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First Impressions and the Reference Encounter: The Influence of Affect and Clothing on Librarian Approachability

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ABSTRACT

Whether or not a librarian appears approachable in public service environments is critical to providing excellent service, conveying a welcoming space, and encouraging library users to engage with one of the key intellectual venues on our campuses. This study used an image-rating method to assess the influence of affect and attire on patron impressions of librarian approachability. Findings suggest that librarian behaviors do matter, with specific treatments resulting in increased or decreased perceptions of approachability. These findings not only support common sense assessments that an attentive and welcoming environment is essential to encouraging patrons to engage with librarians; they also provide information on specific behaviors that affect approachability, allowing librarians to distinguish between a range of presentation styles that can be readily employed in public service.

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INTRODUCTION

Among the American Library Association's recommendations for the behavioral performance of information service providers, an essential component of a successful reference encounter is that a librarian be approachable (ALA, 2004). A judgment of approachability is a first impression, and has an enduring effect on the perceiver's experience (Fiske, Lin, & Neuberg, 1999). Whether or not a librarian appears approachable in public service environments is critical to providing excellent service, conveying a welcoming space, and encouraging library users to engage with one of the key intellectual venues on our campuses. Most empirical studies of reference interactions have focused on communications that take place after patrons have initiated contact with a librarian. The crucial moments in which a patron decides whether or not to approach a librarian to ask for help have the potential to influence, and even increase, our level of meaningful engagement with library users. This paper presents an image-rating study of librarian behaviors that can affect impressions of approachability prior to the reference transaction, and that can be applied at the reference desk and other points of service.

BACKGROUND

There is a wealth of library and information research that analyzes reference desk behaviors and patterns, and their effects on the reference encounter (see Richardson, 2002 for a review of more than 150 studies). However, analyses tend to focus on questions of user satisfaction with reference service, the types of questions users ask librarians, the accuracy of information sharing during the reference interaction, or certain types of reference behaviors that are central to successful interactions. That is to say, these studies do not expressly focus on factors of approachability, and most of them examine users' interests and behaviors after patrons have initiated contact with a librarian.

Several studies have specifically focused on demographic trends that influence users' decisions to approach a librarian (Risner, 1990; Strickland & Bonnet, 2011; Bonnet & McAlexander, 2012). Such information is important to our understanding of the diverse experiences and expectations that users bring to our libraries, and provides insights into areas that need attention and outreach. However, these studies do little for the individual librarian who wishes to increase her/his own approachability.

A handful of observational studies have looked at behavioral trends that influence users' decisions to approach a librarian. Nonverbal behaviors in particular are essential to interpersonal communication and, consequently, to reference interactions, given that they are "irrepressibly impactful" (DePaulo, 1992). However, results of library studies that assessed behaviors and approachability have been mixed. Kazlauskas (1976) observed the body postures and facial expressions among staff at public service points in four academic libraries, assigning positive and negative characteristics of nonverbal communication to 148 interactions. The author concluded that librarians' positive nonverbal behavior (defined variably as eye contact, body posture and movement, and cheerfulness) yielded the same behavioral response from library users, also known as a contagion effect.

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Radford (1998) observed library users at two academic libraries, followed by 155 interviews of patrons after their engagement with staff at a reference desk. These interviews aimed to identify important characteristics that prompted a person's decision to approach a librarian. Interviewees reported that eye contact left the greatest impression on users, with nearly 24% commenting that it had a positive effect on their decision to approach the desk. Using a different experimental design, DeVore-Chew, Roberts, and Smith (1988) trained reference assistants in the use of certain nonverbal behaviors (facial expression, physical contact, and proximity to the patron) and observed 354 academic library users who approached the reference desk. They then distributed a questionnaire to these patrons that aimed to understand their perceptions of librarians and library facilities. Unlike the previous two studies, Devore-Chew et al. found no strong trend; specifically, positive nonverbal attributes did not demonstrate a statistically significant correlation to whom patrons chose to approach when asking for help at the reference desk.

These studies provide observational evidence of librarian behaviors that may affect patrons' decisions to approach the reference desk, with variable results that indicate a need for further study. In addition to the research mentioned above, Saxton (1997) used a quantitative approach to systematically examine variables associated with the ALA's guidelines for successful reference transactions, in order to predict factors that contribute to high levels of reference service in public libraries. These variables comprised librarian readiness, interest, understanding, and verification, and were combined into an aggregate factor of behavioral characteristics. These behaviors did affect three outcomes: transaction completeness, transaction usefulness, and patron satisfaction. However, given that readiness was one piece of an aggregate variable, it is unclear the influence of approachability *per se*, and questions remain as to the specific behaviors that make a librarian appear more approachable. Potter (2007) conducted exploratory research for her Master's thesis in which she incorporated behavioral and clothing treatments into a study specifically aimed at identifying factors of approachability among service providers in an academic library. The test data indicated that perceptions of librarian approachability were influenced by affect and clothing. However, the study only tested user perceptions of one librarian, so the observed trends potentially lack generalizability to the actual reference environment.

The above literature generally indicates that individual librarian behaviors can have an effect on patron perceptions of approachability. Largely missing from this body of research are controlled assessments for a wide range of librarians and patrons of specific factors that lead to user engagement with a librarian prior to the approach. The ALA guidelines provide valuable recommendations in the absence of much empirical data regarding librarian approachability, by advocating for behaviors that intuitively seem approachable (e.g., establish eye contact, smile, acknowledge patrons through the use of a friendly greeting) or by focusing on library position and movement (e.g., remain visible, be mobile, approach patrons). However, suggestions for ways that librarians can enhance their approachability would be bolstered by a deeper understanding of the factors that influence library users' perceptions of approachability.

To gain greater insight into behaviors that librarians can readily employ to increase their approachability, we conducted an image-rating study that systematically varied visible behaviors of hypothetical librarians. This study expands the research on approachability in libraries by focusing on two general categories of nonverbal communication: affect and clothing. For this image-rating study, we carefully balanced hypothetical librarian demographic characteristics (i.e., gender, age, and racial/ethnic affiliation), using a subset of previously rated images. We also tracked rater demographic characteristics. This design produced good experimental control of population and image variables that then facilitated the identification of specific behaviors that librarians can employ to increase their approachability.

APPROACHABILITY VARIABLES

The librarian behaviors tested in this study are described below, with accompanying hypotheses for their effects on librarian approachability.

Facial expression

The most studied behaviors in the scientific literature on approachability are those associated with facial expression. A happy or smiling facial expression has been demonstrated to increase the approachability of targets (Porter, Coltheart, & Langdon, 2007; Willis, Palermo, & Burke, 2011; Willis, Palermo, Burke, McGrillen, & Miller, 2010), with sincere smiles providing the greatest benefit (Miles, 2009). This may be related to smiling being associated with a positive affective state, as well as increased trait perceptions of trustworthiness (Oosterhof & Todorov, 2008), dominance, and affiliation (Montepare & Dobish, 2003). Smiling leads to a number of favorable outcomes in service settings, including positive assessments of the service provider and of service quality, as well as 'emotional contagion,' which refers to the client's embodiment of the service provider's affect (Pugh, 2001; Söderlund, 2008).

Women generally smile more often than men, with the magnitude of the difference between the sexes being affected by such factors as nationality, ethnicity, and age (LaFrance, Hecht, & Paluck, 2003). According to Hess, Adams, and Kleck (2004), this trend likely influences and is influenced by gender expectations for emotional expressivity. They found that these expectations, when controlling for facial appearance (i.e., when targets have the same androgynous face but have a gender-specific hair style), can lead to a contrast effect in which smiling men are actually perceived as happier than smiling women.

The above information creates a strong expectation that smiling will result in increased perceptions of approachability, versus a neutral expression. Based on the gender expectations for smiling, we hypothesize that the relative increase in approachability ratings from neutral expression to smiling will be greater for female targets than for male targets.

Direction of gaze

Direct eye contact with another person is a powerful social cue, allowing the perceiver to more quickly decode gaze-consistent emotions (e.g., "joyful" for direct eye contact and "sad" for averted eyes [Adams & Kleck, 2003]), and providing perceived approach-oriented emotion (e.g., anger versus fear [Adams & Kleck, 2005]). It follows that a librarian's averted direction of gaze should result in generally decreased approachability. What can be predicted with less certainty is whether the object of the librarian's attention, when not on the patron, influences the librarian's perceived approachability. Two principal, non-patron points of interest to which librarians often give attention at the reference desk are computers and books. It is feasible that each object may be associated with a different level of attention required of the librarian, which may affect her/his perceived approachability. A determining factor in this outcome may be age, as younger people are often considered to be more "natural" when viewing a computer, and vice versa for older populations. Another factor may be gender, given the prevalent stereotype that women are better at multitasking than men (Fasanya, McBride, Pope-Ford, & Ntuen, 2011; Buser & Peter, 2012; Ren, Zhou, & Fu, 2009).

For the direction of gaze variable, we predict (consistent with the ALA guidelines [ALA, 2004]) that averted eye contact will result in decreased approachability ratings for hypothetical librarians. We also predict that the object of librarian attention, either a computer or a book, will affect the magnitude of this decrease. Finally, we expect that this outcome will be influenced by the age and gender of the target.

Formality of clothing

Researchers in consumer science and in other disciplines have known for some years that first impressions of targets are influenced by the type of clothing worn by those targets. As summarized by Davis (1984), clothing affects perceptions of political attributes, sociability, ability, imagination, talent, and sincerity, with effects being consistently observed in situations where the varied clothing includes uniforms for widely known occupations (e.g., police officer, nurse). Likely, the influence of clothing on impression formation is related to stereotype activation associated with that clothing and other visible characteristics of the target, such as demographic attributes. Indeed, in a study of college business student perceptions of professors wearing different attires, Sebastian and Bristow (2008) observed that formal clothing increased the observed credibility ratings for male professors, but decreased the credibility ratings for female professors. Race may also be a factor, as one study of potential accountants-for-hire found evidence of an interaction between formality of clothing and race of the target (Khan et al., 2011). There is also evidence that the effect of clothing on impression formation varies based on the demographic characteristics of the perceiver, such as gender (Harris & Bays, 1973) and age (Engstrom, 1996; Albert, Wocial, Meyer, Na, & Trochelman, 2008).

Given the aforementioned findings, it is likely that formality of clothing will affect perceptions of hypothetical librarians. However, based on potentially changing stereotypes of librarians, it is not obvious whether formal clothing would be expected to increase or decrease their perceived approachability. Perhaps historically, librarians have tended to wear formal clothing, but observations of contemporary librarians show a wide variety of attire. As a result, a consistent stereotype for librarian attire may not be present across the user population. Rather, variations in perception may be dominated by demographic characteristics of the targets and perceivers.

For this study, we test a formal versus an informal shirt worn by a hypothetical librarian. Also, we include a treatment for a hypothetical librarian wearing a nametag. We predict that demographic characteristics will moderate any effect of formal clothing on perceived librarian approachability.

Clothing color

Color has social salience and carries meaning (Madden, Hewett, & Roth, 2000), and this phenomenon extends to the color of one's clothing. The color of clothing has been observed to affect perceptions of targets' attractiveness, aggressiveness, and dominance, with the colors red, black, and white generating consistent effects. Red and black clothing increase female and male attractiveness to opposite-sex perceivers, especially versus white clothing (Roberts, Owen, & Havlicek, 2010). In sports, black uniforms are considered to be more malevolent than uniforms with other predominant colors, with football and hockey teams that wear black uniforms more frequently penalized (Frank & Gilovich, 1988). Red uniforms for participants in four combat sports during the 2004 Olympic Games provided a competitive advantage (Hill & Barton, 2005).

As observed by an image-rating study by Roberts et al. (2010), red clothing showed the strongest contrast in conferring attractiveness versus the "least" attractive color, white. With attractiveness and approachability being correlated (Li, Halterman, Cason, Knight, & Maner, 2008; Langlois et al., 2000), we hypothesize that red clothing will confer higher approachability ratings to hypothetical librarians versus white clothing. Interestingly, while the color blue is consistently given favorable ratings in studies of color perception outside of the clothing context (Valdez & Mehrabian, 1994; Madden et al., 2000), the Roberts et al. study did not find a strong effect of this color on perceptions of target attractiveness. Blue is associated across multiple cultures with terms such as "peaceful," "gentle," and "calming"

(Williams, Morland, & Underwood, 1970), which may be more closely associated with approachability than attractiveness. In fact, a quick search of the internet for key words "color + clothing + approachable" identifies multiple claims that blue will increase the approachability of the wearer. To our knowledge, such claims lack systematic evidence and appear to be based on intuition and individual experience. Nonetheless, these assumptions may be an indicator of a phenomenon that can be observed with the image rating method used in this study. Therefore, we include blue in the clothing color manipulations among the images shown to participants.

METHODOLOGY

During the Spring of 2012, respondents at a large, Midwestern university system participated in an online survey aimed at better understanding approachability in a library context. Participants were asked to rate the approachability of a large, diverse set of images of hypothetical librarians. The images were systematically varied with respect to attire and affect, but balanced for image gender, age, and race. After completing the image-rating component of the survey, raters answered questions regarding their own demographic and personality characteristics.

Raters

This study yielded 1,015 raters from the 3-campus university system, and included 730 raters who identified as female, 282 as male, and 3 as transgender. Regarding racial/ethnic affiliation, 59 raters identified themselves as African American or Black, 144 as Asian or Asian American or Pacific Islander, 681 as White (non-Hispanic), and 131 in additional categories including "Other." Within the sample of 1,015 raters, 61% were undergraduate students, 27% graduate students, and 12% faculty, staff, or other affiliation. The total number of younger raters in the dataset was 879, versus 136 older raters. For this study, "younger" was categorized as less than or equal to 35 years of age. This is the age differentiation used by the American Library Association for young professionals (ALA, 2009) and emerging leaders (ALA, 2012). All statistical analyses used to assess differences between demographic categories (e.g., male versus female for the gender category) implicitly accounted for any uneven numbers of raters for those categories. The rater demographic categories used in the statistical analyses were: male versus female (gender), younger versus older (age), and White versus African American versus Asian versus Other (race). Note that transgender individuals were not included in the rater statistics for gender due to the small sample size.

Materials

In the Fall of 2011, the authors conducted a baseline assessment that consisted of an online image-rating study of 48 full color images of hypothetical librarians who displayed: neutral emotional expressions; clothing uniformity; and situational parity (facing forward, sitting at a desk with a computer on the desk). A detailed description of the baseline assessment, including image construction, is provided in Bonnet and McAlexander (2012). The faces for the 48 images were drawn from several image databases, in order to obtain a large set of faces with diverse demographic characteristics. The majority of the faces were downloaded from the National Institute of Standards and Technology Color FERET database (Phillips, Wechsler, Huang, & Rauss, 1998; Phillips, Moon, Rizvi, & Rauss, 2000), followed by small samples of faces from the University of Texas Center for Vital Longevity Database (Minear & Park, 2004) and the European Conference on Visual Perception (2008). Several stock photos were also purchased to ensure that equal numbers of demographic variability were present (i.e., gender, age range, and racial/ethnic affiliation). This assessment

was important to the current study design because it generated a large set of images with a baseline approachability rating.

A subset of 12 images was selected from the baseline data set for the current study. The mean baseline approachability rating for each of the 12 images was between 5.32 and 5.96 (scale of 1 to 10). The 12-image subset was balanced for gender, age, and race. Specifically, the baseline image count consisted of 6 male and 6 female targets for the gender category, 6 younger and 6 older targets for the age category, and 4 White, 4 African American, and 4 Asian targets for the race category. With this setup, each combination of demographic categories (e.g., male-younger-White) was represented by 1 image. The images were then manipulated to test attire and affect. Each image displayed only one variable adjustment versus the baseline image. The adjusted variables were: smiling, looking down at a computer, looking down at a book, wearing a nametag, wearing a formal shirt, wearing a red shirt, and wearing a white shirt. Smiling images were available for all targets in the databases described above.

Adobe Photoshop was used to change the other variables of interest. An example is provided in Fig. 1.

Design and procedure

The current study was conducted online, with the survey made available to a 3-campus university system at a large, public Midwestern university. Qualtrics survey software was used to develop and administer the survey. Given the large number of images tested (96 total), we reduced participant burden by splitting the images into two groups, so that each participant who clicked on the link to the survey was taken to one group of images or the other. Images were presented in randomized order for both Group 1 and Group 2. The same 12 baseline images were rated in both groups; however, between the two groups, different images were varied with respect to affect and clothing. Group 1 yielded 514 participants, and Group 2 yielded 501 participants.
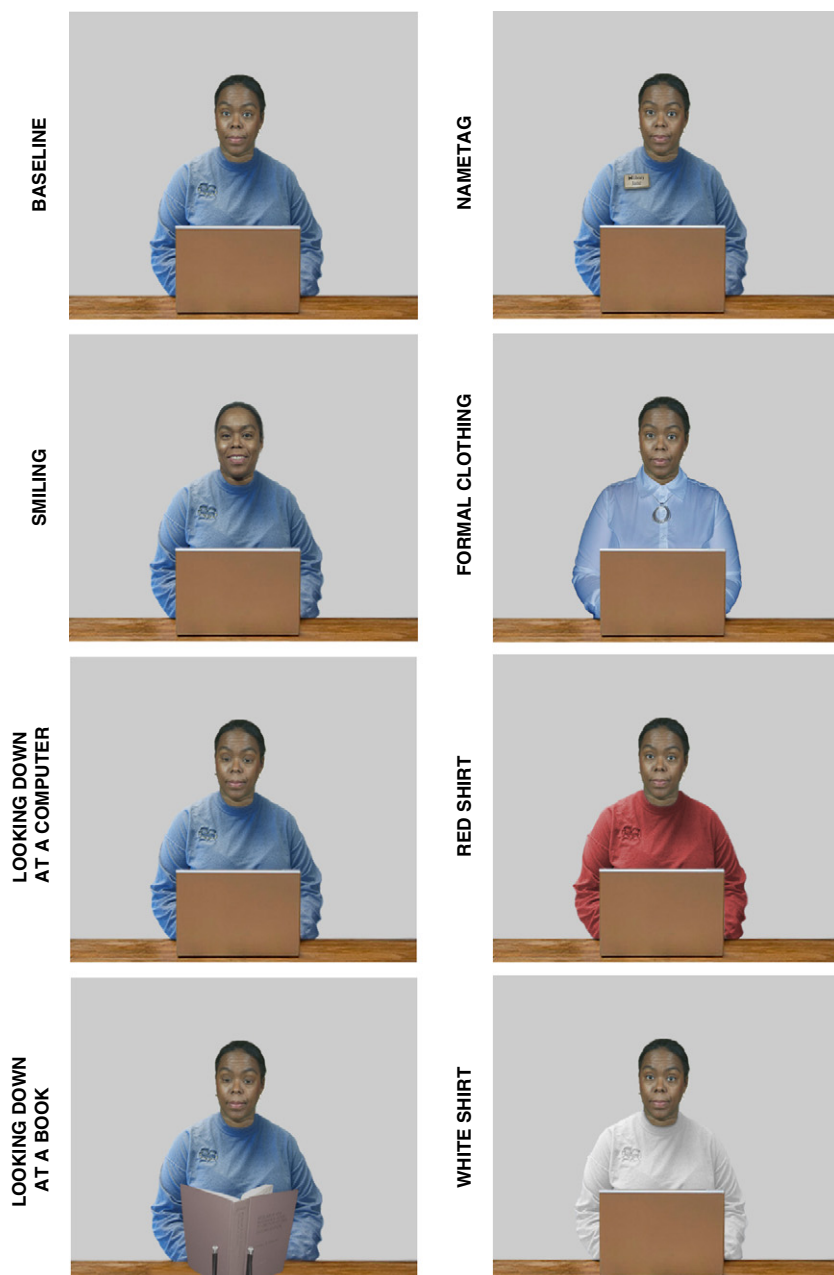

Fig. 1. Example set of images: baseline image and images with manipulated approachability variables (i.e., treatments).

The survey was accessible over a 2-week period during the Spring semester of 2012, and raters were offered an incentive to enter a raffle for one of ten $50 gift cards upon completion of the anonymous survey. Each respondent was introduced to the survey and shown a page of the 12 baseline images as a familiarization step. Respondents then rated the full set of images. Images were presented one-at-a-time, in a different random sequence for each rater, for a total of 54 images of hypothetical librarians in each survey (all 12 baseline images plus 42 with a changed variable). Each image included both a photograph and the following verbal instructions: "Imagine you need to ask a librarian a question. Rate the approachability of this librarian." Raters scored the target image's approachability on a Likert scale of 1 to 10, with 1 being "Least approachable" and 10 being "Most approachable." See Fig. 2 for an example. After they completed the image ratings, raters were asked 4 demographic questions regarding their gender, age, race/ethnicity, and affiliation with the university. Lastly, raters were asked 5 questions regarding their personality characteristics. After completing the survey, raters were prompted to click on a link that took them to a web page where they were able to enter the gift card raffle. Median survey completion time, not including time to enter the raffle, was approximately 9 min.

Hierarchical linear models (HLMs) were used to characterize the differences in the image approachability rating (i.e., the outcome or dependent variable) between treatment (e.g., smiling, red shirt) and image or rater demographic variables (i.e., independent variables). A separate hierarchical linear model was generated for each of the demographic classifications: gender, age, and race. This type of model was used to control for multiple approachability ratings of images nested within raters. The model for each image or rater category of gender, age, or race effects was specified as follows:

Level 1 (Treatment Level):

$$Y_{i,j} = \beta_{0j} + \beta_{1j} * X_{ij} + e_{ij}.$$

Level 2 (Image or Rater Demographic Level):

$$\beta_{0j} = \gamma_{00} + \gamma_{01} * Z_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} * Z_j.$$

Mixed equation:

$$Y_{i,j} = \gamma_{00} + \gamma_{01} * Z_j + \gamma_{10} * X_{ij} + \gamma_{11} * Z_j * X_{ij} + u_{0j} + e_{ij}$$

where $Y_{i,j}$ is the image approachability rating for the ith treatment nested within the jth rater, respectively, X is the treatment category (e.g., smiling, red shirt), and Z is the demographic category (e.g., male or female image for the image gender model). With this model, image approachability ratings for a given treatment that repeat for each rater were entered at Level 1, and demographic-specific measurements were entered at Level 2. In the Level 1 equation, β indicates treatment-level intercept and coefficient. In the Level 2 equations, γ indicates rater-level intercepts and coefficients. The e term represents random error associated with treatment-level effects (i.e., residual error), and the u term represents a random effect for each rater. When the Level 2 components are combined algebraically with the Level 1 equation, the mixed equation incorporates main effects of X and Z, as well as cross-level interactions between X and Z. The main and interaction effects for this type of model are reported relative to the reference value of each variable. The reference value for the treatment-level variables was set to the baseline image, and the reference variable for each demographic variable was set to male (gender)/younger (age)/White (race).

RESULTS

Each of the following sections presents HLM results for a given affect or clothing treatment. Bar graphs display the mean approachability rating versus the baseline, with positive values indicating a higher mean approachability rating for the treatment versus baseline, zeros indicating no change, and negative values indicating a lower mean approachability rating for the treatment versus baseline. Baseline is defined as a neutral expression for the hypothetical librarian, eye contact with the camera, wearing an informal blue colored shirt, and no nametag (see Fig. 2 for an example). Images in the bar graphs are grouped by image demographic category. Significance is reported at an alpha of 0.05.
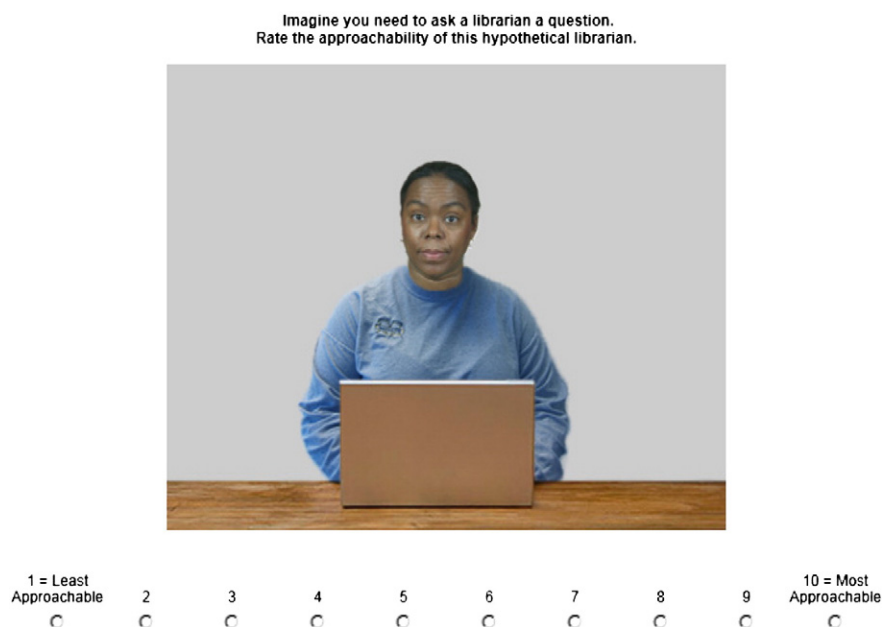

Fig. 2. Example survey question with image and approachability rating scale.

Table 1
Image hierarchical linear model results for smiling treatment.

Image treatment	Image demographic	Effect type	Coefficient	95% confidence interval	p > |z|
Smile	All	Not applicable	1.90	+/− 0.03	0.000
Gender					
Smile	Male	Main	1.85	+/− 0.05	0.000
Smile	Female	Interaction	0.11	+/− 0.07	0.002
Age					
Smile	Younger	Main	2.07	+/− 0.05	0.000
Smile	Older	Interaction	−0.34	+/− 0.07	0.000
Race					
Smile	White	Main	2.19	+/− 0.06	0.000
Smile	African American	Interaction	−0.09	+/− 0.08	0.027
Smile	Asian	Interaction	−0.76	+/− 0.08	0.000

Table 2
Image hierarchical linear model results for direction of gaze treatment.

Image treatment	Image demographic	Effect type	Coefficient	95% confidence interval	p > |z|
Looking at computer	All	Not applicable	−0.78	+/− 0.04	0.000
Looking at book	All	Not applicable	−0.93	+/− 0.04	0.000
Gender					
Looking at computer	Male	Main	−0.70	+/− 0.05	0.000
Looking at computer	Female	Interaction	−0.17	+/− 0.07	0.000
Looking at book	Male	Main	−0.87	+/− 0.05	0.000
Looking at book	Female	Interaction	−0.12	+/− 0.07	0.001
Age					
Looking at computer	Younger	Main	−0.66	+/− 0.05	0.000
Looking at computer	Older	Interaction	−0.24	+/− 0.07	0.000
Looking at book	Younger	Main	−0.99	+/− 0.05	0.000
Looking at book	Older	Interaction	0.13	+/− 0.07	0.000
Race					
Looking at computer	White	Main	−0.62	+/− 0.06	0.000
Looking at computer	African American	Interaction	−0.14	+/− 0.09	0.002
Looking at computer	Asian	Interaction	−0.35	+/− 0.09	0.000
Looking at book	White	Main	−0.86	+/− 0.06	0.000
Looking at book	African American	Interaction	0.02	+/− 0.09	0.620
Looking at book	Asian	Interaction	−0.22	+/− 0.09	0.000

Facial expression

Table 1 displays HLM results for the smiling facial expression, as compared to the baseline of a neutral expression. Fig. 3 presents the observed average values for each image demographic category. A significant positive coefficient was observed when grouping all images, and all main effect coefficients were also significant and positive. All interaction effects were also significant, and where negative for the age and race variables, had a smaller magnitude than the associated main effect. Together, these results indicate that a smiling facial expression consistently increased the approachability of librarians, regardless of demographic category.

For the gender category, smiling increased the approachability ratings for female targets more than male targets. This finding is consistent with previous observations that women's expressions of happiness are perceived as more intense than those by men (Hess, Blairy, & Kleck, 1997). For the age category, smiling increased approachability for younger targets more than older targets. For the race category, the order of increasing magnitude of the positive effect of smiling was Asian targets, followed by African American targets, followed by White targets.

These results support the hypothesis that smiling improves the approachability of targets. As this broad trend has been observed in other studies (as described in the Introduction), these results provide evidence that the image-rating technique used for the current study presents valid information. Further, to our knowledge, potential variable approachability for various demographic categories has not previously been investigated with regards to a smiling target. The trends
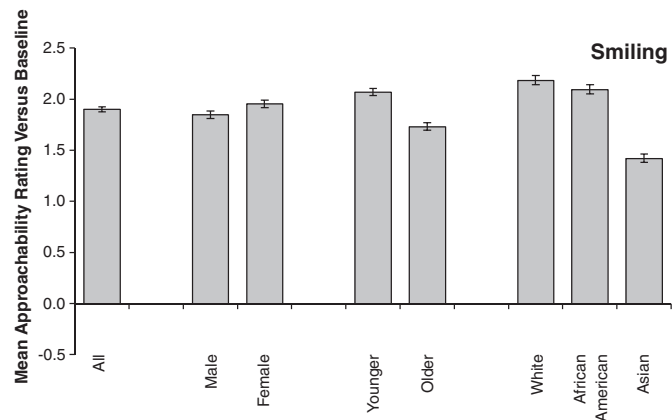
observed for these categories suggest that the demographic characteristics of librarians moderate the influence of smiling.

Direction of gaze

Table 2 displays HLM results for the images in which hypothetical librarians were looking down at a computer or a book, compared to the baseline direction of gaze, "looking forward at camera." Note that baseline images displayed the same computer as the "looking at computer" treatment. Fig. 4 presents the observed average values for the "looking down at computer" treatment, and Fig. 5 presents the observed average values for the "looking down at book" treatment. The results for the two treatments were similar. Nearly all regression coefficients were significant and negative, including the coefficients when combining all images together into one group. With most main and interaction effect coefficients negative, the HLM results indicate that looking down at either object decreases mean approachability ratings to a greater degree for female versus male targets, older versus younger targets, and Asian versus African American versus White targets. One exception is that looking down at a book decreased mean approachability ratings to a greater degree for younger versus older targets. A second exception is that there was no significant difference for African American versus White targets when looking down at a book; the magnitude of the decreases in mean approachability ratings for both race groups were statistically similar.

The above results are consistent with the expectation that an averted direction of gaze decreases the approachability of librarians. This finding also extends the results of Radford's observational
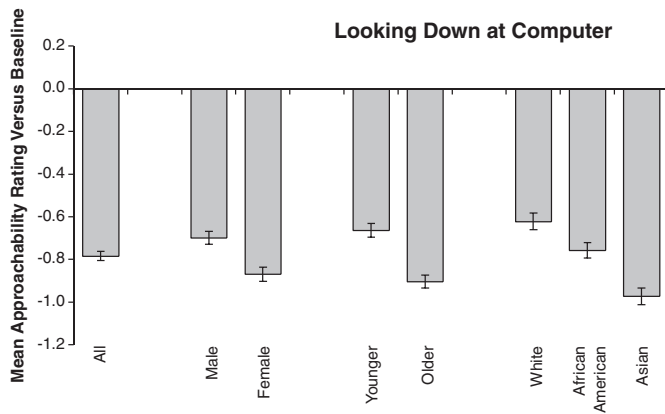

Fig. 3. Mean approachability ratings for images with "smiling" treatment.

Fig. 4. Mean approachability ratings for images with "looking down at computer" treatment.

study in which nearly a fourth of interviewees reported that eye contact was key to librarian approachability (Radford, 1998). With the regression coefficient in the current study having a greater negative magnitude for the "looking at book" than the "looking at computer" treatment when aggregating all images, the data further suggest that in general, looking at a computer is perceived as more approachable than looking at a book.

An interaction of gender and the direction of gaze treatment was observed. Images of women with averted direction of gaze were given lower approachability ratings relative to baseline than images of men with this treatment. It appears that the stereotype of women being better multi-taskers than men did not strongly play into perceptions of approachability. Instead, women were perceived as decreasing their approachability more than men when their attention was focused on something other than the patron.

The results in Table 2 and Figs. 4 and 5 indicate that demographic variables of hypothetical librarians do moderate the effect of an averted direction of gaze. For the gender and race categories, this moderating effect generally does not vary when the object of the hypothetical librarian's attention is a book versus a computer. However, for the age category, the object of attention does matter. Looking down at a computer decreased mean approachability ratings to a greater degree for older versus younger librarians, with a reversed pattern for librarians looking down at a book. This trend is consistent with the hypothesis presented in the Introduction, which predicted that different expectations for librarians based on age would result in different perceptions of approachability depending on the object of librarians' attention.
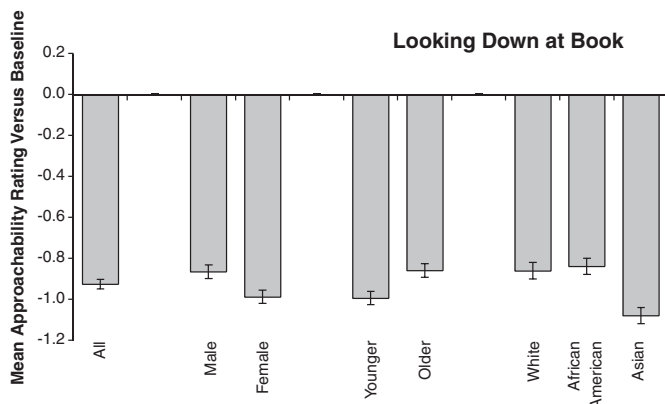
Table 3
Image hierarchical linear model results for formality of clothing treatment.

Image treatment	Image demographic	Effect type	Coefficient	95% confidence interval	p>|z|
Nametag	All	Not applicable	0.16	+/−0.03	0.000
Formal shirt	All	Not applicable	0.00	+/−0.03	0.842
Gender					
Nametag	Male	Main	0.18	+/−0.04	0.000
Nametag	Female	Interaction	−0.05	+/−0.06	0.104
Formal shirt	Male	Main	0.12	+/−0.04	0.000
Formal shirt	Female	Interaction	−0.25	+/−0.06	0.000
Age					
Nametag	Younger	Main	0.22	+/−0.04	0.000
Nametag	Older	Interaction	−0.12	+/−0.06	0.000
Formal shirt	Younger	Main	−0.12	+/−0.04	0.000
Formal shirt	Older	Interaction	0.23	+/−0.06	0.000
Race					
Nametag	White	Main	0.16	+/−0.05	0.000
Nametag	African American	Interaction	−0.01	+/−0.07	0.775
Nametag	Asian	Interaction	0.01	+/−0.07	0.870
Formal shirt	White	Main	0.05	+/−0.05	0.074
Formal shirt	African American	Interaction	−0.03	+/−0.07	0.377
Formal shirt	Asian	Interaction	−0.11	+/−0.07	0.002

Formality of clothing

Table 3 displays HLM results for the images in which the hypothetical librarians were wearing a nametag or wearing formal clothing, compared to the baseline of wearing informal clothing with no nametag. Fig. 6 presents the observed average values for the nametag treatment, and Fig. 7 presents the observed average values for the formal clothing treatment.

When grouping all images, a significant positive correlation coefficient was observed for the nametag treatment. The main effects for the image demographic categories were also positive and significant, but interaction effects were significant only for the age variable. These results indicate that wearing a nametag generally increases librarian approachability, and that this effect is not strongly moderated by target gender or race. Age does influence the magnitude of the increase in approachability for a nametag, with younger targets having a greater increase in approachability than older targets.

No significant effect was observed when grouping all images for the formal clothing treatment. However, as shown in Table 3 and Fig. 7, this is actually due to the "cancelling out" of trends for the gender and age demographic categories. Formal clothing significantly increased mean
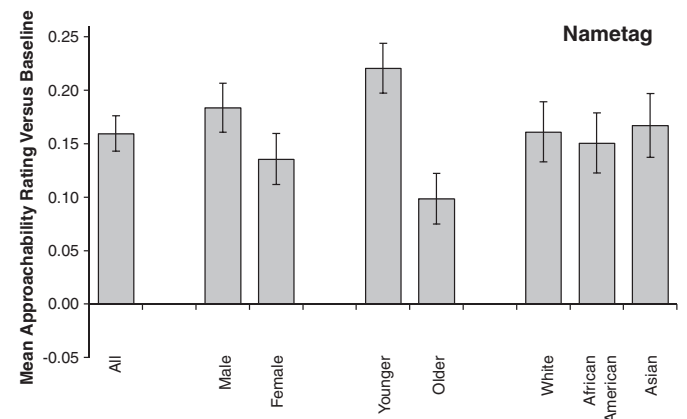

Fig. 5. Mean approachability ratings for images with "looking down at book" treatment.

Fig. 6. Mean approachability ratings for images with "nametag" treatment.
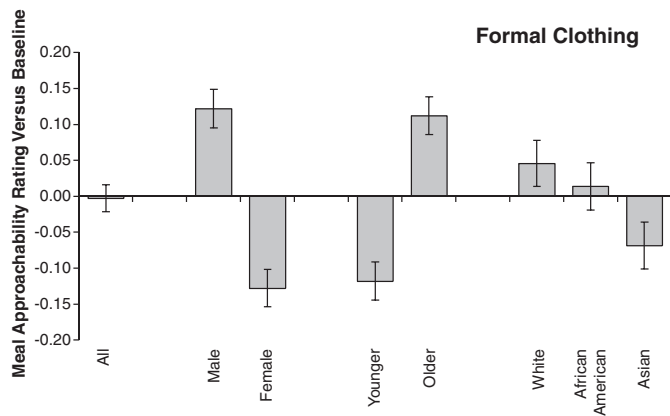
Fig. 7. Mean approachability ratings for images with "formal clothing" treatment.
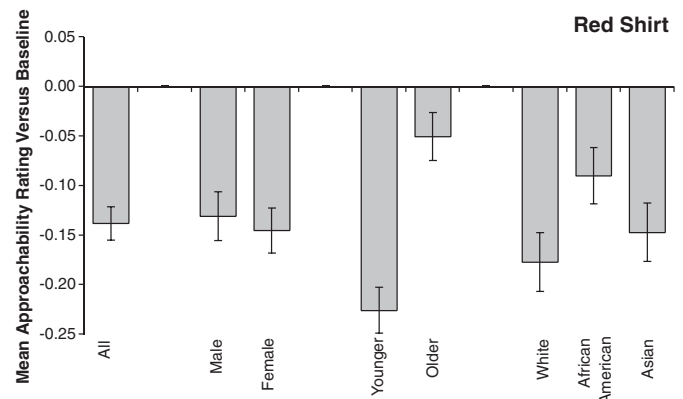

Fig. 8. Mean approachability ratings for images with "red shirt" treatment.

approachability ratings for male targets, but significantly decreased the ratings for female targets. Similarly, formal clothing significantly decreased mean approachability ratings for younger targets, but significantly increased the ratings for older targets. It is possible that a similar "cancelling out" could have occurred for the race category, but this cannot be stated with confidence given the lack of significance for both the White and African American target regression coefficients. These findings are consistent with our hypothesis that target gender affects how formal clothing is perceived by raters, and adds that age is also important. This result is so pronounced that it actually has opposite effects depending on whether a target is male versus female or younger versus older.

Clothing color

Table 4 displays HLM results for the images in which the hypothetical librarians were wearing a red or white shirt, compared to the baseline of a blue shirt. Fig. 8 presents the observed average values for the red shirt treatment, and Fig. 9 presents the observed average values for the white shirt treatment.

For the red shirt treatment, a significant negative regression coefficient was observed when all images were combined into one group.

No significant interaction effect was observed for the gender category. Significant main and interaction effects were observed for the age category, with younger targets having a larger negative effect than older targets. For the race category, a significant negative main effect was observed for White targets, a significant positive interaction effect was observed for African American targets, and no significant interaction effect was observed for Asian targets. This indicates a greater decrease in mean approachability ratings for White and Asian targets compared to African American targets.

Similar to the red shirt treatment, a significant negative regression coefficient was observed when grouping all images for the white shirt treatment. In this case, significant main and interaction effects were observed for the gender category, with female targets showing a greater decrease in approachability ratings versus male targets. A significant negative interaction effect was observed for the age category, with no significance in the main effect. This indicates that a white shirt significantly decreased older target mean approachability ratings without a strong effect on younger targets. No significant interaction effects were observed for the race category.

Together, these data suggest that clothing color does affect the perceived approachability of hypothetical librarians. A blue shirt is generally perceived as more approachable than a white shirt, and both blue and white shirts are perceived as more approachable than a red shirt. The trends for the white and red shirts are counter to the hypothesis presented in the Introduction. Previous studies have observed that targets are perceived as generally more attractive when wearing red shirts versus white shirts, and we expected this to mean that such targets would also be perceived as more approachable. However, the trend is actually reversed for approachability ratings observed in the current study. Perhaps, despite improved attractiveness, red shirts are perceived as less approachable given the association of red with the trait of dominance (Hill & Barton, 2005).

Table 4
Image hierarchical linear model results for clothing color treatment.

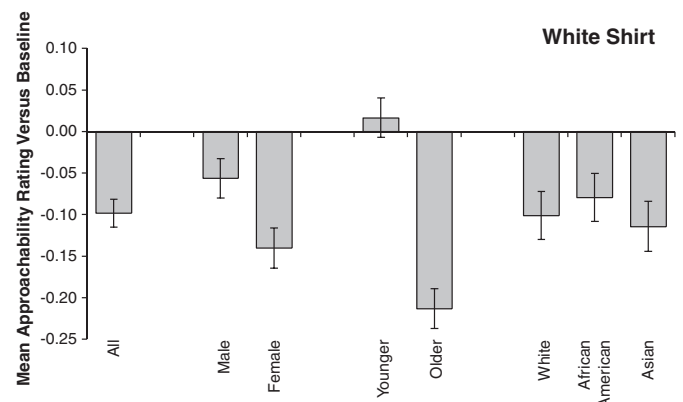| Image treatment	Image demographic	Effect type	Coefficient	95% confidence interval	p>|z|
Red shirt	All	Not applicable	−0.14	+/−0.03	0.000
White shirt	All	Not applicable	−0.10	+/−0.03	0.000
Gender					
Red shirt	Male	Main	−0.13	+/−0.04	0.000
Red shirt	Female	Interaction	−0.01	+/−0.06	0.607
White shirt	Male	Main	−0.06	+/−0.04	0.005
White shirt	Female	Interaction	−0.08	+/−0.06	0.003
Age					
Red shirt	Younger	Main	−0.23	+/−0.04	0.000
Red shirt	Older	Interaction	0.18	+/−0.05	0.000
White shirt	Younger	Main	0.02	+/−0.04	0.398
White shirt	Older	Interaction	−0.23	+/−0.05	0.000
Race					
Red shirt	White	Main	−0.18	+/−0.05	0.000
Red shirt	African American	Interaction	0.09	+/−0.07	0.011
Red shirt	Asian	Interaction	0.03	+/−0.07	0.382
White shirt	White	Main	−0.10	+/−0.05	0.000
White shirt	African American	Interaction	0.02	+/−0.07	0.529
White shirt	Asian	Interaction	−0.01	+/−0.07	0.699

Fig. 9. Mean approachability ratings for images with "white shirt" treatment.

To our knowledge, this data set presents results of the first systematic test of how perceived approachability is affected by clothing color. Given the incipience of this field, it is difficult to interpret the demographic data in Table 4. Demographic characteristics of targets do appear to moderate the influence of clothing color on perceived approachability, but the potential mechanisms of this influence are not readily apparent.

Demographic characteristics of raters

Table 5 presents HLM results for the demographic characteristics of raters. Only interaction effects indicative of significance (i.e., p<0.05) are reported, along with the relevant main effect. For all treatments tested in the current study, at least one rater demographic category was observed to moderate the effect of the treatment. The gender category moderated effects for all treatments except the nametag treatment and the white shirt treatment. For the smiling and direction of gaze treatments, the regression coefficients estimated for male raters were similar in sign (i.e., plus or minus) to those for female raters, but the effects for female raters had higher magnitudes. For the formal clothing treatment, the regression coefficient for male raters was not significant, but the coefficient for females was significant. Together, these gender results suggest that female raters are more strongly influenced than male raters by varied affect and clothing of targets.

Significant rater interaction effects were observed for the age category in the two directions of gaze and two formalities of clothing treatments. Older raters gave targets looking down at either a computer or a book lower approachability ratings than younger raters

gave the same targets. This suggests that older raters are more strongly averse to librarians who are not making eye contact. Younger raters tended to give targets with the nametag treatment higher approachability ratings versus baseline as compared to older raters. This suggests that younger library patrons are especially receptive to nametags on librarians. Younger raters tended to give higher approachability ratings to images showing formal versus informal clothes, and older raters showed the opposite trend. Not only does this line of evidence signify that librarian demographics can influence whether formal clothing is perceived as more or less approachable, but it also suggests that patron demographics can influence the relationship between formality of clothing and librarian approachability.

Finally, rater race influenced target approachability ratings for all treatments except "looking at a computer." This finding provides some evidence that raters with potentially varied cultural experiences are influenced differently when viewing targets with modified affect and clothing.

DISCUSSION

Application

This study was designed to provide data-driven information for librarians wishing to increase their approachability at points of service. In early empirical work that examined reference desk success, librarian behaviors were found to have an impact on interactions with library users (e.g., Gers & Seward, 1985; Durrance, 1989; Durrance, 1995). Later studies that focused specifically on librarian approachability either lumped this factor with other behaviors, used qualitative/anecdotal observational methods, used a small image pool, or focused on factors that are outside of the control of individual librarians. The current study tested approachability as the single dependent variable, used a systematic/quantitative/repeated measures design, and focused on factors that individual librarians can change on a day-to-day or even a moment-to-moment basis. We used an image-rating method that allowed for manipulation of the independent variables of target affect and clothing, with balancing of the potentially confounding factors of target gender, age, and race. The baseline images used in this study had similar approachability ratings based on previous testing (Bonnet & McAlexander, 2012), which likely provided some control of other confounding variables, such as attractiveness and babyfacedness. We achieved a sample size of more than 500 ratings for any given image, with rater representation across a wide range of demographic factors: gender, age, race, and university affiliation. With this design and sample set, it was possible to assess the influence of affect and clothing on librarian approachability as rated by a large, diverse segment of an academic library user population.

Across the board, smiling librarians, and librarians wearing nametags, tended to have increased approachability ratings versus their baseline measures (i.e., neutral expression, no nametag). While image gender and age (and to some extent, race) moderated these increased approachability ratings, in no case did they reverse the positive values versus the baseline. Additionally, the image of a smiling librarian had the largest magnitude effect of all affect and clothing variables tested, positive or negative. If these trends extend to the actual reference desk, then a librarian who smiles or wears a nametag can expect to be perceived as more approachable by the preponderance of the patron population. Further, the act of smiling while looking at a patron can have a uniquely powerful and beneficial effect on the smiler's perceived approachability.

Not surprisingly, images of hypothetical librarians who looked downward and not toward the rater tended to have decreased approachability ratings. Overall, librarians who looked downward at a book decreased their approachability even more than those who looked downward at a computer. At the actual reference desk, many librarians occupy their downtime with one of these two objects, and

Table 5
Image hierarchical linear model results for rater demographic categories (only significant interaction effects at alpha = 0.05 reported, including relevant main effect).

Image treatment	Rater demographic	Effect type	Coefficient	95% confidence interval	p>|z|
Smile	Male	Main	1.52	+/−0.06	0.000
Smile	Female	Interaction	0.53	+/−0.07	0.000
Smile	White	Main	1.95	+/−0.04	0.000
Smile	Asian	Interaction	−0.35	+/−0.1	0.000
Looking at computer	Male	Main	−0.70	+/−0.07	0.000
Looking at computer	Female	Interaction	−0.12	+/−0.08	0.002
Looking at computer	Younger	Main	−0.76	+/−0.04	0.000
Looking at computer	Older	Interaction	−0.20	+/−0.1	0.000
Looking at book	Male	Main	−0.86	+/−0.07	0.000
Looking at book	Female	Interaction	−0.09	+/−0.08	0.024
Looking at book	Younger	Main	−0.89	+/−0.04	0.000
Looking at book	Older	Interaction	−0.27	+/−0.1	0.000
Looking at book	White	Main	−0.88	+/−0.04	0.000
Looking at book	African American	Interaction	−0.23	+/−0.15	0.002
Looking at book	Asian	Interaction	−0.22	+/−0.1	0.000
Nametag	Younger	Main	0.17	+/−0.03	0.000
Nametag	Older	Interaction	−0.10	+/−0.09	0.020
Nametag	White	Main	0.14	+/−0.04	0.000
Nametag	Asian	Interaction	0.09	+/−0.08	0.042
Formal shirt	Male	Main	0.05	+/−0.06	0.084
Formal shirt	Female	Interaction	−0.07	+/−0.06	0.026
Formal shirt	Younger	Main	−0.04	+/−0.03	0.015
Formal shirt	Older	Interaction	0.27	+/−0.09	0.000
Formal shirt	White	Main	−0.04	+/−0.04	0.013
Formal shirt	African American	Interaction	0.29	+/−0.13	0.000
Formal shirt	Asian	Interaction	0.10	+/−0.08	0.019
Red shirt	White	Main	−0.12	+/−0.03	0.000
Red shirt	African American	Interaction	−0.28	+/−0.12	0.000
White shirt	White	Main	−0.09	+/−0.03	0.000
White shirt	African American	Interaction	−0.17	+/−0.12	0.005

there are likely times throughout the day when a patron who is passing by, considering whether to approach the desk, might observe the librarian looking at one of these objects. The results of this study suggest that if librarians wish to minimize the negative effect of their occasional attention to something other than patrons, then looking at a computer would generally be preferable to a book.

Clothing color affected the approachability ratings of hypothetical librarians. Clothing color has been found to convey affective states in other settings and to influence target attractiveness, but to our knowledge, this is the first test of this variable on social judgments of approachability. Librarians wearing blue shirts were perceived as more approachable than those wearing white shirts, and librarians wearing either blue or white shirts were rated higher than librarians wearing red shirts. Whereas the school colors for the university where this study was conducted include blue, the blue shirt color was a different hue than the university blue, and is not expected to have been associated with the school colors. It stands to reason, then, that the ranking of blue–white–red would generalize to other academic libraries, unless the school colors included one of them. Librarians wishing to maximize their approachability at the reference desk would be advised to wear a shirt that is predominantly blue in color.

The demographics of hypothetical librarians influenced but did not undo the broad trends described above. For the most part, the effects of affect and clothing on approachability ratings were more pronounced for female than for male librarians. Female librarians who were smiling increased their approachability ratings more than their male counterparts, and female librarians who looked down or wore a white shirt decreased their approachability ratings more than male librarians. On the one hand, this trend could be considered a positive one for female librarians, since it suggests that they have more control over their perceived approachability than males. On the other hand, it is unfortunate to see that in yet another setting, as in judgments of emotional expressivity (Hess et al., 1997) and occupational performance appraisals (Heilman & Stopeck, 1985), visually salient characteristics have a stronger effect on judgments of female than male targets. The current study provides another line of evidence that females are under a stronger microscope than males when being judged on visual appearance. Librarian age played an interesting role in the direction-of-gaze treatment, for which looking down at a computer decreased the approachability of older librarians more than younger ones, and vice versa for librarians looking down at a book. We suspect that these trends are due to stereotypic expectations of media fluency, with young people perceived as more comfortable (and possibly more inviting) with information technology, and older people with print. If so, the observed trends may erode over time due to the overall increasing technological fluency among all ages. For instance, the Pew Internet and American Life Project found that a larger percentage of teenagers go online than adults, but that the generational gaps in Internet use are decreasing (Jones & Fox, 2009). Finally, race was observed to have some influence over the affect and clothing variables described above, but the effects do not follow a readily apparent pattern for drawing conclusions from these data.

While image demographics played only a moderating role on the effects described above, they played a stronger role for the formal clothing treatment. Male librarians wearing formal clothing were perceived as more approachable than their baseline images in informal clothing, while the opposite was true for females. Similarly, older librarians' approachability ratings were increased by formal clothing, but younger librarians' approachability decreased. For the race variable, White and African American librarian approachability ratings were not significantly different from their baseline scores, but were significantly lower for Asian librarians versus baseline. These findings are likely due to differential stereotypes for the various demographic groups. Whether there is one unifying stereotypical factor that would explain the observed trends is an open question.

Finally, rater demographics were observed to affect image approachability ratings. Females were generally more influenced by the image treatments, and if this phenomenon extends to the actual reference desk, they would be expected to show greater responsiveness to efforts by librarians to be more approachable. Older raters gave relatively low approachability ratings to librarians looking down, which suggests that such patrons would be affected even more than younger raters by eye contact with a librarian prior to a reference interaction. Younger raters gave relatively high approachability ratings to images showing nametags on librarians, making this treatment especially beneficial for patron populations that are traditionally college-aged. Rater race affected approachability ratings in several cases, but without a clear, discernible pattern.

Implications for library policy

The findings of this study suggest that librarians can indeed increase their approachability by manipulating factors that are generally within their control: affect and clothing. The authors see these findings as valuable informational resources for librarians to consider when they are preparing for public service provision, as described in the Application section above. However, we do not view these findings as meriting policy changes for libraries. The first reason can be seen for the formality of clothing treatment. If libraries created a policy that closely followed the trends observed in this study, it would suggest or require that specific demographic groups wear formal clothing, and other groups wear informal clothing. Such a policy would clearly be discriminatory and contrary to the mission of academic libraries to empower diverse populations (ALA, n.d.).

A less obvious reason that this study should be used for informational purposes by individual librarians is that modified affect and clothing have more than an effect on the perceivers; they can also affect the librarians themselves. For instance, red clothing has been observed to not only increase perceptions of targets' attractiveness. Red clothing also results in the targets (particularly males) presenting themselves differently (Roberts et al., 2010), possibly because they actually perceive themselves as more attractive. Thus, a librarian considering whether to wear a red shirt must weigh the potential decrease in approachability perceived by patrons, the possible increase in attractiveness perceived by patrons, and a possible increased feeling of attractiveness. Any given librarian may weight these factors differently, and a library policy about clothing color would overly simplify the complex experience of both librarians and patrons.

Areas for future research

The findings from this study extend what we know about social judgment formation, and enhance our awareness of factors that can improve librarian approachability in public service environments. In addition to the testing described here, several of the treatment variables in this study would benefit from additional investigation. Again, the clothing color treatment provides a good example. In order to keep the treatments to a manageable number, only three clothing colors were tested, and these were each monochromatic. The effect of other clothing colors, including a given school's colors, on perceptions of librarian approachability is worth testing. Also, there is evidence that certain color combinations are perceived as more harmonious than others (Schloss & Palmer, 2011), so this could be tested with an image-rating study similar to the current one. Another potential area for additional research is the smiling treatment. This study found that smiling generally improved the approachability ratings of targets. But all smiles are not the same, with some being sincere and others being insincere. Does the sincerity of the smile affect the perceived approachability? This question could be tested using methods employed elsewhere in which dynamic smiles are depicted by short video clips (Murphy, Lehrfeld, & Isaacowitz,

2010). Finally, the confidence in the findings of the current study for all variables tested could be bolstered by examining combinations of variables, in order to assess whether the effects are additive or possibly synergistic, and by testing them in an actual field setting.

CONCLUSION

The American Library Association's guidelines for effective reference service provision state that, "In all forms of reference services, the success of the transaction is measured not only by the information conveyed, but also by the positive or negative impact of the patron/staff interaction" (ALA, 2004). The current study assessed a patron perception that often occurs before all others — librarian approachability. Judgments of approachability are important to library service given that they form first impressions that have lasting effects on an interpersonal encounter (Fiske et al., 1999). The results of this study suggest that librarian behaviors do matter, and that efforts to appear approachable will not go unnoticed. Not only do these findings support conventional wisdom that an attentive and welcoming environment is essential to encouraging patrons to engage with librarians; they also provide information on specific behaviors that affect assessments of approachability, allowing librarians to distinguish between a range of presentation styles that can be readily employed in public service.

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REFERENCES

Adams, R. B., Jr., & Kleck, R. E. (2005). Effects of direct and averted gaze on the perception of facially communicated emotion. *Emotion*, 5(1), 3–11.

Adams, R. B., & Kleck, R. E. (2003). Perceived gaze direction and the processing of facial displays of emotion. *Psychological Science*, 14(6), 644–647.

Albert, N. M., Wocial, L., Meyer, K. H., Na, J., & Trochelman, K. (2008). Impact of nurses' uniforms on patient and family perceptions of nurse professionalism. *Applied Nursing Research*, 21(4), 181–190.

American Library Association (2004). *Guidelines for behavioral performance of reference and information service providers from the reference and user services association.* (Retrieved 02/15, 2011, from http://www.ala.org/rusa/resources/guidelines/guidelinesbehavioral)

American Library Association (2009). *American library association young professionals task force.* (Retrieved 02/15, 2012, from http://discuss.ala.org/younglibrarians/2009/09/)

American Library Association (2012). *American library association emerging leaders program.* (Retrieved 02/10, 2012, from http://www.ala.org/educationcareers/leadership/emergingleaders)

American Library Association (n.d.). *ALA policy manual: Governance*, 2012, from http://www.ala.org/aboutala/governance/policymanual/updatedpolicymanual/section2/60diversity

Bonnet, J. L., & McAlexander, B. (2012). Structural diversity in academic libraries: A study of librarian approachability. *The Journal of Academic Librarianship*, 38(5), 277–286.

Buser, T., & Peter, N. (2012). Multitasking. *Experimental Economics*, 1–15.

Davis, L. L. (1984). Clothing and human behavior: A review. *Home Economics Research Journal*, 12(3), 325–339.

DePaulo, B. M. (1992). Nonverbal behavior and self-presentation. *Psychological Bulletin*, 111(2), 203–243.

DeVore-Chew, M., Roberts, B., & Smith, N. (1988). The effects of reference librarians' nonverbal communication on the patrons' perceptions of the library, librarians, and themselves. *Library and Information Science Research*, 10, 389.

Durrance, Joan (1989, April 15). Reference Success: Does the 55% Rule Tell the Whole Story? *Library Journal*, 114(7), 31–36.

Durrance, Joan C. (1995). Factors That Influence Reference Success: What Makes Questioners Willing to Return? *The Reference Librarian*, 49(50), 243–265.

Engstrom, E. (1996). Audiences' perceptions of sources' credibility in a television interview setting. *Perceptual and Motor Skills*, 83(2), 579–588.

European Conference on Visual Perception (2008). *2D face sets: Utrecht ECVP.* (Retrieved 07/31, 2011, from http://pics.psych.stir.ac.uk/2D_face_sets.htm)

Fasanya, B. K., McBride, M. E., Pope-Ford, R., & Ntuen, C. (2011). Gender differences in auditory perception and computational divided attention tasks. *Proceedings of the 41st International Conference on Computers & Industrial Engineering* (pp. 241–247).

Fiske, S. T., Lin, M., & Neuberg, S. L. (1999). The continuum model: Ten years later. In Y. T. Shelly Chaiken (Ed.), *Dual-process theories in social psychology* (pp. 231–254). New York, NY: The Guilford Press.

Frank, M. G., & Gilovich, T. (1988). The dark side of self-and social perception: Black uniforms and aggression in professional sports. *Journal of Personality and Social Psychology*, 54(1), 74–84.

Gers, Ralph, Seward, & Lillie, J. (1985, Nov). Improving Reference Performance: Results of a Statewide Study. *Library Journal*, 32–35.

Harris, M. B., & Bays, G. (1973). Altruism and sex roles. *Psychological Reports*, 32(3), 1002-1002.

Heilman, M. E., & Stopeck, M. H. (1985). Being attractive, advantage or disadvantage? Performance-based evaluations and recommended personnel actions as a function of appearance, sex, and job type. *Organizational Behavior and Human Decision Processes*, 35(2), 202–215.

Hess, U., Blairy, S., & Kleck, R. E. (1997). The intensity of emotional facial expressions and decoding accuracy. *Journal of Nonverbal Behavior*, 21(4), 241–257.

Hess, U., Adams, R. B., Jr., & Kleck, R. E. (2004). Facial appearance, gender, and emotion expression. *Emotion*, 4(4), 378–388.

Hill, R. A., & Barton, R. A. (2005). Psychology: Red enhances human performance in contests. *Nature*, 435(7040), 293-293.

Jones, S., & Fox, S. (2009). *Pew internet and American life project: Generational differences in online activities.* (Retrieved 07/30, 2012, from http://www.pewinternet.org/Reports/2009/Generations-Online-in-2009/Generational-Differences-in-Online-Activities/2-Internet-use-and-email.aspx)

Kazlauskas, E. (1976). An exploratory study: A kinesic analysis of academic library public service points. *The Journal of Academic Librarianship*, 2, 130–134.

Khan, Z. U., Chawla, S. K., & Devine, E. A. (2011). Impact of gender, race, and dress on choice of CPA's. *Journal of Applied Business Research (JABR)*, 13(1), 53–68.

LaFrance, M., Hecht, M. A., & Paluck, E. L. (2003). The contingent smile: A meta-analysis of sex differences in smiling. *Psychological Bulletin*, 129(2), 305–334.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, 126(3), 390–423.

Li, N. P., Halterman, R. A., Cason, M. J., Knight, G. P., & Maner, J. K. (2008). The stress-affiliation paradigm revisited: Do people prefer the kindness of strangers or their attractiveness? *Personality and Individual Differences*, 44(2), 382–391.

Madden, T. J., Hewett, K., & Roth, M. S. (2000). Managing images in different cultures: A cross-national study of color meanings and preferences. *Journal of International Marketing*, 90–107.

Miles, L. K. (2009). Who is approachable? *Journal of Experimental Social Psychology*, 45(1), 262–266.

Minear, M., & Park, D. C. (2004). A lifespan database of adult facial stimuli. *Behavior Research Methods*, 36(4), 630–633.

Montepare, J., & Dobish, H. (2003). The contribution of emotion perceptions and their overgeneralizations to trait impressions. *Journal of Nonverbal Behavior*, 27(4), 237–254.

Murphy, N. A., Lehrfeld, J. M., & Isaacowitz, D. M. (2010). Recognition of posed and spontaneous dynamic smiles in young and older adults. *Psychology and Aging*, 25(4), 811–821.

Oosterhof, N. N., & Todorov, A. (2008). The functional basis of face evaluation. *Proceedings of the National Academy of Sciences*, 105(32), 11087–11092.

Phillips, P. J., Moon, H., Rizvi, S. A., & Rauss, P. J. (2000). The FERET evaluation methodology for face-recognition algorithms. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 22(10), 1090–1104.

Phillips, P. J., Wechsler, H., Huang, J., & Rauss, P. J. (1998). The FERET database and evaluation procedure for face-recognition algorithms. *Image and Vision Computing*, 16(5), 295–306.

Porter, M. A., Coltheart, M., & Langdon, R. (2007). The neuropsychological basis of hypersociability in Williams and down syndrome. *Neuropsychologia*, 45(12), 2839–2849.

Potter, M. (2007). *Factors affecting the approachability of help givers at a university library.* Riverside: Master of Arts, University of California.

Pugh, S. D. (2001). Service with a smile: Emotional contagion in the service encounter. *Academy of Management Journal*, 44(5), 1018–1027.

Radford, M. L. (1998). Approach or avoidance? The role of nonverbal communication in the academic library User's decision to initiate a reference encounter. *Library Trends*, 46, 699–717.

Ren, D., Zhou, H., & Fu, X. (2009). A deeper look at gender difference in multitasking: Gender-specific mechanism of cognitive control. *Natural Computation, 2009. ICNC'09. Fifth International Conference on, 5.* (pp. 13–17).

Richardson, J. J. V. (2002). The current state of research on reference transactions. *Advances in librarianship, vol. 26.* (pp. 175–230). Bingley: Emerald Group Publishing Limited.

Risner, K. (1990). *Seeking assistance at the reference desk: A study to determine gender bias.* Master of Library Science, Kent State University.

Roberts, S. C., Owen, R. C., & Havlicek, J. (2010). Distinguishing between perceiver and wearer effects in clothing color-associated attributions. *Evolutionary Psychology*, 8(3), 350–364.

Saxton, M. L. (1997). *Evaluation of reference service in public libraries using a hierarchical linear model: Applying analysis to a multi-level research design.* Doctor of Philosophy, University of California.

Schloss, K. B., & Palmer, S. E. (2011). Aesthetic response to color combinations: Preference, harmony, and similarity. *Attention, Perception, & Psychophysics*, 73(2), 551–571.

Sebastian, R. J., & Bristow, D. (2008). Formal or informal? The impact of style of dress and forms of address on business students' perceptions of professors. *The Journal of Education for Business*, 83(4), 196–201.

Söderlund, M. M. (2008). Revisiting the smiling service worker and customer satisfaction. *International Journal of Service Industry Management*, *19*(5), 552–574.

Strickland, B., & Bonnet, J. L. (2011). Are all reference interactions created equal?: How gender might matter to our patrons. *Declaration of interdependence: The proceedings of the ACRL 2011 conference, Philadelphia, PA* (pp. 7–19).

Valdez, P., & Mehrabian, A. (1994). Effects of color on emotions. *Journal of Experimental Psychology. General*, *123*(4), 394–409.

Williams, J. E., Morland, J. K., & Underwood, W. L. (1970). Connotations of color names in the United States, Europe, and Asia. *The Journal of Social Psychology*, *82*(1), 3–14.

Willis, M. L, Palermo, R., & Burke, D. (2011). Judging approachability on the face of it: The influence of face and body expressions on the perception of approachability. *Emotion*, *11*(3), 514–523.

Willis, M. L., Palermo, R., Burke, D., McGrillen, K., & Miller, L. (2010). Orbitofrontal cortex lesions result in abnormal social judgements to emotional faces. *Neuropsychologia*, *48*(7), 2182–2187.