

Table s1. Mechanism of initialization of the model in pseudocode

Agent-Based Model: Initialized		
1.	Generate network topologies and initial agents	
1.1	Set network topology	$\forall WS, BA, ER$
1.2	Set network of nodes(agents)	V
1.3	Choose the way to assign bots	$\{hige\ degree\ nodes, low\ degr\ random\}$ <i>Default: random</i>
1.4	Assign the species of agents	$S \in \{"1", "2"\}$
2	Assign the properties of agents	
2.1	Set the opinions of agents	
2.1.1	$\forall i \in V$ $\Omega \in [0,1]$ <i>if</i> $S == "1"$ $\Omega = N(0.5, 0.15),$ <i>if</i> $S == "2"$ $\Omega = \beta(0.1, 0.1),$ <i>if</i> $\Omega > 1$ $\Omega = 1$ <i>if</i> $\Omega < 0$ $\Omega = 0$	
2.2	Set the tolerance	$\varepsilon \in [0,1]$
2.2.1	$\forall i \in V$ <i>if</i> $S == "2"$ $\varepsilon = inf$ <i>else</i> $\varepsilon = \varepsilon$	
2.3	Set the degree of homophily	$m \in [0,1]$
2.4	Set the degree of confidence to human and bots	$\mu_{to_bots}, \mu_{to_human} \in [0,1]$ <i>Default = 0.4</i>

Table s2. Mechanism of the update function of the model in pseudocode

Agent-Based Model: Opinion exchange by post propagation		
1.	Prepare for posting	
1.1	Randomly select an agent i	$i \in V$
1.2	Set the list of potential people who may share the post.	E
1.3	Set the list of influenced people	I
1.2	Decide the parameter μ	
1.2.1	if $S_i == "1"$ $\mu = \mu_{to_human}$ else $\mu = \mu_{to_bot}$	$\mu \in \{\mu_{to_human}, \mu_{to_bot}\}$
1.3	Agent i make a post	$post_i$
1.3.1	$\Omega_{post} = \Omega_i + N(0,0.05)$ Then if $\Omega_{post} > 1$ $\Omega_{post} = 1$ if $\Omega_{post} < 0$ $\Omega_{post} = 0$	$\Omega_{post_i} \in [0,1]$
1.3.2	Set the Ω that spread this round. since it is the first round, just share the original post $\Omega_{post_i} = \Omega_{post}$	$\Omega_{post_i} \in [0,1]$
1.4	Set up the post share time to 0 $t_{post} = 0$	$t_{post_i} \in N$
2.	Post propagation	
2.1	Get the degree of all agents in the neighborhood of agent i .	$N(i) \in d(i)$
2.2	Calculate ε_l and ε_r by their Ω and m	
2.2.1	$\forall j \in N(i)$	$\varepsilon_l, \varepsilon_r \in [0,1]$ $\varepsilon_l + \varepsilon_r = \varepsilon$

		$\delta_r(x) = mx + \frac{1-m}{2}$ $\varepsilon_r(\Omega_j) = \delta_r(\Omega_j)\varepsilon_r$ $\varepsilon_l(\Omega_j) = \varepsilon - \varepsilon_r(\Omega_j)$	
2.3	N(i) receives the post and decide whether accept it, or not.		
2.3.1	Calculate the difference of opinion $\forall j \in N(i)$ $\Delta\Omega_j = \Omega_{post_i} - \Omega_j$	$\Delta\Omega_j \forall j \text{ in } N(i)$	
2.3.2	Decide whether accept or not $\forall j \in N(i)$ <i>if</i> $\Delta\Omega_j \geq 0$ <i>if</i> $ \Delta\Omega_j < \varepsilon_r$ $accept_j = True$ <i>else</i> $accept_j = False$ <i>if</i> $\Delta\Omega_j < 0$ <i>if</i> $ \Delta\Omega_j < \varepsilon_l$ $accept_j = True$ <i>else</i> $accept_j = False$		
2.3.3	Put agents who are accepted and did not accept the post before into a list. <i>Let</i> $A = \{\}$ $\forall j \in N(i)$ <i>if</i> $accept_j == True \ \& \ j \notin I$ $j \in A$	A	
2.4	Extend E and I and remove agent i from E <i>Let</i> $A \in E$ and $A \in I$ <i>Then</i> <i>Let</i> $i \notin E$		
2.5	Opinion exchange		

2.5.1	$\forall j \in A$ <i>if</i> $S_j == "1"$ $\Omega_j = \Omega_j + \Delta\Omega_j * \mu$ <i>else</i> $\Omega_j = \Omega_j$	
2.6	Update the t_{post_i} $t_{post_i} += 1$	
2.7	Choose whether stop this round of propagation. <i>If</i> $t_{post_i} > 20 \mid E == \emptyset$ <i>break</i>	
2.8	Choose a new agent i from E	$i \in E$
2.9	Decide the new parameter μ	
2.9.1	<i>if</i> $S_i == "1"$ $\mu = \mu_{to_human}$ <i>else</i> $\mu = \mu_{to_bot}$	
2. 10	New agent i share the post	
2. 10.1	$\Omega_{post_i} =$ $\Omega_{post} + (\Omega_i - \Omega_{post_i}) * N(0.5, 0.05, 1)$ <i>Then</i> <i>if</i> $\Omega_{post_i} > 1$ $\Omega_{post_i} = 1$ <i>if</i> $\Omega_{post_i} < 0$ $\Omega_{post_i} = 0$	
2. 11	Back to 2.1 and repeat the process	