# *Supplementary Material*

## 1 ROBUSTNESS OF SIMULATION RESULTS

In this section, all simulations are independently performed for 30 times in order to explore the robustness of simulation results. Figure S1 presents simulation results in homogeneous populations where all individuals have uniform susceptibility to peer pressure. These boxplots describe the number of opinion clusters with respect to changes in susceptibility to peer pressure, population identity scope and passive adaptation speed, respectively. We find that the number of opinion clusters are almost the same in 30 independent simulations. Figure S2 presents the boxplots recording simulation results, including the number of opinion clusters and the proportion of moderates, in heterogeneous populations. We find that the differences among simulation results in each box are very small. These indicate that both the number of opinion clusters and the proportion of moderates are robust under the same combination of parameters.

## 2 ROBUSTNESS OF BOUNDARY PARAMETER $V$

In this section, we explore whether the value of boundary parameter $V$ influences the proportion of moderates. Figure S3 presents the proportion of moderates with respect to changes in $V$ ($V \in [0.02, 0.1]$) in different situations where $(\alpha_c, \alpha_i)$ is set as $(0, 0.5)$, $(0, 0.3)$, $(0.1, 0.4)$, respectively. We find that the proportion of moderates is almost the same with $V$ varying in all situations. It indicates that the boundary parameter $V$ has little impact.

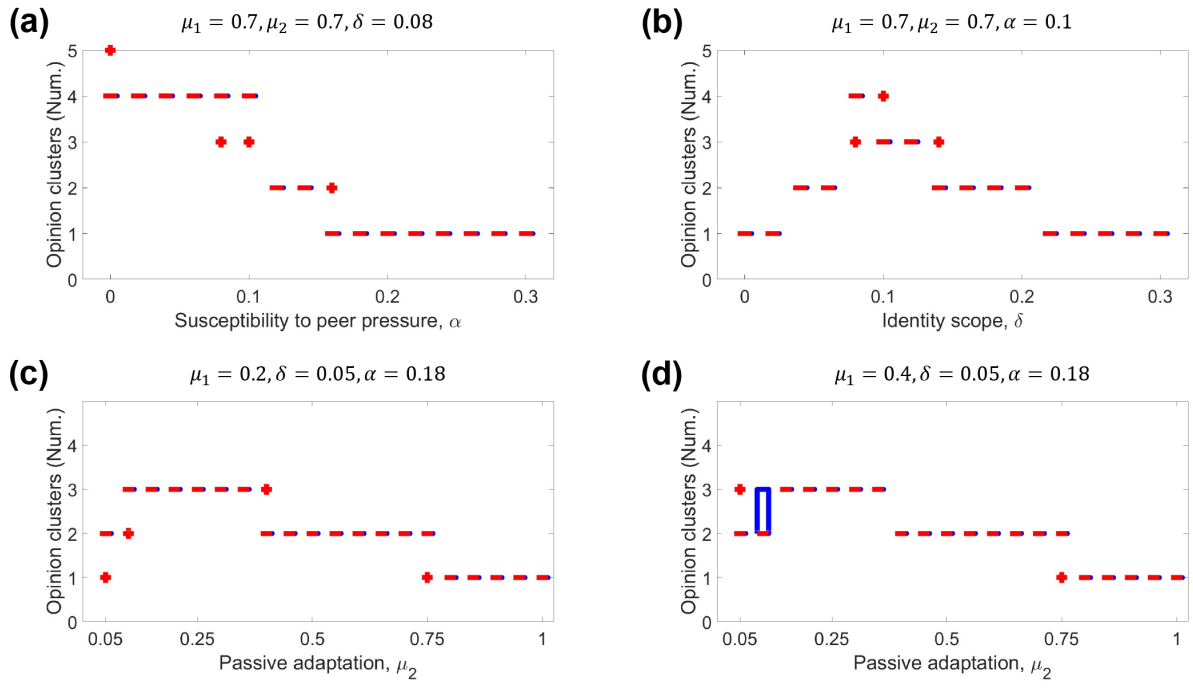


**Figure S1.** Robustness of simulation results in homogeneous populations. For each combination of parameters, we perform 30 independent simulations, whose results are presented by boxplots. Specifically, the number of opinion clusters is presented with respect to changes in (a) susceptibility to peer pressure, (b) population identity scope and (c)(d) passive adaptation speed, respectively. All figures show that simulation results in each box are almost the same.

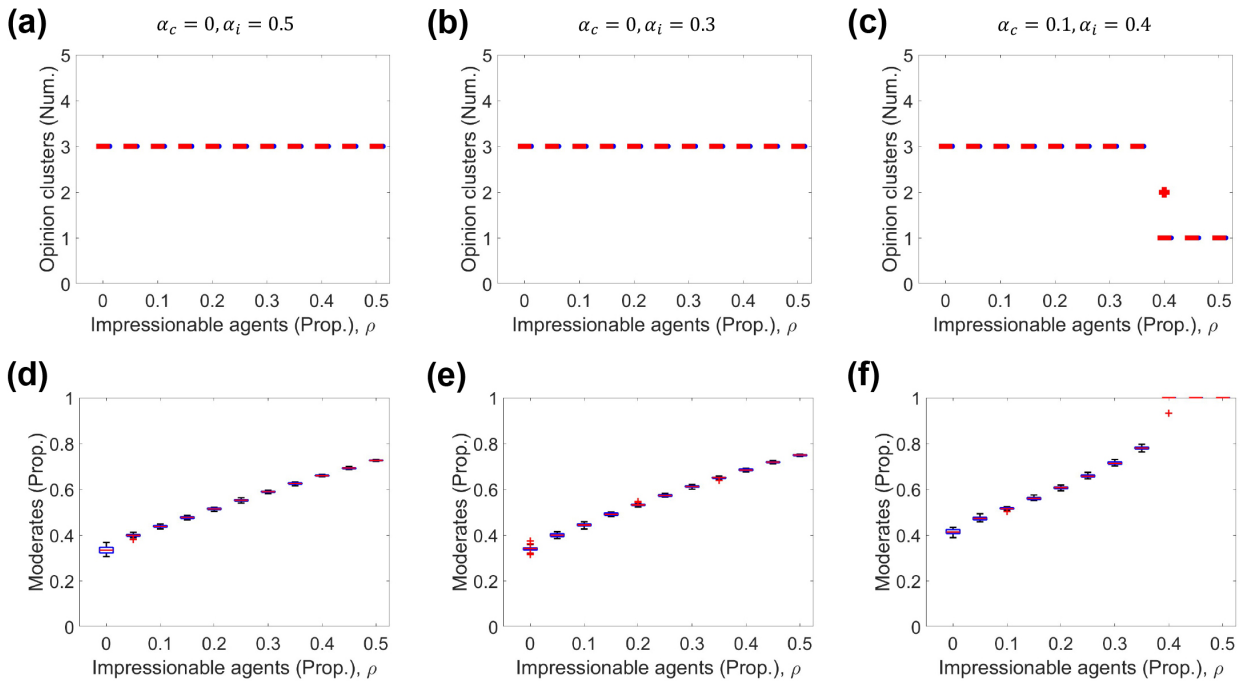


**Figure S2.** Robustness of simulation results in heterogeneous populations. Three situations are considered: (a)(d) $\alpha_c = 0$, $\alpha_i = 0.5$, (b)(e) $\alpha_c = 0$, $\alpha_i = 0.3$, (c)(f) $\alpha_c = 0.1$, $\alpha_i = 0.4$. Shown are boxplots presenting (a)-(c) the number of opinion clusters or (d)-(f) the proportion of moderates under different proportions of impressionable individuals. All simulations are independently performed for 30 times. Parameters: $\mu_1 = 0.7$, $\mu_2 = 0.7$, $\delta = 0.12$.

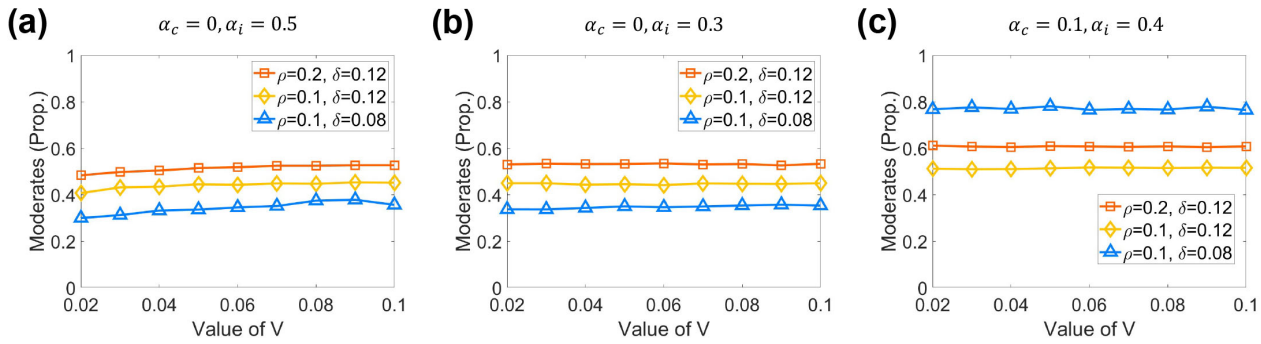


**Figure S3.** Robustness of boundary parameter $V$. Shown is the proportion of moderates with $V$ ranging from 0.02 to 0.1 under different conditions: (a) $\alpha_c = 0$, $\alpha_i = 0.5$, (b) $\alpha_c = 0$, $\alpha_i = 0.3$, (c) $\alpha_c = 0.1$, $\alpha_i = 0.4$. All figures show that the value of $V$ has little impact on the proportion of moderates. Parameters: $\mu_1 = 0.7$, $\mu_2 = 0.7$.

## 3 EVOLUTIONARY RELATIONSHIP BETWEEN IMPRESSIONABLE/CONFIDENT INDIVIDUALS AND MODERATES

Here we perform additional simulations under different population identity scope as complementary studies for the evolutionary relationship between impressionable/confident individuals and moderates. Figure S4 presents what proportion of impressionable/confident individuals finally hold moderate opinions when the system reaches steady states. All simulation results show that the proportion of impressionable individuals becoming moderates exceeds 80%, much larger than that of confident individuals evolving to moderates.

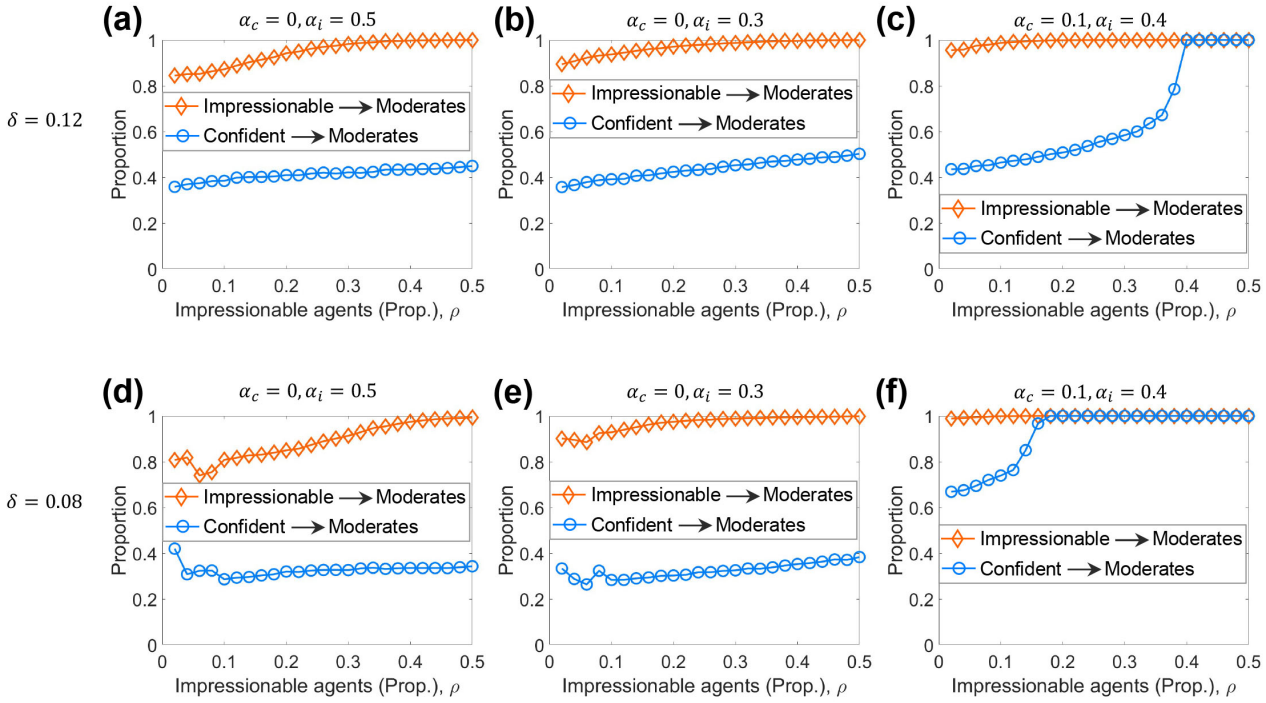


**Figure S4.** Complementary studies for the evolutionary relationship between impressionable/confident individuals and moderates. We consider more situations with different population identity scope: (a)-(c) $\delta = 0.12$, (d)-(f) $\delta = 0.08$. In each subplot, we present the proportion of impressionable individuals evolving to moderates (red diamond) and confident individuals becoming moderates (blue circle). Parameters: $\mu_1 = 0.7$, $\mu_2 = 0.7$.

## 4 EFFECT OF SYSTEM SIZES

Figure S5 shows simulation results under different system sizes. In figure S5(a)and figure S5(b), we present phase diagrams for the number of opinion clusters under different combinations of identity scope and susceptibility to peer pressure when $N = 500$ and $N = 5000$, respectively. Results illustrate the non-monotonous effect of identity scope, which is similar to the situations where $N = 50000$. Overall, through comparing simulation results under different system sizes (see figure S5(a)-(c) and figure 2(a)), we find that the system size only has a slight impact on the number of opinion clusters. The evolutionary results are robust when $N$ is relatively large while more fluctuation is observed when $N$ is small.

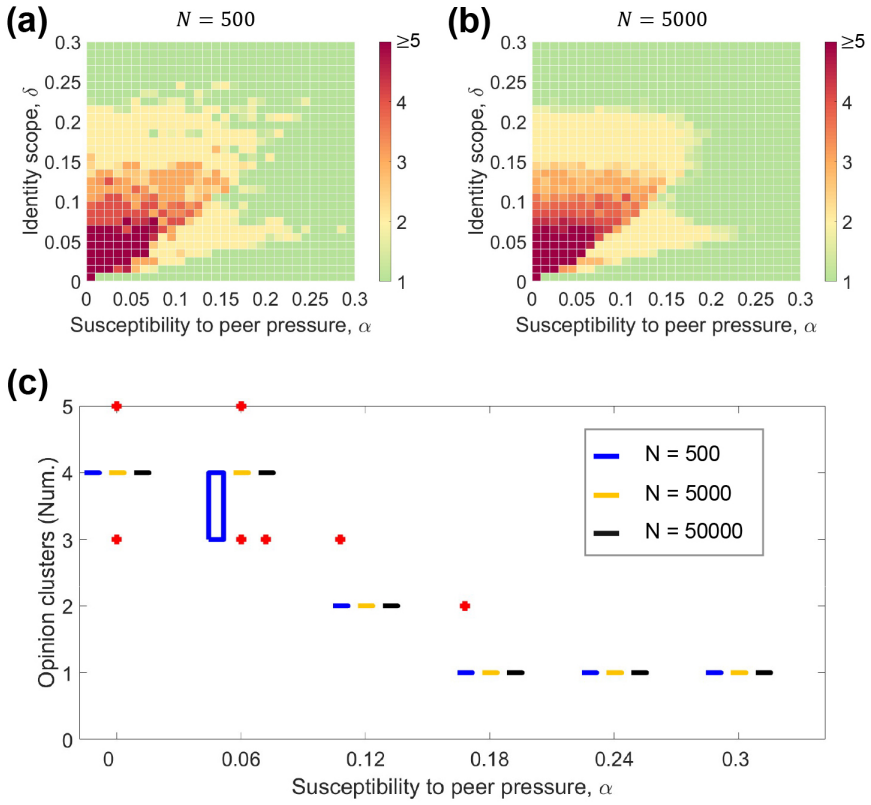


**Figure S5.** Effect of system sizes. Shown are phase diagrams for the number of opinion clusters under different system sizes: (a) $N = 500$, (b) $N = 5000$. The results are averaged over 5 independent runs. (c) Shown is boxplot presenting the number of opinion clusters as a function of $\alpha$ under different system sizes. Each box contains 30 independent simulations. Parameters: $\mu_1 = 0.7$, $\mu_2 = 0.7$. In addition, (c) $\delta = 0.08$.