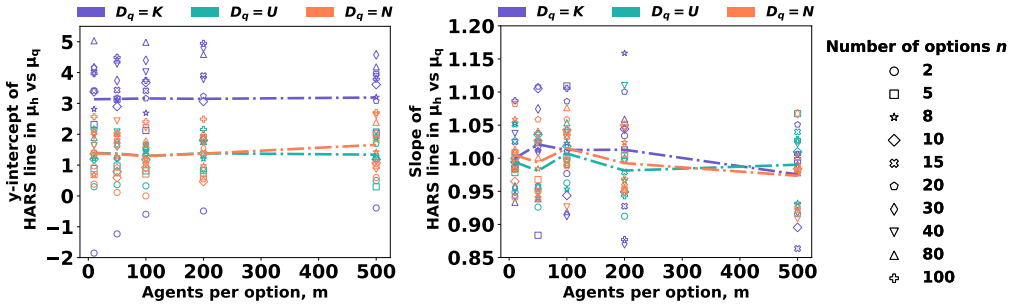

Figure S1: We show that the slope and the y-intercept of the HARS line in μ_h vs μ_q are invariant to changing the number of individuals. For all these simulations, $\sigma_h = \sigma_q = 1$.

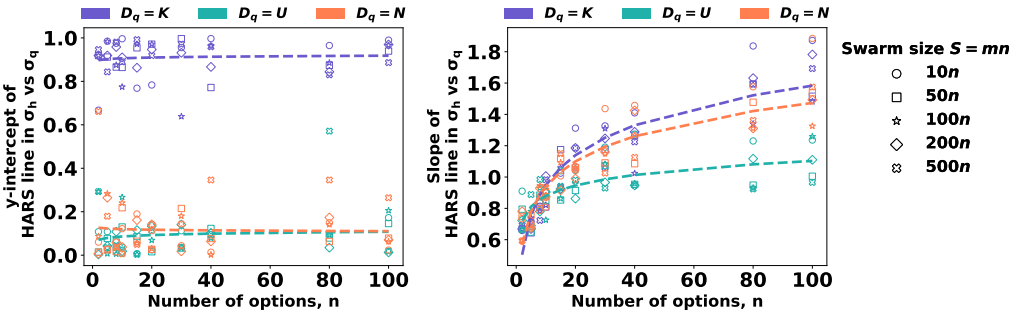

Figure S2: We show that the slope of the HARS line in σ_h vs σ_q varies significantly whereas the y-intercept remains unaffected by changing the number of options in the environment. We run these simulations by naively choosing the response threshold distribution with the same mean as that of the options' quality distribution.

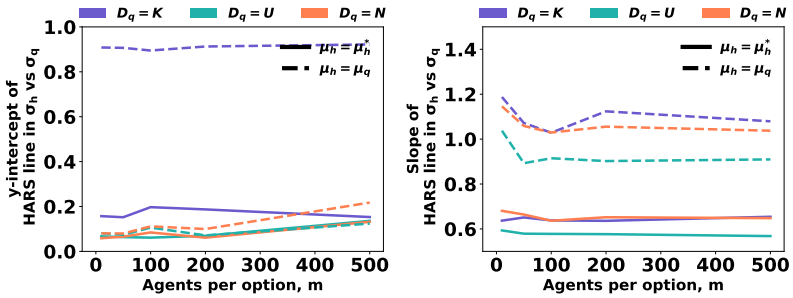

Figure S3: We show the dependency of the slope and the y-intercept of the HARS lines on σ_h vs σ_q plots. We compare the two conditions when $\mu_h = \mu_q$ (dashed lines) and $\mu_h = \mu_h^*$ (solid lines), to estimate how does the slope and the y-intercept get affected by changing the number of agents assigned to each option. We found that both the slope and the y-intercept of the remain invariant to changing the number of agents, m.