Halo Effects and the Attractiveness Premium in Perceptions of Political Expertise

Carl L. Palmer
Assistant Professor
Department of Politics and Government
Illinois State University
Normal, IL 61790
clpalme@ilstu.edu

Rolfe D. Peterson
Assistant Professor
Department of Political Science
Mercyhurst University
Erie, PA 16546
rpeterson@mercyhurst.edu

Abstract

Our physical appearance often influences social interactions, but does it play a role in how we come to understand politics? In this paper we consider the political consequences of the ‘halo effect,’ in which positive traits are ascribed to individuals based upon some other observable characteristic. Using ANES data, as well as a pair of survey experiments, we find clear biases in perceptions of respondents’ political knowledge, as more attractive individuals are viewed as more knowledgeable by interviewers. More attractive individuals are also seen as more persuasive, and are more likely to be sought out by others for political information. These findings have implications for the subconscious biases that govern our daily political lives and our understanding of the role of expertise in social interactions.

Keywords: halo effect, attractiveness stereotypes, political sophistication

9,332 words
Halo Effects and the Attractiveness Premium in Perceptions of Political Sophistication

For many citizens, politics exists as Lippmann described the social world – as a “great blooming buzzing confusion” (Lippmann 1922, p. 63). Information abounds in the modern media landscape, yet few take the time to fully comprehend it. However, when pressed, the ill informed may take advantage of particular features of the political system to approximate informed decision-making and transcend the tethers of their limited information. The relative consistency of our political institutions and parties allows citizens to make use of heuristic shortcuts in attempting to make sense of the issues of the day (Lupia 1994).

In addition to utilizing heuristics to comprehend politics, citizens are thought to be capable of correctly recognizing political experts in their social networks and relying on these informed citizens as reliable sources of political information (Huckfeldt 2001). However, some factors emerge that bias citizen’s ability to accurately perceive political expertise among their communication partners. In some cases, these factors are entirely orthogonal to politics and cognitive ability. We consider the role of one such potential confound – physical appearance.

Are attractive individuals perceived as more politically knowledgeable? Are fellow citizens more likely to view attractive sources as more credible, and seek them out for political information? In this paper, we consider the role that attractiveness biases play in citizens’ perceptions of others’ political expertise. With the importance of perceived expertise in structuring socio-political interactions, particularly how citizens choose to become informed about politics (Ahn et al. 2010; Huckfeldt 2001), understanding the potential cognitive biases that may be caused by attractiveness becomes an important normative question. If citizens place a premium on physical appearance as an indicator of political expertise, the reliance on others as sources of political information may lead to uninformed citizens being led astray. With the value
placed on being an informed and engaged citizen in democratic politics, we take it as some solace that uninformed citizens may seek out better informed others in the hopes of arriving at informed judgments. Yet if politics becomes the blind leading the blind, due to an unreasonable premium being placed on attractiveness, we may be forced to confront the veracity of citizens’ decisions.

As a test of the political influence of physical appearance, we take advantage of a survey item artifact from the ANES, measured only once across the entire time series – the interviewer’s evaluation of the respondents’ physical attractiveness, as well as conducting a pair of survey experiments. Using the 1972-74-76 ANES panel study, we show that interviewers’ subjective assessments of respondent knowledge are biased by the respondents’ physical appearance, despite the interview itself providing a basis to accurately estimate respondents’ levels of information. Our experimental results corroborate this finding, showing that more attractive individuals are seen as more knowledgeable and persuasive, and subjects were more willing to turn to more attractive individuals as potential sources for political information. This suggests a role for physical appearance in mass-level political behavior, while also opening the door for future research on the connection between physical appearance and political orientations.

**Stereotyping the Beautiful?**

Physical appearance is one of the first characteristics we take in when encountering someone, whether familiar or not. These assessments occur automatically, and do not even require our conscious attention (Olson and Marshuetz 2005), competing for cognitive resources with the completion of other tasks (Sui and Liu 2009). These reactions, and even the conceptualization of what is attractive appears to be consistent within cultural groups...
(Cunningham et al. 1995) and is thought to be both universal (Berscheid and Walster 1974; Hatfield and Sprecher 1986) and stable over time (Zebrowitz et al. 1993).

How then, does this predilection toward evaluating the physical appearance of others affect social interactions? In the seminal work on the subject, Dion and colleagues theorize that individuals, when asked to evaluate an attractive other, would more readily assert that more attractive individuals were happier and more successful in their lives than less attractive individuals, applying an ‘attractiveness stereotype’ to their judgments (Dion et al. 1972). Subsequent research suggests that such biases lead individuals to perceive attractive individuals as more sociable, socially skilled, and popular, as well as more competent (Eagly et al 1991; Feingold 1992) and intelligent (Lemay Jr. et al. 2010; Lorenzo et al. 2010; Paunano 2006; Sheppard et al. 2011). These effects are even relatively consistent across gender of target and perceiver (Eagly et al. 1991; Feingold 1992).

The application of an attractiveness stereotype to individuals is a specific instance of a more general psychological principle known as the halo effect, in which individuals ascribe

1 Our discussion of the halo effect and judgments of the relationship between appearance and intelligence would be remiss if we ignored a branch of research suggesting an empirical correlation generally between attractiveness and intelligence. This line of research asserts that, due to patterns of self-selection in mating and heritability of both attractiveness and intelligence, that attractive people are, on average, more likely to be intelligent (Kanazawa 2011; Kanazawa et al 2004; but see Denny 2008). Even the most skeptical of research in this domain has shown a modest positive correlation between attractiveness and intelligence (Zebrowitz et al. 2002), particularly among those at the lower end of the attractiveness and intelligence scales (Zebrowitz and Rhodes 2004).
characteristics to others based upon the presence of another observable characteristic (Thorndike 1920). Such errors are stunningly prevalent in data derived from ratings of others (Kozlowski et al. 1986), to such an extent that one scholar described the problem thusly: “halo error, like death and taxes, seems inevitable” (Feldman, 1986, p. 173). Halo errors are thought to be a reflection of a rater’s inability to differentiate between characteristics being evaluated, although in many circumstances, these errors occur automatically, below the level of conscious information processing (van Leeuwen and Macrae 2004). Those guilty of making them are often, as a result, completely unaware.

The impact of halo errors on evaluations of others may be exaggerated over the course of extended interactions. In education, student achievement has been shown to be affected by initial snap judgments made by instructors (Rosenthal and Jacobson 1992), leading instructors to encourage or discourage student performance with students responding accordingly. In the context of an in-depth, face-to-face interview, even well-trained interviewers may alter their style of questioning and probing in light of their initial snap judgments of respondents (for a review of literature on how these processes occur in the context of job interviews, see Macan (2009)). Simple changes in eye contact, body language, or a number of other nonverbal cues on the part of the interviewer due to how attractive they perceive the respondent to be could potentially change respondents’ response patterns, in turn affecting how the interviewer perceives them.

Most students of social behavior would be hard-pressed to argue that physical appearance has no effect on interpersonal interactions. Despite our best efforts to remain objective in social situations, we do judge and treat others differently based upon their perceived attractiveness (Langlois et al 2000, p. 404). Yet despite the inherently social nature of politics, studies of the political implications of physical attractiveness have been limited, focusing almost entirely on its
role in predicting the success of political candidates (Hart et al. 2011; Waismel-Manor and Tsfati 2011). It stands to reason that we should expect these biases to creep into political discussions as well, influencing individuals’ political perceptions, orientations, and, most importantly, with whom they discuss politics.

Why Expertise Matters

These perceptual biases individuals are susceptible that stem from halo errors may have pernicious implications for how citizens come to understand politics. The broadest tenet of normative democratic theory calls for a well-informed and attentive citizenry to make reasoned judgments about all things political, particularly when considering the selection of individuals to represent their interests (Dewey 1954, 1966; Mill 1910). In studies of citizen behavior, political knowledge increases citizen’s capacity to successfully navigate the tides of day-to-day politics. Informed citizens are more likely to be engaged and active in politics than the uninformed (Delli Carpini and Keeter 1996), and, put simply, are better democratic citizens.

However, more citizens fall into the category of ‘uninformed’ than ‘informed,’ as we see from estimates of the distribution of political knowledge among the American electorate (Delli Carpini and Keeter 1996). When forced to come to political judgments, these individuals often turn to perceived experts as a way of transcending such limitations in political engagement. But who are these experts that uninformed citizens are turning to?

Political experts (and perceived experts) play an important role in the political system. Given the proliferation of political information, and the perceived irrelevance of politics to citizens’ daily lives, it has long been thought to be perfectly rational for uninformed citizens to rely on political experts when it comes time to cast a ballot (Downs 1957). These dynamics have
been illustrated in studies of behavior in social networks, where individuals have been shown to be more likely to turn to experts, reporting more frequent political discussions with those they perceive to be well-informed and engaged (Huckfeldt 2001) even when doing so is costly (Ahn et al. 2013). Information obtained from experts is given greater weight, and, on average, leads the leads the less well informed to adopt similar views and make comparable vote choices to the experts (Ahn et al. 2010; McClurg 2006; Richey 2009).

Such reliance on others to do the heavy lifting of becoming politically informed is potentially normatively troubling, in part due to the existence of heterogeneous political networks (Huckfeldt et al. 2002). While it is more likely that individuals reside in networks whose views they would share, or at least believe they do – see Goel et al. (2010), minimizing the concern that citizens are being led astray because of their lack of knowledge, this premise holds only so long as individuals’ perceptions of expertise are fundamentally unbiased. Research has shown that there are several factors that lead individuals to overvalue the expertise of network members. While the best predictor of perceived expertise is in fact actual political expertise (Huckfeldt 2001), these estimates of expertise may be biased.

Individuals tend to attribute expertise to discussion partners with whom they share political preferences, leading to biased estimates of discussants’ expertise (Ryan 2011). These biases in the attribution of expertise to communication partners are exacerbated by the gender of an individual and their discussion partner, as female discussants are seen viewed as having lower expertise (Mendez and Osborn 2010). While citizens have some ability to accurately discern political experts in their social networks, such perceptual biases suggest that experts may not always be what they seem. If physical appearance also plays a role in shaping perceptions of political expertise, this further clouds our understanding as to whether citizens correctly
recognize experts, potentially weakening of the role of expertise in collective deliberation. The attractiveness halo raises normative implications for citizens’ utilization of political expertise as a cognitive shortcut.

Formally, we expect that the halo effect will lead interviewers (and communication partners more generally) to overstate levels of political knowledge of more attractive respondents despite objective evidence to the contrary. The automaticity of halo errors in person perception, compounded by the difficulty in overcoming them should lead interviewers to subconsciously bias their evaluations of respondents’ intellectual characteristics due to their physical appearance. Additionally, we would expect that, all else held equal, citizens will find more attractive discussion partners to be more politically knowledgeable, and be more likely to seek them out as sources of political information.

**Research Design**

To test the extent to which the physical attractiveness matters for evaluations of their political knowledge, we use a two-fold approach. In the first, we take advantage of a unique artifact of the American National Election Study. While interviewers’ assessments of respondents’ political knowledge is a commonly used proxy for political knowledge and sophistication (see Bartels 1996; Zaller 1986), surveys also include other subjective end-of-the-interview interviewer assessments. Given the in-depth nature of the face-to-face ANES interviews, it is unsurprising that well-trained interviewers would be capable of making informed judgments as to the capabilities and cooperation of respondents based upon the sheer volume of information respondents provide during an interview. However, our analysis hinges on an assessment that has been included only once in this battery of interviewer assessments over the
course of the ANES – an evaluation of the physical appearance of respondents. In the pre-
election wave of the 1972 ANES, interviewers were, in addition to the other assessments
completed at the culmination of the interview, asked to evaluate respondents’ appearance. Much
like the other assessments, these were made on a five-point scale, from 1 (homely) to 5
(strikingly handsome or beautiful).\(^2\) This was the only time attractiveness was measured in the
panel, or in the ANES at all.

Because the 1972 wave was the start of a panel, we are able to examine not only whether
a relationship exists between interviewers’ perceptions of respondents’ physical attractiveness
and knowledge, but also the extent to which that relationship persists over time. The 1972
ANES consisted of pre and post-election waves, with 2,191 completing both waves. Follow-ups
were conducted following the election in 1974, and finally, a pre and post-election survey was
fielded in 1976. We focus our initial analyses on the 2,705 respondents who completed the pre-
election wave in 1972 (when key interviewer assessments were completed), and subsequently the
1,624 respondents completing the 1974 re-interview and the 1,320 respondents who completed
all three waves of the panel.

**Dependent Variable**

The outcome of interest is the interviewers’ subjective evaluations of respondents’ level
of political information made following the conclusion of the interviews. We focus on this
measure due to the reliance on it not only as a proxy for objective political knowledge, but also
\(^2\) Specifically, the battery asked interviewers to evaluate the respondents’ physical appearance
relative to their age and gender. The attractiveness-rating item came at the end of the interviewer
evaluation battery.
as a predictive component of political sophistication (Luskin 1990), and following in the analytic strategy of Leal and Hess (1999) who consider the impact of racial biases in interviewers’ assessments of respondents’ political knowledge.

Evaluations of respondent knowledge were made in the pre-election portion of the surveys, with the exception of 1974 (which consisted only of a post-election wave). Interviewers evaluated knowledge on a five-point scale, here recoded to run from 1 (very low) to 5 (very high). As a preliminary analysis, we plot mean ratings of political knowledge by evaluations of respondent attractiveness in Figure 1.

A consistent pattern emerges – across all waves there is a direct linear relationship between interviewer’s evaluations of respondents’ political knowledge and their assessment of respondents’ physical appearance. Respondents who are perceived as better looking by interviewers are also seen as more politically knowledgeable. From these preliminary analyses, we may say that our expectation is fully supported – more attractive respondents are seen as being more politically knowledgeable, and the differences in these assessments across categories of attractiveness are statistically significant.

To systematically test this relationship, we regress interviewer assessments of political information on the measure for attractiveness, controlling for factors that should influence the interviewers’ assessments of respondents’ levels of political information, as well as factors that could affect their perceptions of respondents’ physical appearance. Key amongst these is a measure of political knowledge, which should (in a world without biases) serve as the basis for interviewers’ evaluations of respondents’ actual knowledge. Political information is measured with an additive scale of respondents’ correct placements of parties on a series of issues (see
3. While information items were measured in both the pre and post surveys (for the 1972 and 1976 waves) we include only those items measured in the pre-election survey, as this is the same time that the interviewers’ assessments of knowledge was made.

In addition to controlling for objectively measured knowledge, we include controls for education, income, age, race, and gender as factors that may also predict knowledge (and thus influence the interviewers’ evaluations of respondents), but may also affect interviewers’ evaluations of respondents’ physical attractiveness. Including these controls mirrors the analytic strategy used by Leal and Hess (1999). We also include a measure of social class, which could

3 We were faced with data limitations in capturing measures of objective knowledge. The 1972 ANES survey consisted of several forms, which varied in their composition. Unfortunately for our purposes, the bulk of the knowledge items were on one form, eliminating nearly half the sample and reducing statistical power. Additionally, no knowledge items of this form were assessed in 1974. To minimize data losses, we use the aforementioned additive index of candidate and party placements rather than the more conventional ‘current event’ and civics knowledge items that are more commonly used (see Delli Carpini and Keeter (1996); Zaller (1992). Results are identical if we use these knowledge items. All items were coded 0 for incorrect and 1 for correct placements and summed to create additive indexes for each wave of the survey. Knowledge items are listed in the Appendix.

4 The correlations between the interviewer assessment of respondent attractiveness and the measures of factual knowledge are quite modest – the largest is merely 0.16.

5 We are unable to account for characteristics of the interviewer (age, sex, or race), as they are not part of the available data. In our efforts to contact the ANES about this data, we were told that all available data was already part of the ANES files. We make the assumption that this
indirectly influence interviewer’s perceptions of respondents’ physical appearance, as well as overall strength of partisan identification, and a measure for the duration of the interview (in minutes). Stronger partisans are thought to be better-informed, potentially influencing the interviewer’s evaluation of their levels of information, and, respondents who give too short an interview may lead interviewers to penalize them in the subjective ratings of their interview performance. Finally, to account for the possibility of interviewer biases in their subjective ratings, we include dummy variables for partisan identification, as well as the remaining subjective interviewer items from the end of the survey (Rs cooperation with the interview, suspicion during the interview, interest in the interview, and sincerity of their responses). All covariates are rescaled to run from 0 to 1.

Table 1 presents the effects of interviewers’ ratings of attractiveness on their ratings of respondents’ political knowledge. Across all models, the measure of attractiveness is positive and statistically significant, even including controls for factors that should themselves predict of political knowledge. Of these other factors, we do also see effects for many of the more conventional explanations of political knowledge. As we would expect, respondents with higher levels of objective political knowledge are seen as more knowledgeable, as are better-educated respondents. While income has a positive significant relationship to perceptions of political knowledge, self-reported social class has no such effect, perhaps due to collinearity with income. Also, older respondents are seen as more informed, while women are seen as less well informed.

omission does not introduce bias into our results as previous work has shown that the effects of attractiveness on perceptions of others are unaffected by the sex of either the target or the evaluator (Webster Jr. and Driskell Jr. 1983). Models do correct the standard errors for correlations across interviewers by clustering on interviewer ID number.
on average, suggesting some biases on the part of the interviewer. Partisanship has no discernible effect on perceived knowledge, although stronger partisans are seen as more politically knowledgeable (with the exception of the final wave of the survey).

Of the other interviewer-assessed factors, only interest in the interview is consistently related to perceived political knowledge, with more interested respondents being seen as more politically knowledgeable. Cooperation with the interview and response sincerity increase perceived political knowledge, and suspicion with the interview decreases such perceptions, but only in the first wave of the survey.

The substantive impact of these results is presented in Figure 2. To better illustrate the biases present in interviewers’ assessments of respondents’ political knowledge and intelligence, we plot the probability of being evaluated as fairly or very knowledgeable, varying both respondents’ physical appearance and their levels of objective knowledge. For each value of attractiveness, we generate the probability of being seen as very/highly knowledgeable for respondents scoring in the bottom 10\(^{th}\) and top 90\(^{th}\) percentiles of the objective knowledge scale. This allows us to illustrate how impactful appearance is, even in the face of concrete measures of political awareness. While the effect sizes vary across waves, the patterns are sharp and consistent. As one would expect, respondents with higher levels of objective knowledge are perceived as being more knowledgeable by interviewers than those with lower levels of objective knowledge.

---

6 For each model, we generate predicted probabilities for the two highest categories of knowledge by each level of attractiveness estimate and sum them, holding all other variables at their means with the exception of objective knowledge, which we vary by setting it at the 10\(^{th}\) and 90\(^{th}\) percentile values of knowledge for each wave.
knowledge, as evidenced by the sizable gaps between those in the top 90\textsuperscript{th} percentile of objective political knowledge and those in the bottom 10\textsuperscript{th} percentile.

However, the attractiveness premium is also quite evident. More attractive respondents are far more likely to be evaluated as politically knowledgeable than less attractive respondents, even if they possess identical levels of objective political information! The bias is as much as 30 points for those in the upper echelon of objective knowledge, but are still sizable for those with lower levels of knowledge – an increase in the likelihood of as many as 20 points when comparing unattractive to more attractive respondents. In other words, perceived attractiveness seems to have an important effect on perceptions of knowledge beyond the effect of actual political knowledge, even standing in for the effects of knowledge for some respondents!

The statistical and substantive impact of interviewer ratings of physical appearance on their perceptions of respondents’ knowledge is clear. While the impact of physical appearance appears to diminish some over the course of the panel, it remains a potent predictor of interviewers’ evaluations of a respondent’s political knowledge and intelligence even when potentially confronted with information to the contrary. Rather than being a pure, unbiased measure, it would appear that apolitical physical characteristics play an influential role in evaluations of political characteristics. Moreover, the analysis provides an example of how attractiveness can influence political interaction generally; attractive individuals are perceived as more political sophisticated than unattractive individuals.

The effect of respondent appearance on interviewer ratings of knowledge does appear to diminish somewhat over time. The mild attenuation of influence is to be expected given that attractiveness is only measured in 1972. We are, in essence, working with a noisy measure of attractiveness, given that it is measured only once at the beginning of the survey panel. Because
of this, we are unable to account for even slight changes in appearance over time, which could affect the impact that respondents’ appearance has on interviewers’ evaluations of them. Additionally, interviewers may react somewhat differently to respondents’ appearance, which could also create noise in the estimated relationship.\footnote{It is also possible that we are observing a diminishing in the halo effect due to the respondents’ persistence in the survey panel over time. While it is unlikely that respondents are being re-interviewed by the same interviewer (something we cannot control for due to unavailability of the data), interviewers may be able to surmise some characteristics about respondents due to their continued participation in the survey panel, and familiarity does diminish the impact of halo errors. It may also be the case that selection effects have created something of a ceiling effect for the biasing effects of physical appearance on judgments of knowledge and intelligence. If those who continue opting in to the survey are the better informed and more engaged, the overall bias should be smaller.} Regardless, the crucial point to consider here is that, even if either of these points is true, the biases persist across waves of the panel.

\textbf{Are Attractive People More Apt to Persuade?}

That interviewers (and likely other citizens) misperceive political expertise of others is only one piece to the puzzle. If poorly informed, but more attractive individuals are simply seen as more knowledgeable, but never acted upon that status, perhaps our normative concerns would be lessened. Yet, given the tendency for uninformed individuals to turn to those they see as better informed, this seems a slim chance at best. To test this premise, we return to the 1972
ANES. While the survey does not contain a battery on discussion partners, the 1972 interview does ask respondents whether they attempted to persuade others’ voting behavior.\(^8\)

Our expectation is that more attractive individuals should be more likely to attempt to persuade others than less attractive individuals. As a consequence of being perceived (and treated) as more knowledgeable due to their physical appearance, more attractive individuals should feel more confident in their political beliefs, and be more likely to attempt to influence others’ vote choice. Our model includes many of the same control variables as the previous analyses, including respondents’ actual, objective levels of political knowledge, while the dependent variable is a dichotomous measure of whether they attempted to persuade another citizen, or not. The results of this analysis are shown in Table 2.

The results shown in the first column of Table 2 confirm these expectations. We find that, even after controlling for objective political knowledge and other factors that predict political participation, that physical attractiveness is a significant predictor of attempted political influence; more attractive respondents are significantly more likely to report attempting to politically proselytize.

But who is trying to influence whom? Is it simply the uninformed, attractive respondents who are influencing their social contacts, or are the politically active attractive individuals well informed, as well as politically active? Given our findings in Table 1, we believe it is the former, rather than the latter. As a systematic test, we interact the measure of attractiveness with the measure of objective political knowledge. If the interaction is positive, it would suggest that

---

\(^8\) Specifically, respondents were asked, “During the campaign, did you talk to any people and try to show them why they should vote for one of the parties or candidates?”
people who are both knowledgeable and attractive are the ones attempting to influence others. However, our expectation is that physical appearance will, for some individuals, stand in for political knowledge. As more attractive individuals are seen (and likely treated as more knowledgeable), we might expect more attractive individuals who lack knowledge to be nearly as likely to attempt to exert political influence as more knowledgeable individuals.

The second column of Table 2 confirms our expectations. While both components of the interaction are positive and significant, the interaction is negative, and approaches conventional levels of significance in a two-tailed test.\(^9\) Interpreting these results, we may say that respondents who have low levels of knowledge and high levels of attractiveness are more likely to influence others, as are respondents who have high levels of knowledge and low levels of attractiveness. Yet, as perceived attractiveness and knowledge increase, their impact on the likelihood of persuasion decreases, confirming our expectation. As both attractiveness and knowledge increase, it would appear that the knowledge gap narrows. Given the negative effect for the interaction, physical appearance would appear to stand in for and condition social behavior.

These substantive effects are clarified in Figure 3. The first panel depicts the effects of appearance on the likelihood of attempting to persuade others holding knowledge at its mean. Here, appearance has a positive effect, increasing the probability of attempted influence by 20 points when moving from least to most attractive. The second panel plots the interactive effects from model 2, where we set knowledge at the 10\(^{th}\) and 90\(^{th}\) percentile of objective political

\(^9\) These results hold if we fully specify the model, and interact the measure of attractiveness with each of the explanatory variables produces substantively similar effects; we include the reduced model for purposes of simplicity of presentation.
knowledge, respectively, and allow the effects of appearance to vary. Here, we see that for those with low levels of knowledge, the impact of appearance on the likelihood of attempting to persuade others is larger, again an increase of 25 points moving from least to most attractive. For more knowledgeable respondents, the effect is only 10 points, suggesting that attractiveness is less influential in shaping the likelihood of persuasion for people with high political knowledge. In fact, if we superimpose the plots for the two knowledge levels, among those rated as highly attractive, level of knowledge does not appear to influence the propensity to persuade, as the confidence intervals of our predicted probabilities overlap. So it is not that attractive knowledgeable people try to persuade less. It is simply that attractive, uninformed people are just as likely to attempt to persuade.

While telling, we must acknowledge that these results are based upon measurements of self-reported behavior, and cannot answer the second half of the key question: are individuals more likely to seek out more attractive others for political information? Lacking data on individuals’ social networks, we must turn to another means to test the second aspect of our research question – whether individuals are more likely to seek out more attractive respondents for political information, all else equal?

**Choosing Political Informants**

To test the impact of physical appearance on the likelihood of being sought out as a source of political information, we conducted a pair of novel survey experiments using subjects from Amazon’s Mechanical Turk (henceforth MTurk).\(^{10}\) Study 1 had 208 valid completions, MTurk has recently become an alternative resource for scholars seeking to conduct research while seeking to avoid the critiques that may come with the use of student convenience samples.
while Study 2 had 215 valid completes. The utility of these experiments is that they allow us to
directly test the extent to which appearance matters for how individuals perceive others’ political
expertise. By randomly assigning them to evaluate a series of potential political discussion
partners whose attractiveness has already been independently assessed, we can mitigate any
concerns that evaluations of political expertise would be influenced by anything else other than
their physical appearance.

The first study is a randomized, between-subjects experiment, in which subjects were randomly assigned to evaluate either four attractive or four unattractive individuals on a series

Researchers upload their HITs to MTurk, specifying the duration of the task and the pay rate, and MTurk workers choose which tasks they would like to complete. While MTurk is itself a convenience sample that participants self-select into, a recent line of scholarship has taken steps to assess the validity of data obtained from MTurk workers. Adam Berinsky and colleagues have found that MTurk samples not only compare favorably to student and adult convenience samples, but randomized national samples as well. Overall, our samples compare reasonably well to that described in Berinsky et al (2012). The average age of participants in Study 1 is 32; the sample is also 41% female and 76% white, with 51% reporting having at least a college degree. In Study 2, the average age was 34.6; the sample is 44% female and 80% white, with 53% reporting having at least a college degree. While our samples are slightly less female, years of education, race, and age are comparable.

11 In each study, subjects were paid $0.25 for their participation, and took on average, around 6 minutes to complete the batteries.

12 In a pilot study, undergraduate coders were presented with a randomly selected subset of the faces (10 women and 10 men, chosen via random number generator from the 35 available) and
of characteristics related to social or political interactions. Respondents were instructed to use their first instincts when forming their impressions of the four individuals they were shown (two men and two women). Study 2 made use of the same stimuli as Study 1, but instead consisted of a within-subjects design in which subjects were asked to rate 8 individuals (four men and four women), whom had been independently evaluated as being either attractive or unattractive.

In both Study 1 and Study 2, subjects were presented with a headshot of the individual they were ostensibly being asked to evaluate. The headshot remained on screen for each question, and no additional information was provided. A sample screenshot from the survey appears in the Appendix. The headshots were taken from The Karolinska Directed Emotional Faces database (Lundqvist et al. 1998), which consists of photographs of 70 individuals (35 men, 35 women) photographed expressing a series of emotional responses from multiple angles (straight on, right and left profile). Studies using the photos to illustrate how subjects form impressions of others have found ratings to be quite consistent across raters when lacking additional information (Willis and Todorov 2006). In both studies, we use shots of individuals facing forward and smiling.

13 These items include their comfort discussing politics with them, how persuasive they felt the person might be, how knowledgeable they seemed to be about politics, and how likely the respondent would be to go to them to discuss politics. All questions were asked in random order. Question wording for all items is listed in the Appendix.

14 Study 2, this means subjects were asked to evaluate two attractive men, two attractive women, two unattractive men, and two unattractive women on the four items described above.
These studies allow us to test the other half of the social interaction equation, by examining the extent to which individuals self-select into patterns of political discussion based upon the physical appearance of potential discussion partners. From the literature on the halo effect, we would expect that subjects would be more likely to rate attractive individuals more positively across all dimensions, given that more attractive people are seen, on average, to be more intelligent, capable, and better adjusted.

To analyze the impact of discussion partner appearance on preferences for political discussion, we create additive indexes for each of the respective questions, and conduct difference of means tests, comparing favorability of individuals across levels of attractiveness. For each outcome being evaluated, the dependent variable is coded such that low values convey more negative impressions of the presented individuals, and higher values more positive impressions.\textsuperscript{15} The results of these analyses appear in Table 3. For each of the comparisons, we see that more attractive respondents are viewed more positively, with subjects perceiving them, on average, as more persuasive, being more comfortable to speak to about politics, as being more knowledgeable, and, most importantly, as someone they would be more likely to seek out to obtain more political information.

While the effects presented may be somewhat modest (around a third of a point on a five point scale), recall that they are the product of appearance alone, as respondents were given no other information about these individuals. Additionally, they appear to be quite robust. Given that our DVs were aggregated ratings of multiple individuals, we were concerned that the observed differences may be driven by ratings of a single individual. However, running the

\textsuperscript{15} For each item, subjects’ ratings are averaged, so the DV is scaled from 1 (most negative impression) to 5 (most positive impression).
analyses and iteratively excluding individuals does not change the statistical or substantive results.

We seek to replicate, and extend these results in Study 2, which utilizes a within-subjects design. Rather than being randomly assigned to evaluate either attractive or unattractive individuals, subjects in Study 2 were asked to evaluate both attractive and unattractive individuals, presented in random order. This allows us to evaluate how subjects differentiate between more and less attractive political discussion partners, and whether they display systematic patterns of preferences for more or less attractive individuals. Utilizing the same measures as above, we again conduct difference-of-means analysis across the four items. These results are presented in Table 4.

We see an identical pattern of results across both studies. All else equal, we see that individuals are more positively disposed to more attractive discussion partners. Not only do they find them on average to be more persuasive and knowledgeable about politics, but would also be more comfortable discussing politics with them, and would be more likely to seek them out to get more information about politics. The effect sizes are somewhat larger than those reported in Study 1, likely due to the mental comparisons subjects are making when evaluating more and less attractive individuals at the same time. These effects are also robust; when we account for subject gender, education, political knowledge, and cognitive complexity (as measured by the Cognitive Reflection Task designed by Shane Frederick (2005), our results remain unchanged. Question wording for the knowledge and cognition items are listed in the Appendix).

Taken together, the observational and experimental results suggest powerful biases at work in the minds of citizens. More attractive individuals are seen as more politically knowledgeable, and are more likely to attempt to persuade others, despite not necessarily
knowing more about politics. And, on the other side, individuals are more likely to seek these individuals out for political information, and give greater weight to what they have to say. These findings paint a normatively troubling picture for how we think about the role of political expertise and how political information is disseminated.

Conclusions

Does attractiveness matter in political life? Surely, the halo effect that is present in everyday social interactions permeates the political world as well. Yet political science research has focused largely on elite-level candidate attractiveness, ignoring the implications for mass-level political behavior. Building upon the belief that attractiveness should also influence mass politics, we show that halo effects increase ratings of political knowledge and intelligence even for individuals who score poorly on objective measures of political information – an attractiveness premium. This effect is present even though interviewers are trained to conduct interviews in an objective and unobtrusive manner as possible. Using a unique data artifact from the ANES, as well as a pair of survey experiments, we have uncovered evidence that physical attractiveness affects not only social interactions, but political interactions as well.

Perceived attractiveness plays a prominent role in shaping social interactions, priming positive emotions on the part of persons interacting with attractive others, as well as leading to the ascription of several socially desirable traits. Attractive individuals are seen as being more personable, agreeable, hardworking, and competent in the social world. The findings of our observational and experimental studies add another dimension to the social influence of physical appearance – perceived competence in the political domain, as individuals would seem to be more likely to ascribe knowledge to more attractive individuals, even with evidence to the
contrary, as well as being much more willing to seek these individuals out and accept their advice with regards to politics.

With attention to and interest in politics at a premium among the public, political experts hold influential positions in the political discourse, as the uninformed are thought to turn to their better-informed friends and acquaintances to help overcome their informational shortcomings when forced to actually come to decisions about things political. The end result is that the less-informed have their perceptions of the political world shaped and their voting decisions influenced by those they perceive to be credible others. If those perceptions of expertise are mistaken beliefs influenced by an individuals’ physical appearance, many poorly informed individuals might simply be being lead astray as they seek to upgrade their political knowledge.

The body of evidence we present would seem to confirm these normative concerns. Not only are more attractive individuals seen as better informed, they are also more likely to attempt to persuade others, particularly when they lack information! Additionally, other citizens are more likely to turn to them as sources of political information, and see them as much more persuasive when compared to less attractive individuals, knowing nothing else about their actual political expertise. Given the premium we place on an informed and engaged electorate, and the tendency of the less-informed to turn to those they perceive to be experts to mitigate shortcomings in information, the attractiveness premium we have uncovered suggests that many citizens, when seeking information, may be lead astray.

We must acknowledge some caveats to the results. As with previous work examining the potential for interviewer biases in evaluations of respondents, we lack key characteristics of the interviewer that could be used to further enhance the analyses. At the very least, we would like to control for correspondence of characteristics between interviewers and respondents, such as
age and gender, which could be factors that influence their subjective evaluations of the respondents’ appearance. Regrettably, the ANES has not been able to recover interviewer characteristics for the 1972-1976 panel study. We may answer these concerns at least in part with the experimental studies, in which we were able to control for demographic matches (and mismatches) between rater and rate, which has been shown to have no significant effect.

Methodologically, we also must face the possibility of endogeneity in our observational study of the ANES. While we posit, as evidenced by previous research, that the causal arrow runs from perceptions of attractiveness to perceptions of intelligence and knowledge. However, it is possible that the causal arrow runs the other direction; political sophisticates may be considered more attractive than the uninformed. Hence, at the culmination of a long interview, the views of a respondents’ competence (or lack thereof) may affect how their physical characteristics are assessed. Appealing as it may be for us as political scientists to believe that political knowledge might drive perceptions of attractiveness, we feel this view is unlikely, given the extensive theoretical literature positing the arrow running in the other direction.

Additionally, since we see persisting (albeit somewhat diminished) effects for respondent attractiveness on their perceived knowledge even among interviewers who were not asked to rate their attractiveness in the 1974 and 1976 waves, we have at least modest evidence to discount the endogeneity concern. This supposition is strengthened by our experimental results, as subjects inferred political knowledge simply based upon physical appearance.

As it stands, our analysis provides a test of halo effects in political behavior. Given the normative importance of knowledge for citizens to comprehend and participate in democratic politics, the presence of halo effects contributes to understanding how attractiveness alters political interactions. With the influence of perceived expertise in the communication of
political knowledge, these findings speak to practical and normative challenges in relying on political experts as a cognitive shortcut in collective deliberation, especially when expertise may be biased by physical attractiveness. Though most students of political behavior would acknowledge that attractiveness matters in politics, future research should work to uncover further tests of how attractive shapes our political interactions and perceptions of others beyond the elite level.
Figure 1. Mean Interviewer Evaluations of Knowledge by Physical Attractiveness
Figure 2. Attractiveness and Evaluations of Political Information
Figure 3. Attractiveness, Knowledge, and Political Persuasion
<table>
<thead>
<tr>
<th></th>
<th>1972 Wave</th>
<th>1974 Wave</th>
<th>1976 Wave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.87**</td>
<td>0.40*</td>
<td>0.67**</td>
</tr>
<tr>
<td></td>
<td>(0.16)</td>
<td>(0.20)</td>
<td>(0.20)</td>
</tr>
<tr>
<td>Political Information</td>
<td>1.50**</td>
<td>0.65**</td>
<td>1.09**</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.10)</td>
<td>(0.13)</td>
</tr>
<tr>
<td>Republican</td>
<td>-0.03</td>
<td>-0.01</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.07)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Independent</td>
<td>0.05</td>
<td>0.07</td>
<td>-0.23</td>
</tr>
<tr>
<td></td>
<td>(0.11)</td>
<td>(0.13)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Partisan Extremity</td>
<td>0.30**</td>
<td>0.35**</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.13)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Education</td>
<td>1.30**</td>
<td>1.49**</td>
<td>1.34**</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.14)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Income</td>
<td>0.41**</td>
<td>0.77**</td>
<td>0.33*</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.14)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Social Class</td>
<td>0.06</td>
<td>0.14</td>
<td>0.36+</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.18)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Age</td>
<td>0.53**</td>
<td>1.10**</td>
<td>0.46*</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.16)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Race</td>
<td>-0.18+</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.13)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.36**</td>
<td>-0.15*</td>
<td>-0.26**</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>Cooperation with Interview</td>
<td>-0.22*</td>
<td>0.10</td>
<td>-0.28</td>
</tr>
<tr>
<td></td>
<td>(0.11)</td>
<td>(0.33)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Suspicion of Interview</td>
<td>3.06**</td>
<td>3.14**</td>
<td>2.78**</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.23)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>Interest in Interview</td>
<td>0.36**</td>
<td>0.31+</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.18)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Response Sincerity</td>
<td>-0.14</td>
<td>1.05**</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.37)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Interview Length</td>
<td>1.55</td>
<td>2.33</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.40)</td>
<td>(0.29)</td>
</tr>
<tr>
<td>Cut 1</td>
<td>2.98</td>
<td>3.71</td>
<td>1.59</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.39)</td>
<td>(0.49)</td>
</tr>
<tr>
<td>Cut 2</td>
<td>4.58</td>
<td>5.26</td>
<td>3.01</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.40)</td>
<td>(0.49)</td>
</tr>
<tr>
<td>Cut 3</td>
<td>6.12</td>
<td>6.70</td>
<td>4.68</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.43)</td>
<td>(0.51)</td>
</tr>
<tr>
<td>Cut 4</td>
<td>1219.06</td>
<td>719.84</td>
<td>629.13</td>
</tr>
<tr>
<td>Wald $\chi^2$</td>
<td>2407</td>
<td>1382</td>
<td>1141</td>
</tr>
</tbody>
</table>

Cell values are point estimates from an ordered probit regression. DV: subjective ratings of respondents’ levels of political information: 1 (very low) to 5 (very high). + p<0.10; * p<0.05; ** p<0.01.
Table 2. Attractiveness Bias in Political Persuasion

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td><strong>0.58</strong></td>
<td><strong>0.88</strong></td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.24)</td>
</tr>
<tr>
<td>Political Information</td>
<td><strong>1.18</strong></td>
<td><strong>1.96</strong></td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.51)</td>
</tr>
<tr>
<td>Attractiveness x Information</td>
<td>-</td>
<td>-1.38+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.82)</td>
</tr>
<tr>
<td>Republican</td>
<td>-0.04</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>Independent</td>
<td><strong>-0.36</strong></td>
<td><strong>-0.36</strong></td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.12)</td>
</tr>
<tr>
<td>Partisan Extremity</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Education</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Income</td>
<td>0.14</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.13)</td>
</tr>
<tr>
<td>Class</td>
<td><strong>0.47</strong></td>
<td><strong>0.47</strong></td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.13)</td>
</tr>
<tr>
<td>Age</td>
<td><strong>-0.66</strong></td>
<td><strong>-0.67</strong></td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>Race</td>
<td>-0.06</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.10)</td>
</tr>
<tr>
<td>Gender</td>
<td><strong>-0.16</strong></td>
<td><strong>-0.16</strong></td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Constant</td>
<td><strong>-1.04</strong></td>
<td><strong>-1.20</strong></td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Wald $\chi^2$</td>
<td>227.74</td>
<td>243.05</td>
</tr>
<tr>
<td>N</td>
<td>2011</td>
<td>2011</td>
</tr>
</tbody>
</table>

Cell values are point estimates from a probit regression, with standard errors clustered by interviewer ID in parentheses. DV: did R try to influence others’ vote (1 – yes, 0 no). + p<0.10; * p<0.05; ** p<0.01.
Table 3. Attractiveness Bias in Political Discussion (Study 1)

<table>
<thead>
<tr>
<th></th>
<th>Persuasive</th>
<th>Comfortable</th>
<th>Knowledgeable</th>
<th>Seek Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>1.90</td>
<td>2.02</td>
<td>1.92</td>
<td>1.60</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Control</td>
<td>1.61</td>
<td>1.68</td>
<td>1.67</td>
<td>1.32</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Difference</td>
<td><strong>0.29</strong></td>
<td><strong>0.33</strong></td>
<td><strong>0.25</strong></td>
<td><strong>0.29</strong></td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.08)</td>
<td>(0.07)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>N</td>
<td>206</td>
<td>204</td>
<td>205</td>
<td>207</td>
</tr>
</tbody>
</table>

Cell values are means (with standard errors in parentheses). DV coded from 1 (most negative impression) to 5 (most positive impression). + p<0.10; * p<0.05; ** p<0.01.
Table 4. Attractiveness Bias in Political Interaction (Study 2)

<table>
<thead>
<tr>
<th></th>
<th>Persuasive</th>
<th>Comfortable</th>
<th>Knowledgeable</th>
<th>Seek Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractive</td>
<td>2.06 (0.04)</td>
<td>2.09 (0.05)</td>
<td>2.02 (0.04)</td>
<td>1.70 (0.05)</td>
</tr>
<tr>
<td>Unattractive</td>
<td>1.55 (0.04)</td>
<td>1.66 (0.05)</td>
<td>1.70 (0.04)</td>
<td>1.32 (0.04)</td>
</tr>
<tr>
<td>Difference</td>
<td>0.51** (0.04)</td>
<td>0.43** (0.04)</td>
<td>0.31** (0.04)</td>
<td>0.38** (0.04)</td>
</tr>
<tr>
<td>N</td>
<td>210</td>
<td>211</td>
<td>209</td>
<td>211</td>
</tr>
</tbody>
</table>

Cell values are means (with standard errors in parentheses). DV coded from 1 (most negative impression) to 5 (most positive impression). + p<0.10; * p<0.05; ** p<0.01.
Appendix

Political Knowledge Items

Respondents were asked their own position on the following items, and then were asked to place the Republican and Democratic parties on the same issue. Responses were coded as 1 (correct) if respondents placed the Democratic party to the left of the Republican party, and 0 otherwise. Respondents were not asked to place the parties if they did not have a position on the issue, and were thus coded as 0 as well.

1972 wave
- Position on guaranteed job and standard of living scale
- Position on change to tax rate scale
- Position on Vietnam withdrawal scale
- Position on government action against inflation scale
- Position on legalization of marijuana scale
- Position on school busing to achieve integration scale
- Position on government versus private health insurance plan scale
- Position on pollution from private industry scale
- Position on equal role for women scale

1974 wave
- Position on guaranteed job and standard of living scale
- Position on handling urban unrest scale
- Position on rights of the accused scale
- Position on school busing to achieve integration scale
- Position on government aid to minorities scale
- Position on liberal/conservative views scale

1976 wave
- Position on guaranteed job and standard of living scale
- Position on Rights of the accused scale
- Position on school busing to achieve integration scale
- Position on government aid to minorities scale
- Position on government medical insurance plan scale
- Position on liberal/conservative views scale
Experimental Survey Items

Social Interaction Battery
Subjects were asked these items presented in random order. All questions were accompanied by the image of the person they were ostensibly evaluating.

1. How persuasive would you say this person is?
2. How comfortable would you be talking about politics with this person?
3. How knowledgeable about politics would you say this person is?
4. How likely would you be to go to this person to get more information about politics?

Political Knowledge Battery
1. What job or political office is held by Mitch McConnell?
2. What job or political office is held by Elena Kagan?
3. What job or political office is held by Eric Holder?

Cognitive Reflection Test Battery
1. A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?
2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?
3. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?
Screenshot of Experimental Manipulation

How comfortable would you be talking about politics with this person?

- Very Comfortable
- Somewhat Comfortable
- Neither Comfortable nor Uncomfortable
- Somewhat Uncomfortable
- Very Uncomfortable
References


