Supplemental Material

Supplemental Figures

Study 1

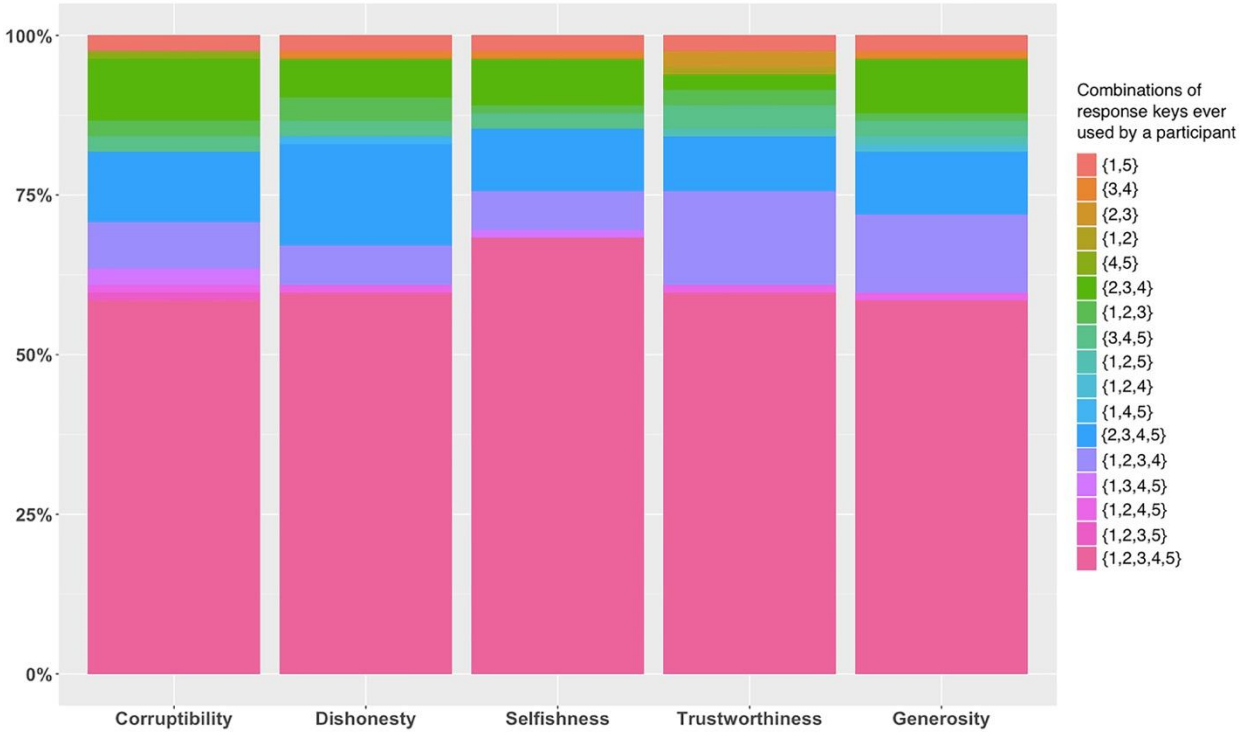


Fig. S1. Distributions of keys used by participants for trait judgments in Study 1 (N = 82). For the evaluation of each trait, the response keys a participant had ever used to rate the faces were tracked. There are 31 possible combinations of response keys and 17 of them were observed in the current study.

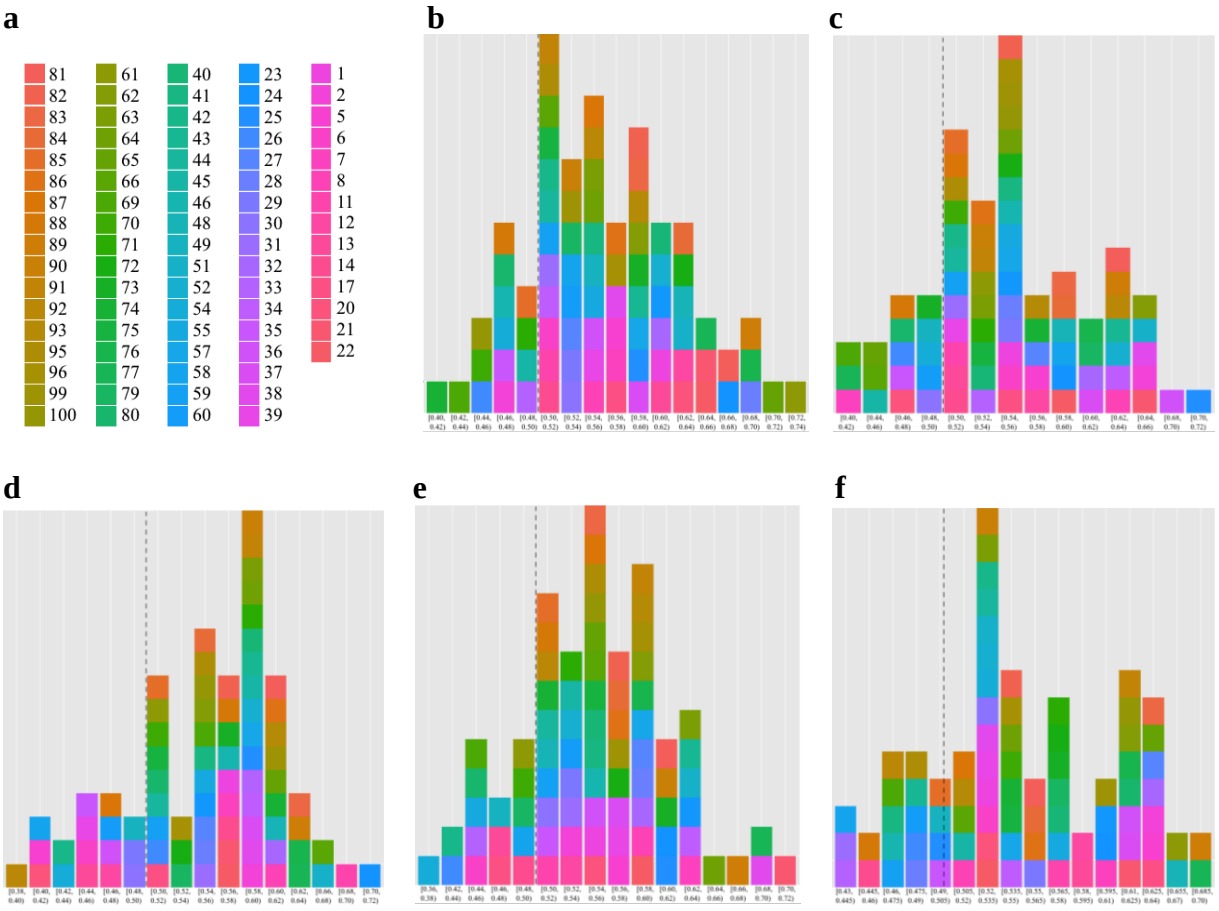
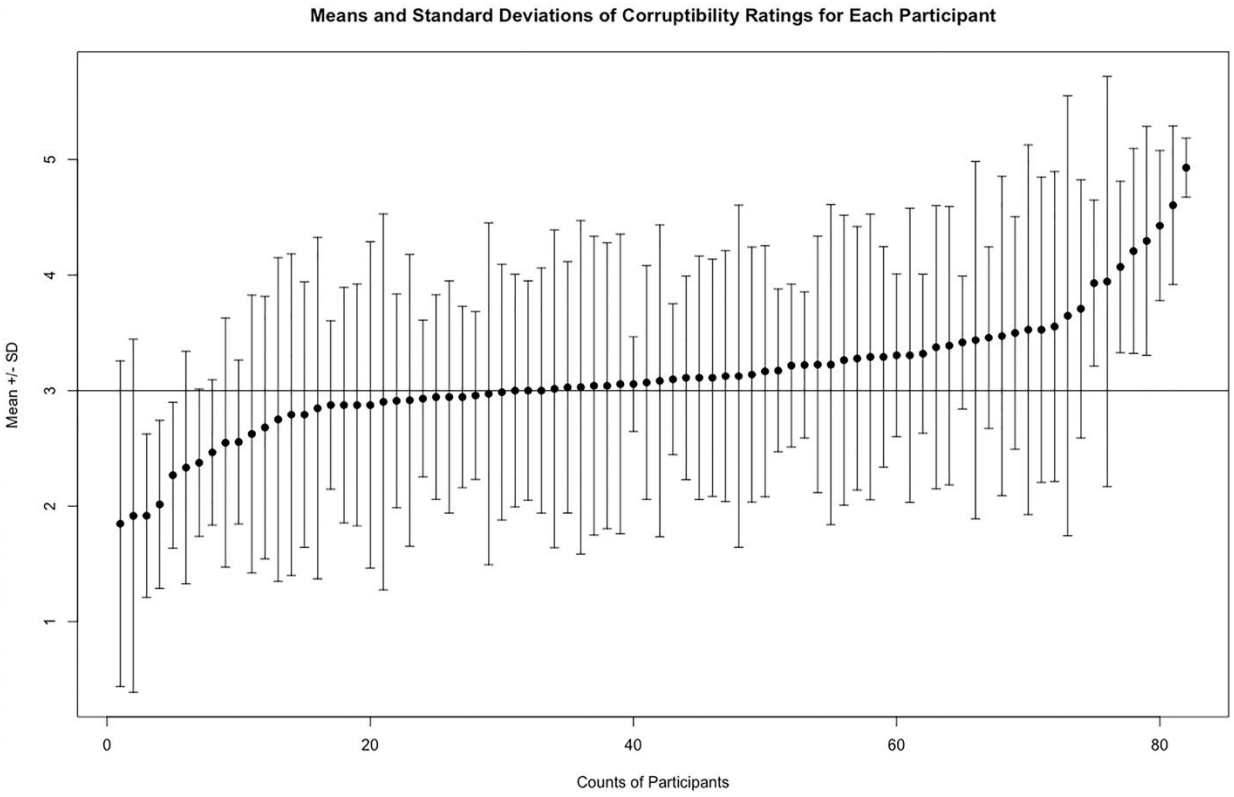
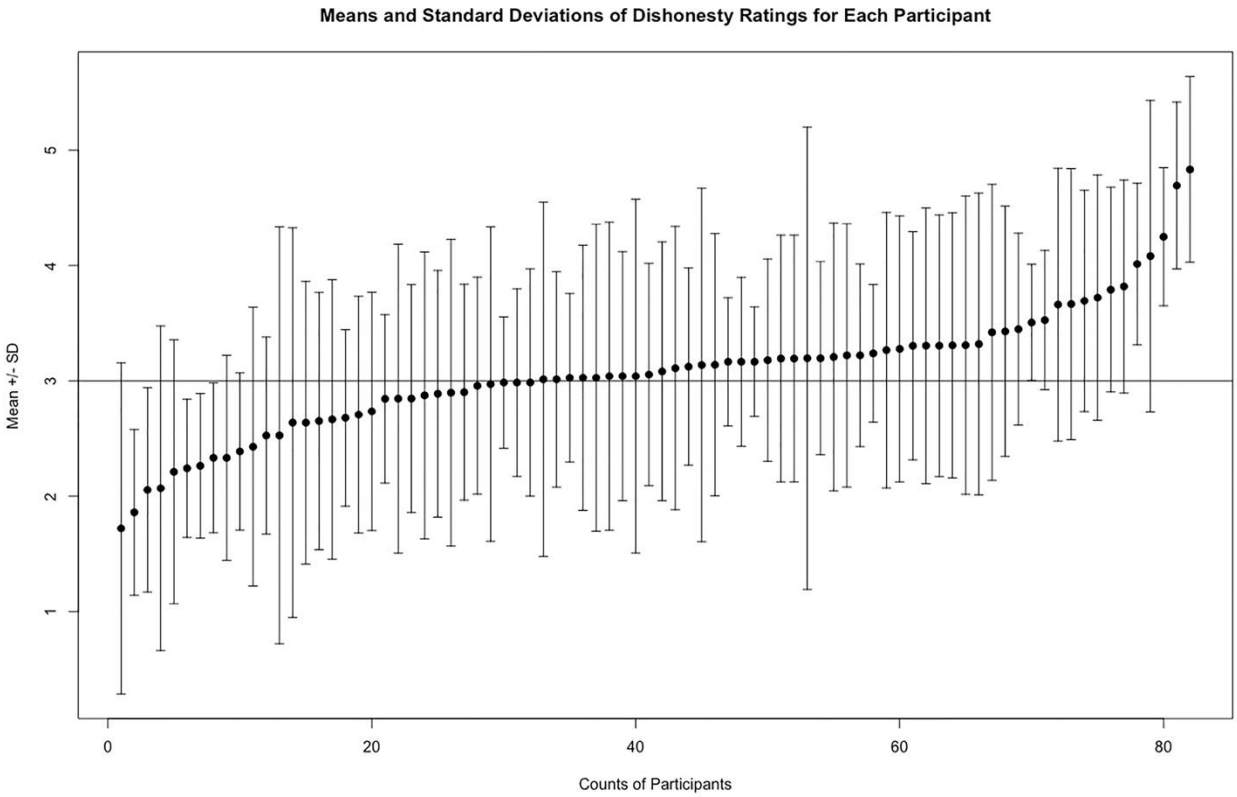


Fig. S2. Participant ID (N = 82) and corresponding color markers (a). The distribution of individual-level accuracies based on Corruptibility inferences (b). The dash-line indicates chance level accuracy (50%). The distribution of individual-level accuracies based on Dishonesty inferences (c). The distribution of individual-level accuracies based on Selfishness inferences (d). The distribution of individual-level accuracies based on Trustworthiness inferences (e). The distribution of individual-level accuracies based on Generosity inferences (f).

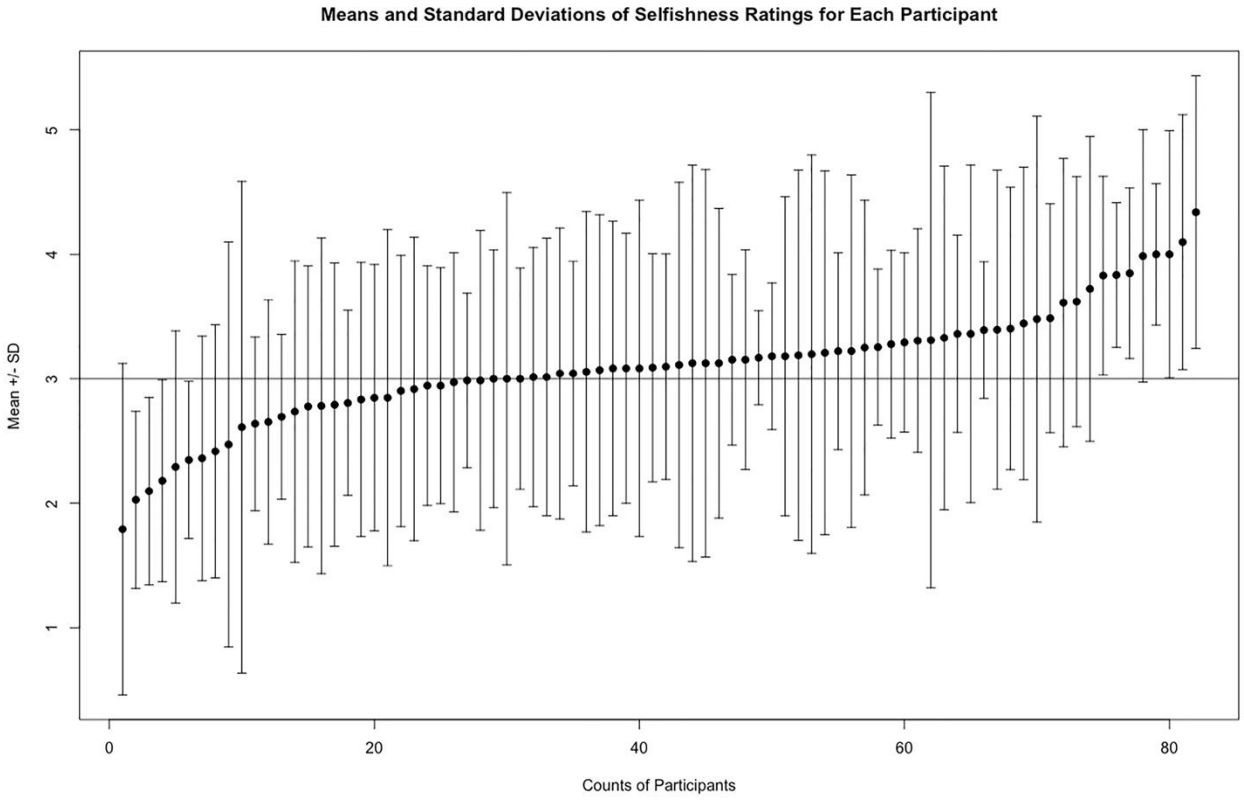
a


Means and Standard Deviations of Corruptibility Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

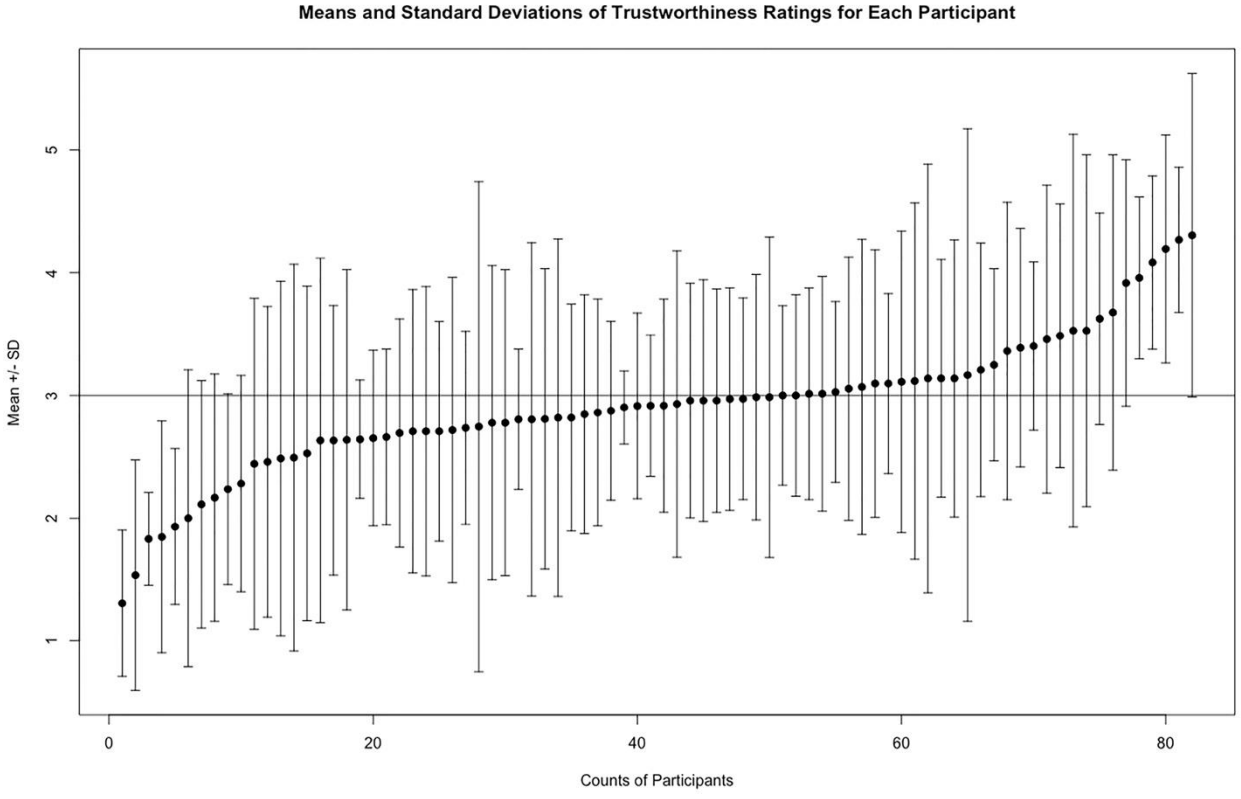
b


Means and Standard Deviations of Dishonesty Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

c


Means and Standard Deviations of Selfishness Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

d


Means and Standard Deviations of Trustworthiness Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

e

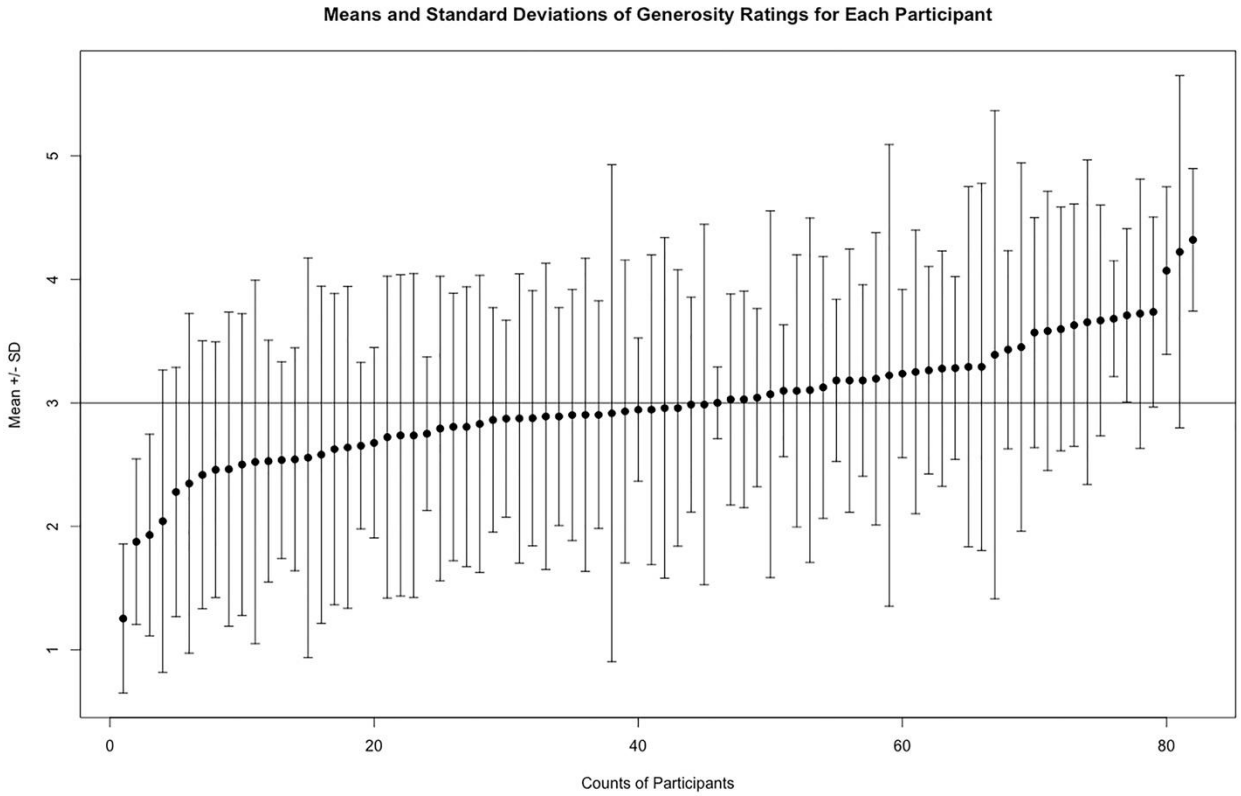


Fig. S3. Mean and standard deviations of trait judgments by each participant across faces for Corruptibility (a), Dishonesty (b), Selfishness (c), Trustworthiness (d), and Generosity (e) in Study 1.

Study 2

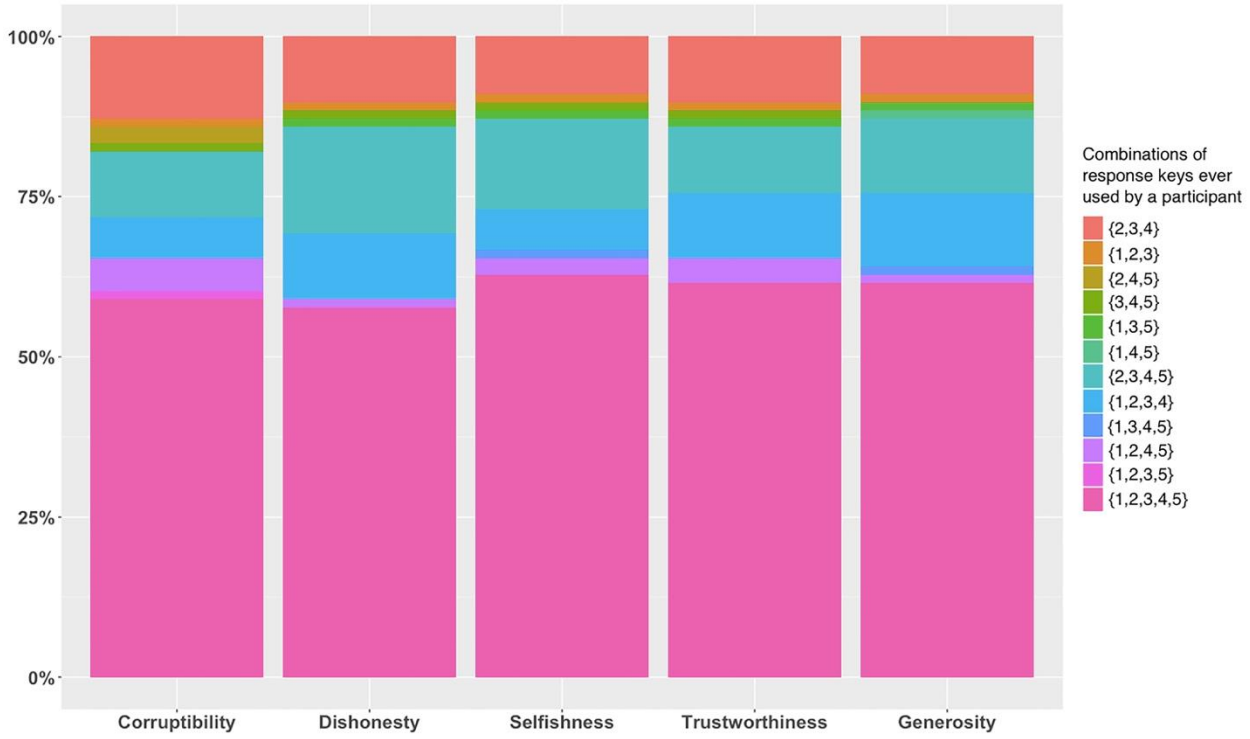


Fig. S4. Distributions of keys used by participants for trait judgments in Study 2 (N = 78). For the evaluation of each trait, the response keys a participant had ever used to rate the faces were tracked. There are 31 possible combinations of response keys and 12 of them were observed in the current study.

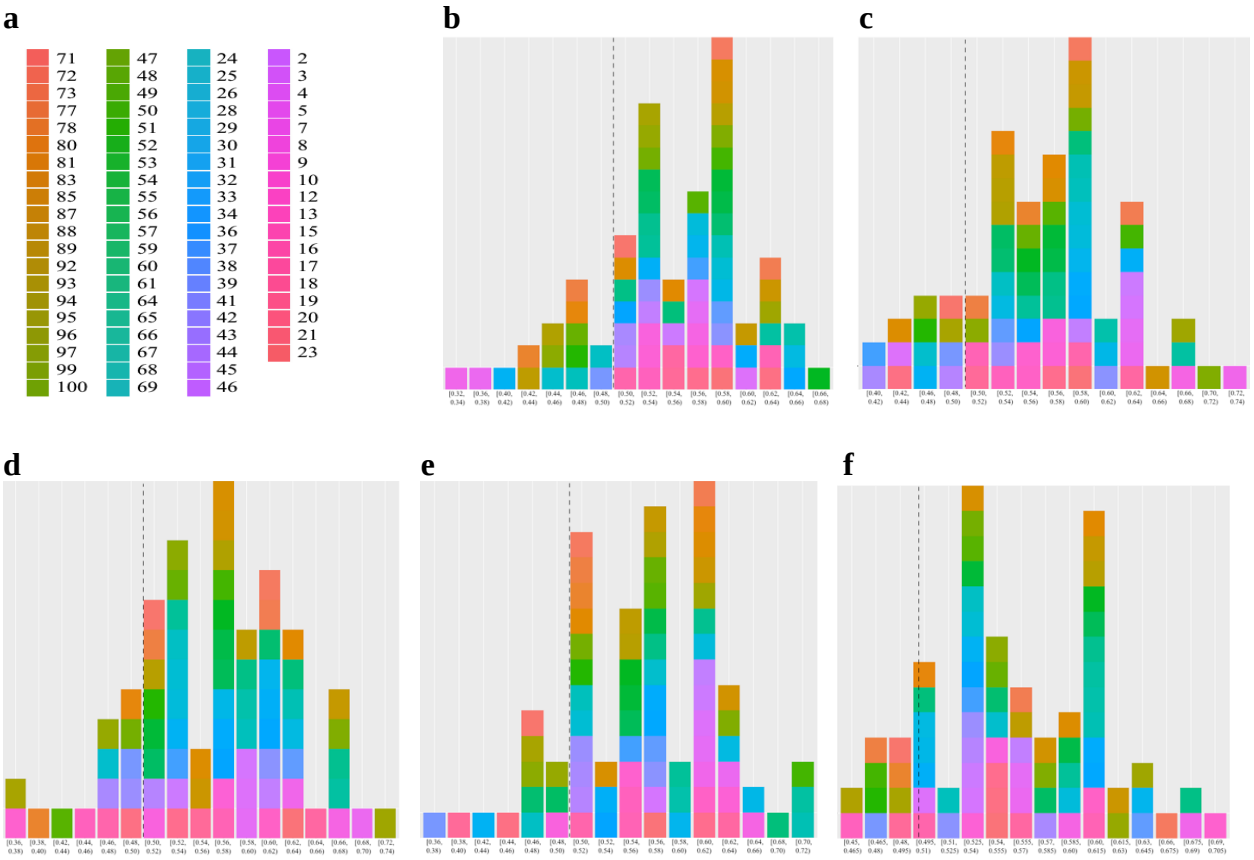
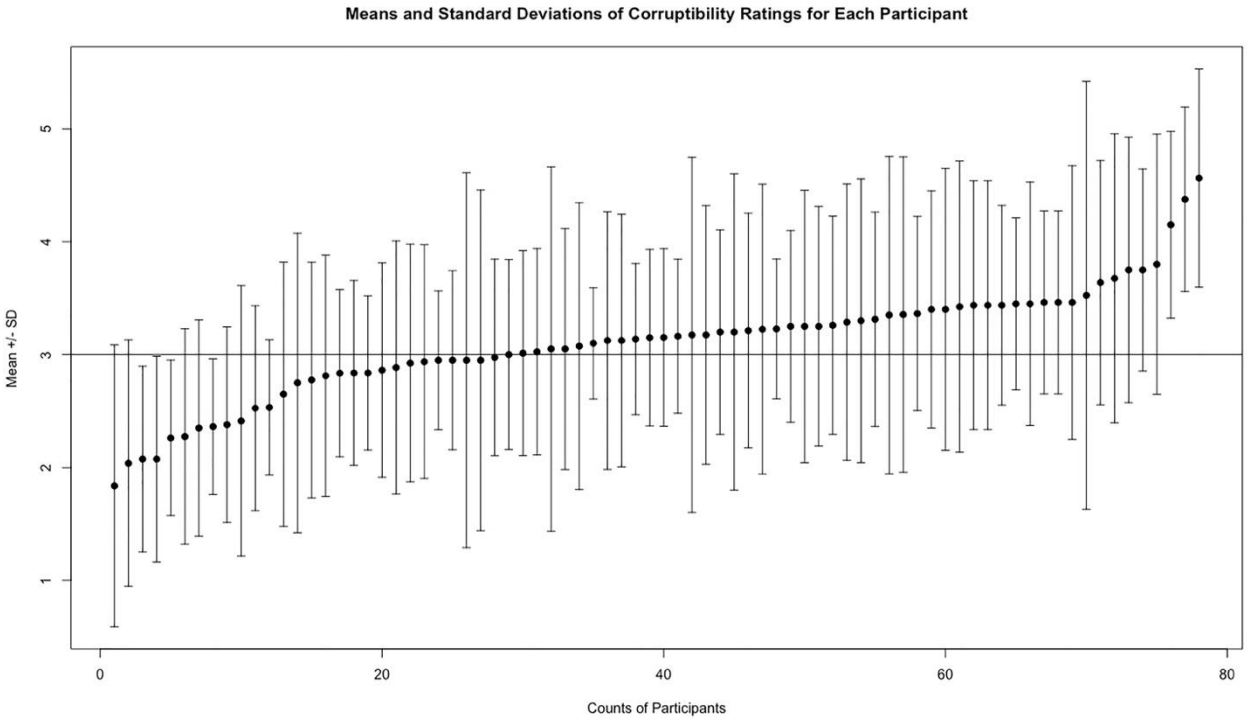
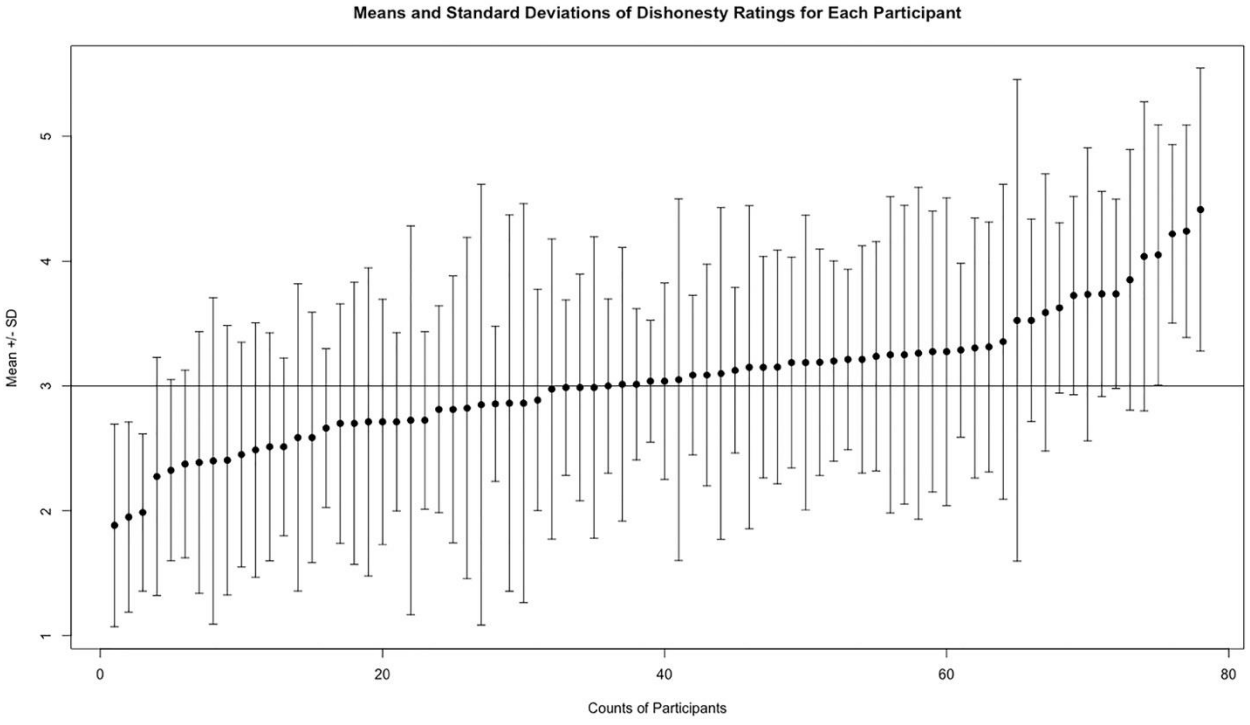


Fig. S5. Participant ID (N = 78) and corresponding color markers (a). The distribution of individual-level accuracies based on Corruptibility inferences (b). The dash-line indicates chance level accuracy (50%). The distribution of individual-level accuracies based on the Dishonesty inferences (c). The distribution of individual-level accuracies based on Selfishness inferences (d). The distribution of individual-level accuracies based on Trustworthiness inferences (e). The distribution of individual-level accuracies based on Generosity inferences (f).

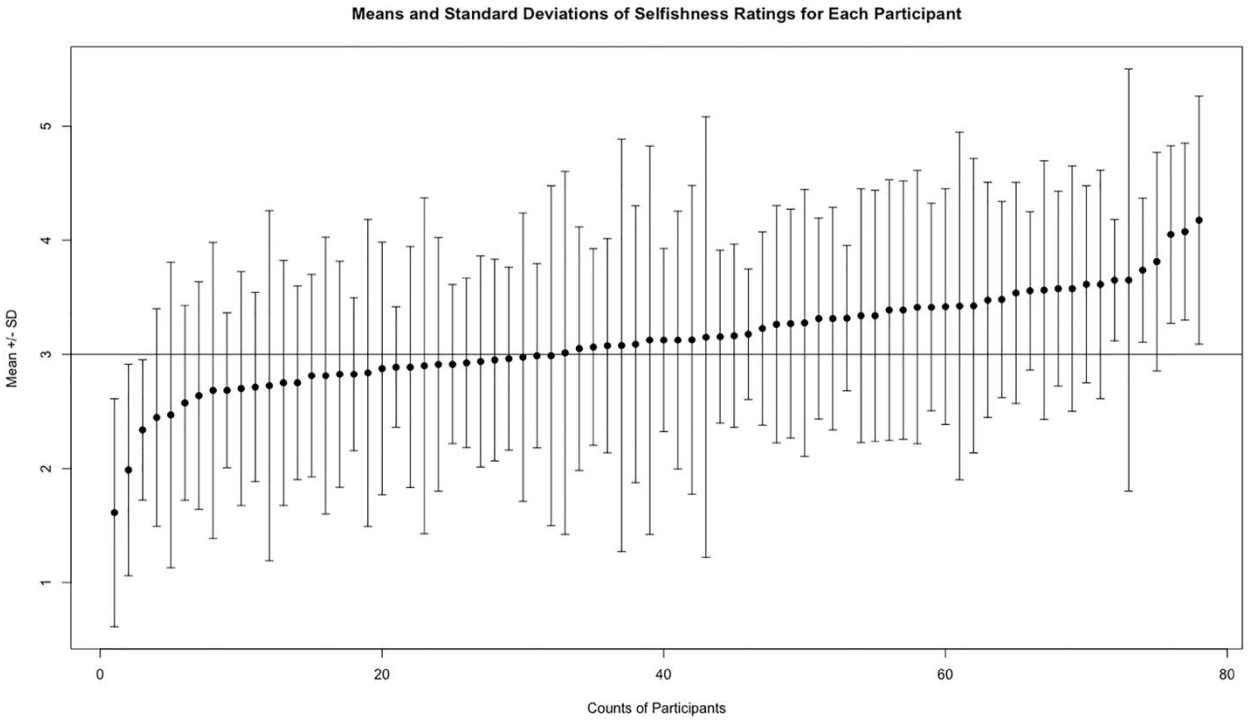
a


Means and Standard Deviations of Corruptibility Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

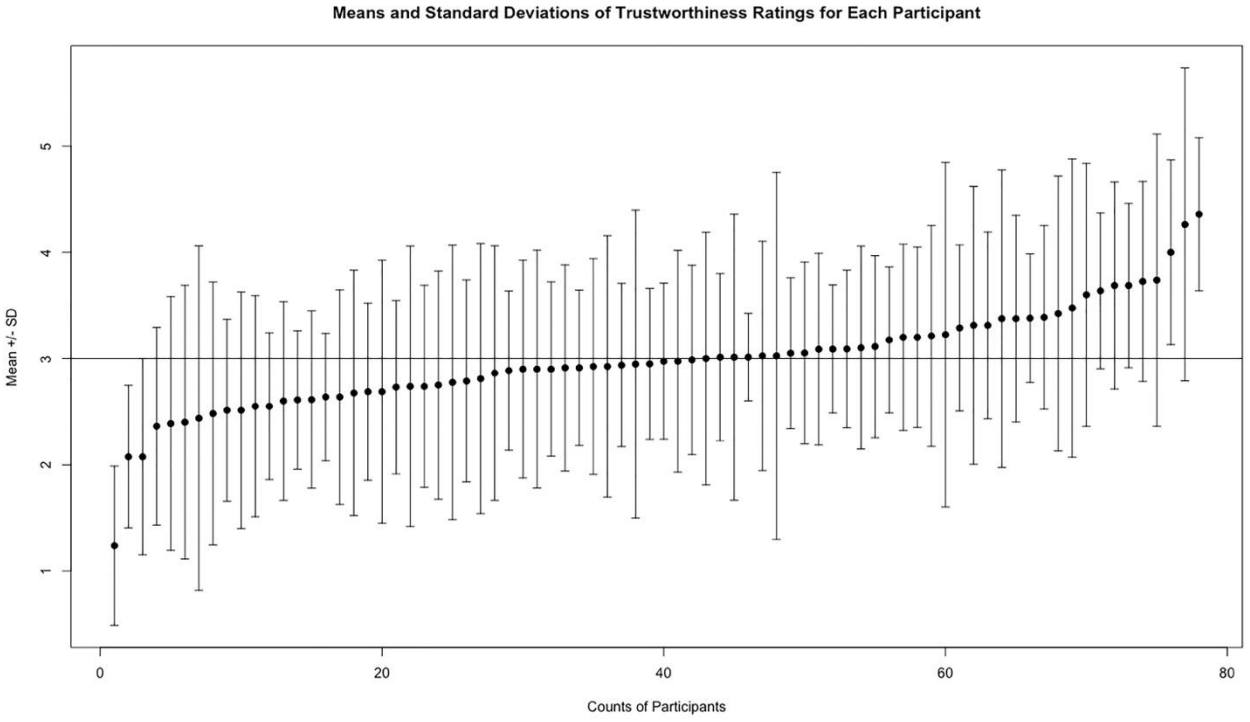
b


Means and Standard Deviations of Dishonesty Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

c


Means and Standard Deviations of Selfishness Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

d


Means and Standard Deviations of Trustworthiness Ratings for Each Participant
Mean +/- SD
1
2
3
4
5
0
20
40
60
80
Counts of Participants

e

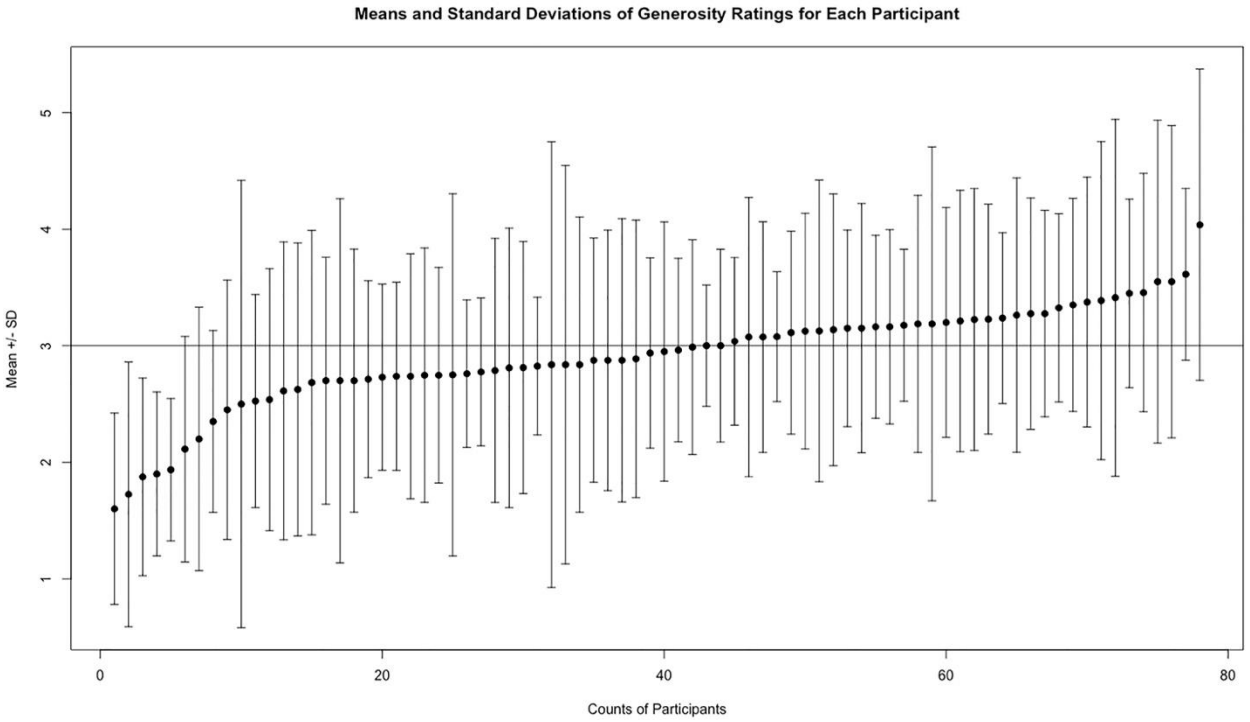


Fig. S6. Mean and standard deviations of trait judgments by each participant across faces for Corruptibility (a), Dishonesty (b), Selfishness (c), Trustworthiness (d), and Generosity (e) in Study 2.

Study 3

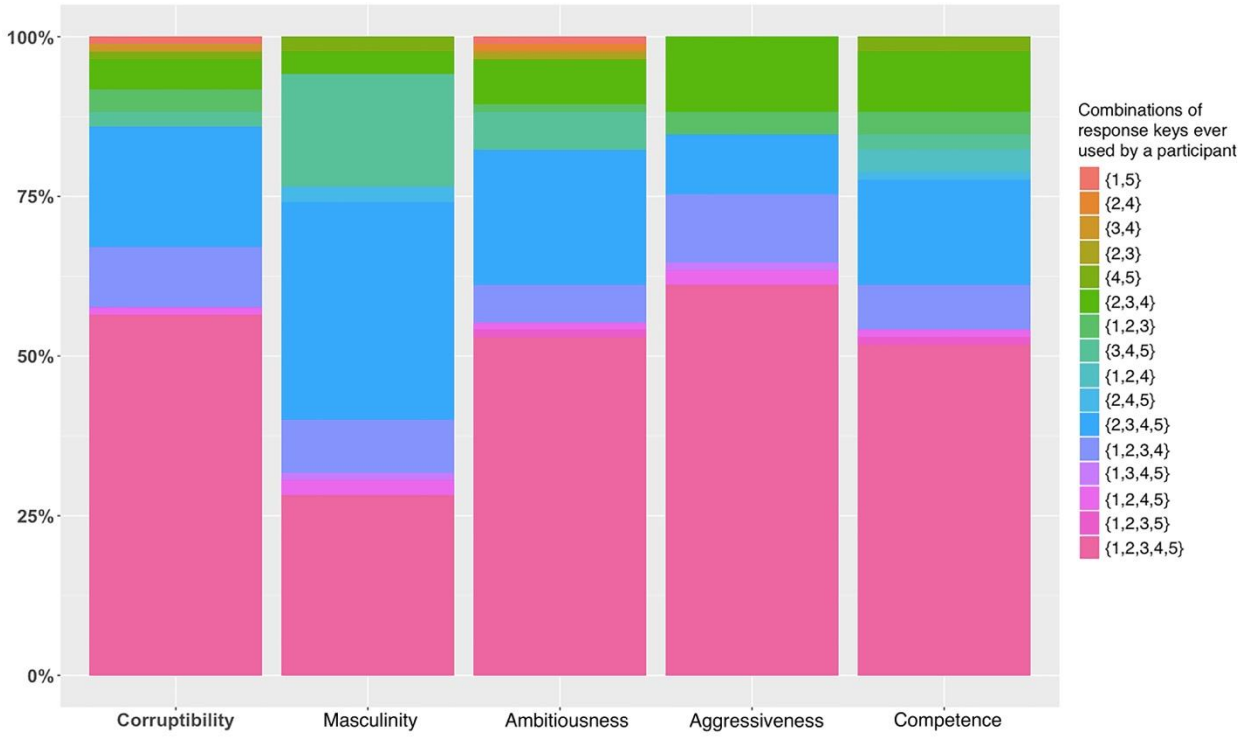


Fig. S7. Distributions of keys used by participants for trait judgments in Study 3 (N = 85). For the evaluation of each trait, the response keys a participant had ever used to rate the faces were tracked. There are 31 possible combinations of response keys and 16 of them were observed in the current study.

Study 4

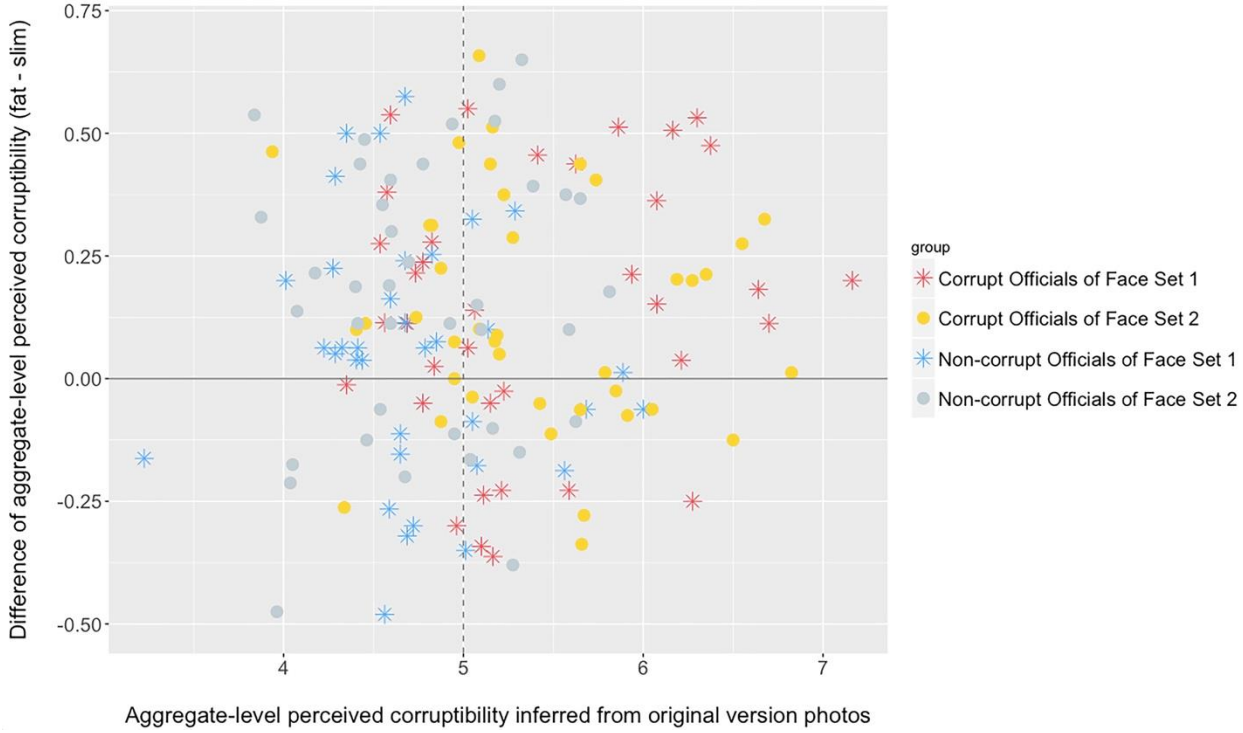


Fig. S8. Relation between aggregate-level corruptibility inferences based on the original-version photo and the perception difference between the fat- and slim-version photos for each elected official (N = 150). The vertical dashed line represents the midpoint of the rating scale and the horizontal solid line indicates zero perception difference between the fat- and slim-version photos of the same official.

Supplemental Tables

Study 1

Table S1. Repeated measures correlations between each pair of traits calculated with individual-level ratings for Study 1 (N = 5757; N was determined by the number of participants multiplied by the number of faces excluding omitted observations; observations from a participant for a face would be omitted if ratings were not available for all the five traits).

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**
Dishonesty	0.25			
	[0.23, 0.28]			
Selfishness	0.31	0.24		
	[0.28, 0.33]	[0.22, 0.26]		
Trustworthiness	-0.29	-0.28	-0.30	
	[-0.31, -0.26]	[-0.30, -0.26]	[-0.33, -0.28]	
Generosity	-0.24	-0.21	-0.29	0.30
	[-0.27, -0.22]	[-0.24, -0.19]	[-0.31, -0.26]	[0.28, 0.32]

All p-values < 0.001.

Table S2. (Tie-corrected) Spearman correlation coefficients between each pair of traits calculated with aggregate-level ratings for Study 1 (N = 72).

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**
Dishonesty	0.88			
	[0.81, 0.92]			
Selfishness	0.84	0.85		
	[0.76, 0.90]	[0.77, 0.91]		
Trustworthiness	-0.84	-0.87	-0.83	
	[-0.90, -0.76]	[-0.92, -0.80]	[-0.89, -0.75]	
Generosity	-0.75	-0.83	-0.83	0.89
	[-0.84, -0.63]	[-0.89, -0.74]	[-0.89, -0.74]	[0.83, 0.93]

All p-values < 0.001.

Table S3. Percentages of Correctly Categorized Officials Based on Individual-level Trait Inferences from Study 1 with categorizing midpoint 3 in an alternative way.

	Average Individual-level Accuracy				
	Corruptibility	Dishonesty	Selfishness	Trustworthiness	Generosity
Mean Accuracy (N = 82)	53.51%	54.82%	54.21%	54.28%	54.70%
SD	6.24%	6.41%	6.92%	5.38%	5.93%
Lower Bound of 95% CI	52.37%	52.97%	52.94%	53.29%	53.61%
t-value (df = 81)	5.10	6.16	5.51	7.20	7.19
Cohen's d	0.56	0.68	0.61	0.80	0.79

For negative traits, a trial was accurate if the official was convicted of corruption and received a high (3, 4, or 5) rating from a participant, or, conversely, if he had a clean record and received a low (1 or 2) rating from a participant; for positive traits, a trial was accurate if the official was convicted of corruption and received a low (1, 2, or 3) rating from a participant, or, conversely, if he had a clean record and received a high (4 or 5) rating from a participant. All p-values < .001.

Table S4. Average individual-level accuracy calculated for subsets of stimuli in which the officials were excluded one by one following the order of the ranking (and one-sided t-tests against chance level) for Study 1.

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**	**Generosity**
Before Exclusion (*N* = 72)	55.73% ***	54.82% ***	55.10% ***	55.03% ***	54.97% ***
Excluded 1st	55.34% ***	54.44% ***	54.67% ***	54.64% ***	54.55% ***
Excluded 1st-2nd	55.01% ***	54.12% ***	54.31% ***	54.23% ***	54.16% ***
Excluded 1st-3rd	54.71% ***	53.81% ***	53.93% ***	53.87% ***	53.80% ***
Excluded 1st-4th	54.39% ***	53.49% ***	53.56% ***	53.50% ***	53.35% ***
Excluded 1st-5th	54.05% ***	53.18% ***	53.18% ***	53.14% ***	52.94% ***
Excluded 1st-6th	53.71% ***	52.82% ***	52.86% ***	52.82% ***	52.59% ***
Excluded 1st-7th	53.35% ***	52.51% **	52.56% ***	52.45% ***	52.20% *
Excluded 1st-8th	53.00% ***	52.21% **	52.24% **	52.08% **	51.77% *
Excluded 1st-9th	52.66% **	51.86% **	51.94% **	51.76% *	51.39% *
Excluded 1st-10th	52.35% **	51.47% *	51.62% *	51.45% *	51.00%
Excluded 1st-11th	52.04% *	51.09%	51.25%	51.13%	50.68%
Excluded 1st-12th	51.74% *	50.72%	50.91%	50.84%	50.33%
Excluded 1st-13th	51.44%	50.37%	50.60%	50.52%	49.97%
Excluded 1st-14th	51.12%	50.04%	50.28%	50.22%	49.63%

One-sample one-sided t-tests against chance (50%) were performed on the individual-level accuracies across participants for each exclusion. Signif. codes: *** p < 0.001, ** p < 0.01, * p < 0.05.

Table S5. Coefficients and standard errors of general linear mixed model analyses on the association between officials' corruption records and inferences of each trait for Study 1 (*N* = 5757; *N* was determined by the number of participants times the number of faces minus omitted observations; observations from a participant for a face would be omitted if ratings were not available for all the five traits).

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**	**Generosity**
Trait Rating[a]	0.23 ***	0.17 ***	0.20 ***	-0.19 ***	-0.20 ***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age	-0.02	-0.01	-0.01	-0.02	-0.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Glasses[b]	0.03	0.02	0.02	0.02	0.02
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Bald[c]	-0.48 *	-0.47 *	-0.44 *	-0.46 *	-0.44 *
	(0.20)	(0.20)	(0.20)	(0.20)	(0.20)
Beard[d]	-0.05	-0.06	-0.07	-0.07	-0.06
	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
Mustache[e]	2.08 ***	2.05 ***	2.08 ***	2.06 ***	2.06 ***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Smile Intensity[f]	-0.64 ***	-0.63 ***	-0.63 ***	-0.63 ***	-0.63 ***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Image Megapixels	-0.18 ***	-0.18 ***	-0.18 ***	-0.18 ***	-0.19 ***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Image Source: Wiki[g]	1.56 ***	1.56 ***	1.57 ***	1.57 ***	1.57 ***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Image Source: News	-0.61 ***	-0.62 ***	-0.62 ***	-0.61 ***	-0.61 ***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)

[a]Officials' corruption records were regressed on ratings of each trait respectively, presented in each column. [b]Glasses is a dummy variable with 1 indicating the official wore glasses. [c]Bald Head is a dummy variable with 1 indicating the

official was bald headed. [d]Beard is a dummy variable with 1 indicating the official had a beard. [e]Mustache is a dummy variable with 1 indicating the official had a mustache. [f]Smile Intensity was coded manually with three levels (1 = smile with no teeth exposed, 2 = smile with teeth but not gums exposed, 3 = smile with gums exposed). [g]There were three sources of photos: government/campaign websites (benchmark), Wikipedia, and news articles. All continuous variables were standardized. Signif. codes: *** p < 0.001, ** p < 0.01, * p < 0.05.

Study 2

Table S6. Repeated measures correlations between each pair of traits calculated with individual-level ratings for Study 2 (N = 6115; N was determined by the number of participants multiplied by the number of faces excluding omitted observations; observations from a participant for a face would be omitted if ratings were not available for all the five traits).

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**
Dishonesty	0.31			
	[0.29, 0.34]			
Selfishness	0.26	0.35		
	[0.24, 0.29]	[0.32, 0.37]		
Trustworthiness	-0.31	-0.38	-0.33	
	[-0.33, -0.28]	[-0.40, -0.36]	[-0.35, -0.31]	
Generosity	-0.26	-0.33	-0.32	0.32
	[-0.28, -0.24]	[-0.35, -0.31]	[-0.34, -0.30]	[0.30, 0.34]

All p-values < 0.001.

Table S7. (Tie-corrected) Spearman correlation coefficients between each pair of traits calculated with aggregate-level ratings for Study 2 (N = 80).

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**
Dishonesty	0.88			
	[0.82, 0.92]			
Selfishness	0.85	0.91		
	[0.77, 0.90]	[0.86, 0.94]		
Trustworthiness	-0.89	-0.90	-0.91	
	[-0.93, -0.83]	[-0.94, -0.85]	[-0.94, -0.86]	
Generosity	-0.77	-0.84	-0.89	0.88
	[-0.85, -0.66]	[-0.90, -0.77]	[-0.93, -0.83]	[0.83, 0.92]

All p-values < 0.001.

Table S8. Percentages of Correctly Categorized Officials Based on Individual-level Trait Inferences from Study 2 with categorizing midpoint 3 in an alternative way.

	Average Individual-level Accuracy				
	Corruptibility	Dishonesty	Selfishness	Trustworthiness	Generosity
Mean Accuracy (N = 78)	53.94%	55.01%	54.56%	54.40%	54.77%
SD	6.34%	6.54%	6.16%	6.88%	6.09%
Lower Bound of 95% CI	52.74%	53.77%	53.40%	53.10%	53.63%
t-value (df = 77)	5.49	6.76	6.54	5.65	6.92
Cohen's d	0.62	0.77	0.74	0.64	0.78

For negative traits, a trial was accurate if the official was convicted of corruption and received a high (3, 4, or 5) rating from a participant, or, conversely, if he had a clean record and received a low (1 or 2) rating from a participant; for positive traits, a trial was accurate if the official was convicted of corruption and received a low (1, 2, or 3) rating from a participant, or, conversely, if he had a clean record and received a high (4 or 5) rating from a participant. All p-values < .001.

Table S9. Average individual-level accuracy calculated for subsets of stimuli in which the officials were excluded one by one following the order of the ranking (and one-sided t-tests against chance level) for Study 2.

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**	**Generosity**
Before Exclusion (N = 80)	54.72% ***	56.15% ***	55.78% ***	56.00% ***	55.80% ***
Excluded 1st	54.36% ***	55.73% ***	55.42% ***	55.53% ***	55.45% ***
Excluded 1st-2nd	54.02% ***	55.32% ***	55.10% ***	55.15% ***	55.09% ***
Excluded 1st-3rd	53.68% ***	54.94% ***	54.80% ***	54.78% ***	54.74% ***
Excluded 1st-4th	53.36% ***	54.55% ***	54.50% ***	54.40% ***	54.38% ***
Excluded 1st-5th	53.05% ***	54.20% ***	54.20% ***	54.01% ***	54.05% ***
Excluded 1st-6th	52.75% ***	53.84% ***	53.90% ***	53.63% ***	53.70% ***
Excluded 1st-7th	52.44% **	53.51% ***	53.60% ***	53.25% ***	53.35% ***
Excluded 1st-8th	52.14% **	53.17% ***	53.31% ***	52.87% ***	53.01% ***
Excluded 1st-9th	51.82% *	52.82% ***	53.01% ***	52.47% **	52.65% ***
Excluded 1st-10th	51.51% *	52.48% **	52.71% ***	52.10% **	52.30% ***
Excluded 1st-11th	51.20%	52.12% **	52.42% **	51.72% *	51.94% **
Excluded 1st-12th	50.87%	51.76% *	52.12% **	51.32%	51.57% **
Excluded 1st-13th	50.56%	51.38%	51.82% *	50.94%	51.26% *
Excluded 1st-14th	50.23%	51.00%	51.53% *	50.57%	50.97%
Excluded 1st-15th	49.90%	50.62%	51.25%	50.18%	50.69%
Excluded 1st-16th	49.56%	50.23%	50.97%	49.81%	50.39%
Excluded 1st-17th	49.22%	49.84%	50.67%	49.44%	50.09%

One-sample one-sided t-tests against chance (50%) were performed on the individual-level accuracies across participants for each exclusion. Signif. codes: *** p < 0.001, ** p < 0.01, * p < 0.05.

Table S10. Coefficients and standard errors of general linear mixed model analyses on the association between officials' violation records and inferences of each trait for Study 2 (*N* = 6115; *N* was determined by the number of participants times the number of faces minus omitted observations; observations from a participant for a face would be omitted if ratings were not available for all the five traits).

	Corruptibility	**Dishonesty**	**Selfishness**	**Trustworthiness**	**Generosity**
Trait Rating[a]	0.24 ***	0.28 ***	0.27 ***	-0.26 ***	-0.27 ***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age	0.12 ***	0.12 ***	0.12 ***	0.12 ***	0.12 ***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Glasses[b]	-2.61 ***	-2.59 ***	-2.62 ***	-2.61 ***	-2.62 ***
	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
Bald[c]	1.55 ***	1.55 ***	1.55 ***	1.55 ***	1.53 ***
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
Beard[d]	-0.14	-0.15	-0.15	-0.14	-0.15
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
Mustache[e]	1.48 ***	1.51 ***	1.49 ***	1.47 ***	1.49 ***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Smile Intensity[f]	-0.30 ***	-0.28 ***	-0.29 ***	-0.26 ***	-0.26 ***

	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Image Megapixels	0.03	0.03	0.04	0.03	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Image Source: Gov[g]	-0.63 ***	-0.63 ***	-0.64 ***	-0.63 ***	-0.63 ***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)

[a]Officials' violation records were regressed on ratings of each trait respectively, presented in each column. [b]Glasses is a dummy variable with 1 indicating the official wore glasses. [c]Bald Head is a dummy variable with 1 indicating the official was bald headed. [d]Beard is a dummy variable with 1 indicating the official had a beard. [e]Mustache is a dummy variable with 1 indicating the official had a mustache. [f]Smile Intensity was coded manually with two levels (0 = smile with no teeth exposed, 1 = smile with teeth exposed). [g]Image source was coded with two levels (1 = government/campaign websites, 0 = news articles). All continuous variables were standardized. Signif. codes: *** p < 0.001, ** p < 0.01, * p < 0.05.

Study 3

Table S11. Factor loadings of trait inferences on the first three factors identified in a principal components analysis with a Varimax rotation. The factor analysis was performed on the aggregate-level trait inferences.

	Factor Solution		
	Corruptibility-related	Competence-related	Masculinity-related
Corruptibility	**0.93**	-0.20	-0.08
Dishonesty	**0.93**	-0.22	-0.03
Selfishness	**0.93**	-0.16	-0.03
Trustworthiness	**-0.90**	0.35	-0.07
Generosity	**-0.87**	0.34	-0.12
Masculinity	0.09	0.20	**0.96**
Aggressiveness	**0.83**	0.10	0.44
Ambitiousness	-0.17	**0.96**	0.15
Competence	-0.52	**0.65**	0.39

Study 4a

Table S12. Summary statistics of facial structure metrics.

	Stimuli Set (n)	**Mean**	**SD**
Facial Width-to-Height Ratio	Set 1 (72)	2.21	0.22
	Set 2 (80)	2.26	0.23
Face Width/Lower Face Height	Set 1 (72)	1.29	0.11
	Set 2 (80)	1.29	0.12
Lower Face/Face Height	Set 1 (72)	0.58	0.05
	Set 2 (80)	0.58	0.03
Cheekbone Prominence	Set 1 (72)	1.06	0.05
	Set 2 (80)	1.04	0.04
Internal Eye Corner Distance	Set 1 (72)	0.24	0.05
	Set 2 (80)	0.24	0.03
Nose Height	Set 1 (72)	0.46	0.05
	Set 2 (80)	0.45	0.04
Mouth Width	Set 1 (72)	0.49	0.07
	Set 2 (80)	0.47	0.05
Nose/Mouth Width	Set 1 (72)	0.70	0.08
	Set 2 (80)	0.70	0.09

Study 4b

Table S13. Questions measuring whether participants noticed the width of the faces was manipulated.

Question	Format
1. Did you notice anything special about the photos in the experiment?	Open-ended
2. You might have noticed that photos of the same politician were shown for more than once in the experiment. Did you notice what are the differences among these photos of the same politician? Or do you think these photos of the same politician are identical?	Open-ended
3. In fact, the politicians' face-width has been manipulated and you have seen different versions of photos of the same politicians. Did you notice that the face of the same politician was wider in some photos and slimmer in others?	Closed-ended