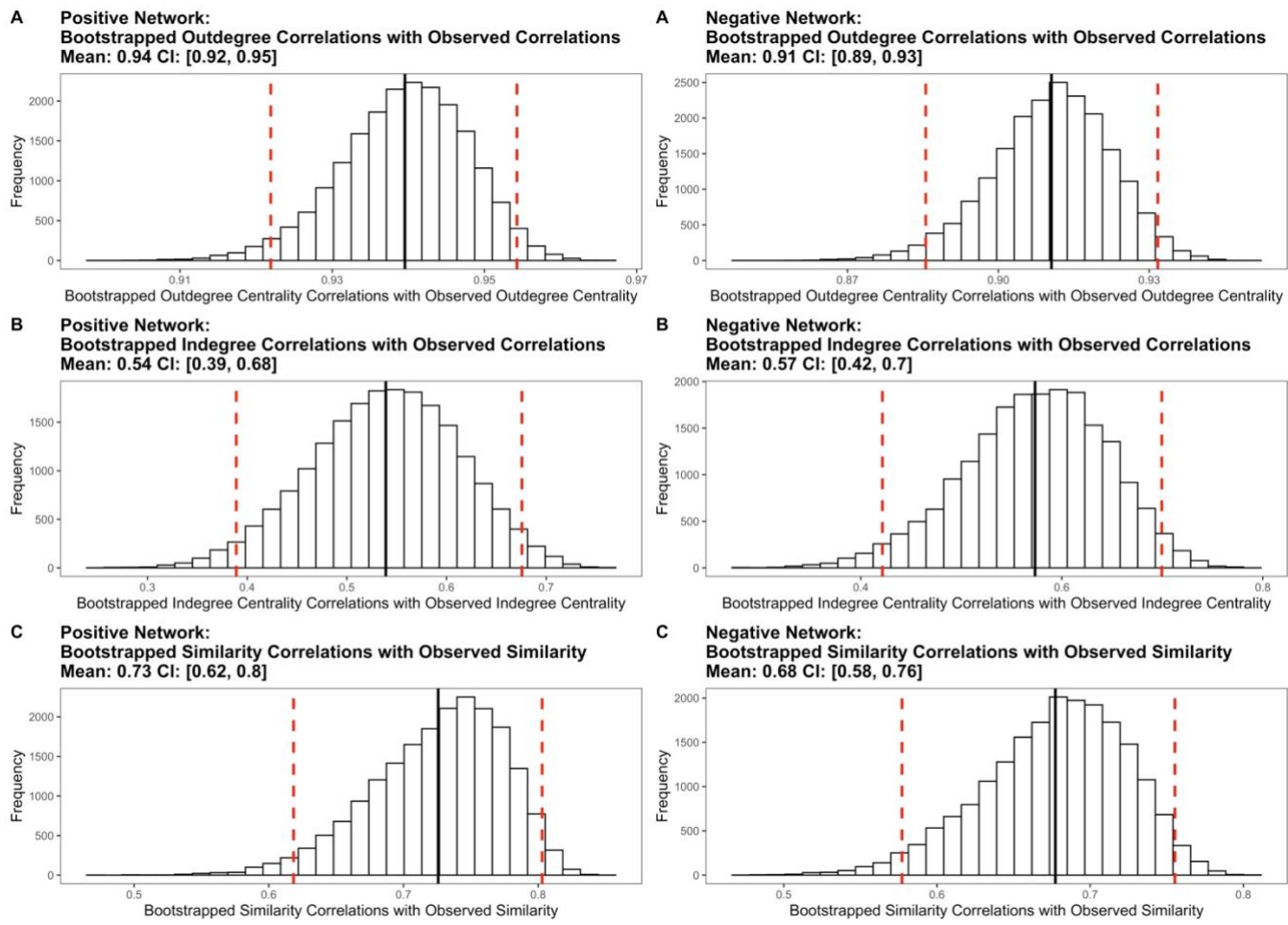
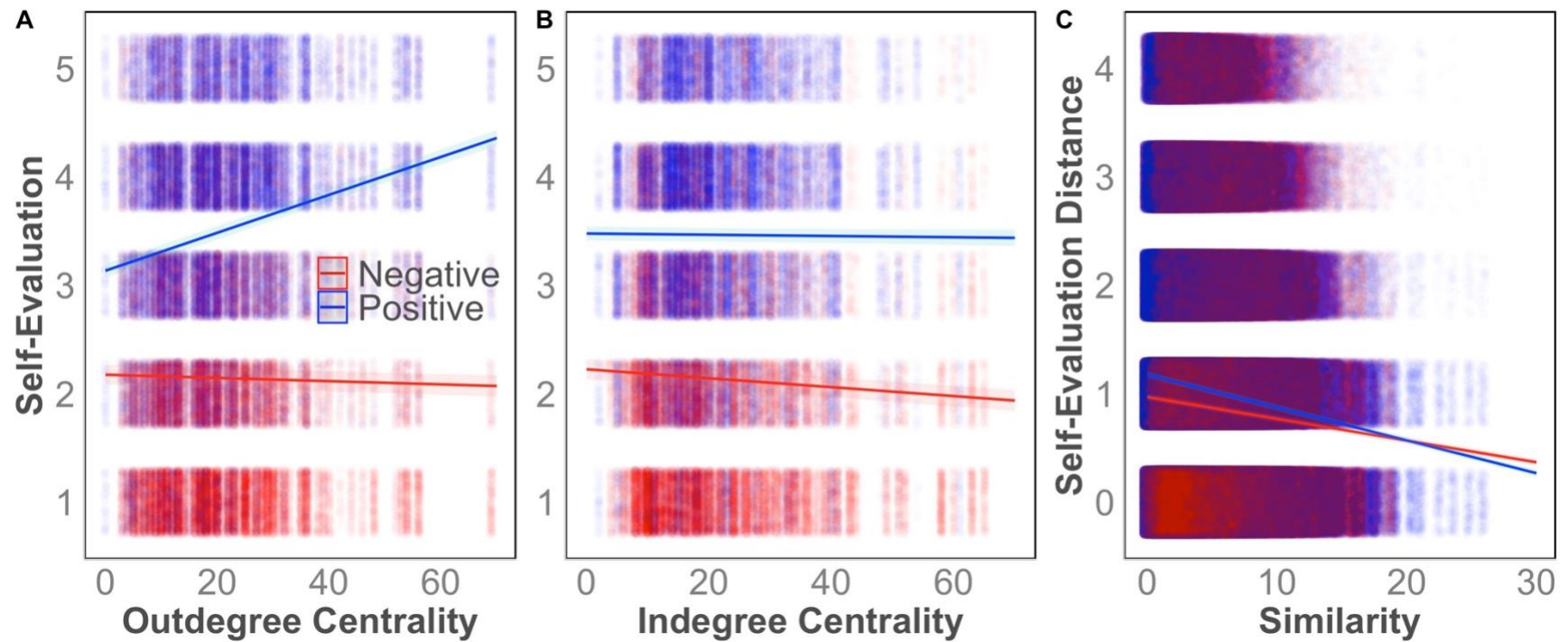


Supplementary Figure 1. *Graphical depiction of the stability of network features over different threshold values. Threshold is the percent of nominations required to binarize a connection. On the y-axis are the correlations estimated between a threshold's network properties and all other thresholds' network properties. On the x-axis are the thresholds. Outdegree correlations estimate the association between the outdegree centrality of a trait across thresholds. Similarity correlations estimate the associations between the inverse log weighted similarity across thresholds. (A) Positive network thresholds (B) Negative network thresholds.*

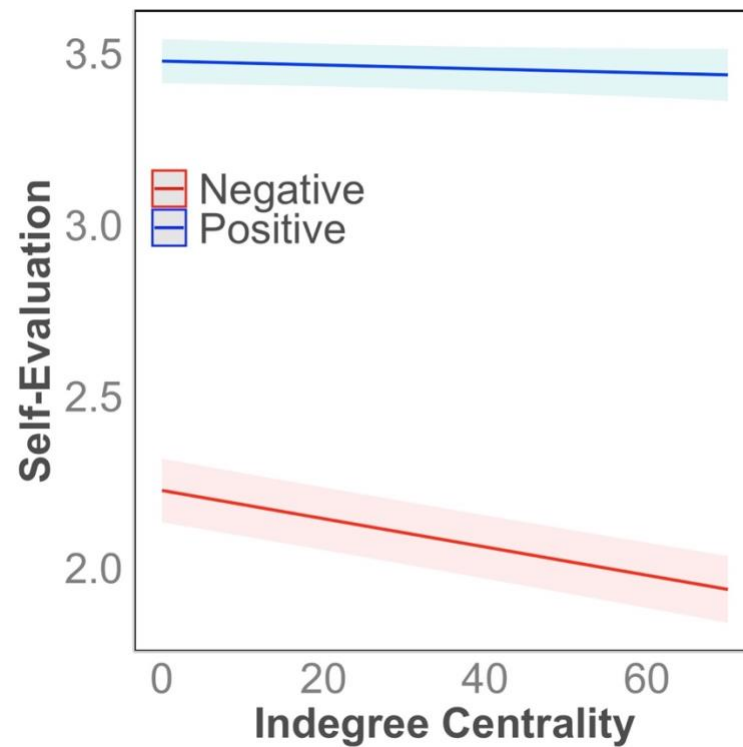


Supplementary Figure 2. *Bootstrapped reliability for positive (left) and negative (right) network measures. Resampled 12-13 participants per trait and computed correlation with original network measure over 20,000 iterations. Black line indicates point estimate for reliability and red lines indicate confidence intervals. (A) Outdegree centrality exhibited strongest reliability for positive*

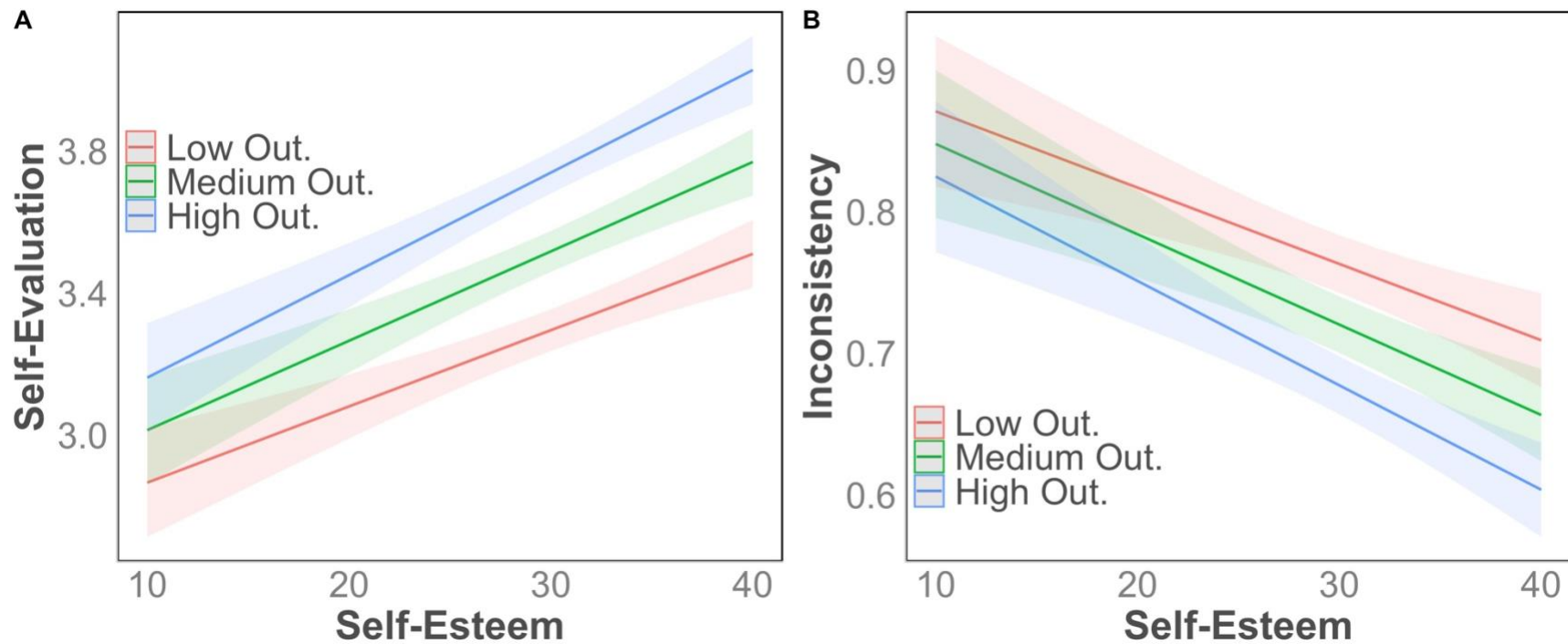
(r = .94) and negative (r = .91) traits. (B) Indegree centrality exhibited moderate reliability for positive (r = .54) and negative (r = .57) traits. (C) Similarity exhibited good reliability for positive (r = .73) and negative (r = .68) traits.



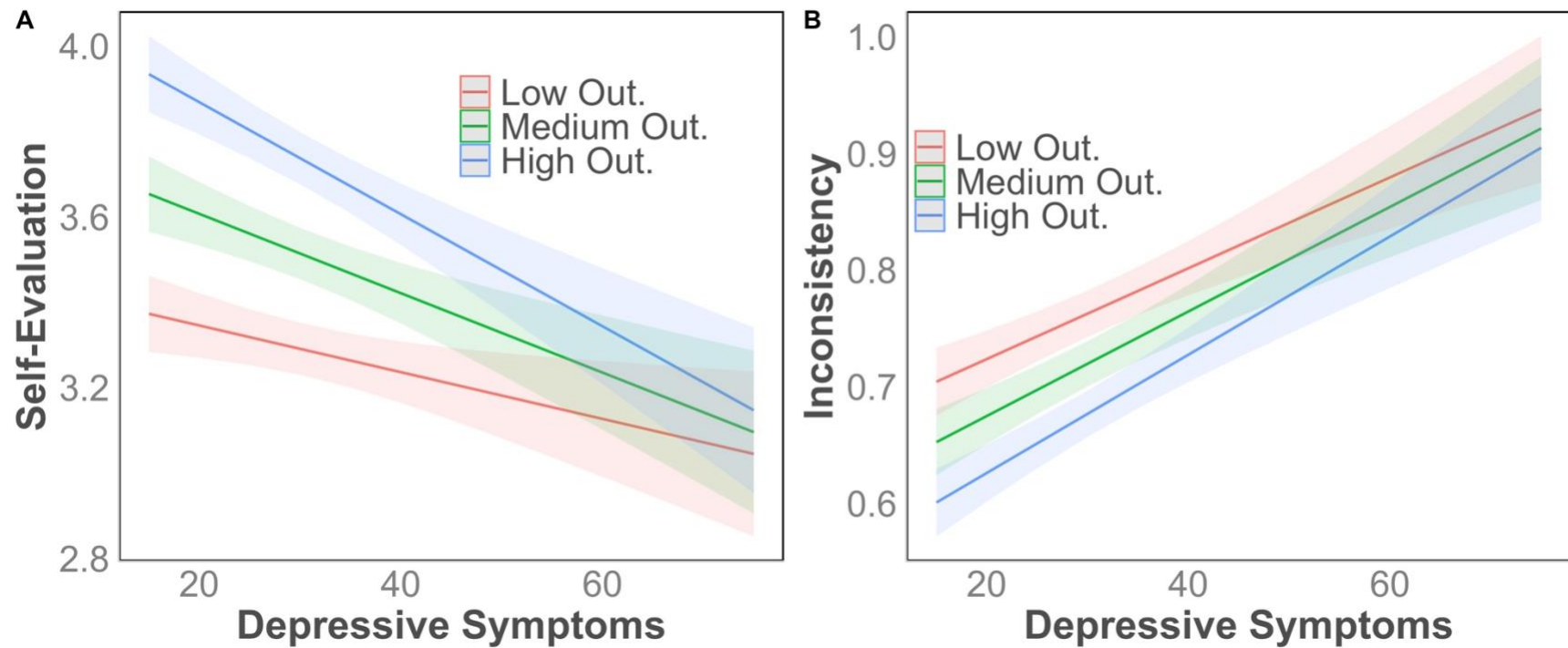
Supplementary Figure 3. Predicted effects plotted with raw data for (A) outdegree centrality by valence interaction on self-evaluations, (B) indegree centrality by valence interaction on self-evaluations, and (C) similarity by valence interaction on self-evaluation distance. Data points plotted with increased opacity and jitter so that the points at each ordinal interval may be more visible.



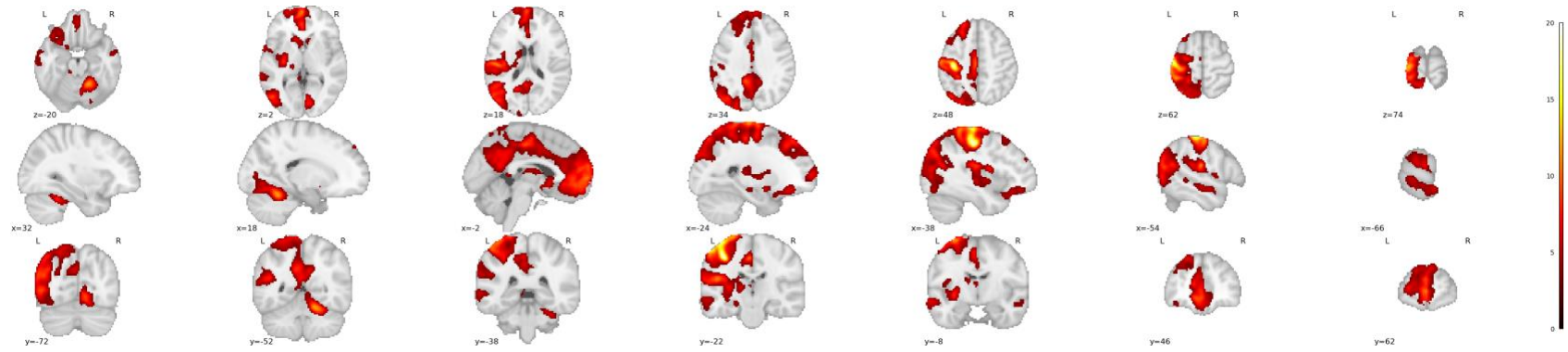
Supplementary Figure 4. *Indegree centrality predicts less self-descriptiveness for negative traits, but has no effect on self-evaluations for positive traits for Study 2. Predicted values (i.e. estimated marginal means/effects) when holding covariates constant, with confidence intervals of +/- 1.96 SE. Plot depicts the interaction of indegree centrality and valence on self-evaluations.*



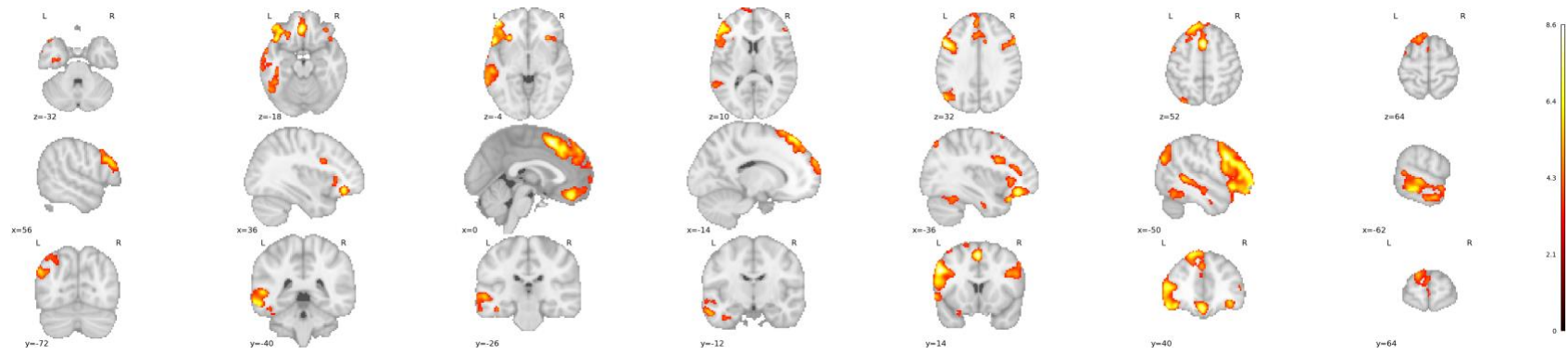
Supplementary Figure 5. *Self-esteem interaction predicted effects. Outdegree centrality split into three levels for visualization. (A) Outdegree centrality by self-esteem interaction in predicting self-evaluations, for positive traits only. People evaluate more favorably as a function of self-esteem, and further, individuals higher in self-esteem differentiate self-evaluations more as a function of outdegree centrality (for positive traits). (B) Outdegree centrality by self-esteem interaction in predicting inconsistency. Individuals higher in self-esteem evaluate more consistently with trait neighbors. Further, individuals higher in self-esteem evaluate more consistently for higher outdegree and less consistently for lower outdegree traits to a greater extent than those lower in self-esteem.*



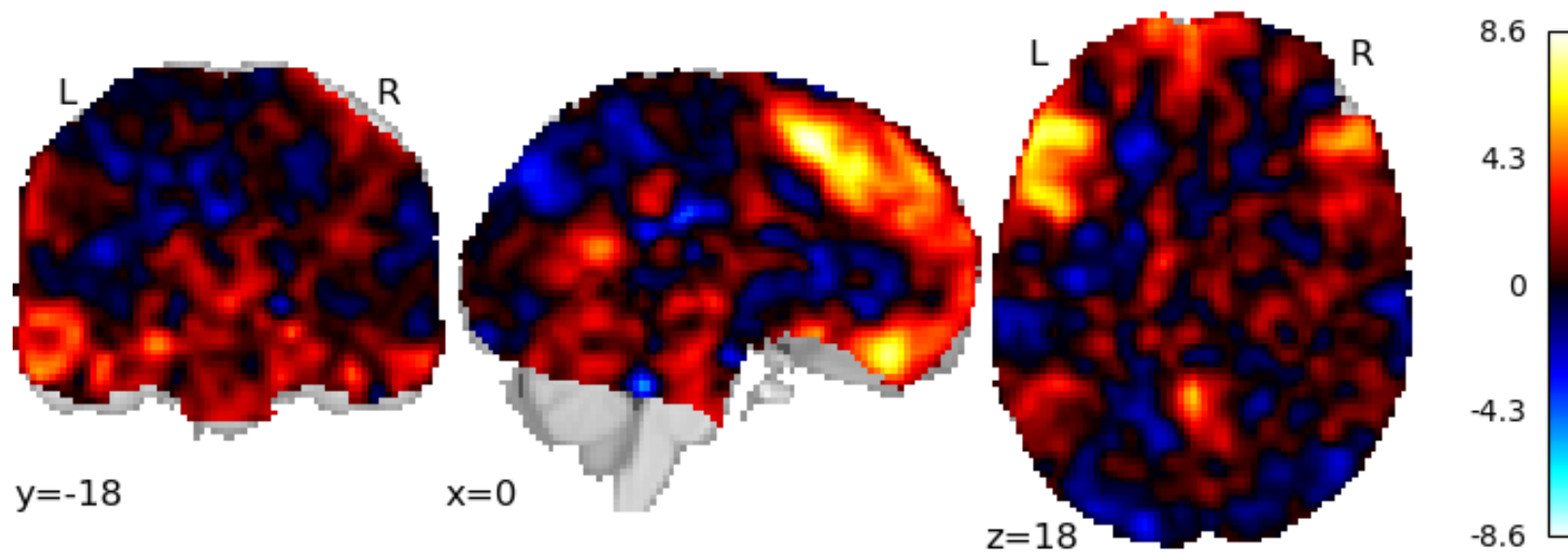
Supplementary Figure 6. *Depressive symptoms interaction predicted effects. Outdegree centrality split into three levels for visualization. (A) Outdegree centrality by depressive symptoms interaction in predicting self-evaluations, for positive traits only. People evaluate less favorably as a function of self-esteem, and further, individuals higher in depressive symptoms differentiate self-evaluations less as a function of outdegree centrality (for positive traits). (B) Outdegree centrality by depressive symptoms interaction in predicting inconsistency. Further, individuals higher in depressive symptoms evaluate inconsistently, regardless of outdegree centrality, unlike those lower in depressive symptoms who differently evaluate consistently as a function of outdegree centrality.*



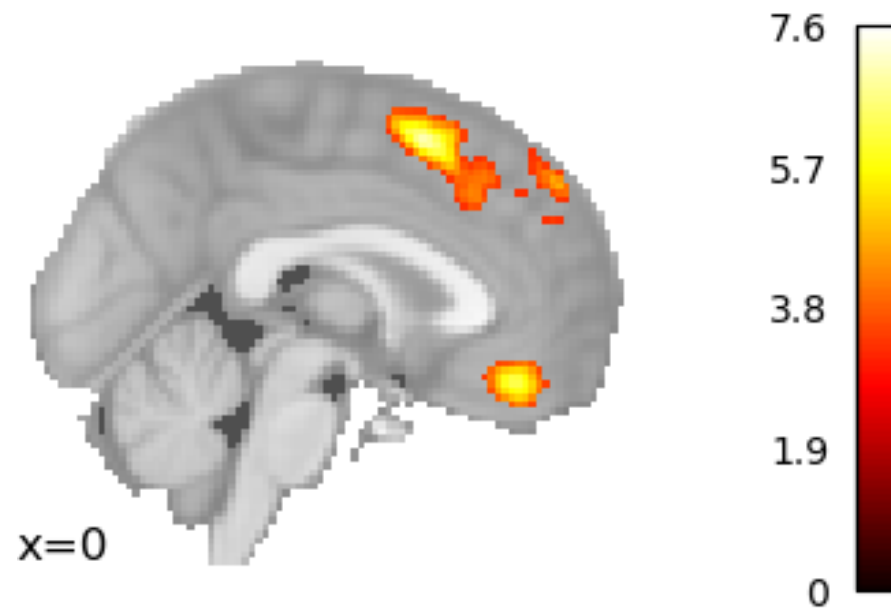
Supplementary Figure 7. *Non-parametric cluster corrected brain regions that parametrically track self-evaluation, regardless of valence. Multi-slice mosaic view.*



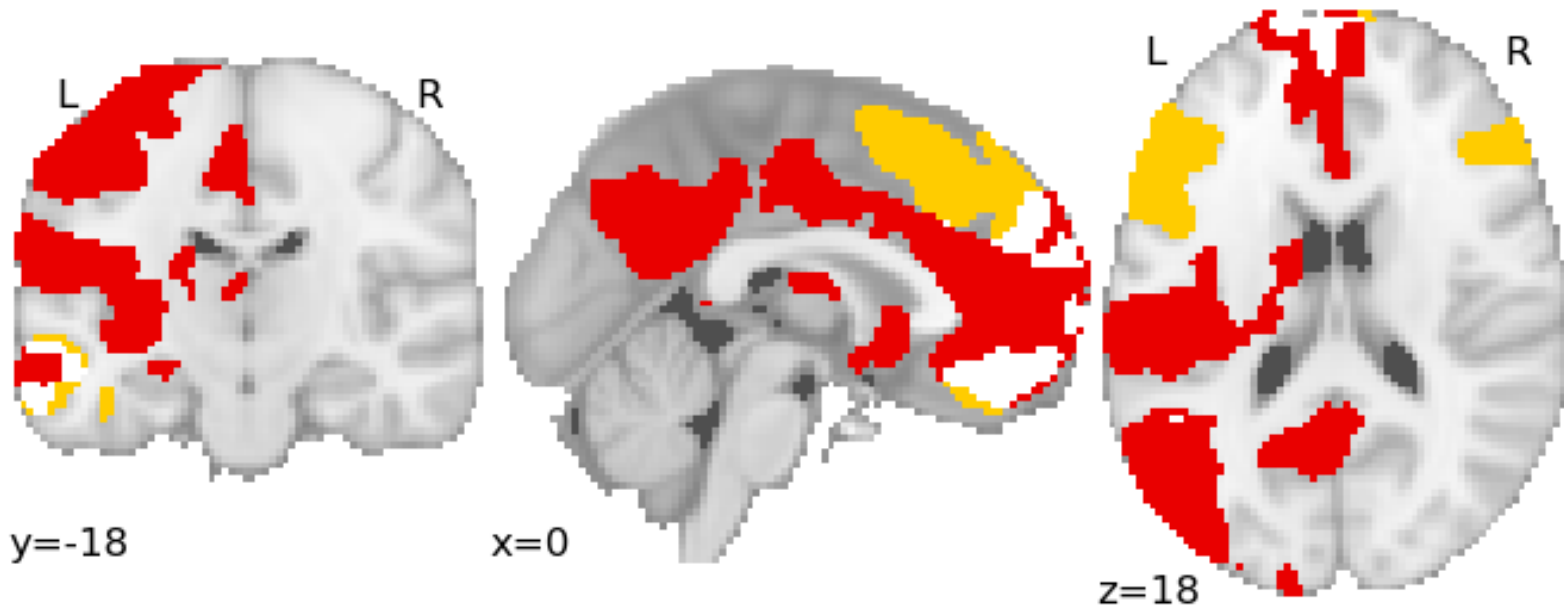
Supplementary Figure 8. *Non-parametric cluster corrected brain regions that parametrically track outdegree centrality, regardless of valence. Multi-slice mosaic view.*



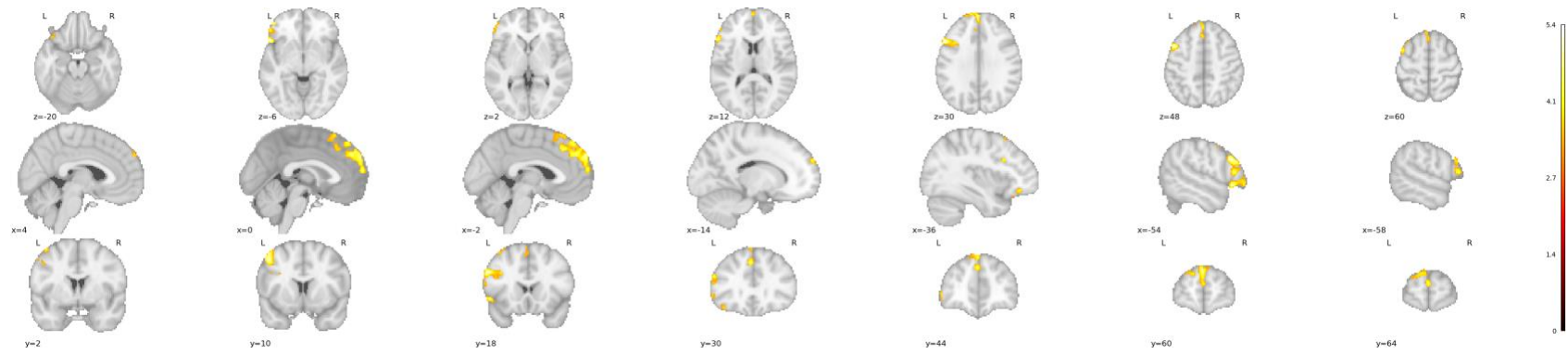
Supplementary Figure 9. *Raw, unthresholded t-statistic map for negative association with outdegree centrality effect regardless of valence.*



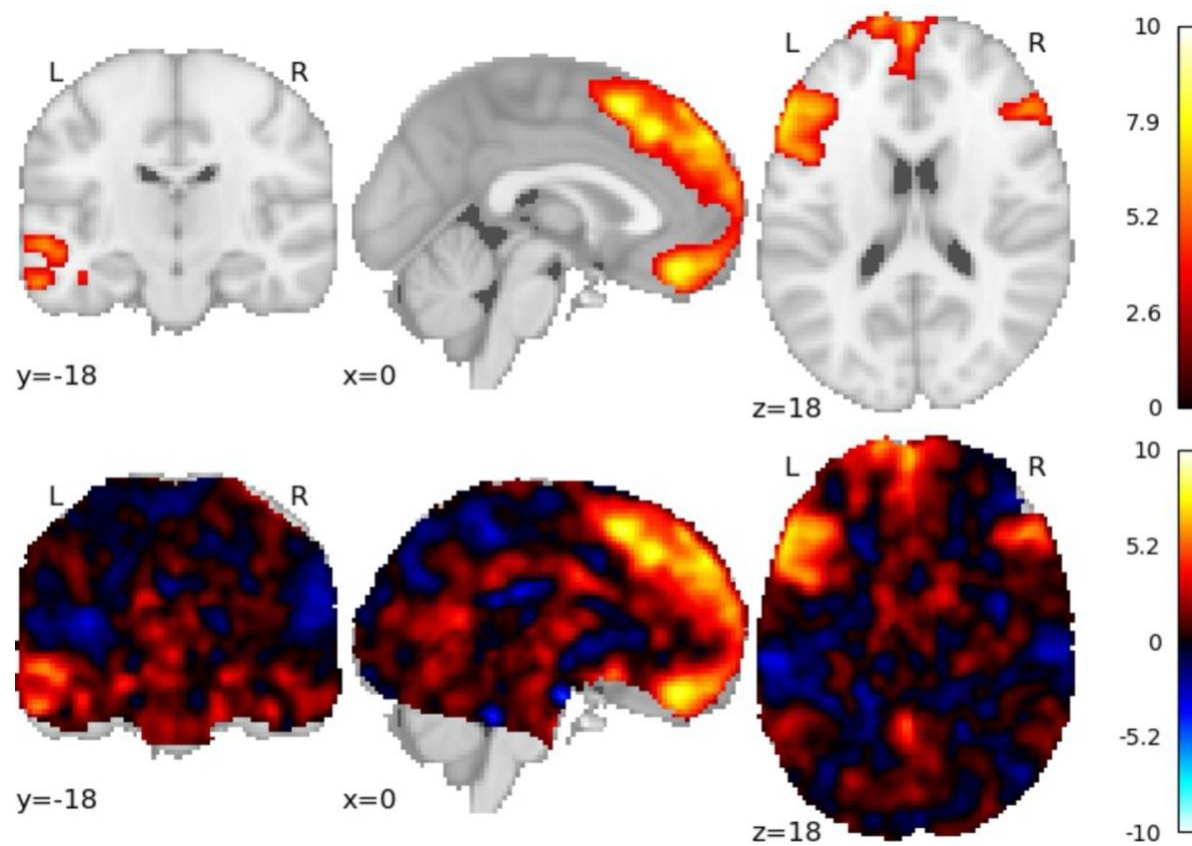
Supplementary Figure 10. *Non parametric cluster-corrected brain regions that parametrically track outdegree centrality, regardless of valence, while controlling for network-derived informativeness and normative social desirability.*



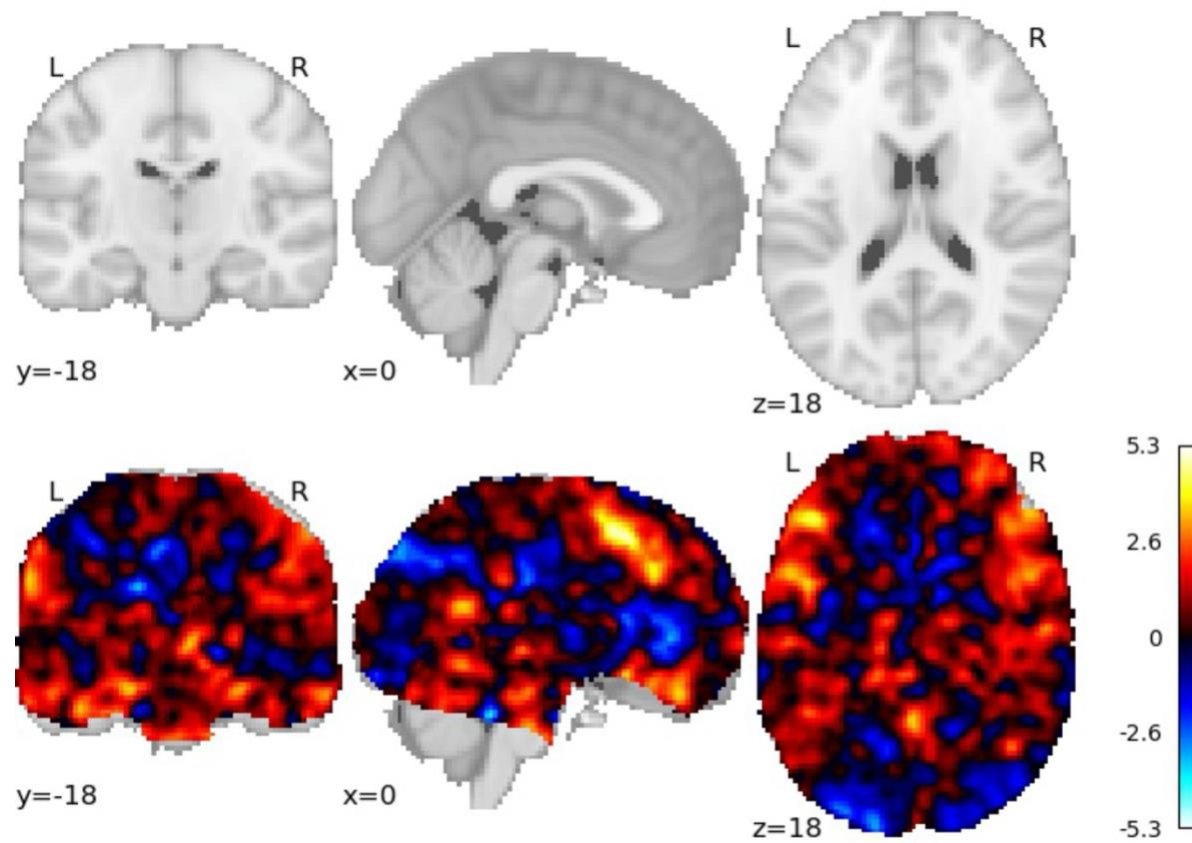
Supplementary Figure 11. Conjunction analysis examining the overlap (white) between the clusters positively associated with self-evaluations (red) and the clusters negatively associated with outdegree centrality (yellow).



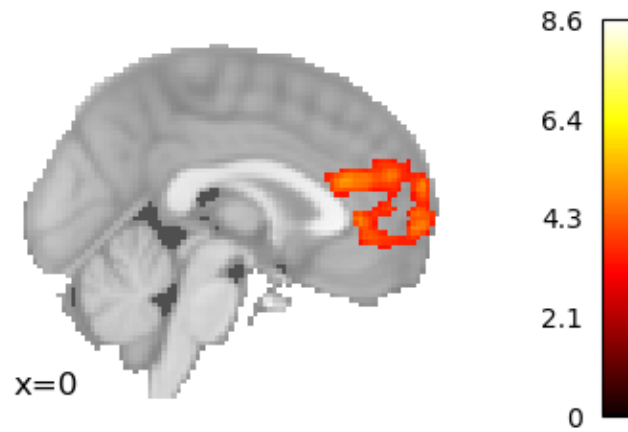
Supplementary Figure 12. *Non-parametric cluster corrected brain regions that are negatively associated with positive outdegree centrality > negative outdegree centrality. Multi-slice mosaic view.*



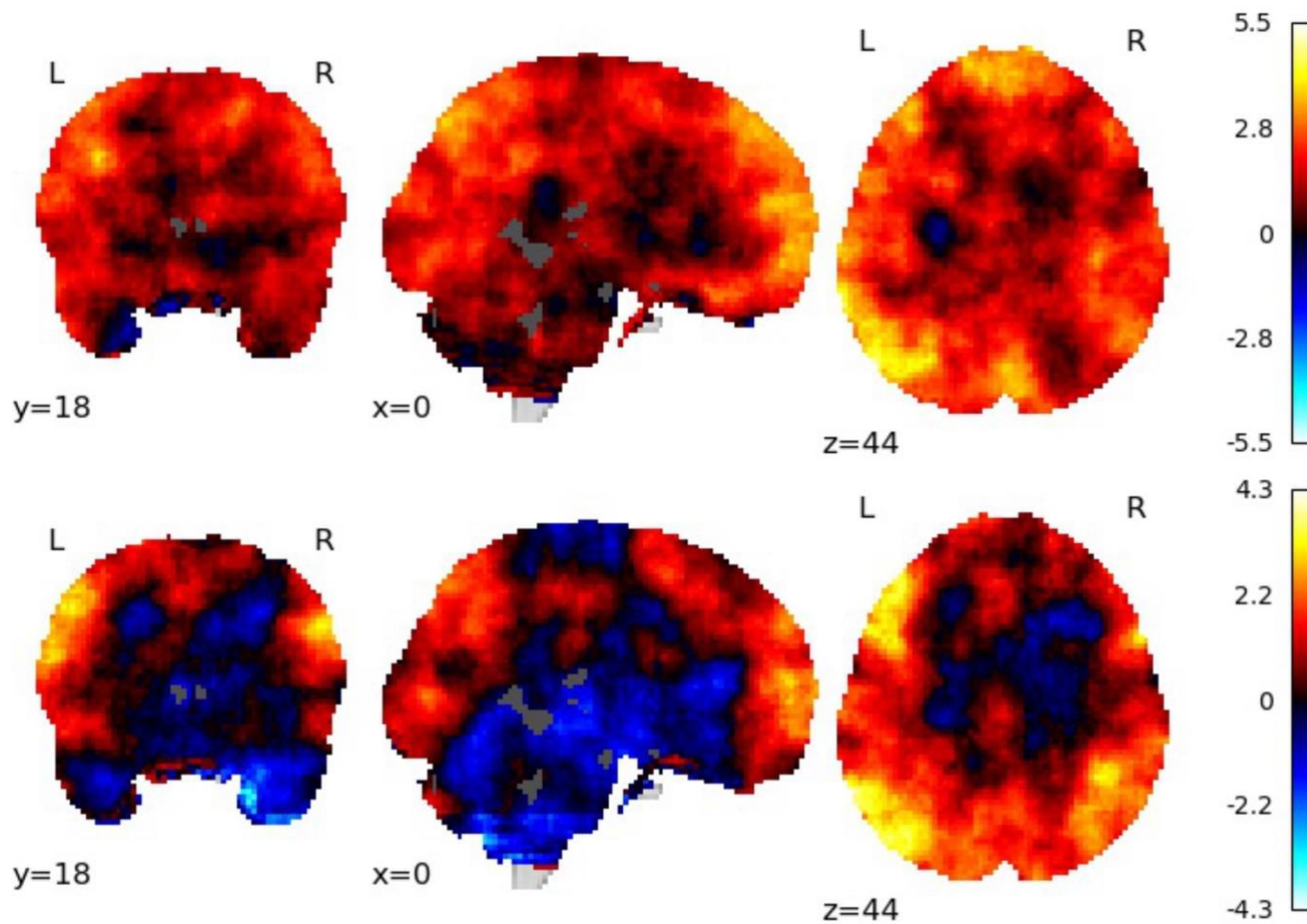
Supplementary Figure 13. *Negative association with outdegree centrality effect for positive traits only. Top: Thresholded, t-statistic map. Bottom: Raw, unthresholded t-statistic map.*



Supplementary Figure 14. *Negative association with outdegree centrality effect for negative traits only. Top: Thresholded, t-statistic map. Bottom: Raw, unthresholded t-statistic map.*



Supplementary Figure 15. *Non-parametric cluster corrected brain regions that parametrically track indegree centrality, regardless of valence. amPFC positively associated with indegree centrality.*



Supplementary Figure 16. Raw, unthresholded t -statistic map for Representational Similarity Analysis for each valence. Positive is top figure and negative is bottom figure.

Accurate	Experienced	Mature	Scientific	Abrupt	Follower	Messy	Thoughtless
Benevolent	Extraverted	Modern	Self-controlled	Absent-minded	Foolish	Mischievous	Touchy
Calm	Fair	Moral	Self-critical	Abusive	Forgetful	Misfit	Troublesome
Capable	Faithful	Natural	Self-sufficient	Afraid	Glum	Moody	Unadventurous
Casual	Fearless	Neat	Sensitive	Aimless	Gossipy	Negative	Unambitious
Charitable	Flexible	Nice	Sentimental	Angry	Gullible	Nervous	Unappreciative
Charming	Foresighted	Normal	Sincere	Annoying	Haphazard	Noncommittal	Unattractive
Clean	Frank	Open-minded	Skillful	Antisocial	Headstrong	Nonconfident	Uncaring
Clean-cut	Friendly	Optimistic	Smart	Anxious	Heartless	Nonpersistent	Uncharitable
Clear-headed	Fun	Orderly	Sociable	Argumentative	Helpless	Nosey	Uncompromising
Clever	Funny	Original	Sophisticated	Bitter	High-strung	Obnoxious	Uneducated
Comfortable	Generous	Outgoing	Stable	Blind	Hostile	Overcautious	Unforgiving
Communicative	Gentle	Outspoken	Steady	Bossy	Hot-headed	Pessimistic	Unfriendly
Compassionate	Giving	Passionate	Straightforward	Bragging	Ignorant	Petty	Ungrateful
Composed	Glad	Peaceful	Studious	Cheerless	Immodest	Profane	Unhealthy
Concise	Good	Perfectionistic	Subtle	Childish	Imperceptive	Pushy	Unimaginative
Confident	Good-humored	Persevering	Talkative	Closed-minded	Impersonal	Reckless	Uninteresting
Conscientious	Good-natured	Persistent	Thoughtful	Cluttered	Impolite	Restless	Unjust
Considerate	Good-tempered	Philosophical	Thrifty	Cold-hearted	Inaccurate	Rigid	Unkind
Constructive	Graceful	Polished	Tough	Cowardly	Inconsiderate	Rough	Unobservant
Contemplative	Healthy	Positive	Unafraid	Crude	Inconsistent	Rowdy	Unpatriotic
Cooperative	Helpful	Practical	Unassuming	Cruel	Indecisive	Rude	Unpolished
Cordial	Honest	Precise	Understanding	Cunning	Inelegant	Sarcastic	Unpopular
Courageous	Hospitable	Prideful	Unenvious	Cynical	Inhibited	Scheming	Unproductive
Dedicated	Humble	Prompt	Unprejudiced	Deceitful	Insolent	Self-centered	Unscientific
Deep	Humorous	Prudent	Unpretentious	Deceptive	Irresponsible	Self-conscious	Unsuccessful
Deliberate	Industrious	Punctual	Unselfish	Defensive	Jittery	Self-indulgent	Unsympathetic
Delicate	Innocent	Purposeful	Untiring	Demanding	Joyless	Selfish	Untidy
Democratic	Inquisitive	Quick-witted	Verbal	Devious	Liar	Short-sighted	Unwise
Dependable	Inventive	Quiet	Versatile	Discourteous	Lifeless	Silent	Uptight
Dignified	Knowledgeable	Rational	Warm	Dishonest	Lonely	Skeptical	Vague
Disciplined	Lenient	Realistic	Well-mannered	Disturbed	Loud	Sly	Vain
Eager	Level-headed	Refined	Well-organized	Dominating	Loud-mouthed	Stereotyped	Wasteful
Economical	Lively	Reserved	Well-read	Dull	Maladjusted	Stern	Weak
Elegant	Loyal	Respectable	Well-spoken	Eccentric	Malicious	Temperamental	Wishy-washy
Enthusiastic	Lucky	Respectful	Wise	Egotistical	Manipulative	Tense	Wordy
Ethical	Mathematical	Romantic	Witty	Finicky	Meddlesome	Theatrical	Worrier

Supplementary Table 1. All 148 positive and 148 negative trait word stimuli. Positive traits in blue, negative traits in orange.

Trait	Outdegree	Indegree	Desirability	Breadth	Interpersonal	Observability	Prevalence	Informative
Thoughtful	69	27	6.312	1.323	5	4.368	4.895	0.00429518
Knowledgeable	56	27	6.25	1.576	3.778	4.789	4.611	0.00354131
Level-headed	56	17	6	1.73	3.944	4.737	4.368	0.00260225
Respectful	54	33	6.375	1.551	5.667	5.316	5.158	0.00225288
Friendly	54	20	6.562	1.944	6.167	5.684	5.526	0.00157331
Good-natured	53	49	6.375	1.298	5.444	5.105	5.105	0.00363107
Self-controlled	52	23	6	1.998	3.333	4.789	4.789	0.00187631
Cooperative	48	14	6.562	1.622	5.722	5.211	5.474	0.00179827
Respectable	46	26	6.188	1.131	5.333	5.316	4.842	0.00345892
Peaceful	44	25	6.438	1.057	4.389	5.421	4.895	0.00141512
Rational	42	29	5.875	1.667	4.333	5.053	4.684	0.00200095
Good	40	13	6.188	1.219	4.5	4.632	5.632	0.00187664
Disciplined	39	19	5.625	1.6	4.222	5.211	4.842	0.00132962
Smart	38	29	6.25	1.768	3.722	4.789	4.684	0.00210829
Practical	36	23	5.562	1.359	4.056	4.789	4.632	0.00126505
Positive	36	17	6.188	1.372	5.222	5.105	5.053	0.00121555
Persistent	36	28	5.875	1.543	4.111	5.053	4.579	0.00109051
Open-minded	36	20	5.75	1.786	5	4.737	4.947	-0.0013257
Good-tempered	35	20	6.25	1.698	5.111	5.316	4.737	0.00232429
Calm	35	28	6.25	1.453	4.389	5.526	4.947	0.00117364
Understanding	33	20	6.562	1.667	5.111	4.632	5.053	0.00219261
Accurate	32	16	5.75	1.829	3.778	4.737	4.053	0.00240526
Persevering	32	14	5.812	1.724	3.556	4.737	4.895	0.00063978
Refined	32	23	5.625	1.618	4.444	4.895	3.842	-0.0023492
Capable	31	20	6.25	1.197	4.167	5.105	5.105	0.00184487

Precise	31	30	5.625	1.967	3.556	4.789	4.263	0.00160603
Sincere	30	36	6.25	1.74	5.333	4.526	5	0.0023278
Helpful	30	18	6.562	1.091	5.667	5.632	5.053	0.00210496
Dependable	30	15	6.125	1.616	5.167	5.263	4.842	0.00129095
Flexible	30	23	5.75	1.263	4.667	5.053	5.053	0.00035975
Considerate	29	31	6.25	1.629	6.111	5.632	5.158	0.00302213
Clear-headed	29	54	6.562	1.649	4.222	5.211	4.737	0.0030147
Nice	29	32	6.25	1.519	5.611	5	5.053	0.00240392
Well-mannered	29	13	6.188	1.724	5.556	5.632	5	0.00130473
Passionate	29	5	5.75	1.391	5	5.474	4.684	0.00041779
Purposeful	28	37	6	1.453	3.944	4.263	4.842	0.00205032
Steady	28	20	5.75	1.532	3.833	4.684	4.632	0.0018651
Inquisitive	28	24	5.688	1.841	4.944	4.684	3.947	-0.0013573
Moral	27	41	6.438	1.586	4.333	4.421	4.526	0.0020725
Skillful	27	18	6.125	1.237	3.444	4.632	4.842	0.00150081
Lively	27	5	5.688	1.435	4.833	5.316	5.421	-0.000409
Outgoing	27	22	5.75	1.48	5.5	5.526	4.947	-0.0029052
Dedicated	26	32	5.5	1.993	4.389	4.842	5.105	0.00242226
Fair	26	16	6.188	1.404	5	4.684	4.789	0.0016361
Stable	25	40	6.25	1.417	4.222	5.211	5	0.00264226
Ethical	25	38	5.875	1.693	4.889	4.684	5.158	0.00200206
Mature	25	26	6.062	1.6	4.444	5.211	4.895	0.00175686
Composed	25	14	5.812	1.704	4.611	5.368	5.053	0.00146225
Gentle	25	21	5.562	1.417	4.778	4.842	4.526	0.00052815
Loyal	25	9	6.188	1.801	5.667	4.789	5.105	-0.0003119
Unselfish	25	33	5.5	2.015	4.889	4.895	3.737	-0.001325
Realistic	24	14	5.875	1.906	3.722	4.579	4.737	0.00146575

Self-sufficient	24	15	6.062	1.801	3.167	5	5.053	0.00069566
Well-organized	23	34	5.938	2.154	3.611	5.737	4.737	0.00045221
Honest	23	13	5.938	2.32	5.833	5	4.947	0.0004005
Fun	23	17	6.25	1.251	4.389	5	5.158	0.00016051
Wise	23	14	6.312	1.419	4.5	5.316	4.211	-0.0001984
Sociable	23	25	6.125	1.409	6	5.474	5.579	-0.0019426
Outspoken	23	6	5.438	1.539	5.556	5.263	5.316	-0.0022636
Good-humored	22	12	6	1.6	5.167	5.579	4.842	0.00083626
Foresighted	22	14	5.938	1.9	3.722	4.053	3.737	-0.0017187
Polished	22	40	5.375	1.51	3.667	4.474	4.158	-0.0032205
Perfectionistic	22	34	4.25	2.033	3.889	5.316	3.737	-0.0054035
Deliberate	21	19	5.25	1.704	3.889	4.684	4.895	0.00026868
Orderly	21	23	5.438	1.611	3.944	5.053	4.778	-0.0003404
Confident	20	16	6.5	1.551	4.667	5.632	4.947	0.00046325
Communicative	20	13	5.6	1.801	6.056	5.684	5.158	0.00036496
Straightforward	20	22	5.688	1.795	5.333	5.105	4.789	0.00031385
Punctual	20	15	5.875	1.944	4.5	5.053	4.474	-0.0010578
Frank	20	11	5.125	1.741	5.167	5.105	4.421	-0.0013852
Industrious	20	18	5.688	1.625	3.722	4.105	4.158	-0.0021176
Reserved	20	9	4.625	1.59	3.833	5.316	4.368	-0.0033365
Sensitive	20	23	4.938	1.536	4.833	4.789	4.579	-0.0040847
Compassionate	19	30	6.25	1.49	5.5	5.158	5.167	0.00167858
Humble	19	27	6.062	1.622	4.833	5.684	4.579	7.97E-05
Original	19	15	5.938	1.228	4.111	4.316	4.316	-0.0002398
Inventive	19	30	5.688	1.839	3.444	4.211	3.895	-0.0021922
Generous	18	36	6.312	1.32	5.389	4.947	4.632	0.00136022
Well-spoken	18	19	5.75	2.304	5.611	5.947	4.579	0.00058645

Courageous	18	15	6.062	1.249	4.611	4.842	4.222	-0.0006064
Funny	18	27	5.812	1.228	5.5	5.632	4.842	-0.0008254
Talkative	18	10	5.375	1.921	5.667	5.684	5.632	-0.0019907
Charming	18	41	6.25	1.682	5.722	4.889	4.895	-0.0025781
Scientific	18	39	5.188	1.869	3.111	5.263	3.947	-0.00272
Clever	17	22	6	1.921	4.278	5.053	4.211	0.00011575
Conscientious	17	19	5.938	1.704	4.889	4.684	4.105	1.82E-05
Cordial	17	26	5.938	1.853	5.778	5.211	4.684	-0.0004399
Studious	17	24	5.375	1.829	3.611	4.684	3.684	-0.0006653
Charitable	17	19	6	1.269	5.111	4.842	4.105	-0.00188
Unpretentious	17	28	5.812	1.844	4.444	4.474	4.263	-0.0032472
Innocent	17	32	5.125	1.7	3.056	4.842	4.316	-0.0051456
Giving	16	21	6.125	1.219	5.444	4.895	5	0.00054395
Experienced	16	16	6.062	1.463	3.5	4.947	4.789	0.00041807
Contemplative	16	5	5.438	1.944	4.056	4.526	4.474	-0.0008579
Deep	16	18	5.438	1.326	3.444	3.947	4	-0.0012052
Philosophical	16	13	5.25	1.312	4.176	4.368	3.789	-0.0017832
Unafraid	15	11	5.688	2.262	3.556	4.211	3.947	-0.0026363
Constructive	14	9	5.8	1.435	4.882	4.842	4.737	0.00062304
Concise	14	10	5.375	1.724	4.167	4.368	4.105	-0.0001596
Unprejudiced	14	15	5.5	2.251	4.889	4.316	3.684	-0.0018168
Warm	13	48	6.25	1.176	5.444	5.368	5.105	0.00269689
Optimistic	13	17	5.938	1.833	5	5.263	5	0.00042996
Neat	13	9	5.75	1.873	3.5	5.158	4.474	-0.0001297
Quick-witted	13	27	5.75	1.736	5.333	5.474	4.389	-0.0005017
Normal	13	15	5.5	1.249	4.222	4.842	5.211	-0.0005698
Witty	13	20	5.938	1.9	5.222	5.211	3.684	-0.0009738

Graceful	13	22	5.938	2.118	4.389	5.158	4.211	-0.0017971
Hospitable	12	35	6	1.766	5.444	5.263	5.158	0.00131887
Enthusiastic	12	27	6.062	1.6	4.667	5.579	5	-0.0001711
Benevolent	12	16	5.938	1.906	4.833	4.316	4.368	-0.0016554
Prudent	12	11	5.75	1.919	4	4.158	3.947	-0.0019063
Self-critical	12	11	4.5	2.262	3.167	4.105	4.947	-0.0026751
Well-read	11	21	5.75	2.325	3.667	4.368	4.211	-0.0003235
Romantic	11	16	5.562	1.873	5.444	4.947	4.316	-0.0012942
Democratic	11	25	5.5	1.437	4.556	4.474	4.632	-0.0014588
Sophisticated	11	33	5.5	1.536	4.167	5.368	4.053	-0.0022419
Mathematical	11	40	4.75	1.749	2.056	4.158	3.684	-0.0060236
Natural	10	9	5.625	1.455	4.167	4.789	4.895	0.00038498
Prompt	10	14	5.688	1.691	4	5.056	4.722	9.71E-05
Modern	10	13	5.188	1.345	3.278	4.789	5.526	-4.92E-05
Lenient	10	17	5.375	1.326	4.722	5	4.316	-0.0009193
Dignified	10	51	6.062	1.698	4.444	5	3.579	-0.0010284
Quiet	10	12	4.75	1.551	3.944	5.895	4.105	-0.0026302
Unassuming	10	61	5.125	1.741	4.167	4.263	4.368	-0.0078224
Comfortable	9	41	6.188	1.125	4.333	5.158	5.158	0.00161831
Clean	9	10	6.312	1.805	3.222	5.579	5.105	0.00024122
Humorous	9	14	5.75	1.409	5.222	5.684	5.105	-0.0001876
Verbal	9	13	5.562	1.888	5.389	5.947	5.421	-0.0009319
Delicate	9	8	5.062	1.562	4.278	4.947	4	-0.0020846
Glad	8	10	6.062	1.51	3.611	4.684	5.158	0.00025388
Casual	8	24	5.75	1.348	4.722	4.842	5.211	-0.0003813
Faithful	8	28	5.938	1.298	5.111	4.263	5	-0.0012841
Tough	8	20	5.438	0.728	3.944	4.632	4.632	-0.001837

Sentimental	7	16	5.5	1.886	4.333	4.789	4.947	-0.0011874
Prideful	7	11	4.312	1.853	3.833	4.737	5.263	-0.0015915
Untiring	7	15	5.625	1.741	3.333	3.842	3.368	-0.003309
Economical	6	10	5.312	1.801	3.444	4.737	4.737	4.60E-05
Healthy	6	7	6.188	1.873	3.611	5	4.895	-5.07E-06
Subtle	6	18	5.312	1.505	4.333	4.105	3.789	-0.0026711
Versatile	5	5	6.188	1.249	4.222	5	4.737	6.08E-05
Thrifty	5	17	5.067	1.839	2.944	4.421	4.263	-0.0016619
Elegant	5	18	5.188	1.197	4	5.421	3.579	-0.0030641
Extraverted	5	23	5.562	1.7	5.389	5.789	5.053	-0.0040038
Lucky	4	2	5.75	1.543	3.111	4.105	3.789	-0.0009324
Fearless	4	15	5.625	1.618	3.889	4.684	3.684	-0.0024663
Eager	3	5	5.375	1.622	4.111	5.211	4.895	-0.0001351
Clean-cut	3	11	5.562	2.166	2.944	4.842	4.842	-0.000676
Unenvious	0	12	5.625	1.759	4.778	3.684	3.316	-0.0012908

Supplementary Table 2. All 148 positive ordered by outdegree centrality, with columns for trait, outdegree centrality, indegree centrality, desirability, interpersonal, observability, breadth, prevalence, and informativeness.

Trait	Outdegree	Indegree	Desirability	Breadth	Interpersonal	Observability	Prevalence	Informative
Rude	55	28	2.238	3.8	4.188	6.222	4.5	0.00435087
Self-centered	52	19	3	3.733	4.25	5.111	5	-0.0015614
Thoughtless	47	22	2.19	3.667	4.312	4.611	4.1	0.00279285
Negative	46	38	2.095	4.333	4.5	5.444	4.3	0.00103633
Heartless	44	26	2.05	3.933	4.25	4.5	3.5	0.00326766
Selfish	44	24	2.381	3.533	3.875	4.944	4.9	-0.0001993
Uncaring	43	36	2.571	4.067	4.812	5.111	3.45	0.00374105
Headstrong	41	9	3.81	3.533	4.125	5.278	3.85	-0.0117221
Tense	39	13	3.15	3.067	4.188	5.444	4.2	-0.0013366
Pessimistic	38	18	2.381	3.2	4.267	4.889	4	-0.0013039
Cruel	37	21	2.143	3.067	4.375	5.722	3.35	0.00248895
Petty	37	27	2.476	4.133	4.25	4.556	4.15	0.001568
Joyless	36	29	2.476	3.6	3.75	5.333	3.5	0.00161364
Temperamental	36	63	2.65	3.6	4.562	5.278	4.5	-0.0037891
Reckless	35	18	3	3.667	3.875	5.667	3.7	0.00164263
Hostile	34	58	2.619	3.133	4.375	5.611	3.3	0.00478508
Inconsiderate	34	49	2.25	3.867	4.562	5.389	4.35	0.0038298
Pushy	33	20	2.714	3.067	4.688	5.889	4.3	0.00056758
Noncommittal	32	11	2.81	3.714	4.125	3.944	3.2	0.00012774
Overcautious	32	30	3.524	3.667	3.938	4.222	2.9	-0.0088207
Short-sighted	32	14	2.476	3.6	4.125	4.278	4.25	0.00090131
Unimaginative	32	26	2.476	3.667	4.125	4.389	3.7	0.00092789
Demanding	31	18	2.952	3.867	5.125	5.556	4.1	-0.0035663
Helpless	31	14	2.476	4.133	3.875	5.056	3.7	0.00115435
Hot-headed	31	18	2.381	3.667	4.438	5.882	3.5	0.00040748

Liar	31	16	2	3.333	5.062	4.556	4.25	0.00179157
Loud-mouthed	31	11	3.143	3.533	4.375	6.5	4.05	-0.0003274
Maladjusted	31	27	2.429	3.733	4	4.111	3	0.00186574
Manipulative	31	17	2.429	3.4	4.688	4.389	4.15	0.00116063
Closed-minded	30	41	2.286	3.533	4.5	5.389	4.85	0.0009718
Deceptive	30	10	2.524	3.467	4.688	3.778	4.2	0.00118593
High-strung	30	25	3.19	3.533	4.5	5.167	4.2	-0.0008436
Impolite	30	8	2.524	3.333	4.25	5.444	4.25	0.00235348
Self-indulgent	30	17	3.429	4	4.562	5.056	4.55	-0.0051007
Unambitious	30	18	2.667	4.2	3.438	4.167	3.45	0.0008271
Unappreciative	30	14	2.476	3.8	4.438	5.056	4.5	0.00229786
Uncompromising	30	15	3.19	3.867	4.25	4.889	3.8	-0.0012872
Unfriendly	30	44	2.333	4.067	4.875	5.722	3.65	0.00328896
Deceitful	29	23	2.238	3.533	5	3.667	3.6	0.00230854
Lonely	29	26	3.048	3.6	3.75	4.056	3.55	-0.0014345
Rough	29	21	3	3.933	4.688	5.167	3.35	0.00021905
Unkind	29	28	2.524	3.8	4.375	5.389	3.85	0.00330677
Lifeless	28	35	2.619	3.2	4.188	5.944	2.85	0.00204969
Nervous	28	9	2.667	3.267	4	4.889	4.4	-0.0019863
Nonconfident	28	13	2.619	3.667	3.875	5	3.6	-0.0005755
Stern	28	14	3.619	3.067	3.688	5.333	3.7	-0.002894
Troublesome	28	34	2.619	3.733	4.25	5.444	3.8	0.00283922
Uninteresting	28	19	2.238	4.6	3.75	4.778	3.8	0.00026021
Cynical	27	25	2.667	3.267	3.938	4.529	4.2	-0.0047555
Defensive	27	17	3.333	3.533	4.333	5.611	4.7	-0.0031208
Irresponsible	27	10	2.476	3.933	4.438	5.278	4.2	0.0016699
Malicious	27	40	2.19	3.4	4.25	4.889	3.1	0.00239079

Obnoxious	27	58	2.476	3.467	4.5	5.444	4.3	0.00255596
Afraid	26	12	2.429	3.133	3.812	5.333	4.2	-0.0001015
Aimless	26	11	2.333	4.333	3.812	4.278	3.35	0.0014296
Loud	26	24	2.952	2.867	4.375	6.389	4.45	-0.0017792
Rigid	26	30	3	3.333	4.25	4.556	4.15	-0.0015071
Touchy	26	15	3	3.667	4.533	5.389	4.05	-0.002258
Worrier	26	26	2.7	3.6	3.812	5	4.35	-0.0057166
Discourteous	25	17	2.571	3.667	4.625	5.556	3.9	0.00232177
Unobservant	25	24	2.381	3.6	3.625	4.944	3.7	0.00157779
Absent-minded	24	12	2.619	3.733	3.688	5.111	3.4	-0.0001511
Dominating	24	30	3.476	3.533	4.938	6	3.7	-0.0040095
Egotistical	24	16	2.571	3.6	4.125	5.333	4.45	-0.0001768
Skeptical	24	20	4.048	3.133	4.312	4.444	4.2	-0.0087598
Unproductive	24	26	2.524	3.8	4.5	4.722	4.05	0.0006547
Abusive	23	43	2.238	3.8	5.125	5.722	3.4	0.0014028
Angry	23	32	2.619	3.4	4.75	6.222	4.15	0.00231025
Moody	23	22	2.714	4.067	4.5	5.167	4.5	-0.0023698
Rowdy	23	20	3.381	3.533	4.125	5.889	3.45	0.00096207
Scheming	23	36	3.095	3.933	4.625	4.333	3	0.00107256
Self-conscious	23	26	3.524	3.733	4.062	5.111	4.2	-0.0098439
Haphazard	22	8	2.667	3.733	3.938	3.611	3.4	0.00093236
Indecisive	22	43	2.6	4.267	4.125	4.556	3.95	-0.0027416
Unadventurous	22	9	2.714	3.467	3.688	4.118	3.15	-0.0007535
Antisocial	21	31	2.19	3.667	4.562	5	3.75	-0.003412
Ignorant	21	8	2.381	4.4	4.062	5.389	4.6	0.00104019
Inconsistent	21	9	2.381	4.067	4.125	5.111	3.95	0.00081069
Mischievous	21	22	3.238	3.2	4.375	4.5	3.15	-0.0002919

Profane	21	16	3.238	3.667	4.125	4.778	3.45	-0.0013812
Restless	21	10	2.667	3.933	3.562	5.278	4.05	-0.0015903
Sly	21	16	3.238	3.733	4.062	4.056	3.15	-0.0013683
Ungrateful	21	12	2.143	3.667	4.125	5.111	4.55	0.00190815
Unsympathetic	21	19	2.476	4.133	4.625	4.722	3.85	0.00104794
Messy	20	11	2.238	4	3.562	5.278	4.05	-0.000247
Silent	20	18	3.524	3.333	3.812	5.444	3.35	-0.0053368
Weak	19	37	2.571	4.143	3.688	4.944	4	0.00133211
Abrupt	18	16	3.238	3.133	3.438	5.222	3.65	-3.44E-06
Annoying	18	63	2.476	3.667	4.625	6.222	4.65	0.00255208
Anxious	18	20	2.81	3.267	4	4.944	4.75	-0.0026313
Crude	18	20	2.571	4	4.375	5.333	3.65	0.00135209
Devious	18	12	2.714	3.533	4.25	4.111	3.4	0.00096611
Dull	18	41	2.571	3.8	3.938	5.222	3.35	0.00029715
Jittery	18	19	2.857	3.133	4.438	5	3.7	-5.14E-05
Unsuccessful	18	60	2.286	3.533	3.75	5.222	3.75	-0.0007621
Uptight	18	10	2.81	3.4	4.312	5.167	4.15	0.00014267
Argumentative	17	15	3.048	2.867	4.562	5.333	4.25	-0.0012562
Cold-hearted	17	33	2.286	3.6	4.5	5.056	3.85	0.00163634
Cunning	17	10	3.19	3.8	4.25	3.556	3.55	-0.0023307
Inhibited	17	10	2.714	3.6	4.125	5.278	3.4	-0.0015344
Theatrical	17	12	4.048	3.133	4.75	5.667	3.5	-0.0016078
Uncharitable	17	15	2.476	3.533	4.188	4.056	4	0.00062461
Uneducated	17	9	2.571	4.067	3.625	4.167	3.7	0.00050722
Dishonest	16	17	2.095	3	4.375	4.882	4.4	0.00191953
Bossy	15	34	2.952	3.4	4.533	6.111	4.2	-0.001664
Disturbed	15	14	2.619	3.8	3.875	4.444	3.4	0.00109528

Impersonal	15	9	2.952	3.933	4.5	4.667	3.8	5.89E-05
Nonpersistent	15	33	2.619	4.4	3.562	4.5	3.25	0.00034518
Unattractive	15	10	3	4.4	3.688	6	4.05	-0.0004549
Unforgiving	15	22	2.714	3.933	4.938	4.333	4	-0.0006759
Unhealthy	15	36	2.381	3.533	3.733	5.5	4.5	-0.0011833
Unpopular	15	10	2.905	3.667	4.25	5.333	3.4	-0.0004508
Wishy-washy	15	39	2.857	4.533	4.312	4.389	3.7	0.00122658
Foolish	14	65	2.476	3.333	3.625	5.222	3.95	0.00284259
Gullible	14	13	2.667	3.533	4.875	4.5	3.6	9.39E-05
Immodest	14	11	2.714	3.667	4	4.778	3.6	0.00051798
Unjust	14	31	2.333	4.467	4.938	4.167	3.35	0.00275808
Meddlesome	13	13	2.619	3.4	4	4.278	3.65	0.00089581
Unpolished	13	24	2.667	4.267	3.812	4.722	3.7	0.00017317
Imperceptive	12	4	2.524	4.133	3.5	4.389	3.65	0.00026753
Sarcastic	12	11	3.81	3.533	4.562	5.333	4.15	-0.0057083
Stereotyped	12	6	2.905	3.333	3.938	4.222	4.35	-0.0003954
Bitter	11	24	2.238	3.667	4.125	5.556	3.75	0.00106069
Cowardly	11	19	2.19	3.267	4.25	4.778	4.15	0.00113144
Inaccurate	11	18	2.619	3.467	3.75	4.444	3.85	0.00107741
Misfit	11	13	3	4	4.5	4.278	3.15	7.22E-05
Wasteful	11	33	2.714	3.2	3.312	5.111	4.65	0.00139498
Finicky	10	8	2.524	3.333	3.938	4.222	3.8	-5.35E-05
Untidy	10	7	2.476	3.733	4.312	5.222	3.3	-7.57E-05
Bland	9	34	2.714	4.333	4.5	4.611	3.95	-0.0003172
Cheerless	9	29	2.524	3.533	4.125	5.111	3.2	0.00070732
Forgetful	9	31	3.05	4	3.812	4.5	4.4	-0.0022214
Glum	9	52	2.429	4	3.938	4.944	3.35	0.00218439

Gossipy	9	7	2.714	3.2	4.562	5.556	4.75	-0.0003828
Inelegant	9	8	2.905	3.6	4.188	5.333	3.15	-0.0004401
Unwise	9	6	2.762	4.133	4.125	5.444	4.05	0.00074643
Follower	8	5	3.381	3.467	4.562	4.778	4.4	-0.0010959
Childish	7	39	2.667	3.8	4.25	5.556	4.35	-0.0004116
Insolent	7	51	2.333	3.733	4.533	4.222	3.5	0.00182002
Vague	7	29	2.714	4.4	4.062	4.222	3.8	-0.000364
Bragging	6	24	2.905	3.133	4.625	5.944	4.45	0.00072369
Unpatriotic	6	8	3.143	3.267	3.625	3.722	3.5	-0.0002946
Vain	6	10	3.095	3.467	4.812	5.944	3.95	4.06E-06
Wordy	6	22	3.714	4.2	5	5.444	3.15	-0.0049262
Eccentric	5	16	4.048	4.533	4.312	5.167	3.15	-0.0023137
Unscientific	5	10	2.857	4.267	4.188	4.294	3.9	0.00025142
Cluttered	4	18	2.571	3.533	3.875	5.389	3.45	5.82E-05
Nosey	0	15	2.333	3.333	4.5	5.333	4.35	-0.000545

Supplementary Table 3. All 148 negative ordered by outdegree centrality, with columns for trait, outdegree centrality, indegree centrality, desirability, interpersonal, observability, breadth, prevalence, and informativeness.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Outdegree	21.75	11.57							
2. Indegree	21.75	12.03	.17**						
			[.06, .28]						
3. Desirability	4.26	1.59	.01	-.06					
			[-.11, .12]	[-.17, .06]					
4. Breadth	2.65	1.08	.02	.04	-.93**				
			[-.10, .13]	[-.07, .16]	[-.94, -.91]				

5. Interpersonal	4.35	0.65	.17**	.08	.26**	-.21**			
			[.06, .28]	[-.03, .19]	[.15, .37]	[-.32, -.10]			
6. Observability	4.97	0.55	.13*	.13*	-.01	-.00	.31**		
			[.01, .24]	[.02, .24]	[-.13, .10]	[-.12, .11]	[.21, .41]		
7. Prevalence	4.25	0.62	.16**	-.03	.62**	-.63**	.35**	.25**	
			[.04, .26]	[-.15, .08]	[.55, .69]	[-.70, -.56]	[.25, .45]	[.14, .35]	
8. Informative	-0.00	0.00	.32**	.15**	-.02	.00	.16**	.09	.13*
			[.21, .41]	[.04, .26]	[-.14, .09]	[-.11, .12]	[.04, .27]	[-.02, .21]	[.02, .24]

Supplementary Table 4. *Descriptive statistics and intercorrelations for both positive and negative traits' network-defined centrality,*

*normative ratings of trait words, and network-defined informativeness (i.e., entropy reduction). Means (M), standard deviations (SD), and correlations with confidence intervals. Values in square brackets indicate the 95% confidence interval for each correlation. * indicates $p < .05$. ** indicates $p < .01$.*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Outdegree	21.22	12.62							
2. Indegree	21.22	10.76	.22**						
			[.06, .37]						
3. Desirability	5.79	0.45	.46**	.19*					
			[.32, .57]	[.03, .34]					
4. Breadth	1.63	0.29	-.12	-.08	-.24**				
			[-.28, .04]	[-.24, .08]	[-.39, -.08]				

5. Interpersonal	4.48	0.81	.23**	.09	.41**	-.14			
			[.07, .38]	[-.08, .24]	[.26, .53]	[-.29, .02]			
6. Observability	4.94	0.47	.14	.03	.21**	-.08	.47**		
			[-.02, .30]	[-.14, .19]	[.05, .36]	[-.24, .08]	[.34, .59]		
7. Prevalence	4.63	0.52	.29**	-.03	.37**	-.23**	.40**	.46**	
			[.14, .43]	[-.19, .13]	[.22, .50]	[-.38, -.07]	[.26, .53]	[.32, .58]	
8. Informative	-0.00	0.00	.59**	.07	.69**	-.21*	.25**	.22**	.48**
			[.47, .68]	[-.09, .23]	[.59, .77]	[-.36, -.05]	[.10, .40]	[.06, .37]	[.35, .60]

Supplementary Table 5. Descriptive statistics and intercorrelations for positive traits' network-defined centrality, normative ratings of trait words, and network-defined informativeness (i.e., entropy reduction). Means (*M*), standard deviations (*SD*), and correlations with confidence intervals. Values in square brackets indicate the 95% confidence interval for each correlation. * indicates $p < .05$. ** indicates $p < .01$.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Outdegree	22.28	10.44							
2. Indegree	22.28	13.20	.12						
			[-.04, .28]						
3. Desirability	2.73	0.43	-.16*	-.25**					
			[-.32, -.00]	[-.40, -.10]					
4. Breadth	3.68	0.38	-.06	.07	-.12				
			[-.22, .10]	[-.10, .22]	[-.28, .04]				

5. Interpersonal	4.23	0.39	.08	.13	.04	-.05			
			[-.08, .24]	[-.03, .29]	[-.13, .20]	[-.21, .11]			
6. Observability	5.00	0.62	.12	.19*	.07	-.21*	.21*		
			[-.04, .27]	[.03, .34]	[-.09, .23]	[-.36, -.05]	[.05, .36]		
7. Prevalence	3.87	0.47	.16	.01	-.12	-.18*	.10	.28**	
			[-.01, .31]	[-.15, .17]	[-.27, .04]	[-.33, -.02]	[-.06, .26]	[.13, .43]	
8. Informative	-0.00	0.00	.07	.20*	-.68**	.10	.06	.02	-.09
			[-.09, .23]	[.05, .35]	[-.76, -.58]	[-.06, .26]	[-.10, .22]	[-.14, .18]	[-.25, .07]

Supplementary Table 6. Descriptive statistics and intercorrelations for negative traits' network-defined centrality, normative ratings of trait words, and network-defined informativeness (i.e., entropy reduction). Means (*M*), standard deviations (*SD*), and correlations with confidence intervals. Values in square brackets indicate the 95% confidence interval for each correlation. * indicates $p < .05$. ** indicates $p < .01$.

Study 2 Models: Favorability Model Parameters

Effect	Param	Valence Model ^a	Out. Model ^b	In. Model ^b	Cent. Main Effects ^b	Out. with Valence ^c	In. with Valence ^c	Valence Inter. ^d
Valence	β_{1j}	0.995 (.006)***	0.995 (.005)***	0.994 (.005)***	0.994 (.005)***	0.992 (.005)***	0.994 (.005)***	0.992 (.005)***
Outdegree	β_{2j}	--	0.074 (.003)***	--	0.075 (.003)***	-0.013 (.003)***	0.071 (.003)***	-0.014 (.004)***
Indegree	β_{3j}	--	--	-0.008 (.003)**	-0.012 (.003)***	-0.024 (.003)***	-0.030 (.003)***	-0.036 (.003)***
Outdegree with Valence	β_{4j}	--	--	--	--	0.175 (.005)***	--	0.173 (.006)***
Indegree with Valence	β_{5j}	--	--	--	--	--	0.047 (.006)***	0.031 (.006)***
Random Effects: Variance Components	σ^2_e	0.650	0.644	0.650	0.644	0.636	0.643	0.636
	σ^2_0	0.103	0.103	0.103	0.103	0.103	0.103	0.103
Goodness of Fit Deviance		206976	206250	206968	206231	205229	206164	205200
AIC		206984	206260	206978	206243	205243	206178	205216

BIC	207021	206307	207025	206300	205309	206243	205291
$\Delta\chi^2$	27592***	725.53***	7.71**	744.5***	1002***	67.64***	29.77***
Δdf	1	1	1	2	1	1	1
$\Delta\text{pseudo-R}^2$	0.247	0.005	0.00005	0.006	0.007	0.0005	0.0002

Supplementary Table 7. Model parameters and fit statistics for Study 2 model predicting self-evaluations from centrality and valence. Negative is the reference group for the dummy coded valence variable. Parameter slopes are all fixed, but in final model, valence is incorporated as random effect. σ^2_e represents the within-subject variance (residual) and σ^2_0 represents the between-subject variance (intercept). (a) Compared to baseline intercept only model. (b) Compared to valence only model. (c) Compared to centrality main effects model. (d) Compared to outdegree centrality interaction model. Note: * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

<i>Study 2: Favorability Model Covariates</i>			
Model Controlling For:	<i>Outdegree Centrality</i>	<i>Outdegree Interaction</i>	<i>Covariate</i>
Original Model	-.014 (.003)***	.173 (.005)***	--
Desirability	-.013 (.003)***	.113 (.005)***	.492 (.022)***
Breadth	-.014 (.003)***	.172 (.005)***	-.022 (.011)*
Prevalence	-.010 (.003)***	.147 (.005)***	.084 (.006)***
Interpersonal	-.014 (.003)***	.169 (.005)***	.015 (.005)**
Observability	-.014 (.003)***	.171 (.005)***	.013 (.004)**
Informativeness	-.013 (.004)**	.181 (.005)***	-.093 (.015)***
Informativeness Interaction with Valence	-.008 (.003)*	.108 (.004)***	.701 (.004)***

Supplementary Table 8. Study 2 favorability models (outdegree centrality interacting with valence predicting self-evaluations) while controlling for normative characteristics and informativeness. Mixed model contains fixed effects for outdegree centrality, indegree centrality, valence, outdegree centrality interaction with valence, indegree centrality interaction with valence, and the covariate, but only these three fixed effects are reported as they are of primary interest. The columns display the fixed effect coefficients for outdegree centrality, it's interaction with valence, and the covariate. Each row displays a different covariate model. The top row displays the original model with no covariate for comparison. The following models separately model covariates for desirability, breadth, prevalence, interpersonal, observability, informativeness, and the interaction of informativeness with valence. Random slopes modeled for valence and normative characteristic. Reporting standardized beta coefficients and standard errors. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

<i>Study 2: Similarity Model Statistics</i>						
Effect	<i>B</i>	<i>SE</i>	<i>CI</i>	<i>df</i>	<i>t</i>	<i>p</i>
Valence	.167	.0008	.166, .169	6331000	219.23	<.0001
Similarity	-.057	.0005	-.058, -.056	6331000	-103.42	<.0001
Similarity with Valence	-.029	.0008	-.031, -.028	6331000	-38.17	<.0001
Similarity (Positive Simple)	-.088	.0005	-.089, -.087	3165000	-162.7	<.0001
Similarity (Negative Simple)	-.056	.0005	-.057, -.055	3165000	-107.1	<.0001

Supplementary Table 9. *Study 2 model coefficients and standard errors for mixed models testing the effect of network similarity on self-evaluation distance.*

<i>Study 2: Consistency Model Parameters</i>				
Effect	<i>Param</i>	<i>Indegree Model^a</i>	<i>Outdegree Model^a</i>	<i>Full Model^b</i>
Indegree	β_{1j}	-.028 (.003)***	--	-.070 (.003)***
Outdegree	β_{2j}	--	-.072 (.003)***	-.016 (.003)***
Random Effects: Variance Components	σ^2_e	0.914	0.910	0.909
	σ^2_0	0.086	0.086	0.086
Goodness of Fit Deviance		236069	235650	235626
AIC		236077	235658	235636
BIC		236114	235696	235682
$\Delta\chi^2$		74.121***	492.46***	24.95 ***
Δdf		1	1	1

Δ pseudo- R^2	0.0008	0.005	0.0002
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Supplementary Table 10. *Model parameters and fit statistics for Study 2 model predicting self-evaluation consistency from centrality. σ^2_e represents the within-subject variance (residual) and σ^2_0 represents the between-subject variance (intercept) All fixed slopes. (a) Compared to baseline intercept only model. (b) Compared to outdegree main effect model. Note: * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

<i>Study 2: Consistency Model Covariates</i>		
Model Controlling For:	<i>Outdegree Centrality</i>	<i>Covariate</i>
Original Model	-.036 (.009)***	--
Desirability	-.037 (.009)***	.037 (.016)*
Breadth	-.036 (.009)***	.024 (.017)
Prevalence	-.034 (.009)***	-.012 (.011)
Interpersonal	-.036 (.009)***	-.004 (.011)
Observability	-.033 (.009)***	-.031 (.011)**
Informativeness	-.008 (.003)**	-.636 (.012)***

Supplementary Table 11. *Study 2 consistency models (outdegree centrality predicting consistency) while controlling for normative characteristics and informativeness. Mixed model contains fixed effects for outdegree centrality, indegree centrality, and the covariate, but only these two fixed effects are reported as they are of primary interest. The columns display the fixed effect coefficients for outdegree centrality, and the covariate. Each row displays a different covariate model. The top row displays the original model*

*with no covariate for comparison. The following models separately model covariates for desirability, breadth, prevalence, interpersonal, observability, and informativeness.. Random slopes modeled for normative characteristic. Reporting standardized beta coefficients and standard errors. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

Study 2: Individual Differences and Favorability Model Coefficients

Individual Differences	Individual	Indiv. * Valence	Indiv. * Outdegree	Indiv. * Indegree	Indiv. * Valence * Outdegree	Indiv. * Valence * Indegree
Self-Esteem	-.244 (.030)***	.391 (.036)***	.003 (.003)	-.010 (.003)***	.025 (.005)***	.012 (.005)*
Conscientious	-.398 (.024)***	.552 (.028)***	-.003 (.003)	-.015 (.003)***	.043 (.005)***	.024 (.005)***
Neuroticism	.359 (.026)***	-.535 (.029)***	.002 (.003)	.012 (.003)***	-.032 (.005)***	-.023 (.005)***
Self-Efficacy	-.235 (.031)	.478 (.032)***	-.005 (.003)	-.017 (.003)***	.029 (.005)***	.023 (.005)***
Depression	.432 (.022)***	-.532 (.029)***	.006 (.003)	.031 (.005)***	-.047 (.005)***	-.025 (.005)***
Psych. Distress	.448 (.021)***	-.503 (.031)***	.003 (.003)	.012 (.003)***	-.044 (.005)***	-.019 (.005)***
Substance Use	.253 (.030)***	-.225 (.041)***	.002 (.003)	.005 (.003) ⁺	-.029 (.005)***	-.005 (.005)
Alcohol Use	.346 (.027)***	-.273 (.040)***	0 (.003)	.009 (.003)**	-.039 (.005)***	-.010 (.005) ⁺

Simple Effects

Individual Differences	Individual (Positive)	Indiv. * Outdegree (Positive)	Indiv. * Indegree (Positive)	Indivi-dual (Negative)	Indiv. * Outdegree (Negative)	Indiv. * Indegree (Negative)
Self-Esteem	.174 (.025)***	.025 (.004)***	.003 (.004)	-.274 (.034)***	.004 (.004)	-.012 (.004)***
Conscientious	.182 (.025)***	.047 (.004)***	.009 (.004)*	-.448 (.027)***	-.004 (.004)	-.018 (.004)***
Neuroticism	-.208 (.024)***	-.036 (.004)***	-.012 (.004)**	.404 (.030)***	.002 (.004)	.014 (.004)***
Self-Efficacy	.288 (.021)***	.028 (.004)***	.007 (.004)	-.265 (.034)***	-.006 (.004)	-.021 (.004)***
Depression	-.118 (.026)***	-.048 (.004)***	-.009 (.004)*	.486 (.025)***	.005 (.004)	.020 (.004)***
Psych. Distress	-.653 (.027)*	-.048 (.004)***	-.007 (.004)	.503 (.023)***	.004 (.004)	.015 (.004)***
Substance Use	.033 (.027)	-.032 (.004)***	.0004 (.004)	.284 (.034)***	.002 (.004)	.006 (.004) ⁺
Alcohol Use	.087 (.027)**	-.046 (.004)***	-.0009 (.004)	.389 (.030)***	-.0 (.003)***	-.011 (.004) ⁺

Supplementary Table 12. *Model coefficients and standard errors for Study 2 centrality model incorporating individual differences variables. Simple effects within each valence are reported below. “Individual” denotes the individual difference variable indicated in each row. “Indiv” denotes each individual difference interacting with other predictors in model. In the bottom table, parentheses containing “(Positive)” and “(Negative)” denote the simple effects for each valence. Note: + indicates $p < .10$. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

Study 2: Individual Differences and Consistency Model Coefficients

Individual Differences	Individual	Indiv. * Outdegree	Indiv. * Indegree
Self-Esteem	-.087 (.016)***	.013 (.003)***	-.010 (.003)**
Conscientious	-.077 (.017)***	-.022 (.003)***	-.008 (.003)*
Neuroticism	.110 (.016)***	.013 (.003)***	.010 (.003)**
Self-Efficacy	-.089 (.016)***	-.013 (.003)***	-.009 (.003)**
Depression	.110 (.016)***	.014 (.003)***	.011 (.003)***
Psych. Distress	.078 (.017)***	.013 (.003)***	.009 (.003)**
Substance Use	.017 (.017)	.007 (.003)*	.002 (.003)
Alcohol Use	-.004 (.017)	.011 (.003)***	.007 (.003)*

Supplementary Table 13. *Model coefficients and standard errors for Study 2 model incorporating individual differences variables with consistency. “Individual” denotes the individual difference variable indicated in each row. “Indiv” denotes each individual difference interacting with other predictors in model. Note: * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

Study 3: Favorability Model Parameters

Effect	Param	Valence Model ^a	Out. Model ^b	In. Model ^b	Cent. Main Effects ^b	Out. with Valence ^c	In. with Valence ^d	Valence Inter ^d
Valence	β_{1j}	1.013 (.015)***	1.02 (.015)***	1.01 (.015)***	1.016 (.015)***	1.011 (.015)***	1.016 (.015)***	1.011 (.015)***
Outdegree	β_{2j}	--	.076 (.007)***	--	0.083 (.008)***	.181 (.008)***	.081 (.008)***	-.061 (.012)***
Indegree	β_{3j}	--	--	-.027 (.007)***	-.041 (.008)***	-.043 (.008)***	-.061 (.009)***	-.047 (.010)***
Outdegree with Valence	β_{4j}	--	--	--	--	.242 (.015)***	--	.240 (.015)***
Indegree with Valence	β_{5j}	--	--	--	--	--	.045 (.015)***	.009 (.015)
Random Effects: Variance	σ^2_e	0.717	0.711	0.716	0.709	0.695	0.708	0.695
Components	σ^2_0	0.028	0.028	0.027	0.028	0.028	0.028	0.028
Goodness of Fit Deviance		32364	32259	32351	32229	31970	32219	31970

AIC	32372	32269	32361	32286	31984	32233	31986
BIC	32402	32306	32399	32241	32036	32285	32046
$\Delta\chi^2$	3933.2****	105.53****	12.979****	135.05****	259.04****	0	0
Δdf	1	1	1	2	1	1	1
$\Delta pseudo-R^2$	0.256	0.006	0.0007	0.007	0.014	-.014	0

Supplementary Table 14. Model parameters and fit statistics for Study 3 model predicting self-evaluations from centrality and valence. Negative is the reference group for the dummy coded valence variable. Parameter slopes are all fixed, but in final model, valence is incorporated as random effect. σ^2_e represents the within-subject variance (residual) and σ^2_0 represents the between-subject variance (intercept). (a) Compared to baseline intercept only model. (b) Compared to valence only model. (c) Compared to centrality main effects model. (d) Compared to outdegree centrality interaction only model. Note: * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

Study 3: Favorability Model Covariates

Model Controlling For:	<i>Outdegree Centrality</i>	<i>Outdegree Interaction</i>	<i>Covariate</i>
Original Model	-.062 (.011)***	.242 (.014)***	--
Desirability	-.037 (.011)***	.148 (.015)***	.614 (.043)***
Breadth	-.065 (.011)***	.241 (.014)***	-.114 (.025)***
Prevalence	-.085 (.011)***	.221 (.014)***	.183 (.015)***
Interpersonal	-.065 (.011)***	.225 (.014)***	.076 (.013)***
Observability	-.070 (.011)***	.242 (.014)***	.068 (.011)***
Informativeness	-.056 (.011)***	.244 (.014)***	-.165 (.024)***
Informativeness Interaction with Valence	-.053 (.010)***	.203 (.013)***	.719 (.012)***

Supplementary Table 15. *Study 3 favorability models (outdegree centrality interacting with valence predicting self-evaluations) while controlling for normative characteristics and informativeness. Mixed model contains fixed effects for outdegree centrality, indegree centrality, valence, outdegree centrality interaction with valence, indegree centrality interaction with valence, and the covariate, but only these three fixed effects are reported as they are of primary interest. The columns display the fixed effect coefficients for outdegree centrality, it's interaction with valence, and the covariate. Each row displays a different covariate model. The top row displays the original model with no covariate for comparison. The following models separately model covariates for desirability, breadth, prevalence, interpersonal, observability, informativeness, and the interaction of informativeness with valence. Random slopes modeled for valence and normative characteristic. Reporting standardized beta coefficients and standard errors. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

<i>Study 3: Similarity Model Statistics</i>						
Effect	<i>B</i>	<i>SE</i>	<i>CI</i>	<i>df</i>	<i>t</i>	<i>p</i>
Valence	.032	.002	.028, .036	935100	15.955	<.0001
Similarity	-.044	.001	-.047, -.041	935100	-29.883	<.0001
Similarity with Valence	-.020	.002	-.024, -.016	935100	-9.877	<.0001
Similarity (Positive Simple)	-.066	.001	-.068, -.063	467500	-46.851	<.0001
Similarity (Negative Simple)	-.043	.001	-.046, -.040	467500	-30.033	<.0001

Supplementary Table 16. *Study 3 model coefficients and standard errors for mixed models testing the effect of network similarity on self-evaluation distance.*

<i>Study 3: Consistency Model Parameters</i>				
Effect	<i>Param</i>	<i>Indegree Model^a</i>	<i>Outdegree Model^a</i>	<i>Full Model^b</i>
Indegree	β_{1j}	-.019 (.009)*	--	-.013 (.009)
Outdegree	β_{2j}	--	-.040 (.008)***	-.036 (.009)***
Random Effects: Variance Components	σ^2_e	.929	.928	.928
	σ^2_0	.072	.072	.072
Goodness of Fit Deviance		35730	35714	35712
AIC		35738	35722	35722
BIC		35768	35752	35760
$\Delta\chi^2$		4.962*	20.795***	2.1687

Δdf	1	1	1
$\Delta pseudo-R^2$.0004	.001	.0002

Supplementary Table 17. *Model parameters and fit statistics for Study 3 model predicting self-evaluation consistency from centrality. σ^2_e represents the within-subject variance (residual) and σ^2_0 represents the between-subject variance (intercept). All fixed slopes. (a) Compared to baseline intercept only model. (b) Compared to outdegree main effect model. Note: * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

<i>Study 3: Consistency Model Covariates</i>		
Model Controlling For:	<i>Outdegree Centrality</i>	<i>Covariate</i>
Original Model	-.036 (.009)***	--
Desirability	-.037 (.009)***	.037 (.016)*
Breadth	-.036 (.009)***	-.024 (.017)
Prevalence	-.034 (.009)***	-.012 (.011)
Interpersonal	-.036 (.009)***	-.004 (.011)
Observability	-.033 (.009)***	-.031 (.011)**
Informativeness	.009 (.006)	-.699 (.028)***

Supplementary Table 18. *Study 3 consistency models (outdegree predicting consistency) while controlling for normative characteristics and informativeness. Mixed model contains fixed effects for outdegree centrality, indegree centrality, and the covariate, but only these two fixed effects are reported as they are of primary interest. The columns display the fixed effect coefficients for outdegree centrality, and the covariate. Each row displays a different covariate model. The top row displays the original model*

*with no covariate for comparison. The following models separately model covariates for desirability, breadth, prevalence, interpersonal, observability, and informativeness. Random slopes modeled for normative characteristic. Reporting standardized beta coefficients and standard errors. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.*

Study 3: Individual Differences and Favorability Model

Individual Differences	Individual	Indiv * Valence	Indiv. * Outdegree	Indiv. * Indegree	Indiv. * Val. * Outdegree	Indiv. * Val. * Indegree
Self-Esteem	-.121 (.036)**	.356 (.054)***	.016 (.014)	-.017 (.009) ⁺	.007 (.014)	.002 (.014)
Conscientious	-.079 (.039)*	.239 (.067)***	.040 (.011)***	-.007 (.009)	.031 (.014)*	.019 (.015)
Neuroticism	.119 (.037)**	-.291 (.062)***	-.015 (.011)	.009 (.009)	-.004 (.014)	-.018 (.015)
SC Clarity	-.121 (.038)**	.263 (.065)***	.015 (.011)	-.004 (.009)	.008 (.015)	.010 (.015)
Depression	.134 (.037)***	-.267 (.065)***	-.011 (.009)	.010 (.009)	.0009 (.015)	-.018 (.015)
Independent	.083 (.040)*	.268 (.065)***	.004 (.011)	-.015 (.009) ⁺	.009 (.015)	-.006 (.015)
Interdependent	.039 (.041)	-.126 (.074) ⁺	-.031 (.011)**	.004 (.009)	.021 (.015)	-.005 (.015)

Simple Effects

Individual Differences	Indivi-dual (Positive)	Indiv. * Outdegree (Positive)	Indiv. * Indegree (Positive)	Indivi-dual (Negative)	Indiv. * Outdegree (Negative)	Indiv. * Indegree (Negative)
Self-Esteem	.266 (.041)***	.029 (.011)**	-.016 (.012)	-.144 (.043)**	.017 (.012)	-.023 (.012)*
Conscientious	.181 (.050)***	.011 (.011)	.012 (.011)	-.09 (.046) ⁺	.043 (.012)***	-.009 (.012)
Neuroticism	-.195 (.049)***	-.023 (.011)*	-.009 (.012)	.140 (.043)**	-.015 (.012)	.011 (.012)
SC Clarity	-.160 (.051)**	.029 (.012)*	.006 (.012)	-.142 (.044)**	.015 (.012)	-.006 (.012)
Depression	-.151 (.051)**	-.034 (.012)**	.0003 (.012)	.158 (.043)	-.017 (.012)	.015 (.012)
Independent	.210 (.046)***	.016 (.012)	.021 (.012) ⁺	-.099 (.047)*	.004 (.012)	-.019 (.012)
Interdependent	-.098 (.054) ⁺	-.011 (.011)	-.0008 (.012)	.045 (.049)	-.033 (.012)**	.006 (.012)

Supplementary Table 19. Model coefficients and standard errors for fMRI study 3 centrality model incorporating individual differences variables. Simple effects within each valence are reported below. “Individual” denotes the individual difference variable indicated in each row. “Indiv” denotes each individual difference interacting with other predictors in model. In the bottom table, parentheses containing “(Positive)” and “(Negative)” denote the simple effects for each valence. Note: + indicates $p < .10$. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

Study 3: Individual Differences and Consistency Model

Individual Differences	Individual	Indiv. * Outdegree	Indiv. * Indegree
Self-Esteem	-.042 (.040)	-.020 (.003)*	.001 (.009)
Agreeableness	-.099 (.038)*	-.008 (.009)	.002 (.009)
Neuroticism	-.015 (.041)	.015 (.009) ⁺	.012 (.009)
SC Clarity	.031 (.041)	-.014 (.009) ⁺	-.013 (.009)
Depression	-.039 (.041)	.018 (.009)*	-.004 (.009)
Independent	.022 (.041)	-.013 (.009)	-.014 (.009)
Interdependent	-.078 (.004) ⁺	.0002 (.009)	.007 (.009)
Dialectical	-.042 (.040)	.008 (.009)	.029 (.009)***

Supplementary Table 20. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$. Model coefficients and standard errors for fMRI study 3 model incorporating individual differences variables with consistency. “Individual” denotes the individual difference variable indicated in each row. “Indiv” denotes each individual difference interacting with other predictors in model. Note: + indicates $p < .10$. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

<i>Self-Evaluations: Parametric regressor of self-evaluations</i>						
Cluster #	Region	Peak Coordinates			<i>T</i>	Size
		<i>x</i>	<i>y</i>	<i>z</i>		
1	Post Central Gyrus	-38	-22	48	12.6	10251
	Superior Parietal Lobule	-42	-42	62	11.8	
	Medial Prefrontal Cortex	-2	62	2	11	
2	Right Cerebellum	20	-50	-22	12.2	2581
	Lingual Gyrus	12	-70	-10	9.4	
3	Left Middle Anterior Temporal Gyrus	-62	-2	-16	6.84	1116
4	Right Middle Anterior Temporal Gyrus	56	-2	-18	5.47	265
<i>Negative Association</i>						
Cluster #	Region	Peak Coordinates			<i>T</i>	Size
		<i>x</i>	<i>y</i>	<i>z</i>		
1	Right Postcentral Gyrus	42	-22	64	18.3	10557
	Right Supramarginal Gyrus	44	-36	52	11.7	
	Right Superior Parietal Cortex	28	-60	64	11.1	
2	Left Cerebellum	-16	-52	-22	12.9	2716
3	Middle Anterior Cingulate	8	-16	48	8.02	1119
4	Central Opercular Cortex	48	-18	16	9.04	733
5	Right Lateral Occipital Cortex	54	-70	6	5.5	425
6	Right Anterior Insula	32	26	4	8.51	366

Supplementary Table 21. *Non-parametric cluster corrected brain regions that parametrically track self-evaluations, regardless of valence.*

<i>Parametric regressor of self-evaluation positive self-evaluation > negative self-evaluation</i>						
<i>Positive Association</i>		<u>Peak Coordinates</u>			<i>T</i>	Size
Cluster #	Region	<i>x</i>	<i>y</i>	<i>z</i>		
1	Left Primary Motor	-38	-24	68	12.6	10536
	Paracingulate Gyrus	-2	-18	48	8.62	
2	Cuneal Cortex	0	-80	-36	8.48	5788
	Occipital Pole	28	-88	62	6.71	
3	Left Anterior Supramarginal Gyrus	-50	-20	18	6.82	855
4	Left Posterior Middle Temporal Gyrus	-66	-18	-14	6.95	572
5	Left Putamen	-28	-4	-8	5.42	204
<i>Negative Association</i>		<u>Peak Coordinates</u>			<i>T</i>	Size
Cluster #	Region	<i>x</i>	<i>y</i>	<i>z</i>		
1	Right Primary Motor	46	-14	58	8.99	1205

Supplementary Table 22. *Non-parametric cluster corrected brain regions that parametrically track self-evaluations differently for positive and negative valence.*

<i>Parametric regressor of outdegree centrality</i>						
<i>Positive Association</i>		<u>Peak Coordinates</u>			<i>T</i>	Size
Cluster #	Region	<i>x</i>	<i>y</i>	<i>z</i>		
1	Precuneus	-10	-70	32	5.41	332
<i>Negative Association</i>		<u>Peak Coordinates</u>			<i>T</i>	Size
Cluster #	Region	<i>x</i>	<i>y</i>	<i>z</i>		
1	Middle Frontal Gyrus	-54	18	30	7.63	3612
2	Left Posterior Middle Temporal Gyrus	-54	-42	4	6.9	2498
3	Superior Frontal Gyrus	-12	42	52	5.64	982
4	Paracingulate Gyrus	0	12	54	7.03	574
5	Ventromedial Prefrontal Cortex	-2	38	-18	7.09	308
6	Right Inferior Frontal Gyrus	54	32	20	4.89	243

Supplementary Table 23. *Non-parametric cluster corrected brain regions that parametrically track outdegree centrality, regardless of valence, while controlling for informativeness and normative social desirability.*

<i>Parametric regressor of outdegree centrality for positive traits</i>						
Cluster #	<i>Negative Association</i>	<u>Peak Coordinates</u>			<i>T</i>	Size
	Region	<i>x</i>	<i>y</i>	<i>z</i>		
1	Frontal Pole	-54	18	30	10.5	13001
2	Left Posterior Middle Temporal Gyrus	-66	-32	0	7.85	2908
3	Ventromedial Prefrontal Cortex	36	36	-12	7.44	2014
4	Left Superior Lateral Occipital Cortex	-48	-68	46	6.14	1109
5	Left Occipital Pole	-34	-94	-6	5.85	285
6	Right Occipital Pole	34	-90	-6	5.05	272

Supplementary Table 24. *Non-parametric cluster corrected brain regions that parametrically track outdegree centrality, for positive traits.*

Parametric regressor of outdegree centrality for negative traits

<i>Negative Association</i>		Peak Coordinates			<i>T</i>	Size
Cluster #	Region	<i>x</i>	<i>y</i>	<i>z</i>		
1	Inferior Frontal Gyrus	44	10	24	5.29	204

Supplementary Table 25. *Non-parametric cluster corrected brain regions that parametrically track outdegree centrality, for negative traits.*

<i>Parametric regressor of self-evaluation positive outdegree centrality > negative outdegree centrality</i>						
Cluster #	Negative Association Region	Peak Coordinates			T	Size
		x	y	z		
1	Superior Frontal Gyrus	-2	60	34	5.14	757
2	Left Middle Frontal Gyrus	-54	18	30	5.4	476
3	Left Inferior Frontal Gyrus	-46	50	-4	5.1	351
4	Left Middle Frontal Gyrus	-46	12	48	5.17	305

Supplementary Table 26. *Non-parametric cluster corrected brain regions that parametrically track positive outdegree centrality > negative outdegree centrality.*

List of Representational Similarity Analysis Searchlight Regions (Positive Traits)

Cluster #	Region	Peak Coordinates			<i>T</i>	Size
		<i>x</i>	<i>y</i>	<i>z</i>		
1	Left Posterior Parietal Cortex	-42	-68	54	5.54	2025
2	Anterior Medial Prefrontal Cortex	-12	62	20	4.99	1645
3	Left Postcentral Gyrus	-36	-28	68	5.32	1206
4	Right Postcentral Gyrus	32	-24	68	4.62	598
5	Left Middle Frontal Gyrus	-38	24	36	4.99	338
6	Left Middle Temporal Gyrus	-62	-58	-8	4.59	269
7	Precuneus	6	-80	50	4.16	200
8	Right Angular Gyrus	50	-52	52	3.81	163
9	Right Posterior Parietal Cortex	54	-56	32	3.85	156
10	Left Superior Parietal Lobule	-24	-60	70	4.26	138

Supplementary Table 27. *Non-parametric cluster corrected brain regions in which a significant association was observed between neural activation pattern similarity and inverse log-weighted similarity as defined by the trait network, for positive traits only.*

<i>List of Representational Similarity Analysis Searchlight Regions (Negative Traits)</i>						
Cluster #	Region	Peak Coordinates			<i>T</i>	Size
		<i>x</i>	<i>y</i>	<i>z</i>		
1	Left Posterior Parietal Cortex	-46	-68	36	4.34	400

Supplementary Table 28. *Non-parametric cluster corrected brain region in which a significant correlation was observed between neural activation pattern similarity and inverse log-weighted similarity as defined by the trait network, for negative traits.*

Supplementary Information Text

Methods

Estimating Informativeness

To estimate a network-derived measure of “informativeness”, we generated a metric reflecting how much information was added by each trait. For each of the 148 positive and 148 negative traits, we determined (1) how similar each trait is to all other traits (of the same valence) using the network-derived similarity measures, and (2) how similar each trait is to all other traits (of the same valence) that were self-evaluated at each of the five Likert response types (1 through 5). A probability for each of the five response types could then be generated as the summed similarity of a trait to all other traits with that response type, divided by the summed similarity of a trait to all other traits regardless of response type. Therefore, five probabilities corresponding to the likelihood of the

participant self-evaluating at each of the response types were calculated for each trait. Using this, entropy could be calculated for each of the traits as:

$$\mathbf{Entropy}_t = - \sum_{f=1}^{f=5} P_f * \log_2(P_f)$$

For each trait (trait t), a leave-one-out procedure was conducted by which the entropy of all other 147 traits (of the same valence) was calculated with trait t and without trait t , and was averaged. Finally, the difference between this average entropy with trait t and without trait t was calculated (entropy without trait t minus entropy with trait t). This provides a measure of how much uncertainty is reduced by trait t — In other words, it provides a measure of the information added by, or the informativeness of trait t .

Results

Indegree Centrality Predicts Self-Evaluations

Given that the dependency structure of the network may produce dissociable effects for traits that vary based on their number of indegree versus outdegree connections, we also tested the interaction of indegree centrality with valence, despite not having a priori predictions about indegree centrality. This analysis revealed that valence interacted with indegree centrality (controlling for outdegree

centrality) to predict self-evaluations ($\beta = .030$, $SE = .005$, $CI = [.021, .040]$, $t(84970) = 6.133$, $p < .0001$, $sr^2 = .0004$), such that the effect of indegree centrality on self-evaluations was significantly more negative for negative traits than for positive traits. The interaction was decomposed into simple effects, which revealed that indegree centrality was not significantly associated with self-descriptiveness ratings among positive traits ($\beta = -.005$, $SE = .004$, $CI = [-.014, .003]$, $t(42780) = -1.222$, $p = .222$), but was significantly associated with decreases in self-descriptiveness ratings for negative traits ($\beta = -.044$, $SE = .004$, $CI = [-.051, -.037]$, $t(42480) = -11.874$, $p < .0001$, $sr^2 = 0.004$).

Indegree Centrality Interaction with Individual Differences

Next, we tested the effect of self-esteem on the valence-dependent indegree centrality interaction. We revealed a valence, indegree, and self-esteem interaction ($\beta = 0.0121$, $SE = .005$, $CI = [.002, .0219]$, $t(85550) = 2.402$, $p = .01631$, $sr^2 = .00007$), indicating a stronger association between self-esteem and indegree centrality on self-evaluations for negative than positive traits. Decomposition of the simple effects shows that individuals higher in self-esteem evaluate the highest indegree centrality negative traits as least self-descriptive and the least indegree central traits as most self-descriptive, whereas individuals lower in self-esteem individuals do not differentiate indegree centrality on self-evaluations ($\beta = -.017$, $SE = .004$, $CI = [-.0194, -.0049]$, $t(42780) = -4.705$, $p < .0001$, $sr^2 = .0003$). Positive traits exhibited a weak interaction of self-esteem with indegree centrality ($\beta = -.009$, $SE = .004$, $CI = [-.0061, .0107]$, $t(42780) = -2.045$, $p = .0409$). Individuals may be more sensitive to indegree centrality among negative traits as self-

esteem increases due to an aversion to rate negative traits as self-descriptive to the extent that is determined by many other negative traits.

Finally, we tested whether depressive symptoms moderates the valence-dependent indegree centrality effects. Depressive symptoms interacted with indegree centrality and valence ($\beta = -.024$, $SE = .005$, $CI = [-.038, -.018]$, $t(85550) = -4.487$, $p < .0001$, $sr^2 = .0003$), revealing a greater relationship between depression and indegree centrality among negative traits. Simple effects revealed that for negative traits, depression interacted with indegree centrality ($\beta = .0197$, $SE = .004$, $CI = [.0124, .0270]$, $t(85550) = 5.314$, $p < .0001$, $sr^2 = .0009$), where those lower in depression evaluated negative traits with higher indegree centrality as less self-descriptive. We found a weak interaction of depression with indegree centrality among positive traits ($\beta = -.0089$, $SE = .004$, $CI = [-.0172, -.0004]$, $t(85550) = -2.045$, $p = .0409$, $sr^2 = .0001$). Individuals high in depression may not be effective at discriminating traits that are more or less determined by other negative traits, contributing to more volatile self-perceptions.

amPFC Tracks Indegree Centrality

We next examined brain activity that parametrically tracks network-defined indegree centrality (Figure 3b). Activity in anterior mPFC (amPFC) was positively associated with indegree centrality (0, 32, 20; $t = 5.15$, $k = 790$). Inferences on higher indegree traits may require greater inferential processing in amPFC to generate self-perceptions that are consistent with evaluations on the many traits that are perceived to cause them. Conversely, inferences on lower indegree traits may require less inferential processing in

amPFC to maintain consistency because there are fewer traits that are perceived to cause them. Indegree centrality for positive traits revealed positive associations in middle paracingulate gyrus (0, 44, 52; $t = 5$, $k = 551$) and right lateral orbitofrontal cortex (44, 20, -10; $t = 5.05$, $k = 238$). Indegree centrality for negative traits revealed a significant positive association with amPFC (0, 64, 2; $t = 5.15$, $k = 242$) and a significant negative association with left superior frontal gyrus (-44, 10, 24; $t = 4.91$, $k = 616$). No clusters showed significant negative associations with indegree centrality.

Discussion

Although our primary results on MPFC's role in self evaluations focuses on outdegree centrality, some parts of MPFC may also track indegree centrality, which exhibits unique behavioral and neurobiological patterns. Indegree describes the degree to which people perceive a trait as depending on other traits for meaning. As such, indegree may reflect how judgments on an ensemble of traits inform judgments on a specific trait. In terms of brain activation, aMPFC was positively associated with indegree centrality, which is a different pattern from what we observed for outdegree centrality, which was negatively associated with activation in vMPFC. These results suggest that people are monitoring not only the potential downstream (output-level) consequences of their self-evaluations on a trait, but also may be using information about the traits that contribute to the trait's meaning (input-level). This dissociation is further demonstrated in our behavioral findings, in which we find that outdegree centrality predicts more favorable evaluations on both positive and negative traits, whereas indegree centrality only predicts more favorable evaluations for negative traits. Therefore,

differences observed between outdegree and indegree corroborate a key part of our trait dependency network model that directionality (i.e. input vs. output) matters for self-evaluations and information-processing. A possibility for why results for indegree centrality were overall weaker may be that the reliability for indegree centrality measures appeared to be substantially weaker than for outdegree centrality. Given that the association between two measures is constrained by the square root of the product of each measure's reliability (Nunnally, 1959), it is plausible that the effect sizes for any indegree centrality effects are attenuated due to its lower reliability.

Supplemental Analyses

In separate analyses, we model covariates for all normative trait characteristics and a measure of network-derived informativeness, as well as modeling all covariates simultaneously for the behavioral analyses conducted in the main text, collapsed across positive and negative traits, as well as for positive and negative traits separately. Specifically, we conducted these control analyses for the favorability, consistency, and individual differences moderated analyses across both studies. We also split Study 2 and Study 3 samples by Asian and Non-Asian and conducted the favorability and consistency analyses across Asian and Non-Asian subsamples. They can be found at the following link:

<https://rpubs.com/JaEl/861338>