## Online Appendix

A1: Descriptive statistics for the raters







## A2: Determinants of attractiveness, competence and likability (regular background)



Odds Ratio with 99\% Cls
$\diamond$ attractiveness $\circ$ competence $\times$ likability

A3: Determinants of attractiveness, competence and likability (uniform background)


A4: Determinants of attractiveness, competence and likability (young vs. old raters)




Odds Ratio with 99\% CIs

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\diamond attractiveness ○ competence }\times\mathrm{ likability
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A5: Determinants of attractiveness, competence and likability (left vs. right raters)

$\diamond$ attractiveness $\circ$ competence $\times$ likability

## A6: Ambiguity weighting by latency times

The fastest click of each rater is assigned a weighting factor of 1.0 while the slowest click gets a weight of 0.2 . The final weighted proportion of clicks for candidate $A$ in district $X$ computes as follows:
$p_{A, X}=\frac{\sum_{i=1}^{n X}\left(r(A)_{i, X} \cdot w_{i, X}\right)}{\sum_{i=1}^{n X}\left(w_{i, X}\right)}$
with: $\quad n_{X}=$ number of ratings in district $X$
$w_{i, X}=$ weight for rating $i$ in district $X$
$r(A)_{i, X}=\operatorname{rating} i$ for candidate $A$ in district $X$ (i.e. 0 or 1 );

## A7: Variable overview (all variables measure on the level of the electoral district, $\mathrm{N}=401$ )

| Variable | operationalization | min / max | mean (sd) |
| :---: | :---: | :---: | :---: |
|  |  | For dummies: \% of cases |  |
| Dependent Variable | Vote share winner - vote share runner up in the House election on November 8 | $0 / 100$ | 32.142 (18.640) |
| Attractiveness (picture set1) | Latency weighted mean of clicks for the winning candidate compared to the runner-up. Appearance ratings based on pictures with regular background. | $0 / 1$ | 0.529 (0.279) |
| Competence (picture set1) |  | $0.202 / 1$ | 0.564 (0.202) |
| Likability (picture set1) |  | 0.050 / 1 | 0.513 (0.225) |
| Attractiveness (picture set2) | Latency weighted mean of clicks for the winning candidate compared to the runner-up. Appearance ratings based on pictures with uniform slate-grey background. | $0 / 1$ | 0.540 (0.290) |
| Competence (picture set2) |  | $0 / 1$ | 0.586 (0.208) |
| Likability (picture set2) |  | 0.023 / 1 | 0.525 (0.221) |
| Gender | Four dummies indicating the gender configuration of the race |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Incumbency | Three dummies indicating who of the candidates (if any) was the incumbent | Incumbent $=\ldots$  <br> Winner 2016: $85.29 \%$ <br> Runner up 2016: $2.00 \%$ <br> Neither winner nor runner up: $12.72 \%$ |  |
| Incumbency in years |  |  |  |
| Age difference | Age of the winner minus age of the runner up | -35.66 / 49.29 | -5.871 (16.071) |
| Unemployment rate | In \% | 2.620 / 14.563 | 6.350 (1.931) |
| Senior-to-youth-rate | $\frac{\text { Share of seniors }(>60)}{\text { Share of youth }(<25)}$ | 0.273 / 1.819 | 0.662 (0.193) |
| Males | Male population in \% | 45.437 / 52.637 | 49.237 (0.938) |
| Blacks | Black population in \% | 0.439 / 66.327 | 12.167 (13.493) |
| Hispanics | Hispanic population in \% | 0.954 / 87.616 | 17.434 (18.096) |
| Rental vacancy rate | Percentage of rental houses that is vacant | 1.1 / 19.4 | 5.895 (2.412) |
| Median household income | In 1000 \$ | 31.789 / 120.089 | 58.219 (15.439) |
| Persons without health insurance | In \% | 1.931 / 31.403 | 9.328 (4.427) |
| Persons with BA or higher | In \% | 9.1 / 71.5 | 30.357 (10.218) |
| District not safe | District has been rated as "not safe" (= leaning, likely or toss up) by at least one of the following predictions on November 7, 2016: Cook Political Report, Daily Kos Elections, the Rothenberg Political Report, and Real Clear Politics. | 14.46\% |  |
| Toss-up district | District has been rated as "toss-up" by at least one of the following predictions on November 7, 2016: Cook Political Report, Daily Kos Elections, the Rothenberg Political Report, and Real Clear Politics. | 6.23\% |  |
| District with two candidates from same party | Two candidates from the same party received the most votes. | 2.99\% |  |
| Absolute margin TrumpClinton | Absolute difference between the percentage of votes for Donald Trump and Hilary Clinton at the presidential elections 2016; data from the Partisan Voting Index by the Cook Political Report 2017 | 0 / 87 | 26.484 (18.439) |
| Winner Republican | Dummy indicating whether the winner was a Republican | 56.36\% |  |
| Disbursement difference | $100 \cdot \frac{\text { total disbursement of the winner }}{\text { total disbursement of the winner + total disbursement of the runner up }}$ Data from the Federal Election Commission, campaign finance data. | 15.897 / 100 | 88.358 (16.785) |

## A8: Main models with influential cases excluded

|  | Model 1 | Model 2 | Model 3 | Model 4 |
| :---: | :---: | :---: | :---: | :---: |
| Perceived physical appearance |  |  |  |  |
| Attractiveness | 5.439*** | 5.457*** | 2.209 |  |
|  | (1.957) | (1.516) | (1.733) |  |
| Competence | 1.116 |  | 1.392 | 5.822** |
|  | (2.153) |  | (2.181) | (2.257) |
| Likability | -1.746 |  | 0.824 |  |
|  | (1.939) |  | (1.956) |  |
| Gender |  |  |  |  |
| Winner: female \& Runner up: female | -1.272 |  | -0.810 |  |
|  | (2.067) |  | (1.978) |  |
| Winner: male \& Runner up: female | 1.308 | 1.953** | 1.002 |  |
|  | (0.920) | (0.918) | (0.930) |  |
| Winner: female \& Runner up: male | -1.971* | -2.916*** | -1.389 |  |
|  | (1.100) | (1.007) | (1.113) |  |
| Incumbency |  |  |  |  |
| Incumbent = runner up | -3.046 |  | -2.255 |  |
|  | (2.420) |  | (2.510) |  |
| Incumbent = no one | -2.621** |  | -2.773*** |  |
|  | (1.041) |  | (1.055) |  |
| Incumbency in years | 0.180*** | 0.164*** | 0.176*** | $0.144^{* * *}$ |
|  | (0.0436) | (0.0417) | (0.0450) | (0.0466) |
| Controls |  |  |  |  |
| Age difference | -0.0228 |  | -0.0300 | -0.0556** |
|  | (0.0260) |  | (0.0263) | (0.0257) |
| Unemployment rate | -0.819** | -0.512** | -0.761** | -0.536** |
|  | (0.326) | (0.234) | (0.314) | (0.249) |
| Senior-to-youth rate | 0.274 |  | 0.673 |  |
|  | (2.172) |  | (2.124) |  |
| Males \% | -1.443** |  | -1.347** | -0.774* |
|  | (0.594) |  | (0.587) | (0.461) |
| Blacks \% | 0.0759 |  | 0.0671 |  |
|  | (0.0509) |  | (0.0530) |  |
| Hispanics \% | 0.101** |  | 0.0731* |  |
|  | (0.0425) |  | (0.0396) |  |
| Rental vacancy rate | -0.0500 |  | -0.0815 |  |
|  | (0.177) |  | (0.176) |  |
| Median household income in 1000\$ | -0.0805* |  | -0.0572 |  |
|  | (0.0446) |  | (0.0452) |  |
| Persons without health insurance \% | -0.359** | -0.193* | -0.295* |  |
|  | (0.145) | (0.103) | (0.153) |  |
| Persons with BA or higher \% | -0.0406 | -0.131*** | -0.0618 | -0.118** |
|  | (0.0611) | (0.0460) | (0.0625) | (0.0484) |
| District not safe | -1.917 | -2.648* | -1.705 | -2.735* |
|  | (1.464) | (1.435) | (1.438) | (1.457) |
| Toss-up district | 2.506 |  | 2.505 |  |
|  | (1.881) |  | (1.895) |  |
| District with two candidates from same party | -10.34*** | -7.551*** | -9.562*** | -9.317*** |
|  | (1.986) | (2.028) | (1.900) | (2.098) |
| Disbursement share winner | 0.222*** | 0.253*** | 0.231*** | 0.229*** |
|  | (0.0328) | (0.0313) | (0.0330) | (0.0309) |
| Absolute margin Trump-Clinton | 0.718*** | 0.704*** | 0.731*** | 0.729*** |
|  | (0.0266) | (0.0238) | (0.0284) | (0.0276) |
| Winner: Republican | 2.950*** |  | 3.413*** | 2.147** |
|  | (1.075) |  | (1.072) | (0.979) |
| Constant | 70.35** | -4.687 | 63.20** | 31.72 |
|  | (30.62) | (3.929) | (29.90) | (23.58) |
| Observations | 376 | 378 | 376 | 381 |
| R -squared | 0.849 | 0.827 | 0.849 | 0.817 |

Note: To test whether the most influential cases alter the main effects, all cases with a Cook's distance greater than $4 / \mathrm{N}$ were excluded from the models. Models 1 and 2 use the appearance-ratings from picture set 1 (regular background), models 3 and 4 those from picture set 2 (uniform background). Models 2 and 4 with stepwise backward selection. Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

## A9: Main models with standardized coefficients

|  | Model 1 | Model 2 | Model 3 | Model 4 |
| :---: | :---: | :---: | :---: | :---: |
| Perceived physical appearance |  |  |  |  |
| Attractiveness | 0.176*** | 0.155*** | 0.122*** | 0.100*** |
| Competence | 0.00947 |  | 0.0128 |  |
| Likability | -0.0531 |  | -0.0176 |  |
| Gender |  |  |  |  |
| Winner: female \& Runner up: female | 0.0136 |  | 0.0179 |  |
| Winner: male \& Runner up: female | 0.0610* | 0.0664** | 0.0524 | 0.0628* |
| Winner: female \& Runner up: male | -0.102*** | -0.117*** | -0.0927*** | -0.103*** |
| Incumbency |  |  |  |  |
| Incumbent = runner up | -0.0256 |  | -0.0196 |  |
| Incumbent = no one | -0.0370 |  | -0.0416 |  |
| Incumbency in years | 0.0307 |  | 0.0327 |  |
| Controls |  |  |  |  |
| Age difference | 0.0679 | 0.0767* | 0.0484 |  |
| Unemployment rate | -0.0726 |  | -0.0766 |  |
| Senior-to-youth rate | -0.0172 |  | -0.0163 |  |
| Males \% | -0.0436 |  | -0.0459 |  |
| Blacks \% | 0.0583 |  | 0.0504 |  |
| Hispanics \% | 0.0387 |  | 0.0366 |  |
| Rental vacancy rate | 0.00340 |  | 0.00410 |  |
| Median household income in 1000\$ | -0.0376 |  | -0.0261 |  |
| Persons without health insurance \% | -0.0162 |  | -0.0132 |  |
| Persons with BA or higher \% | -0.0479 |  | -0.0553 |  |
| District not safe | -0.00997 |  | -0.00322 |  |
| Toss-up district | 0.0238 |  | 0.0251 |  |
| District with two candidates from same party | -0.101** | -0.0927** | -0.0933** | -0.0872** |
| Disbursement share winner | $0.268 * * *$ | 0.297*** | 0.280*** | 0.310*** |
| Absolute margin Trump-Clinton | 0.658*** | 0.666*** | 0.664*** | 0.675*** |
| Winner: Republican | 0.0300 |  | 0.0414 |  |
| Observations | 401 | 401 | 401 | 401 |
| R -squared | 0.698 | 0.685 | 0.691 | 0.676 |

Note: Robust standardized coefficients. Models 1 and 2 use the appearance-ratings from picture set 1 (regular background), models 3 and 4 those from picture set 2 (uniform background). Models 2 and 4 with stepwise backward selection. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

## A10: Main models without "disbursement share winner"

|  | Model 1 | Model 2 | Model 3 | Model 4 |
| :---: | :---: | :---: | :---: | :---: |
| Perceived physical appearance |  |  |  |  |
| Attractiveness | 13.35*** | 11.52*** | 9.085*** | 8.719*** |
|  | (3.976) | (2.681) | (3.235) | (2.361) |
| Competence | 2.843 |  | 2.669 |  |
|  | (3.796) |  | (3.868) |  |
| Likability | -5.136 |  | -1.803 |  |
|  | (3.829) |  | (3.679) |  |
| Gender |  |  |  |  |
| Winner: female \& Runner up: female | 0.0106 |  | 0.676 |  |
|  | (3.182) |  | (3.086) |  |
| Winner: male \& Runner up: female | 2.165 |  | 1.705 |  |
|  | (1.741) |  | (1.753) |  |
| Winner: female \& Runner up: male | -5.306*** | -6.217*** | -4.703** | -5.459*** |
|  | (1.786) | (1.533) | (1.892) | (1.605) |
| Incumbency (1.786) (1.533) (1.802) (1.605) |  |  |  |  |
| Incumbent = runner up | -8.957** | -10.50*** | -8.303** | -8.888** |
|  | (3.577) | (3.287) | (3.627) | (3.542) |
| Incumbent = no one | -4.250** | -4.576*** | -4.633*** | -4.391*** |
|  | (1.752) | (1.595) | (1.744) | (1.635) |
| Incumbency in years | 0.0769 |  | 0.0792 |  |
|  | (0.0769) |  | (0.0779) |  |
| Controls |  |  |  |  |
| Age difference | 0.0847 | 0.105** | 0.0620 | 0.0898* |
|  | (0.0700) | (0.0534) | (0.0667) | (0.0527) |
| Unemployment rate | -0.662 |  | -0.720 |  |
|  | (0.492) |  | (0.511) |  |
| Senior-to-youth rate | -2.719 |  | -2.419 | -4.581* |
|  | (2.885) |  | (2.895) | (2.693) |
| Males \% | -1.139 |  | -1.189 | -1.091* |
|  | (0.873) |  | (0.902) | (0.637) |
| Blacks \% | 0.0696 |  | 0.0591 |  |
|  | (0.0813) |  | (0.0865) |  |
| Hispanics \% | 0.0558 |  | 0.0563 |  |
|  | (0.0611) |  | (0.0615) |  |
| Rental vacancy rate | 0.155 |  | 0.158 |  |
|  | (0.308) |  | (0.313) |  |
| Median household income in 1000\$ | -0.0531 | -0.0753** | -0.0382 | -0.0614* |
|  | (0.0626) | (0.0317) | (0.0631) | (0.0324) |
| Persons without health insurance \% | -0.0333 |  | -0.0179 |  |
|  | (0.233) |  | (0.243) |  |
| Persons with BA or higher \% | -0.0576 |  | -0.0745 |  |
|  | (0.104) |  | (0.106) |  |
| District not safe | -7.151*** | -8.277*** | -7.164*** | -8.271*** |
|  | (1.623) | (1.332) | (1.596) | (1.372) |
| Toss-up district | -2.276 |  | -2.338 |  |
|  | (2.065) |  | (2.117) |  |
| District with two candidates from same party | -15.75*** | -15.01*** | -14.99*** | -14.77*** |
|  | (5.809) | (5.419) | (5.704) | (5.430) |
| Absolute margin Trump-Clinton | 0.707*** | 0.705*** | 0.715*** | 0.716*** |
|  | (0.0400) | (0.0347) | (0.0405) | (0.0357) |
| Winner: Republican | 1.538 |  | 2.089 | 2.233* |
|  | (1.510) |  | (1.581) | (1.321) |
| Constant | 72.61 | 14.66*** | 74.88 | 70.35** |
|  | (44.70) | (2.272) | (45.95) | (31.81) |
| Observations | 402 | 402 | 402 | 402 |
| R-squared | 0.673 | 0.659 | 0.663 | 0.655 |

Note: Robust standardized coefficients. Models 1 and 2 use the appearance-ratings from picture set 1 (regular background), models 3 and 4 those from picture set 2 (uniform background). Models 2 and 4 with stepwise backward selection. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

## A11: Interaction between incumbency and attractiveness (predicted values)




