Supplementary Materials

Supplementary Figure 1. Top: For all 13 traits, ratings of unnamed targets and ratings of named targets were significantly correlated. **Bottom:** For all 13 traits, trait distances calculated for pairs of unnamed targets and trait distances calculated for pairs of named targets were significantly correlated.



trait	theory	b	SE	t	р	adjusted p
openness	big 5	0.470	0.029	15.949	1.31E-50	3.93E-50
conscientiousness	big 5	0.819	0.019	42.728	1.41E-218	1.27E-217
extraversion	big 5	0.242	0.032	7.463	2.00E-13	4.00E-13
agreeableness	big 5	0.867	0.017	52.094	1.23E-273	1.48E-272
neuroticism	big 5	0.815	0.019	42.199	2.46E-215	1.97E-214
dominance	face perception	0.170	0.033	5.157	3.08E-07	3.08E-07
trustworthiness	face perception	0.822	0.019	43.243	9.98E-222	9.98E-221
warmth	stereotype content model	0.868	0.017	52.429	1.62E-275	2.11E-274
competence	stereotype content model	0.826	0.019	43.935	6.22E-226	6.84E-225
agency	mind perception	0.617	0.026	23.515	1.19E-95	5.95E-95
experience	mind perception	0.613	0.026	23.232	7.25E-94	2.90E-93
intelligence	n/a	0.758	0.022	34.850	5.39E-169	3.77E-168
attractiveness	n/a	0.711	0.023	30.292	1.97E-139	1.18E-138

Supplementary Table 1. Results from 13 linear models predicting holistic similarity between pairs of unfamiliar people (with names and faces), using pairwise trait distance. P-values were corrected using the Holm-Bonferroni method.

Supplementary Table 2. Results from a cumulative linear model predicting holistic similarity between pairs of unfamiliar people (with names and faces), using all 13 pairwise trait distances. This model significantly predicted holistic similarity (F(13,886) = 267.70, p < 0.0001, CoD = 0.790). Traits highlighted in yellow changed in significance after adding names and faces to the unfamiliar targets.

variable	b	SE	t	р	partial correlation
(Intercept)	0.000	0.015	0.000	1.000	
openness	0.015	0.021	0.686	0.493	0.023
conscientiousness	0.115	0.038	2.998	0.003 **	0.100
extraversion	0.034	0.017	2.008	0.045 *	0.067
agreeableness	0.254	0.061	4.189	3.08E-05 ***	0.139
neuroticism	0.190	0.035	5.429	7.31E-08 ***	0.179
dominance	0.056	0.016	3.476	0.001 ***	0.116
trustworthiness	-0.019	0.044	-0.427	<mark>0.670</mark>	-0.014 (prev. 0.105)
warmth	0.273	0.062	4.394	1.25E-05 ***	0.146 (prev. 0.021)
competence	0.132	0.044	2.992	0.003 **	0.100
agency	0.062	0.021	2.917	<mark>0.004 **</mark>	0.098 (prev0.044)
experience	-0.044	0.024	-1.787	0.074	-0.060
intelligence	-0.048	0.033	-1.453	0.147	-0.049
attractiveness	-0.003	0.026	-0.111	0.911	-0.004

Supplementary Figure 2. Partial correlations between each trait distance and holistic similarity, controlling for the other 12 trait distances, in (1) the domain of unfamiliar people (with names and faces), and (2) the domain of famous people.



Supplementary Table 3. Results from 13 linear models predicting holistic similarity between pairs of famous people, using pairwise trait distance, controlling for concordance in: gender, race, nationality, and industry. Partial correlations were calculated between holistic similarity and trait distance, controlling for the four biographical covariates.

trait	theory	b	SE	t	р	adjusted p	partial correlation
openness	Big 5	0.088	0.030	2.944	0.003	0.010	0.094
conscientiousness	Big 5	0.260	0.027	9.474	2.33E-20	1.864E-19	0.295
extraversion	Big 5	0.172	0.028	6.138	1.25E-09	7.5E-09	0.200
agreeableness	Big 5	0.116	0.029	4.039	5.84E-05	2.34E-04	0.129
neuroticism	Big 5	0.055	0.029	1.941	0.053	0.053	0.061
dominance	face perception	0.322	0.027	11.753	9.30E-30	1.023E-28	0.365
trustworthiness	face perception	0.172	0.028	6.076	1.82E-09	9.10E-09	0.192
warmth	stereotype content model	0.079	0.029	2.772	0.006	0.011	0.086
competence	stereotype content model	0.282	0.027	10.252	2.15E-23	2.15E-22	0.320
agency	mind perception	0.192	0.028	6.862	1.27E-11	8.89E-11	0.221
experience	mind perception	0.330	0.027	12.369	1.50E-32	1.8E-31	0.376
intelligence	n/a	0.350	0.027	13.027	1.21E-35	1.573E-34	0.396
attractiveness	n/a	0.260	0.027	9.659	4.62E-21	4.158E-20	0.305

Supplementary Table 4. Results from a cumulative linear model predicting holistic similarity between pairs of famous people, using all 13 pairwise trait distances, controlling for concordance in: gender, race, nationality, and industry. This model significantly predicted holistic similarity (F(17,882) = 62.08, p < 0.0001, CoD = 0.524). Traits highlighted in yellow changed in significance after adding biographical covariates to the 13-trait model.

variable	Ь	SE	t	p	partial correlation
(Intercept)	0.000	0.023	0.000	1.000	
openness	0.136	0.030	4.576	5.42E-06 ***	0.152
conscientiousness	0.063	0.042	1.506	<mark>0.132</mark>	0.051 (prev. 0.103)
extraversion	0.107	0.026	4.128	4.00E-05 ***	0.138
agreeableness	-0.183	0.071	-2.575	<mark>0.010 **</mark>	-0.086 (prev0.044)
neuroticism	-0.070	0.034	-2.025	<mark>0.043 *</mark>	-0.068 (prev0.048)
dominance	0.239	0.029	8.362	2.39E-16	0.271
trustworthiness	0.139	0.052	2.689	<mark>0.007 **</mark>	0.090 (prev. 0.059)
warmth	0.057	0.052	1.105	0.270	0.037
competence	-0.222	0.062	-3.595	3.43E-04 ***	-0.120
agency	-0.132	0.038	-3.492	5.03E-04 ***	-0.117
experience	0.225	0.048	4.689	3.18E-06 ***	0.156
intelligence	0.298	0.052	5.698	1.65E-08 ***	0.188
attractiveness	0.177	0.024	7.312	5.91E-13 ***	0.239
same_gender	-0.110	0.025	-4.437	1.03E-05 ***	-0.148
same_race	-0.202	0.024	-8.473	9.93E-17 ***	-0.274
same_nation	-0.011	0.025	-0.452	0.651	-0.015
same_industry	-0.329	0.025	-13.097	6.10E-36 ***	-0.404

Supplementary Figure 3. Partial correlations between each trait distance and holistic similarity, controlling for the other 12 trait distances, in (1) the domain of unfamiliar people, and (2) the domain of famous people. The model for famous people included, as covariates, concordance in: gender, race, nationality, and industry.



trait	CoD: unfamiliar people	CoD: famous people	RMSE: unfamiliar people	RMSE: famous people	MAE: unfamiliar people	MAE: famous people
openness	0.217	0.040	0.882	0.977	0.752	0.778
conscientiousness	0.673	0.122	0.570	0.934	0.455	0.734
extraversion	0.059	0.056	0.967	0.969	0.845	0.770
agreeableness	0.752	0.039	0.496	0.977	0.398	0.782
neuroticism	0.665	0.015	0.577	0.990	0.466	0.788
dominance	0.024	0.197	0.985	0.894	0.864	0.694
trustworthiness	0.676	0.057	0.567	0.968	0.458	0.767
warmth	0.755	0.022	0.494	0.986	0.389	0.786
competence	0.683	0.106	0.561	0.942	0.447	0.743
agency	0.382	0.056	0.783	0.969	0.653	0.770
experience	0.375	0.149	0.788	0.920	0.656	0.719
intelligence	0.575	0.175	0.650	0.905	0.526	0.704
attractiveness	0.506	0.098	0.701	0.947	0.575	0.745
all 13	0.792	0.390	0.455	0.778	0.362	0.602

Supplementary Table 5. Within-domain predictive performance of models predicting pairwise holistic similarity using trait distance. The unfamiliar targets were presented with names and faces. Five-fold cross-validation was used to calculate performance measures. The bottom row reports performance for the cumulative model.

Supplementary Table 6. Cross-domain predictive performance of models predicting holistic similarity using trait distance. The unfamiliar targets were presented with names and faces. Five-fold cross-validation was used to calculate performance measures. A negative coefficient of determination indicates poorer prediction than the mean value. The bottom row reports performance for the cumulative model.

trait	CoD: unfamiliar people ➔ famous people	CoD: famous people ➔ unfamiliar people	<i>RMSE</i> : unfamiliar people → famous people	<i>RMSE</i> : famous people → unfamiliar people	MAE: unfamiliar people → famous people	MAE: famous people → unfamiliar people
openness	-0.029	0.148	1.011	0.920	0.818	0.805
conscientiousness	-0.095	0.456	1.043	0.736	0.846	0.628
extraversion	0.057	0.059	0.968	0.968	0.770	0.845
agreeableness	-0.397	0.314	1.178	0.826	0.974	0.719
neuroticism	-0.460	0.187	1.205	0.899	0.990	0.788
dominance	0.121	-0.050	0.935	1.021	0.738	0.876
trustworthiness	-0.279	0.340	1.127	0.810	0.901	0.703
warmth	-0.488	0.244	1.216	0.867	1.000	0.758
competence	-0.134	0.440	1.060	0.746	0.850	0.637
agency	-0.084	0.241	1.038	0.868	0.839	0.755
experience	0.101	0.327	0.945	0.818	0.746	0.704
intelligence	0.064	0.463	0.963	0.731	0.763	0.617
attractiveness	-0.056	0.351	1.024	0.804	0.822	0.687
all 13	-0.205	0.351	1.094	0.803	0.899	0.656

Supplementary Figure 4. Performance measures for models predicting holistic similarity, visualized as radar plots. **(Top left)** CoD values by dimension, within the domain of unfamiliar people (with names and faces) and within the domain of famous people. **(Top right)** Cross-domain CoD values between observed and predicted holistic similarity values. **(Bottom left)** RMSE values by dimension, within the domain of unfamiliar people and within the domain of famous people. **(Bottom right)** Cross-domain RMSE values between observed and predicted holistic similarity values.



Supplementary Table 7. Predicting holistic similarity between pairs of unfamiliar people, after controlling for whether the targets performed behaviors of the same valence. Each model consisted of two predictors: (1) concordance in valence for each pair, and (2) trait distance. Coefficients, t statistics, and p-values are reported for each dimension. P-values were adjusted using the Holm-Bonferroni method.

trait	b	SE	t	р	adjusted <i>p</i>	CoD	RMSE
openness	0.250	0.023	10.76	1.85E-25	7.39E-25	0.757	0.499
conscientiousness	0.536	0.026	20.51	6.08E-77	5.47E-76	0.811	0.438
extraversion	-0.0003	0.018	-0.02	0.985	0.985 (ns)	0.721	0.529
agreeableness	0.564	0.026	21.89	1.94E-85	2.14E-84	0.819	0.428
neuroticism	0.472	0.021	22.51	2.78E-89	3.61E-88	0.822	0.423
dominance	0.090	0.019	4.75	2.43E-06	4.85E-06	0.728	0.522
trustworthiness	0.501	0.023	22.27	8.09E-88	9.71E-87	0.821	0.425
warmth	0.521	0.027	19.01	5.75E-68	4.60E-67	0.801	0.447
competence	0.460	0.025	18.42	1.66E-64	1.16E-63	0.799	0.450
agency	0.263	0.024	10.96	2.65E-26	1.33E-25	0.755	0.496
experience	0.249	0.024	10.24	2.30E-23	6.91E-23	0.751	0.500
intelligence	0.415	0.024	17.47	4.59E-59	2.76E-58	0.792	0.457
attractiveness	0.522	0.025	20.55	3.22E-77	3.22E-76	0.812	0.437

trait	b	SE	t	р	adjusted p	CoD	RMSE
openness	0.245	0.077	3.202	0.002	0.020 *	0.095	0.968
conscientiousness	0.199	0.078	2.565	0.011	0.100	0.051	0.980
extraversion	0.065	0.079	0.819	0.414	1.000	0.026	0.996
agreeableness	0.034	0.079	0.425	0.671	1.000	0.031	1.005
neuroticism	0.067	0.079	0.847	0.398	1.000	0.013	0.998
dominance	0.237	0.077	3.088	0.002	0.026 *	0.069	0.972
trustworthiness	0.081	0.079	1.03	0.305	1.000	0.044	1.003
warmth	0.119	0.079	1.516	0.131	0.917	0.044	0.994
competence	0.260	0.076	3.399	0.001	0.011 *	0.114	0.982
agency	-0.044	0.079	-0.561	0.575	1.000	0.022	0.997
experience	0.226	0.077	2.927	0.004	0.039*	0.096	0.987
intelligence	0.174	0.078	2.228	0.027	0.218	0.043	0.978
attractiveness	0.019	0.079	0.241	0.81	1.000	0.014	1.001

Supplementary Table 8. Predicting holistic similarity between pairs of unfamiliar people who performed positive behaviors, using trait distance. P-values were adjusted using the Holm-Bonferroni method.

Supplementary Table 9. Predicting holistic similarity between pairs of unfamiliar people who performed negative behaviors, using trait distance. P-values were adjusted using the Holm-Bonferroni method.

trait	b	SE	t	р	adjusted p	CoD	RMSE
openness	0.085	0.079	1.077	0.283	0.849	0.027	0.999
conscientiousness	0.286	0.076	3.791	0.0002	0.002 **	0.103	0.960
extraversion	0.227	0.077	2.962	0.004	0.028 *	0.085	0.977
agreeableness	0.260	0.076	3.418	0.001	0.007 **	0.077	0.962
neuroticism	0.324	0.075	4.345	0.000	0.0003 ***	0.158	0.961
dominance	0.119	0.078	1.525	0.129	0.645	0.055	1.001
trustworthiness	0.262	0.076	3.451	0.001	0.007 **	0.083	0.956
warmth	0.114	0.078	1.450	0.149	0.645	0.053	0.988
competence	0.176	0.078	2.269	0.025	0.172	0.082	0.995
agency	0.069	0.079	0.883	0.379	0.849	0.015	0.986
experience	0.012	0.079	0.153	0.878	0.878	0.006	0.994
intelligence	0.308	0.075	4.109	0.0001	0.001 **	0.128	0.952
attractiveness	0.151	0.078	1.940	0.054	0.325	0.044	0.991

Supplementary Table 10. Predicting holistic similarity between pairs of unfamiliar people (with names and faces), after controlling for whether the targets performed behaviors of the same valence. Each model consisted of two predictors: (1) concordance in valence for each pair, and (2) trait distance. Coefficients, t statistics, and p-values are reported for each dimension. P-values were adjusted using the Holm-Bonferroni method.

trait	b	SE	t	p	adjusted <i>p</i>	CoD	RMSE
openness	0.090	0.020	4.544	6.27E-06	1.88E-05	0.731	0.524
conscientiousness	0.418	0.023	18.59	1.77E-65	1.59E-64	0.799	0.450
extraversion	0.059	0.018	3.272	0.001	0.002	0.725	0.526
agreeableness	0.521	0.025	20.87	3.85E-79	4.62E-78	0.813	0.435
neuroticism	0.434	0.020	21.64	6.36E-84	8.27E-83	0.818	0.429
dominance	0.032	0.018	1.797	0.073	0.073 (ns)	0.722	0.528
trustworthiness	0.427	0.022	19.25	2.17E-69	2.17E-68	0.803	0.444
warmth	0.526	0.026	20.16	7.91E-75	8.71E-74	0.808	0.439
competence	0.423	0.024	17.75	1.26E-60	1.01E-59	0.794	0.455
agency	0.192	0.021	9.315	9.16E-20	4.58E-19	0.746	0.505
experience	0.147	0.022	6.753	2.60E-11	1.04E-10	0.736	0.515
intelligence	0.337	0.021	15.86	3.96E-50	2.77E-49	0.782	0.468
attractiveness	0.298	0.020	14.71	4.69E-44	2.82E-43	0.777	0.476

Supplementary Table 11. Predicting pairwise similarity between pairs of unfamiliar people (with names and faces) who performed positive behaviors, using trait distance. P-values were adjusted using the Holm-Bonferroni method.

trait	b	SE	t	р	adjusted p	CoD	RMSE
openness	0.222	0.077	2.876	0.005	0.055	0.066	0.978
conscientiousness	0.141	0.078	1.794	0.075	0.872	0.035	0.993
extraversion	0.099	0.079	1.26	0.210	1.000	0.044	0.996
agreeableness	0.025	0.079	0.315	0.753	1.000	0.022	1.002
neuroticism	0.096	0.079	1.222	0.223	1.000	0.083	1.004
dominance	0.142	0.078	1.812	0.072	0.718	0.025	0.988
trustworthiness	0.074	0.079	0.943	0.347	1.000	0.027	0.997
warmth	-0.010	0.079	-0.125	0.901	1.000	0.011	0.996
competence	0.063	0.079	0.8	0.425	1.000	0.021	0.997
agency	0.092	0.079	1.17	0.244	1.000	0.042	1.002
experience	0.240	0.077	3.125	0.002	0.028 *	0.089	0.982
intelligence	0.181	0.078	2.323	0.021	0.236	0.040	0.975
attractiveness	0.126	0.078	1.612	0.109	1.000	0.041	0.994

trait	Ь	SE	t	р	adjusted p	CoD	RMSE
openness	0.075	0.079	0.952	0.343	1.000	0.037	1.001
conscientiousness	0.251	0.076	3.286	0.001	0.014 *	0.092	0.974
extraversion	0.116	0.078	1.48	0.141	0.844	0.031	0.990
agreeableness	0.176	0.078	2.272	0.024	0.195	0.054	0.978
neuroticism	0.387	0.073	5.328	0.000	0.000	0.164	0.927
dominance	0.034	0.079	0.431	0.667	1.000	0.012	0.999
trustworthiness	0.238	0.077	3.103	0.002	0.023 *	0.057	0.964
warmth	0.060	0.079	0.765	0.445	1.000	0.029	0.992
competence	0.311	0.075	4.153	0.000	0.001	0.120	0.959
agency	0.012	0.079	0.147	0.883	1.000	0.021	0.991
experience	-0.061	0.079	-0.771	0.442	1.000	0.008	0.993
intelligence	0.233	0.077	3.044	0.003	0.025 *	0.064	0.974
attractiveness	0.154	0.078	1.977	0.050	0.348	0.057	1.000

Supplementary Table 12. Predicting pairwise similarity between pairs of unfamiliar people (with names and faces) who performed negative behaviors, using trait distance. P-values were adjusted using the Holm-Bonferroni method.

Supplementary Figure 5. Histograms of PC1 scores for negative, neutral, and positive unfamiliar targets.



	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13
agency	-0.289	0.088	0.172	0.113	-0.860	-0.170	0.121	-0.059	0.067	-0.223	0.137	-0.060	0.055
agreeableness	-0.302	-0.020	-0.016	-0.129	0.016	-0.118	-0.200	-0.007	0.133	-0.031	-0.074	0.113	-0.895
attractiveness	-0.301	-0.029	0.030	-0.147	0.011	-0.182	-0.195	-0.033	0.395	0.097	-0.452	0.564	0.354
competence	-0.298	0.003	0.138	-0.010	0.042	0.310	0.308	0.073	-0.576	-0.287	-0.519	0.097	-0.030
conscientiousness	-0.300	-0.022	0.075	-0.108	-0.073	-0.058	-0.042	0.446	-0.397	0.609	0.330	0.207	0.047
dominance	0.179	0.586	0.696	-0.267	0.128	-0.175	0.031	-0.114	-0.021	0.068	-0.017	-0.024	-0.035
experience	-0.286	0.133	0.242	0.462	0.069	0.548	-0.473	-0.263	0.041	0.086	0.139	-0.004	0.050
extraversion	-0.103	0.756	-0.600	-0.107	-0.062	0.181	0.070	0.008	0.031	0.054	-0.007	0.029	0.010
intelligence	-0.295	-0.039	0.179	-0.048	0.180	0.328	0.534	0.316	0.555	0.029	0.128	-0.162	-0.007
neuroticism	0.293	0.158	0.084	0.257	-0.094	0.046	-0.320	0.769	0.100	-0.262	-0.169	0.042	-0.040
openness	-0.284	0.173	-0.038	0.585	0.379	-0.550	0.187	0.017	-0.069	-0.181	0.146	0.065	0.038
trustworthiness	-0.296	-0.030	-0.020	-0.476	0.203	-0.010	-0.310	0.095	-0.084	-0.569	0.401	-0.046	0.211
warmth	-0.301	0.006	-0.038	-0.063	0.035	-0.220	-0.250	0.087	0.014	0.213	-0.382	-0.760	0.126

Supplementary Table 13. Principal component loadings: Trait ratings of unfamiliar people (without names and faces)

Supplementary Table 14. Principal component loadings: Trait ratings of famous people

	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13
agency	-0.313	0.114	0.191	0.004	-0.286	-0.556	0.517	-0.328	0.089	0.243	-0.112	0.085	-0.012
agreeableness	-0.311	-0.278	-0.006	-0.059	0.038	0.194	0.143	-0.061	-0.092	-0.406	-0.462	0.102	-0.602
attractiveness	0.069	-0.505	0.063	0.603	-0.551	-0.057	-0.117	0.213	-0.052	0.028	-0.037	0.007	0.053
competence	-0.346	0.082	-0.088	0.031	-0.162	0.050	0.024	0.070	0.145	-0.060	0.446	-0.718	-0.302
conscientiousness	-0.326	0.138	0.151	0.128	0.212	-0.288	-0.211	0.524	0.197	0.020	0.271	0.453	-0.266
dominance	-0.219	0.350	0.423	0.002	-0.403	0.384	-0.331	-0.307	0.199	-0.207	0.033	0.200	0.116
experience	-0.332	0.131	0.006	-0.114	-0.139	0.319	-0.023	0.224	-0.583	0.578	-0.106	0.024	-0.028
extraversion	0.164	-0.320	0.571	-0.604	-0.153	-0.069	0.029	0.342	0.083	0.000	-0.023	-0.159	0.034
intelligence	-0.325	0.184	-0.165	-0.064	-0.094	-0.212	0.028	0.337	-0.234	-0.521	-0.217	-0.123	0.522
neuroticism	0.274	0.235	-0.350	-0.162	-0.443	0.252	0.461	0.310	0.174	-0.088	0.143	0.279	-0.129
openness	-0.205	-0.307	-0.510	-0.450	-0.268	-0.198	-0.434	-0.199	0.120	0.102	0.078	0.177	0.017
trustworthiness	-0.322	-0.189	-0.095	0.064	0.186	0.334	0.163	0.155	0.622	0.272	-0.287	-0.061	0.322
warmth	-0.250	-0.410	0.080	-0.029	0.161	0.225	0.340	-0.173	-0.217	-0.174	0.576	0.258	0.253

trait	b	SE	t	р
openness	1.861	0.045	41.400	e-116
conscientiousness	1.958	0.024	80.669	e-185
extraversion	0.774	0.115	6.754	e-11
agreeableness	1.960	0.024	82.847	e-188
neuroticism	-1.915	0.035	-54.619	e-144
dominance	-1.353	0.091	-14.801	e-36
trustworthiness	1.927	0.032	59.425	e-152
warmth	1.960	0.024	82.780	e-188
competence	1.937	0.030	64.614	e-161
agency	1.914	0.035	54.153	e-143
experience	1.896	0.039	48.876	e-132
intelligence	1.902	0.038	50.533	e-136
attractiveness	1.949	0.027	72.946	e-174

Supplementary Table 15. Predicting trait ratings of unfamiliar people using target valence (whether the target performed a positive or negative behavior).

Supplementary Figure 6. Left: Pearson's correlations for all pairwise combinations of the 13 trait dimensions in the domain of unfamiliar people with names and faces. Comparing the trait ratings of unfamiliar people with trait ratings of famous people, we found a significant difference between the correlation matrices produced using these datasets ($\chi^2(78) = 2540.13$, p < 0.0001). Permutation testing revealed that the degree of intercorrelatedness among the 13 trait dimensions is stable in the set of unfamiliar people with names and faces (Kendall's $\tau = 0.861$, p < 0.0001). Thus, when observers are judging unfamiliar people – whether given their names, faces, and behaviors, or just given their behaviors – their trait representations seem to differ from when they're judging famous people. **Right:** Scree plot displaying proportion of total variance explained by each principal component in the domain of unfamiliar people with names and faces. The first PC accounted for 76.9% of variance.



Supplementary Figure 7. Kendall's tau distributions for permuted data in the domain of unfamiliar people with names and faces (**top left**), positive unfamiliar people with names and faces (**top right**), negative unfamiliar people with names and faces (**bottom left**), unfamiliar people with names and faces after the 1st PC was removed (**bottom right**).



Supplementary Figure 8. Top: Pearson's correlations for all pairwise combinations of the 13 trait dimensions in the domains of positive unfamiliar people with names and faces, and negative unfamiliar people with names and faces. The following comparisons between correlation matrices were significant: between all unfamiliar people and positive unfamiliar people ($\chi^2(78) = 7104.44$, p < 0.0001); between all unfamiliar people and negative unfamiliar people ($\chi^2(78) = 5571.21$, p < 0.0001); and between positive unfamiliar people and negative unfamiliar people ($\chi^2(78) = 544.69$, p < 0.0001). Permutation testing revealed that the degree of intercorrelatedness among the 13 trait dimensions is stable in the set of positive unfamiliar people with names and faces (Kendall's $\tau = 0.403$, p = 0.0001), and in the set of negative unfamiliar people with names and faces (Kendall's $\tau = 0.638$, p < 0.0001).

Bottom: Scree plots displaying proportion of total variance explained by each principal component in the domains of positive unfamiliar people with names and faces, and negative unfamiliar people with names and faces. The first PC for each valence subset explained less than half of all variance (positive behaviors: 30.0%; negative behaviors: 38.7%).



Supplementary Figure 9. Pearson's correlations for all pairwise combinations of the 13 trait dimensions for the domain of unfamiliar people with names and faces, after removing the 1st PC. After removing the first PC, the correlation matrix for unfamiliar people with names and faces was significantly different from the original $(\chi^2(78) = 18487.02, p < 0.0001)$. The resulting correlation structure was still reliable (Kendall's $\tau = 0.420$, permutation p < 0.0001).



Supplementary Figure 10. Measures of biographical similarity between pairs of famous people. For each pair of famous people, we coded whether or not the targets shared the same: (a) Gender, (b) Race, (c) Nationality, and (d) Industry (arts, athletics, business, media, politics, sciences), based on Wikipedia entries (entering NAs where information was not available). (e) Holistic similarity ratings (for comparison with biographical similarities).





Industry

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Participant instructions: similarity ratings

In this study you will be asked to rate how **similar** two people are to each other, given information about their behavior.

Please make your ratings on a scale from **0** (extremely dissimilar) to **100** (extremely similar).

Participant instructions: trait ratings

All trait descriptions are from: Thornton, M. A., & Mitchell, J. P. (2018). Theories of person perception predict patterns of neural activity during mentalizing. *Cerebral Cortex*, *28*(10), 3505–3520.

In this study you will be asked to rate people's **openness to experience**, based on their behaviors. **High openness to experience** reflects intellectual curiosity, creativity, and desire for novelty. **Low openness to experience** reflects conventionality, concreteness and a preference for familiarity. Please make your ratings on a scale from **1** (very closed) to **7** (very open).

In this study you will be asked to rate the **conscientiousness** of people, based on their behaviors. **High conscientiousness** reflects self-discipline, organization and planning.

Low conscientiousness reflects spontaneity, carelessness and impulsivity.

Please make your ratings on a scale from 1 (very impulsive) to 7 (very conscientious).

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In this study you will be asked to rate the **extraversion** of people, based on their behaviors. **High extraversion** reflects assertiveness, sociability and finding enjoyment and energy in the company of others.

Low extraversion reflects quietness, introversion and a desire for solitary time.

Please make your ratings on a scale from **1** (very introverted) to **7** (very extraverted).

In this study you will be asked to rate the **agreeableness** of people, based on their behaviors.

High agreeableness reflects friendliness, altruism and the desire to cooperate.

Low agreeableness reflects self-interest, lack of sympathy and pessimism about the character of others. Please make your ratings on a scale from **1** (very disagreeable) to **7** (very agreeable).

In this study you will be asked to rate the **neuroticism** of people, based on their behaviors. **High neuroticism** reflects susceptibility to negative emotions such as anxiety, anger and stress. **Low neuroticism** reflects greater emotional stability and resistance to negative feelings. Please make your ratings on a scale from **1** (very stable) to **7** (very neurotic).

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In this study you will be asked to rate the warmth of people, based on their behaviors.

Warm people are those that are generally regarded with positive feelings such as trust, admiration, empathy or pity rather than suspicion, contempt, envy or disgust.

empathy or pity rather than suspicion, contempt, envy or disgust.

Please make your ratings on a scale from 1 (not at all warm) to 7 (very warm).

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In this study you will be asked to rate the **competence** of people, based on their behaviors. **Competence** reflects people's intelligence, common sense, social dominance and ability to solve a variety of problems in an efficient manner.

Please make your ratings on a scale from **1** (not at all competent) to **7** (very competent).

In this study you will be asked to rate the **agency** of people, based on their behaviors.

Agency refers a person's ability to enact their intentions, control themselves and the degree to which they possess a will of their own. A fictional intelligent robot would be high in agency even though it might not have rich emotions like a human.

Please make your ratings on a scale from 1 (no agency) to 7 (very agentic).

In this study you will be asked to rate the level of **experience** of people, based on their behaviors.

Experience refers to a person's capacity to have internal feelings and perceive the world around them. An animal or baby might be very **high in experience** even though they don't necessarily have all of the same mental abilities as an adult human.

Please make your ratings on a scale from **1** (no experience) to **7** (high experience).

In this study you will be asked to rate the **intelligence** of people, based on their behaviors.

Intelligence refers to a person's ability for learning, thinking, and abstract problem solving as well as how much they know about the world.

Please make your ratings on a scale from **1** (very unintelligent) to **7** (very intelligent).

In this study you will be asked to rate the **attractiveness** of people, based on their behaviors.

Attractiveness refers a person's romantic or sexual desirability to other people. This includes both their physical beauty and the desirability of their personality.

Please make your ratings on a scale from 1 (very unattractive) to 7 (very attractive).

In this study you will be asked to rate the **social dominance** of people, based on their behaviors. **Social dominance** reflects a person's tendency to exert their authority over other people in social situations.

Dominant individuals are thought of as strong and commanding.

Less dominant individuals are thought of more as followers.

Please make your ratings on a scale from 1 (not at all dominant) to 7 (very dominant).

In this study you will be asked to rate the **trustworthiness** of people, based on their behaviors. **Trustworthiness** refers to a person's honesty, reliability and good nature.

A **highly trustworthy** individual could be given heavy responsibility or placed in the path of large temptations without worry.

Please make your ratings on a scale from 1 (not at all trustworthy) to 7 (very trustworthy).

Demographics: participants who rated holistic similarity between unfamiliar targets

Age: *M* = 30.1, *SD* = 12.8

Gender	n		
Μ	36		
F	38		
Non-binary/other	1		
Race	n		
Native American	0		
Asian or Asian American	3		
Black or African American	8		
Native Hawaiian or Other Pacific Islander	0		
White	58		
Other	2		
More than one race selected	4		
Ethnicity	n		
Hispanic/Latino	6		
Not Hispanic/Latino	65		

Demographics: participants who gave trait ratings for unfamiliar targets Age: *M* = 37.2, *SD* = 11.2

Bachelor's degree

Postgraduate

-			
Gender	n		
Μ	958		
F	995		
Non-binary/other	6		
Race	n		
Native American	7		
Asian or Asian American	107		
Black or African American	1161		
Native Hawaiian or Other Pacific Islander	1		
White	1581		
Other	32		
More than one race selected	67		
Ethnicity	n		
Hispanic/Latino	140		
Not Hispanic/Latino	1776		

Demographics: participants who gave trait ratings for unfamiliar targets with names and faces Age: *M* = 39.4 *SD* = 12.0

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Gender	n			
M	35	351		
F	298			
Non-binary/other	3			
Race and Ethnicity		n		
American Indian or Alaska Native		3		
Asian		53		
Black or African American		43		
Native Hawaiian or Other Pacific Islander		2		
White		500		
Other		2		
More than one race selected		45		
Hispanic/Latino		27		
Education	n			
Some high school	1	1		
High school diploma	71			
Some college	12	123		
Associate degree	70			