You’ve got mail: Using e-mail to examine the effect of prejudiced attitudes on discrimination against Arabs

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Abstract

This study examined subtle forms of discrimination directed towards Arabs. Participants were sent a “lost” e-mail intended for someone else. The surname of the intended recipient was either of Arab or European descent. The e-mail stated the recipient was or was not awarded a prestigious 4-year scholarship, and that a response was required within 48 h. Participants had completed a measure of prejudiced attitudes toward Arab-Americans two weeks before they received the lost e-mail. In comparison to less prejudiced individuals, more prejudiced individuals were less likely to return a lost e-mail stating that an Arab had won a scholarship and were more likely to return a lost e-mail stating that an Arab had not won a scholarship.

On September 11, 2001, four airplanes were hijacked. Two planes hit the World Trade Center in New York City; one plane hit the Pentagon in Washington, DC; and one plane crashed in a Pennsylvania field. In the end, over 3000 people had died (CNN News, 2002). Once the identity of the hijackers was learned, 19 males of Arab descent residing in the United States, Arabs residing in the United States feared they would be targets of retaliatory attacks. Almost immediately, the media and government officials urged Americans to act with tolerance and restraint towards Arabs. Former New York City mayor Rudolf Giuliani informed the public “...hatred, prejudice, and anger is what caused this [terrorist attacks]. We should act bravely and in a tolerant way” (American Civil Liberties, 2001). Despite such appeals, there was strong backlash against Arabs in the United States (American Civil Liberties, 2001; CNN News, 2001). For example, Arabs were removed from airplanes without probable cause, out of fear they might be terrorists. Women in headscarves were jeered and insulted. Mosques were sprayed with graffiti and with bullets.

Prejudice and discrimination against Arabs living in the United States has increased dramatically since the September 11, 2001 attacks. Highly visible forms of discrimination (e.g., vandalism, assault) are still relatively rare. The pleas from the government, civil liberties groups, and others imply that such acts are socially, and legally, unacceptable. However, less visible forms of discrimination persist. For example, in the year following the September 11, 2001 attacks, the Equal Opportunity Employment Commission received over 706 complaints of workplace discrimination against Arab-Americans, 383 more than the year before the attacks (Equal Opportunity Employment Commission, 2001). In workplace discrimination cases, it is often unclear if the disputed action (e.g., job termination) is motivated by prejudiced or by non-prejudiced causes (e.g., poor job performance). The present research focuses on less visible forms of discrimination against Arabs.

Origins of prejudice and discrimination

Prejudice directed towards minority group members is one of the most studied topics in social psychology.
Prejudice against individuals of Arab descent

Very few studies have addressed discrimination against individuals of Arab descent. A few studies (Bar-Tal, 1996; Bar-Tal & Labin, 2001; Eshel, 1999; Teichman, 2001) have examined Jewish-Israeli prejudice and aggression towards Arabs who live in the Middle East, where there is strong Anti-Arab sentiment. However, there is a dearth of research examining prejudice and discrimination towards Arabs who live in the United States. In light of the terrorist attacks on September 11, 2001, and the apparent backlash against Arabs, such research is desperately needed. Moreover, research must focus on less visible forms of discrimination against Arabs, because more visible forms of discrimination are unlikely to be exhibited (Crosby, Bromley, & Saxe, 1980).

Present research

Milgram (1977) used the “lost e-mail” technique to examine prejudice towards socially undesirable groups. Milgram dropped self-addressed, stamped envelopes around a college campus, and counted the number of lost letters that were mailed. People mailed more letters addressed to socially desirable groups (e.g., a medical research group) than to socially undesirable groups (e.g., a communist organization).

Stern and Faber (1997) modified the lost letter technique to capitalize on a new means of communication—e-mail. Participants received an e-mail meant for another individual. The dependent measure was whether or not participants returned the e-mail message to the original sender, pointing out the error. The lost e-mail technique can subtly assess the effect of racist attitudes on behaviors. Demand characteristics and socially desirable responding are minimized by moving the study out of the lab. The technique is also high in face validity. E-mail is a popular means of communication, and receiving a misaddressed e-mail is not uncommon.

In the present study, participants (all European-Americans) received an e-mail message addressed to a person with an Arab surname (e.g., Mohammed or Hassan Hameed) or a European-American surname (e.g., Peter or Jullianne Brice). The e-mail stated that the intended recipient either had or had not received a prestigious 4-year college scholarship (positive and negative feedback, respectively). The e-mail requested a reply within 48 h.

The lost e-mail technique was used to measure discrimination. Failing to return the e-mail stating that an Arab had won a scholarship would prevent him or her from getting the scholarship. This could cost the Arab tens of thousands of dollars. Failing to offer help has been used to assess racism in past research (Crosby et al., 1980; Gaertner & Bickman, 1974). Also, returning an e-mail stating that an Arab had not received a scholarship would ensure that he or she would receive this unpleasant news.

Participants completed a measure of prejudiced attitudes toward Arabs two weeks before they received the e-mail message. In comparison to less prejudiced individuals, we expected more prejudiced individuals to be less likely to return a lost e-mail stating that an Arab had won a scholarship and to be more likely to return a lost e-mail stating that an Arab had not won a scholarship.

Methods

Participants

Participants were 512 college students (194 men, 318 women) enrolled in introductory level psychology classes.

Procedure

Two weeks prior to the study, 940 college students (427 men, 513 women) completed a large battery of questionnaires. Obtaining consent using traditional methods was not possible. Thus, one of the questionnaires asked students if they would be willing to participate in an “unsolicited e-mail study.” This question was embedded in a number of related questions (e.g., whether they would be willing to participate in an unsolicited phone study, an unsolicited mail study, or an
unsolicited door-to-door study). A “yes” response to the question was considered voluntary consent.

A measure of prejudiced attitudes was also included in the battery of questionnaires. A modified form of the Anti-Semitism Scale was used (Levinson & Sanford, 1944). The original 22-item scale assessed negative sentiment towards individuals of Jewish faith. We used 11 of the items that could be generalized to other ethnic groups for the revised scale (see Appendix A). Due to the sensitive nature of the statements, and to minimize demand characteristics, we asked students to evaluate 5 ethnic groups (i.e., Arab-, African-, Asian-, European-, and Hispanic-Americans) on the 11 statements, yielding a 55-item scale. Each statement was rated on a 10-point scale ranging from 1 (strongly disagree) to 10 (strongly agree). Responses for each ethnic group were summed to create prejudice scores.

Also, participants were asked their ethnicity during the mass-testing session. Because we wanted to compare discrimination against European-American and Arab targets, only individuals who described themselves as white, non-Latino were selected for participation. Thus, the European-American target was always an ingroup member for participants.

Individuals who: (a) gave consent, (b) had an Arab-American prejudice score, and (c) were white, non-Latino were considered potential participants. In all, 54% of students met these criteria. The Iowa State University on-line directory was used to obtain the e-mail addresses of potential participants.

On April 22, 2002, two weeks after they completed the battery of questionnaires, participants received a “lost e-mail” (see Appendix B). Male participants always received an e-mail addressed to a female (i.e., Mohammed Hameed or Peter Brice), whereas female participants always received an e-mail addressed to a male (i.e., Hassan Hameed or Jullianna Brice). The outcome variable was whether or not participants replied back to the ostensible sender of the e-mail, the Chair of the Scholarship Committee, to report the misaddressed e-mail. Even though a 48-h response was requested, participants were given one week to reply. However, all participants who responded did so within 48 h. After one week, participants received a full debriefing statement. Researcher contact information was provided in the debriefing, but no participants used the contact information.

**Results**

**Preliminary analyses**

**Sex differences**

Women were more likely to forward lost e-mail messages than were men, 25.5 and 15.5%, respectively. Men and women, however, responded similarly to the feedback and target ethnicity manipulations, ps > .2. Thus, the data for men and women were combined.

**Prejudice score differences**

Participants had higher Arab-American prejudice scores than African-American, Asian-American, and Hispanic-American prejudice scores, ts(511) = 13.69, 14.52, and 9.23, ps < .001, respectively, ds = 1.21, 1.28, and 0.82, respectively (see Table 1). Thus, participants had stronger feelings of prejudice toward Arab-Americans than toward other ethnic groups.2

Prejudice scores among the different ethnic groups were also highly correlated (see Table 1). Participants who disliked Arab-Americans also tended to dislike African-Americans, Asian-Americans, and Hispanic-Americans.

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Table 1
Correlations among prejudice scores for different ethnic groups

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Arab-American</td>
<td>-</td>
<td>.74* (93)</td>
<td>.76* (95)</td>
<td>.69* (95)</td>
<td>.78* (95)</td>
</tr>
<tr>
<td>African-American</td>
<td>-</td>
<td>-</td>
<td>.86* (95)</td>
<td>.75* (95)</td>
<td>.87* (95)</td>
</tr>
<tr>
<td>Asian-American</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.80* (96)</td>
<td>.89* (96)</td>
</tr>
<tr>
<td>European-American</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.76* (95)</td>
</tr>
<tr>
<td>Hispanic-American</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

Note. N = 512. *p < .05. Means, standard deviations (in parentheses), and α coefficients are on diagonal. Prejudice scores for all ethnic groups could range from 11 to 110.

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2 Nonparticipants also had stronger feelings of prejudice toward Arab-Americans than toward other ethnic groups. Of the 428 nonparticipants, 294 were white, non-Latino and had completed the prejudice scales. These 294 nonparticipants had higher Arab-American prejudice scores (M = 34.00, SD = 18.3) than African-American (M = 26.7, SD = 16.7), Asian-American (M = 26.3, SD = 16.2), and Hispanic-American (M = 29.5, SD = 18.8) prejudice scores, ts(293) = 10.12, 11.87, and 6.36, ps < .001, respectively, ds = 1.18, 1.39, and 0.74, respectively.
Primary analyses

Because the outcome variable was dichotomous (i.e., response vs. no response to the e-mail from the ostensible Chair of the Scholarship Committee), the data were analyzed using logistic regression analysis. Indicator variables were used to code type of feedback (0 = positive, 1 = negative) and ethnic background of target (0 = European, 1 = Arab). Arab-American prejudice scores were coded as a continuous variable (scores could range from 11 to 110; actual scores ranged from 11 to 79).

We predicted that the ethnicity of the target would influence the odds of a reply, but that the effect of target ethnicity would depend on how prejudiced the participants were and on whether the feedback was positive or negative. Thus, we predicted a three-way interaction between target ethnicity, prejudicial attitudes, and type of feedback. This model included as predictor variables target ethnicity, prejudicial attitudes, type of feedback, as well as all possible interactions between these predictor variables. In addition, we were interested in testing the effect of prejudice on the odds of replying for each of the four conditions, separately. A logistic model was estimated to isolate these simple main effects as well as the three-way interaction (see Jaccard, 2001).

Simple main effects of prejudice

The effect of prejudicial attitudes on the odds of replying to the lost e-mail was statistically significant in two of the four conditions. As expected, it was statistically significant when the e-mail stated that an Arab applicant had received the scholarship (Wald statistic = 8.49, exponent of logistic coefficient = 0.952, 95% CI for exponent of the coefficient = 0.921–0.984, \( p < .004 \)). The logistic coefficient indicates an inverse relationship between the odds of replying and prejudice, such that more prejudiced individuals were less likely to return the lost e-mail stating that an Arab had won the scholarship. Specifically, for every one unit that prejudice increased, the odds of replying were reduced by a multiplicative factor of 0.949. For example, when the prejudice score was 15, the predicted odds of replying was 0.491 (corresponding to a probability of replying of .329), when the prejudice score was 30 (near its mean), the predicted odds of replying was 0.235 (corresponding to a probability of replying of .190), and when the prejudice score was 45 (about one standard deviation above its mean), the predicted odds of replying was 0.116 (corresponding to a probability of replying of .051).

The other two simple main effects were not statistically significant. For the lost e-mail stating that a European-American had won the scholarship, the Wald statistic testing the relationship between the odds of replying and prejudice was 2.427 (exponent of logistic coefficient = 0.980, 95% CI for exponent of the coefficient = 0.955–1.005, \( p < .119 \)). For the lost e-mail stating that an Arab had not won the scholarship, the corresponding Wald statistic was 0.549 (exponent of logistic coefficient = 1.010, 95% CI for exponent of the coefficient = 0.985–1.034, \( p < .441 \)).

Three-way interaction

The three-way interaction involves a focal independent variable, a first-order moderator, and a second-order moderator (Jaccard, 2001). The focal independent variable in the analysis is target ethnicity (i.e., Arab vs. European-American target). The first order moderator, prejudicial attitudes toward Arab-Americans, moderates the effect of the focal independent variable on the outcome variable. The second order moderator, type of feedback (i.e., positive vs. negative) impacts the way that the first order moderator “moderates” the relationship between the focal independent variable and the outcome variable. When the second order moderator is qualitative, the three-way interaction is illustrated by presenting two-way plots at each level of the second order moderator (Jaccard, 2001). The plot for positive feedback is depicted in Fig. 1A, whereas the plot for negative feedback is depicted in Fig. 1B.\(^3\) For ease of interpre-

\(^3\) Although we did not make any predictions for two-way interactions, they are reported here for interested readers. The two-way interaction between target ethnicity and prejudicial attitudes was not statistically significant for the positive feedback condition (Wald statistic = 1.82, exponent of logistic coefficient = 0.97, 95% CI for exponent = 0.93–1.01, \( p < .18 \)). The two-way interaction between target ethnicity and prejudicial attitudes was statistically significant for the negative feedback condition (Wald statistic = 5.64, exponent of logistic coefficient = 0.913, 95% confidence interval for exponent = 0.855–0.976, \( p < .018 \)).
the figures are presented as odds rather than as log odds.

The coefficient for the three-way interaction was statistically significant (Wald statistic = 7.24, exponent of logistic coefficient = 1.095, 95% CI for exponent of the coefficient = 1.03–1.17, p < .007). People with low prejudice scores were just as likely to return a lost e-mail containing positive feedback when the target was Arab as when the target was European-American (see Fig. 1A). This also tended to be true for a lost e-mail containing negative feedback (see Fig. 1B). By contrast, people with higher prejudice scores showed a differential pattern of replying depending on the type of feedback. When the lost e-mail contained positive feedback, the odds of replying tended to be higher when the target was European-American as opposed to Arab as opposed to European-American (see the distance between lines at the corresponding points in Fig. 1B).

Discussion

The current study examined discrimination directed towards an understudied minority group, Arabs. The results suggest that high prejudice individuals discriminate against Arabs. When high prejudiced individuals received a lost e-mail stating that an applicant had received a very prestigious 4-year scholarship, they were less likely to return the e-mail to the sender if the applicant was Arab than if the applicant was European-American. If the applicant did not respond to the lost e-mail within 48 h, he or she would lose a scholarship worth tens of thousands of dollars. In contrast, when high prejudice individuals received a lost e-mail stating that an applicant had not received the prestigious scholarship, they were more likely to return the e-mail to the sender if the applicant was Arab than if the applicant was European-American. Returning the e-mail containing this negative news increased the chance the applicant would feel angry, sad, or disappointed over not receiving the scholarship. Less prejudiced individuals did not discriminate against the Arab recipients when passing on either positive or negative feedback.

There is normative pressure in the United States to be nonprejudiced (Dunton & Fazio, 1997; Plant & Devine, 1998). Because the government and civil rights organizations urge tolerance towards Arabs, prejudiced individuals may use less visible forms of discrimination to harm Arabs. In the current study, the potential for social ramifications against discriminatory behavior was small. First, we created a sense of anonymity. If participants did not respond, they were unidentifiable. Second, any discriminatory behavior is logically explainable. Several reasons unrelated to recipient ethnicity (e.g., fear of a virus) can explain why individuals did not return a positive e-mail message. Also, individuals could return a misdirected e-mail with negative information for innocuous reasons (e.g., ensure the message got to its rightful target).

Measuring discrimination in the digital age

The current study uses a new procedure, the lost e-mail technique, to investigate discriminatory behavior. This technique has at least four strengths. First, many individuals, especially college students, use e-mail on a regular basis, and receiving an e-mail in err is not uncommon. Second, unlike the laboratory, individuals are not aware they are participating in a psychological study. Thus, their response cannot be influenced by
demand characteristics. This is important when measuring discriminatory behavior. If people avoid overt discrimination to avoid social ramifications, they might monitor their discriminatory behavior closely if they believe the study is related to race. Third, highly visible forms of interracial discrimination are relatively rare. The lost e-mail procedure provides a technique for measuring less visible forms of prejudice, which reduces socially desirable responding. Fourth, the lost e-mail technique mirrors subtle "real world" discriminatory tactics, such as failing to return an important phone call.

Limitations

Although the lost e-mail technique is innovative, it does have at least four drawbacks. First, the overall response rate was low (22%). Most individuals chose not to respond, for reasons that are unknown. Second, it is possible that individuals who responded and failed to respond to the e-mail represent two different populations, thus limiting the generalizability of our results. Third, we do not know directly the intentions of participants. Fourth, the target ethnicity manipulation was subtle; we simply changed the addressee's name on the e-mail. Though the ethnicity of the Arab surname likely was salient, we do not know what ethnicity the participants perceived the European name to be.

Conclusion

Thousands of people died because of the September 11, 2001 terrorist attacks. Americans were both scared and angry, which increased prejudiced feelings and discriminatory behavior against Arabs. The current study used a novel procedure, the lost e-mail technique, to demonstrate that prejudiced individuals discriminate against Arabs when they can remain anonymous. By identifying and understanding less visible discrimination techniques individuals might use, society might be better able to protect the rights of innocent Arabs.

Appendix A

This is the measure used to assess prejudice against ethnic groups. Only the Arab-American items are listed. The same items were given for African-, Asian-, Hispanic-, and European-Americans.

<table>
<thead>
<tr>
<th>Item</th>
<th>Arabic-Americans</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Arab-Americans have moral standards that they apply in their dealing with each other, but with non-Arab-Americans, they are unscrupulous, ruthless, and undependable.</td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

Appendix B

This is the text of the positive feedback e-mail message. The negative feedback e-mail message was identical except for the changes noted in square brackets.

Dear <Mr./Ms.> <Arab name/European name>,

Thank you for applying for a Glassner Foundation Scholarship. As you know, these scholarships are highly competitive and are given only to a few select individuals. They cover tuition for four years at a state-funded university. There is also an additional $500 per year stipend for students to spend on academic related supplies (e.g., books). This scholarship is available ONLY for students planning to attend a state-funded university.

Because of the large number of applicants, this year we are late in sending out these notices. Because of the time sensitive nature of this material, we wanted to immediately inform you of the committee’s decision regarding your application. We realize that our decision may affect your decision to attend a state-funded or private institution.

We are happy to inform you that you have been selected to receive a Glassner Foundation Scholarship. Congratulations! Only the most qualified individuals receive this scholarship. [We regret to inform you that you have not been selected to receive a Glassner
Foundation Scholarship. We are sorry, but many highly qualified individuals do not receive this scholarship.]

We ask that you respond to this e-mail within 48 h to inform us whether you will formally accept our scholarship offer. Due to the high number of qualified applicants, we would like to extend offers to other students on our waiting list if you choose to decline our scholarship. [Though you did not receive the Glassner Foundation Scholarship, please respond to this message to let us know if you would like to remain on our waiting list if you choose to decline our offer.]

Thank you for applying for the scholarship. We look forward to receiving your response within 48 h.

Sincerely,
Jill Cummings
Chair, Glassner Foundation Scholarship Committee.

References


