

# Predicting Elections: Child's Play!

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In *The Republic*, Plato states, “Imagine ... a ship in which there is a captain who is taller and stronger than any of the crew, but he is a little deaf and has a similar infirmity in sight, and his knowledge of navigation is not much better” (1). Plato argues that the crew (i.e., voters) cannot select a competent captain (i.e., ruler) because the crew is beguiled, in part, by appearances. Plato uses this allegory to suggest that voters lack the rational faculties and knowledge to elect competent rulers.

Ideally, democracies should elect politicians on their competence. Intellectual (or learning) ability predicts effective performance in complex domains (2) and in the U.S. presidency (3). Presidents, though, are not elected on ability (4). Among other factors, voters are biased by facial appearances; naïve raters can predict elections after simply rating the competence (i.e., intelligence, leadership, and competence per se) of political candidates from their photographs (5). On a general level, individuals automatically infer characteristics of social targets based on facial appearances (6). Voters acting rationally, however, should change these initial classifications as they receive information about the target individual's values, performance, political affiliation and the like. Unfortunately, voters are anchored in first impressions and do not appropriately correct initial inferences; additional information on the candidates does not change choices by much (5). Perhaps voters are acting knowledgeably if, after experience, they have learned that facial appearance correlates with competence or performance.

However, intelligence of adults cannot be predicted from facial appearance (7), and there is great variation in the competence of politicians (3).

Why do naïve ratings and actual votes correlate? Are voters using the same rudimentary decision heuristics that children use? Facial stereotypes and other classification schemes are well developed even in infancy (8), probably stemming from an innate template and rapid early learning (9). We hypothesized that voters might still be using the same cues that children do to categorize individuals on competency, which explains why voters may largely ignore additional information on candidates. We tested our claim by examining whether naïve voters predict actual voter preferences in the same way that children do.

We recruited adults and children in Switzerland to rate pairs of faces (the winner and runner-up) from the run-off stages of the 2002 French parliamentary election (10). In experiment 1 ( $N = 684$  adults), results of a logistic regression showed that the probability of predicting an election result correctly on the basis of ratings of competence was 0.72. Ratings of competence also predicted margin of victory (standardized beta = 0.32,  $P < 0.001$ ).

Using the same materials in experiment 2, 841 individuals—of whom 681 were children aged 5 to 13 years (mean age = 10.31,  $SD = 1.81$ )—participated in a game involving a computer-simulated trip from Troy to Ithaca. Thereafter, participants chose from two faces the captain of their boat (Fig. 1A). For the children, results from a logistic regression showed that probability of predicting an election result correctly on the basis

of choice of captain was 0.71. The results did not differ when including the other participants ( $N = 160$ , mean age = 30.49,  $SD = 16.32$ ); prediction accuracy did not depend on age (fig. S1).

Next, we compared the adults in experiment 1 to the children. We used the mean (i.e., at the pair-level) predicted probabilities for each pair of faces for both children and adults in a random-effects regression model. The variable indicating adults was unrelated to the predicted probabilities; again, child-adult response patterns were indistinguishable. Furthermore, children ratings strongly predicted the adult ratings (standardized regression beta = 0.61,  $P < 0.001$ ). Face effects appear to be age-invariant, suggesting that adults and children use similar cues in judging competence from facial appearance.

Evidently, young children, who are less experienced than are adults in observing performance in complex domains, playing an innocuous game can predict election results retrospectively (11). These findings suggest that voters are not appropriately weighting performance-based information on political candidates when undertaking one of democracy's most important civic duties.

## References and Notes

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3. D. K. Simonton, in *Advances in Psychological Research*, S. P. Shohov, Ed. (Nova Science, Hauppauge, NY, 2002), vol. 14, pp. 143–153. Note, in Simonton's analysis, the standardized partial beta for relation between intelligence and presidential greatness is 0.29 (the zero-order correlation was 0.55); removing an endogenous predictor (i.e., the number of years in office) increases the beta of intelligence to 0.41.
4. If politicians were selected on ability, the correlation between ability and performance would be zero or very weak (given the range restriction in ability).
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10. Materials, methods, and extended results are available as supporting material on Science Online.
11. In experiment 2, we also presented children with two pairs of faces (one from the recent Democratic party primary and the other from the U.S. election). The children correctly predicted the Obama-Clinton [likelihood-ratio  $\chi^2(1) = 3.94$ ,  $\phi = 0.54$ ,  $P < 0.05$ ] and the Obama-McCain [likelihood-ratio  $\chi^2(1) = 8.45$ ,  $\phi = 0.81$ ,  $P < 0.01$ ] election results.
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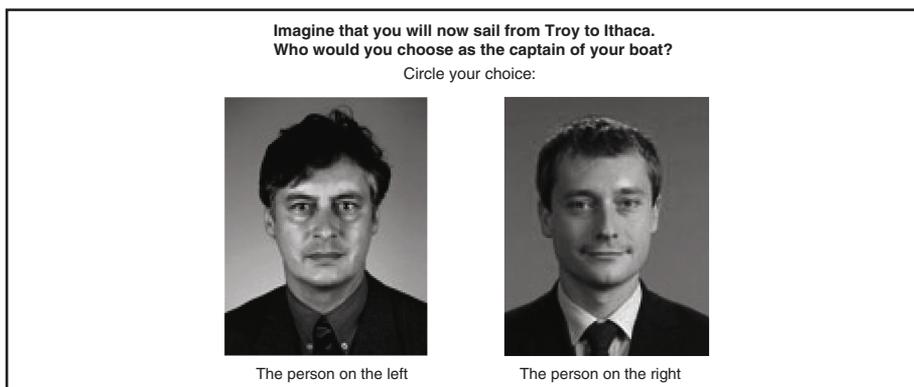
## Supporting Online Material

www.sciencemag.org/cgi/content/full/323/5918/1183/DC1  
Materials and Methods  
SOM Text  
Fig. S1

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**Fig. 1.** An example of a pair of faces we used from the Meurthe-et-Moselle electoral district (number 1). Jean-Jacques Denis (left) lost to Laurent Hénart (right). Of the participants who rated this pair, 77% of children and 67% of adults in experiment 1 chose Hénart. Over the 57 pairs of faces and across all raters, the adults in experiment 1 chose correctly 60% of the time, likelihood ratio  $\chi^2(1) = 28.86$ ,  $\phi = 0.20$ ,  $P < 0.001$ ; for experiment 2, both children and adults chose correctly 64% of the time, likelihood ratio  $\chi^2(1) = 68.10$ ,  $\phi = 0.28$ ,  $P < 0.001$ . These effects become stronger when controlling for covariates and fixed effects for pairs of faces (10).