Online Supporting Information to

“The Dynamics of Message Selection in Online Political Discussion Forums”

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# **Inclusion of the control terms in the TERGM model**

All models reported in Table 3 of the main document control for age, gender (including homophily), education, regional origins (including homophily), offline talk frequency, media use frequency, internal discussion efficacy, candidate preference, hedonic motivations, activity spread (gw-outdegree), isolate, and multiple two-paths (gwdsp), as well as lagged versions of network-endogenous statistics (previous communication, delayed reciprocity, delayed transitivity, delayed cyclic closure, delayed activity closure, delayed popularity closure, and number of in- and out ties of a given nodes at previous time point). Here, we control for (a) all possible temporal dependencies in a form of lagged structural variables (which closely resemble the concurrent structural terms), and (b) other covariates that help control lower-order effects in estimating higher-order effect (e.g., GWDSP), and (c) control for basic degree effects and densities (edge and isolate parameter together, given non-negligible number of isolates in each time period).

# **Table S1. Full TERGM results including model building procedures**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Control only** | **Control + Structural** | **Final Model I** | **Final Model II** |
| Edges (Intercept) | **-4.977** [-6.749; -6.749]\* | **-1.127** [-2.206; -2.206]\* | **-1.890** [-2.932; -1.392]\* | **-2.259** [-2.958; -1.732]\* |
| ***Motivation and Homophily*** |  |  |  |  |
| Consistency motivation (in-ties) |  |  | **.034** [.009; .113]\* | **.062** [.047; .144]\* |
| Consistency motivation (out-ties) |  |  | .025 [-.044; .077] | **.046** [.007; .046]\* |
| Understanding motivation (in-ties) |  |  | -.052 [-.080; .022] | **-.078** [-.118; -.011]\* |
| Understanding motivation (out-ties) |  |  | **.028** [.005; .076]\* | **.056** [.047; .092]\* |
| Hedonic motivation (in-ties) |  |  | -.012 [-.029; .001] | **-.026** [-.039; -.021]\* |
| Hedonic motivation (out-ties) |  |  | **.102** [.087; .133]\* | .043 [-.009; .114] |
| Same candidate pref |  |  | -.032 [-.070; .047] |  |
| Similar policy pref |  |  | -.108 [-.212; .006] |  |
| Dissimilar ideology (*absdiff*) |  |  |  | .024 [-.007; .040] |
| Similar evaluative criteria |  |  | **.407** [.399; .415]\* | **.482** [.398; .482]\* |
| ***Endogenous structural effects*** |  |  |  |  |
| Isolates |  | **1.021** [.797; .797]\* | **1.019** [.908; 1.264]\* | **.825** [.598; 1.224]\* |
| Reciprocity |  | **.765** [.497; .497]\* | **.769** [.564; 1.068]\* | **.720** [.504; 1.069]\* |
| Multiple path closure (GWESP-OTP) |  | **.058** [-.056; -.056]\* | .058 [-.053; .125] | .040 [-.078; .067] |
| Multiple cyclic closure (GWESP-ITP) |  | **-.068** [-.082; -.082]\* | **-.066** [-.080; -.060]\* | **-.058** [-.077; -.047]\* |
| Multiple activity closure (GWESP-OSP) |  | **.035** [.030; .030]\* | **.036** [.033; .045]\* | **.027** [.026; .033]\* |
| Multiple popularity closure (GWESP-ISP) |  | **.117** [.083; .083]\* | **.115** [.093; .232]\* | **.129** [.099; .286]\* |
| Multiple two-paths (GWDSP) |  | **.003** [-.005; -.005]\* | .003 [-.007; .007] | **.008** [.002; .016]\* |
| Activity spread (GW-outdegree) |  | **-4.399** [-4.669; -4.669]\* | **-4.350** [-4.557; -4.157]\* | **-3.923** [-4.124; -3.623]\* |
| Popularity spread (GW-indegree) |  | **-4.056** [-5.343; -5.343]\* | **-4.049** [-5.342; -3.259]\* | **-4.828** [-5.429; -3.889]\* |
| ***Lagged structural effects*** |  |  |  |  |
| Previous communication |  | **.214** [.182; .182]\* | **.222** [.192; .253]\* | **.531** [.494; .549]\* |
| Delayed reciprocity |  | **.082** [-.067; -.067]\* | .074 [-.073; .194] | .002 [-.197; .139] |
| Delayed transitivity closure |  | **.034** [.018; .018]\* | **.034** [.020; .055]\* | **.032** [.026; .037]\* |
| Delayed cyclic closure |  | **.037** [.010; .010]\* | **.034** [.008; .057]\* | **.032** [.003; .035]\* |
| Delayed activity closure |  | **-.058** [-.068; -.068]\* | **-.056** [-.067; -.046]\* | **-.061** [-.071; -.037]\* |
| Delayed popularity closure |  | **-.060** [-.089; -.089]\* | **-.059** [-.110; -.043]\* | **-.062** [-.124; -.046]\* |
| Persistent sender (out-tie) |  | **.019** [.009; .009]\* | **.019** [.010; .029]\* | **.510** [.176; .724]\* |
| Persistent receiver (in-ties) |  | **.023** [.019; .019]\* | **.023** [.018; .038]\* | **.116** [.020; .165]\* |
| ***Controls*** |  |  |  |  |
| Age (in-ties) | **.101** [-.012; -.012]\* | **.003** [-.017; -.017]\* | .001 [-.020; .022] | **-.025** [-.033; -.006]\* |
| Age (out-ties) | **.218** [-.097; -.097]\* | **.031** [-.224; -.224]\* | .052 [-.105; .093] | .101 [-.046; .141] |
| Female (in-ties) | **-.204** [-.245; -.245]\* | **-.001** [-.038; -.038]\* | .005 [-.036; .041] | -.023 [-.057; .030] |
| Female (out-ties) | **-.169** [-.446; -.446]\* | **.075** [-.308; -.308]\* | .014 [-.348; .254] | .151 [-.266; .389] |
| Gender homophily | **.010** [-.032; -.032]\* | **.051** [.018; .018]\* | **.044** [.023; .086]\* | **.045** [.021; .100]\* |
| Education (in-ties) | **-.114** [-.182; -.182]\* | **-.008** [-.042; -.042]\* | -.011 [-.039; .019] | -.015 [-.047; .014] |
| Education (out-ties) | **-.132** [-.239; -.239]\* | **.028** [-.010; -.010]\* | .016 [-.015; .091] | -.044 [-.096; .029] |
| Regional origin = Seoul (in-ties) | **-.418** [-.501; -.501]\* | **-.077** [-.116; -.116]\* | -.084 [-.130; .044] | **-.109** [-.140; -.030]\* |
| Regional origin = Seoul (out-ties) | **-.192** [-.383; -.383]\* | **-.143** [-.635; -.635]\* | -.125 [-.438; .350] | -.135 [-.435; .324] |
| Regional homophily (Seoul) | **-.021** [-.047; -.047]\* | **.013** [-.020; -.020]\* | .017 [-.014; .080] | .025 [-.002; .049] |
| Talk freq (in-ties) | **.129** [-.120; -.120]\* | **.045** [.021; .021]\* | **.046** [.024; .049]\* | **.051** [.048; .051]\* |
| Talk freq (out-ties) | **.025** [-.428; -.428]\* | **.034** [-.173; -.173]\* | .014 [-.099; .161] | .010 [-.111; .206] |
| Media use (in-ties) | **-.061** [-.108; -.108]\* | **-.011** [-.021; -.021]\* | **-.011** [-.019; -.003]\* | -.006 [-.012; .004] |
| Media use (out-ties) | **-.070** [-.104; -.104]\* | **.040** [.004; .004]\* | .033 [-.017; .071] | .043 [-.006; .078] |
| Internal efficacy (in-ties) | **.051** [-.045; -.045]\* | **-.013** [-.040; -.040]\* | -.013 [-.058; .055] | **-.030** [-.072; -.006]\* |
| Internal efficacy (out-ties) | **.187** [.132; .132]\* | **-.018** [-.098; -.098]\* | .024 [-.102; .128] | **.115** [.051; .163]\* |
| Candidate pref = Moon (in-ties) | **.174** [.057; .057]\* | **-.018** [-.063; -.063]\* | .003 [-.008; .092] | -.003 [-.056; .085] |
| Candidate pref = Moon (out-ties) | **.315** [.216; .216]\* | **-.010** [-.100; -.100]\* | .013 [-.123; .066] | .080 [-.004; .100] |
| Num. obs. | 291096 | 291096 | 291096 | 291096 |

\* = zero outside the 95% bias-corrected and accelerated confidence interval based on 1000 replications.

Note: Decay (alpha) values for each geometrically weighted term are: GWESP-OTP = 3, GWESP-ITP = 3, GWESP-OSP = 3, GWESP-ISP = 2, GWDSP = 1, GW-outdegree = 2, and GW-indegree = 3. “Final model” denotes the final model reported in the Table 3 in the main manuscript.

# **Table S2. Full TERGM results including interactions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Interaction I**  **(candidate preference)** | **(evaluation criteria)** | **(policy preference)** | **Interaction II**  **(ideology)** |
| Edges (Intercept) | **-1.819** [-2.732; -.304]\* | **-1.823** [-2.807; -1.169]\* | **-1.936** [-2.937; -1.098]\* | **-2.150** [-2.938; -1.630]\* |
| ***Motivation and Homophily*** |  |  |  |  |
| Consistency motivation (in-ties) | .037 [-.004; .113] | **.037** [.010; .113]\* | **.037** [.010; .113]\* | **.065** [.021; .144]\* |
| Consistency motivation (out-ties) | .019 [-.112; .071] | .019 [-.112; .071] | .019 [-.043; .071] | **.039** [.039; .039]\* |
| Understanding motivation (in-ties) | -.049 [-.103; .022] | -.049 [-.103; .022] | -.049 [-.078; .022] | **-.075** [-.094; -.011]\* |
| Understanding motivation (out-ties) | **.036** [.012; .075]\* | **.035** [.011; .087]\* | **.035** [.011; .075]\* | **.064** [.049; .065]\* |
| Hedonic motivation (in-ties) | -.012 [-.038; .001] | -.013 [-.032; .001] | -.013 [-.038; .001] | **-.026** [-.049; -.022]\* |
| Hedonic motivation (out-ties) | **.102** [.094; .130]\* | **.102** [.096; .130]\* | **.102** [.094; .105]\* | .042 [-.005; .110] |
| Same candidate pref | **-.135** [-.211; -.111]\* | -.033 [-.079; .047] | -.032 [-.079; .047] |  |
| Similar policy pref | -.091 [-.225; .042] | -.090 [-.230; .042] | .094 [-.764; .272] |  |
| Dissimilar ideology (*absdiff*) |  |  |  | -.013 [-.134; .028] |
| Similar evaluative criteria | **.385** [.260; .404]\* | .295 [-.359; .639] | **.389** [.255; .405]\* | **.465** [.350; .481]\* |
| ***Interactions*** |  |  |  |  |
| time trends (linear) | .079 [-.059; .262] | **.083** [.021; .171]\* | **.144** [.063; .235]\* | **.074** [.016; .133]\* |
| time X same candidate preference | **.051** [.038; .071]\* |  |  |  |
| time X evaluative criteria similarity |  | .046 [-.176; .242] |  |  |
| time X policy preference similarity |  |  | -.095 [-.253; .214] |  |
| time X dissimilar ideology |  |  |  | .019 [-.016; .063] |
| ***Endogenous structural effects*** |  |  |  |  |
| Isolates | **1.003** [.793; 1.264]\* | **1.005** [.793; 1.152]\* | **1.005** [.895; 1.264]\* | **.811** [.518; 1.030]\* |
| Reciprocity | **.768** [.560; 1.068]\* | **.768** [.559; 1.068]\* | **.768** [.507; 1.068]\* | **.719** [.501; 1.069]\* |
| Multiple two-paths (GWDSP, 1) | .003 [-.007; .007] | .003 [-.007; .007] | .003 [-.007; .009] | .007 [-.001; .013] |
| Multiple path closure (GWESP-OTP) | .057 [-.053; .094] | .057 [-.053; .125] | **.057** [.025; .125]\* | .039 [-.078; .066] |
| Multiple cyclic closure (GWESP-ITP) | **-.066** [-.076; -.061]\* | **-.066** [-.076; -.061]\* | **-.066** [-.080; -.061]\* | **-.057** [-.077; -.048]\* |
| Multiple activity closure (GWESP-OSP) | **.035** [.033; .043]\* | **.035** [.033; .041]\* | **.035** [.033; .043]\* | **.027** [.027; .032]\* |
| Multiple popularity closure (GWESP-ISP) | **.113** [.083; .232]\* | **.113** [.083; .232]\* | **.113** [.098; .232]\* | **.128** [.100; .286]\* |
| Activity spread (GW-outdegree) | **-4.395** [-4.557; -4.153]\* | **-4.392** [-4.557; -4.152]\* | **-4.392** [-4.557; -3.994]\* | **-3.968** [-4.165; -3.627]\* |
| Popularity spread (GW-indegree) | **-4.123** [-5.342; -3.541]\* | **-4.120** [-5.342; -3.537]\* | **-4.121** [-4.810; -3.259]\* | **-4.898** [-5.435; -3.889]\* |
| ***Lagged structural effects*** |  |  |  |  |
| Previous communication | **.220** [.184; .250]\* | **.220** [.184; .250]\* | **.219** [.185; .250]\* | **.528** [.507; .549]\* |
| Delayed reciprocity | .076 [-.073; .289] | .075 [-.073; .257] | .076 [-.073; .257] | .001 [-.197; .139] |
| Delayed transitivity closure | **.033** [.019; .051]\* | **.033** [.019; .051]\* | **.033** [.019; .051]\* | **.031** [.025; .036]\* |
| Delayed cyclic closure | **.032** [.008; .041]\* | **.032** [.008; .057]\* | **.032** [.008; .043]\* | **.031** [.003; .035]\* |
| Delayed activity closure | **-.055** [-.060; -.035]\* | **-.055** [-.065; -.035]\* | **-.055** [-.065; -.035]\* | **-.061** [-.072; -.037]\* |
| Delayed popularity closure | **-.058** [-.081; -.034]\* | **-.058** [-.110; -.043]\* | **-.058** [-.081; -.034]\* | **-.060** [-.124; -.046]\* |
| Persistent sender (out-tie) | **.019** [.010; .029]\* | **.019** [.010; .025]\* | **.019** [.010; .025]\* | **.506** [.176; .724]\* |
| Persistent receiver (in-ties) | **.023** [.018; .038]\* | **.023** [.018; .038]\* | **.023** [.021; .038]\* | **.112** [.059; .165]\* |
| ***Controls*** |  |  |  |  |
| Age (in-ties) | -.003 [-.023; .020] | -.003 [-.022; .035] | -.003 [-.022; .020] | **-.028** [-.034; -.017]\* |
| Age (out-ties) | .040 [-.192; .091] | .040 [-.112; .090] | .040 [-.113; .090] | .089 [-.049; .134] |
| Female (in-ties) | .009 [-.037; .043] | .009 [-.036; .071] | .009 [-.036; .071] | -.021 [-.054; .012] |
| Female (out-ties) | .029 [-.348; .268] | .029 [-.348; .268] | .029 [-.348; .335] | .162 [-.266; .397] |
| Gender homophily | **.044** [.015; .070]\* | **.044** [.015; .086]\* | **.044** [.022; .086]\* | **.044** [.019; .100]\* |
| Education (in-ties) | -.010 [-.029; .019] | -.010 [-.029; .019] | -.010 [-.029; .018] | -.014 [-.046; .014] |
| Education (out-ties) | .015 [-.016; .073] | .015 [-.016; .072] | .015 [-.016; .071] | -.046 [-.096; .029] |
| Regional origin = Seoul (in-ties) | -.083 [-.157; .044] | -.084 [-.131; .044] | **-.084** [-.157; -.031]\* | **-.109** [-.128; -.030]\* |
| Regional origin = Seoul (out-ties) | -.143 [-.598; .350] | -.142 [-.450; .350] | -.143 [-.449; .350] | -.152 [-.675; .324] |
| Regional homophily (Seoul) | .015 [-.014; .048] | .015 [-.014; .080] | .015 [-.014; .080] | .023 [-.002; .048] |
| Talk freq (in-ties) | **.030** [.018; .037]\* | **.030** [.018; .036]\* | **.030** [.002; .037]\* | **.036** [.034; .036]\* |
| Talk freq (out-ties) | -.005 [-.097; .161] | -.006 [-.130; .161] | -.006 [-.143; .110] | -.009 [-.110; .206] |
| Media use (in-ties) | **-.018** [-.024; -.002]\* | **-.018** [-.024; -.002]\* | -.018 [-.024; .000] | **-.013** [-.021; -.008]\* |
| Media use (out-ties) | **.024** [.001; .287]\* | .024 [-.017; .075] | .024 [-.017; .074] | .034 [-.006; .063] |
| Internal efficacy (in-ties) | -.012 [-.058; .055] | -.012 [-.058; .055] | -.012 [-.042; .055] | **-.029** [-.052; -.001]\* |
| Internal efficacy (out-ties) | .030 [-.102; .128] | .031 [-.064; .128] | .031 [-.102; .128] | **.122** [.051; .140]\* |
| Candidate pref = Moon (in-ties) | .006 [-.008; .049] | .004 [-.008; .092] | .003 [-.008; .092] | -.004 [-.056; .055] |
| Candidate pref = Moon (out-ties) | .017 [-.123; .070] | .017 [-.123; .070] | .016 [-.063; .131] | **.085** [.039; .121]\* |
| Num. obs. | 291096 | 291096 | 291096 | 291096 |

\* = zero outside the 95% bias-corrected and accelerated confidence interval based on 1000 replications.

Note: Decay (alpha) values for each geometrically weighted term are: GWESP-OTP = 3, GWESP-ITP = 3, GWESP-OSP = 3, GWESP-ISP = 2, GWDSP = 1, GW-outdegree = 2, and GW-indegree = 3. “Interaction I” and “Interaction II” denote the final interaction models reported in the Table 3 in the main manuscript.

# **Figure S1. The Goodness-of-fit (*gof*) assessment of final model specification**

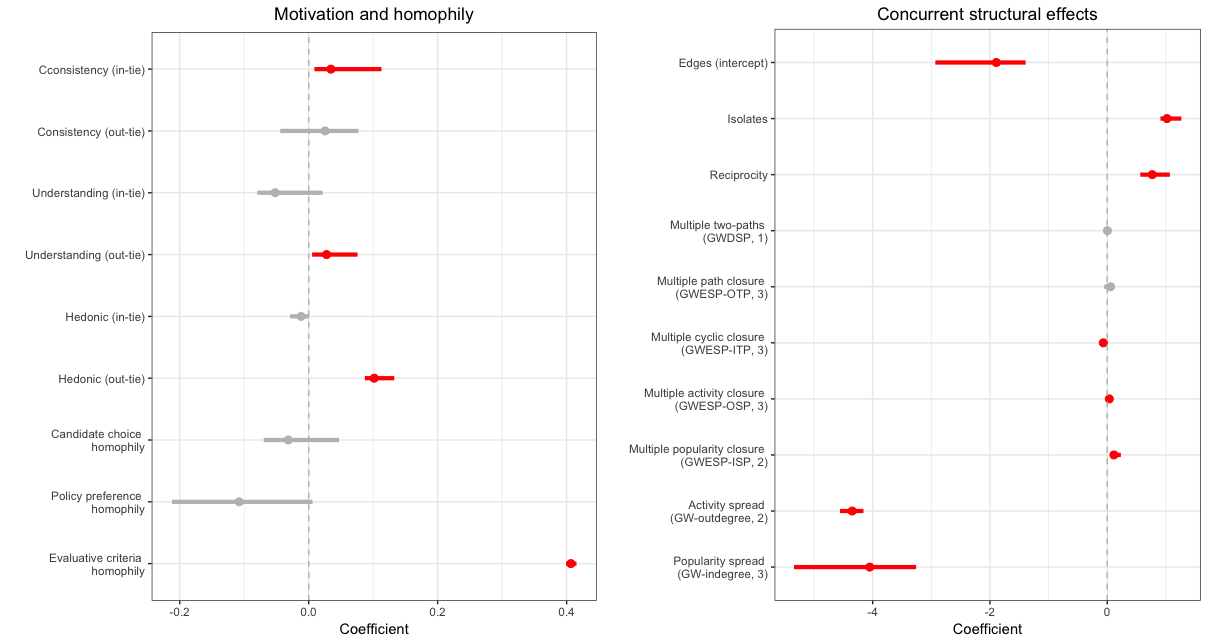
Note: The distribution of network statistics from the simulated networks (N = 900) does not significantly deviate from that of the observed statistic (bold line), suggesting that model fit is acceptable and adequate.

# **Table S3. Model robustness checks**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Final model I** | **Multiple Imputation** | **Daily** | **No Threshold** | **MRQAP** |
| Edges (Intercept) | -**1.89** [-2.93; -1.39]\* | **-1.19** [-3.29; -.58]\* | **-1.24** [-1.80; -.64]\* | **-.29** [-.37; -.25]\* | 1.209 |
| ***Motivations and homophily*** |  |  |  |  |  |
| Consistency (in-ties) | **.034** [.009; .113]\* | **.026** [.023; .036]\* | **.017** [.002; .036]\* | **.026** [.019; .059]\* | .052 |
| Consistency (out-ties) | .025 [-.044; .077] | .028 [-.032; .090] | .001 [-.031; .030] | -.027 [-.050; -.006]\* | -.030 |
| Understanding (in-ties) | -.052 [-.080; .022] | **-.058** [-.087; -.023]\* | **-.027** [-.046; -.009]\* | **-.061** [-.085; -.017]\* | **-.197**\* |
| Understanding (out-ties) | **.028** [.005; .076]\* | .026 [-.002; .055] | .022 [-.016; .063] | **.036** [.034; .041]\* | **.127**\*\* |
| Hedonic (in-ties) | -.012 [-.029; .001] | -.003 [-.015; .007] | -.006 [-.016; .004] | .007 [-.010; .028] | .079 |
| Hedonic (out-ties) | **.102** [.087; .133]\* | **.076** [.040; .112]\* | **-.025** [-.048; -.006]\* | -.002 [-.007; .030] | **-.300**\*\*\* |
| Same candidate preference | -.032 [-.070; .047] | -.039 [-.081; .039] | **.040** [.020; .057]\* | **.072** [.059; .094]\* | .013 |
| Similar policy preference | -.108 [-.212; .006] | .028 [-.105; .239] | .071 [-.012; .143] | .057 [-.033; .103] | -.092 |
| Similar evaluative criteria | **.407** [.399; .415]\* | **.461** [.445; .484]\* | **.094** [.017; .176]\* | **.053** [.012; .058]\* | **.587**\* |
| ***Endogenous structural effects*** |  |  |  |  |  |
| Isolates | **1.019** [.908; 1.264]\* | **1.243** [.931; 1.402]\* | **1.311** [1.051; 1.564]\* | **1.470** [.967; 2.285]\* |  |
| Reciprocity | **.769** [.564; 1.068]\* | **1.027** [.550; 1.298]\* | **.848** [.759; .974]\* | **.903** [.754; 1.008]\* | **.416**\*\*\* |
| Multiple two-paths (GWDSP) | .003 [-.007; .007] | .002 [-.006; .005] | .002 [-.001; .005] | -.001 [-.003; .001] |  |
| Path closure (GWESP-OTP) | .058 [-.053; .125] | **.048** [.021; .151]\* | **.083** [.066; .101]\* | **.021** [.021; .024]\* |  |
| Cyclic closure (GWESP-ITP) | **-.066** [-.080; -.060]\* | **-.053** [-.063; -.047]\* | **-.060** [-.067; -.053]\* | -.008 [-.015; -.003]\* |  |
| Activity closure (GWESP-OSP) | **.036** [.033; .045]\* | .013 [-.013; .044] | **.017** [.008; .026]\* | **.011** [.007; .014]\* |  |
| Popularity closure (GWESP-ISP) | **.115** [.093; .232]\* | **.057** [.011; .073]\* | **.081** [.059; .107]\* | .010 [-.000; .021] |  |
| Activity spread (GW-outdegree) | **-4.35** [-4.56; -4.16]\* | -**4.78** [-5.27; -3.43]\* | -**2.88** [-3.23; -2.60]\* | -**4.10** [-4.43; -3.79]\* |  |
| Popularity spread (GW-indegree) | -**4.05** [-5.34; -3.26]\* | -**4.59** [-5.05; -2.99]\* | -**3.79** [-4.13; -3.46]\* | **-4.63** [-4.84; -4.47]\* |  |
| ***Lagged structural effects*** |  |  |  |  |  |
| Previous communication | **.222** [.192; .253]\* | **.218** [.115; .262]\* | **.221** [.171; .273]\* | **.239** [.207; .257]\* | **2.336**\*\*\* |
| Delayed reciprocity | .074 [-.073; .194] | **.080** [.036; .248]\* | -.025 [-.080; .025] | .001 [-.044; .064] | **-.227**\*\*\* |
| Delayed transitivity closure | **.034** [.020; .055]\* | **.010** [.004; .040]\* | **.031** [.020; .041]\* | **-.006** [-.008; -.001]\* |  |
| Delayed cyclic closure | **.034** [.008; .057]\* | **.020** [.013; .037]\* | **.002** [-.004; .009] | -.002 [-.005; .003] |  |
| Delayed activity closure | **-.056** [-.067; -.046]\* | **-.030** [-.058; -.009]\* | **-.028** [-.035; -.018]\* | **-.002** [-.004; -.001]\* |  |
| Delayed popularity closure | **-.059** [-.110; -.043]\* | **-.033** [-.091; -.017]\* | **-.009** [-.016; -.001]\* | **-.013** [-.015; -.011]\* |  |
| Persistent sender (out-tie) | **.019** [.010; .029]\* | **.019** [.009; .025]\* | **.017** [.014; .019]\* | **.009** [.005; .011]\* |  |
| Persistent receiver (in-ties) | **.023** [.018; .038]\* | **.019** [.009; .027]\* | **.002** [-.000; .003] | **.010** [.007; .012]\* |  |
| ***Controls*** |  |  |  |  |  |
| Age (in-ties) | .001 [-.020; .022] | .002 [-.003; .026] | **-.022** [-.036; -.009]\* | **-.015** [-.041; -.004]\* | .049 |
| Age (out-ties) | .052 [-.105; .093] | .069 [-.193; .120] | .029 [-.002; .064] | **.038** [.008; .052]\* | **.307**\*\*\* |
| Female (in-ties) | .005 [-.036; .041] | .022 [-.005; .070] | **-.037** [-.062; -.001]\* | .009 [-.017; .042] | -.103 |
| Female (out-ties) | .014 [-.348; .254] | .055 [-.269; .282] | **-.043** [-.105; -.003]\* | -.005 [-.084; .042] | .037 |
| Gender homophily | **.044** [.023; .086]\* | **.069** [.043; .101]\* | .018 [-.003; .041] | .016 [-.011; .034] | .055 |
| Education (in-ties) | -.011 [-.039; .019] | -.007 [-.032; .017] | **-.019** [-.038; -.000]\* | -.005 [-.018; .008] | -.092 |
| Education (out-ties) | .016 [-.015; .091] | .006 [-.049; .130] | -.023 [-.060; .004] | -.027 [-.043; .018] | **-.252**\*\*\* |
| Regional origin = Seoul (in-ties) | -.084 [-.130; .044] | -.049 [-.114; .017] | **-.077** [-.107; -.058]\* | **-.071** [-.131; -.013]\* | **-.377**\* |
| Regional origin = Seoul (out-ties) | -.125 [-.438; .350] | -.109 [-.463; .097] | **.098** [.032; .156]\* | **.046** [.011; .088]\* | **.433**\*\*\* |
| Regional homophily (Seoul) | .017 [-.014; .080] | **.035** [.024; .049]\* | .015 [-.012; .042] | .017 [-.010; .074] | -.032 |
| Talk freq (in-ties) | **.046** [.024; .049]\* | **.038** [.019; .045]\* | .**026** [.015; .037]\* | **.050** [.015; .070]\* | **.268**\*\* |
| Talk freq (out-ties) | .014 [-.099; .161] | .003 [-.169; .076] | -.013 [-.037; .012] | .012 [-.043; .024] | -.016 |
| Media use (in-ties) | **-.011** [-.019; -.003]\* | -.015 [-.067; .003] | -.008 [-.014; .001] | -.010 [-.037; .002] | -.076 |
| Media use (out-ties) | .033 [-.017; .071] | .007 [-.036; .075] | -.004 [-.013; .006] | .001 [-.012; .020] | **-.130**\*\* |
| Internal efficacy (in-ties) | -.013 [-.058; .055] | -.014 [-.033; .008] | **-.013** [-.021; -.005]\* | -.010 [-.017; -.003]\* | -.134 |
| Internal efficacy (out-ties) | .024 [-.102; .128] | .015 [-.143; .113] | **.049** [.027; .078]\* | **.065** [.028; .092]\* | **.226**\*\*\* |
| Candidate pref = Moon (in-ties) | .003 [-.008; .092] | -.005 [-.038; .044] | **-.034** [-.053; -.004]\* | -.025 [-.105; .007] | -.019 |
| Candidate pref = Moon (out-ties) | .013 [-.123; .066] | .024 [-.025; .074] | -.015 [-.055; .035] | -.023 [-.059; .021] | **.278**\*\*\* |
| Num. obs. | 291096 | 347820 | 2522832 | 291096 |  |
| F-statistic |  |  |  |  | 1294.354 |
| df1 |  |  |  |  | 29 |
| df2 |  |  |  |  | 76787 |
| Multiple R-squared |  |  |  |  | 0.328 |
| Adjusted R-squared |  |  |  |  | 0.328 |

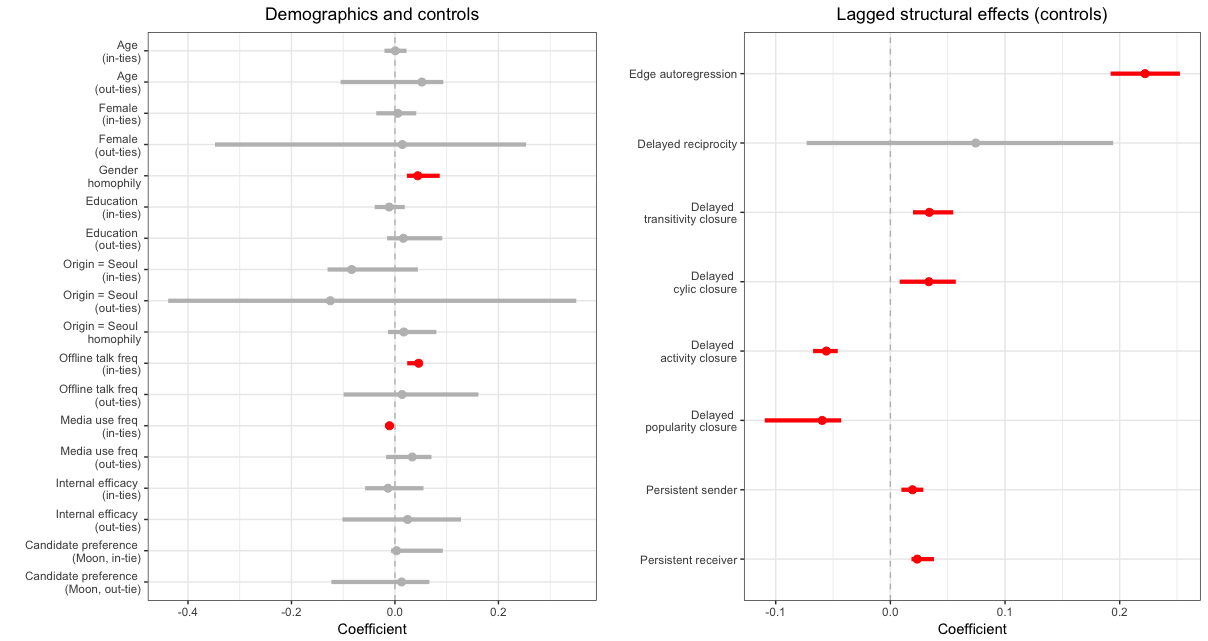
Note: \*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05 (or 0 outside the 95% bias-corrected and accelerated confidence interval based on 1000 replications). Significant results in bold. Final Model I = the leftmost final result reported in Table 3 of the manuscript. Multiple Imputation = multiple imputation for missing candidate preference at wave 1. Daily = Daily slice model with t = 26. No Threshold = no threshold model, such that ties defined as 0 vs. all other values. MRQAP = Multiple Regression using double semi-partialing Quadratic Assignment Procedure on the single aggregated network. For “no threshold” and “MRQAP” model, we did not dichotomize the original valued matrix. All other models use dichotomized matrix based on mean number of selection instances within each time slice. MRQAP model does not report traditional CIs or standard errors.

# **Figure S2. Parameter estimates and 95% confidence intervals from the final model**



Note: Coefficients for key predictor variables (as reported in Table 2 in the main document) and their 95% CIs are reported (significant model terms are denoted in red).

# **Figure S2. Parameter estimates and 95% confidence intervals from the final model (con’d)**



Note: Coefficients for control variables and their 95% CIs are reported (significant model terms are denoted in red).

# **Table S4. Additional robustness checks**

Predicting “change statistics” of key network-endogenous variables as a function of partisan homophily variables (i.e., *same candidate preference*, *similar policy preference*, and *dissimilar ideological self-placement*) using *netlm* (QAP-regression) and *netlogit* (QAP-logit regression)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DV:** | **Popularity spread**  (gw-indegree) | | **Activity spread**  (gw-outdegree) | | **Reciprocity**  (mutual) | |
| ***IV: Same candidate preference*** | | | | | | |
| *Time point* | ***b*** | ***Pr* ≥ (|*b*|)** | ***b*** | ***Pr* ≥ (|*b*|)** | ***b*** | ***Pr* ≥ (|*b*|)** |
| *T = 1* | -.0056 | .257 | -.0122 | .089 | .1234 | .225 |
| *T = 2* | -.0024 | .750 | .0023 | .828 | .0716 | .662 |
| *T = 3* | -.0053 | .286 | -.0068 | .401 | .0934 | .530 |
| ***IV: Policy preference similarity*** | | | | | | |
| *Time point* | ***b*** | ***Pr* ≥ (|*b*|)** | ***b*** | ***Pr* ≥ (|*b*|)** | ***b*** | ***Pr* ≥ (|*b*|)** |
| *T = 1* | .0059 | .847 | .0804 | .010 | -.5281 | .405 |
| *T = 2* | .0564 | **.036** | .1355 | **.001** | -2.0456 | **.005** |
| *T = 3* | .0275 | .312 | .0394 | .347 | .3777 | .593 |
| ***IV: Dissimilar ideological self-placement*** | | | |  |  |  |
| *Time point* | ***b*** | ***Pr* ≥ (|*b*|)** | ***b*** | ***Pr* ≥ (|*b*|)** | ***b*** | ***Pr* ≥ (|*b*|)** |
| *T = 1* | -.0004 | .933 | -.0011 | .868 | -.0308 | .724 |
| *T = 2* | -.0049 | .241 | -.0091 | .160 | .0384 | .679 |
| *T = 3* | .0000 | .999 | -.0069 | .251 | .0785 | .475 |

*Note*: *b* = unstandardized regression coefficients, where models include only intercept and a respective predictor variable. We used the double semi-partialing permutation with 1,000 replications for deriving probabilities of observed value (*b*) exceeding the either lower or upper tails of the simulated distribution at .05 level (denoted as *Pr* ≥ (|*b*|) above). Since change statistics for reciprocity is constrained to be zero and one, we used *netlogit* (logit regression QAP) instead of *netlm* (QAP regression). For all other dependent change statistics, we used *netlm* (QAP regression).