Aesthetic Properties and Message Customization: Navigating the Dark Side of Web Recruitment

Brian R. Dineen and Juan Ling
University of Kentucky

Steven R. Ash
The University of Akron

Devon DelVecchio
Miami University

The authors examined recruitment message viewing time, information recall, and attraction in a Web-based context. In particular, they extended theory related to the cognitive processing of recruitment messages and found that the provision of customized information about likely fit related to increased viewing time and recall when good aesthetics were also present. A 3-way interaction among moderate-to low-fitting individuals further indicated that objective fit was most strongly related to attraction when messages included both good aesthetics and customized information. In particular, given this combination, the poorest fitting individuals exhibited lower attraction levels, whereas more moderately fitting individuals exhibited invariant attraction levels across combinations of aesthetics and customized information. The results suggest that, given good aesthetics, customized information exerts effects mostly by causing poorly fitting individuals to be less attracted, which further suggests a means of averting the "dark side" of Web recruitment that occurs when organizations receive too many applications from poorly fitting applicants.

Keywords: aesthetics, attraction, customized information, fit, Web-based recruitment

The importance of human capital to organizational success is increasingly recognized in both academic and practitioner circles (Grossman, 2004; Taylor & Collins, 2000). To compete in the "war for talent," recruiters have largely turned to the Web, leading to a tremendous growth in its use over the past several years (Lievens & Harris, 2003). Yet, the effectiveness of the Web as a recruitment source is uncertain at best. Indeed, with millions of job postings competing for job seekers' time and attention and a tremendous volume of unqualified application traffic, inefficiencies abound. For example, recruiters who use the Web to identify job candidates are likely to receive applications from a large number of applicants who do not exhibit appropriate levels of fit with various aspects of the job or company (e.g., Chapman & Webster, 2003; "Internet Misuse," 2003; Lievens & Harris, 2003). One of these sources noted that 92% of recruiters claim to be inundated with irrelevant responses to online job postings, and 71% claim that the majority of resumes do not match the job description ("Internet Misuse," 2003).

This is a logical outcome, as decreased transaction costs in terms of time and effort allow individuals to easily apply for multiple online jobs in a short period (e.g., Sumser, 2004). Indeed, it can be argued that decreased application costs have lowered attraction thresholds, creating a "dark side of Web recruitment" whereby too many job seekers are attracted to and apply for a particular job vacancy. This suggests a need to supersede efforts to increase attraction levels across all job seekers by efforts to decrease attraction among job seekers who are not likely to be a good fit, an approach consistent with the realistic job preview (RJP) tradition (e.g., Phillips, 1998; Premack & Wanous, 1985). At the same time, the tremendous amount of information available to job seekers via the Web increases the competitive stakes for companies vying to capture and retain job seekers' attention to enhance memory for vacancy characteristics.

Because of issues such as these, research on Web-based recruitment is critically needed on several fronts (e.g., Anderson, 2003; Cappelli, 2001; Highhouse & Hoffman, 2001; Lievens & Harris, 2003; Rynes & Cable, 2003). In particular, both scholars and practitioners recognize that certain aspects of the Web fundamentally differentiate it from more traditional recruitment sources, with Lievens and Harris (2003) recently stating that "Internet recruitment has, in certain ways at least, significantly changed the way in which the entire staffing process is conducted and understood" (p. 132). This study extends recent theoretical work related to the cognitive processing of recruitment information (e.g., Breaugh & Starke, 2000; Cable & Turban, 2001; Cober, Brown, Keeping, & Levy, 2004) by examining how certain aspects of Web technology might be leveraged to assist companies competing for job seekers' time and attention. It further extends work related to

RJPs in terms of vying to generate a more desirable initial pool of job seekers primarily by decreasing attraction among the poorest fitting of those job seekers.

Among the many features associated with Web technology, two in particular have the potential to distinguish Web-based recruitment advertisements from non-Web-based advertisements and are the focus of the present investigation. First, Web technology offers the ability to customize messages to individual job seekers rather than simply disseminating a common message to a large target audience (Cappelli, 2001; Dineen, Ash, & Noe, 2002). *Customized information* refers to information tailored to individual job seekers in response to information those job seekers initially provide about themselves and is consistent with the move toward customization that the marketing field has begun to embrace ("Mass Customization," 2001) as well as calls to examine customized recruitment practices (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005). For example, job seekers might provide information about their organizational values preferences on an organizational Web site or Web-based job board. These responses can be compared with previously collected responses from organizational incumbents that reflect the values actually held by an organization. The Web site can then provide feedback to the job seeker regarding likely fit between the two values profiles. RJPs were conceptualized as a means of generating better matches between actual job characteristics and new employee expectations, and the provision of customized information allows for this to occur among job seekers on a more personalized basis. Second, Web technology has increased the degree to which stylistic differences, including various aesthetic properties, can be incorporated into job advertisements (Cober et al., 2004). Web site *aesthetic properties* refer to features such as fonts, pictures, colors, and Web page design (e.g., Cober, Brown, Levy, Cober, & Keeping, 2003).

We address calls to explicitly manipulate content and aesthetic features of Web-based job advertisements (e.g., Cober et al., 2003) and extend past work that has mostly considered content and aesthetics issues separately. We propose that desirable aesthetics and customized content combine to relate to significantly more optimal outcomes than either characteristic alone. In particular, we contend that the traditionally weak relationship between objective fit (calculated indirectly by comparing independent ratings of person and environment characteristics) and attraction (Judge & Cable, 1997; Kristof-Brown, Zimmerman, & Johnson, 2005) will be stronger when recruitment messages include both good aesthetics and customized content. We also draw on the marketing, human–computer interaction, and Web-based recruitment literature to propose that aesthetic features are critical in capturing initial attention to allow for the effects of useful content to materialize (Baumgartner, Sujan, & Padgett, 1997; Cober et al., 2004; Schenkman & Jonsson, 2000). This suggests increased message viewing time, which should enhance information recall. In the following sections, we develop hypotheses related to these ideas and describe a study that tested these hypotheses.

Theoretical Background and Hypotheses Development

Previous Stylistic- and Content-Related Recruitment Research

Whereas the present investigation focused on the simultaneous examination of stylistic (aesthetics) and content (information cus-

tomization) issues in regard to important recruitment outcomes, prior recruitment research has tended to focus on either style or content at the expense of both. For example, it is widely recognized that a focus on content issues has dominated non-Web-based recruitment research (e.g., Barber, 1998; Cober et al., 2003). An applicant attraction meta-analysis by Chapman et al. (2005) showed relationships between job characteristics (e.g., pay) and attraction ($\rho = .39$) and organizational characteristics (e.g., location) and attraction ($\rho = .37$) but did not address how the aesthetics associated with the message might relate to attraction.

In contrast, scholarly efforts to better understand and leverage the Web for recruitment purposes have focused largely on Web site design issues, including overall site usability, navigation, and aesthetics (e.g., Cober et al., 2004; Scheu, Ryan, & Nona, 1999; Zusman & Landis, 2002). These studies generally have found higher quality aesthetics and design features to be associated with greater levels of job seeker attraction. Dineen and colleagues (2002; Dineen, 2003) departed somewhat from studies examining stylistic issues by manipulating various message characteristics to examine how customized content—in the form of feedback regarding likely fit—related to attraction in a Web-based context. Their findings suggest that feedback indicating a high degree of fit increases attraction, whereas feedback indicating a low fit decreases attraction. Whereas the Dineen et al. studies held good aesthetic properties constant, only one known Web-based recruitment study has examined both stylistic and content characteristics simultaneously, finding that each contributed uniquely to the prediction of attraction (Cober et al., 2003). Cober and colleagues' (2003) usefulness analysis examined only the independent effects of style and content on attraction, however, and not their potential interactive effects.

A common theme underscores the importance of studying aesthetics and customized information simultaneously. In particular, both can be linked to the cognitive processing of recruitment information, an issue receiving increased attention (Breaugh & Starke, 2000; Cable & Turban, 2001). Each is likely to influence processing differently, however, leaving their combined effects in need of closer scrutiny. Also, whereas each has been linked to attraction (Dineen et al., 2002; Zusman & Landis, 2002), neither has been linked to viewing time or recall.

The elaboration likelihood model (ELM; Petty & Cacioppo, 1986) has been identified as a useful framework for addressing issues of job seeker information processing and is applicable to a discussion of Web-based aesthetics and message content. This model is perhaps the most widely accepted model of information processing and lately has been the focus of renewed interest from recruitment scholars in general (e.g., Cable & Turban, 2001; Maurer, Howe, & Lee, 1992; Roberson, Collins, & Oreg, 2005; Williamson, Cable, & Aldrich, 2002) and Web-based recruitment researchers in particular (Dineen, 2003; Ehrhart, Mayer, & Ziegert, 2005; Lievens & Harris, 2003). The ELM suggests that individuals process information through either a central or peripheral route. Central processing involves expending resources to pursue and carefully consider the merits of information. A primary means for enhancing central processing is by providing a receiver more personally relevant messages (Petty & Cacioppo, 1986). One way to enhance personal relevance is to customize messages to individuals (Dineen et al., 2002). By contrast, peripheral processing does not involve careful examination of the merits of information

presented; rather, information is processed using simple informational cues that are often unrelated to the message. Aesthetic properties fit this characterization (Lievens & Harris, 2003).

The distinction between central and peripheral processing is important because when individuals centrally process, they spend more time carefully considering the content of the message, which strengthens their ability to recall information and allows them to better use the information in forming attitudes, such as attraction toward stimuli. By contrast, peripheral processing often leads to only weak, fleeting links between the message and associated attitudes, behaviors, or codification of information in memory (Cable & Turban, 2001; Lievens & Harris, 2003; Petty & Cacioppo, 1986). In general, the tendency for past recruitment research to focus on content or style issues in isolation has failed to recognize the possibility that messages contain elements that encourage both central and peripheral processing. For example, when good aesthetics and customized information (i.e., that is personally relevant) exist simultaneously, the relative effect that each exerts on processing motivation becomes an empirical question. We build on this foundation in the following sections.

Effects of Aesthetics and Customized Information on Viewing Time and Information Recall

In formulating the ELM, Petty and Cacioppo (1986) proposed that a person's ability and motivation to process information determines the route through which information is processed. Whereas it can be assumed that most job seekers have the ability to process job advertisement information (i.e., they can read and understand the information in the message; Cable & Turban, 2001), their motivation is subject to greater variation, especially given the tremendous amount of job vacancy information available on the Web. An interesting question concerns the manner in which aesthetics affect a job seeker's motivation to process recruiting information available online. On the one hand, the ELM suggests that aesthetic properties likely encourage more peripheral processing, such that message content is not carefully considered. More recent work (Breaugh & Starke, 2000; Cober et al., 2004) has conceptualized the role of aesthetics differently, however. For example, Cober and colleagues' (2004) model of Web-based recruitment suggests that motivation to process derives in part from initial affective reactions to a Web site. By extension, this model suggests that a job seeker must be initially drawn to a Web-based job posting through aspects such as aesthetics or playfulness before any effects of content can be realized. Cober et al. stated, "A job seeker's initial reaction to the web site façade is most likely to be an affective one, which serves as a guide to determine if he/she wants to invest more cognitive effort in an employer's web site" (p. 630). This model also suggests that search behavior is a key mediating process variable between initial affective reactions and familiarity with the organization or position, and it defines search behavior to include depth (amount of time spent on each piece of information accessed) and effort (total amount of time spent) of search (for similar conclusions, see Chen & Bargh, 1999; Tractinsky, Katz, & Ikar, 2000; Williamson et al., 2002).

The marketing literature also suggests that Web-induced mood influences the time Web surfers spend visiting a Web site (Hoffman & Novak, 1996) and that aesthetics have an influence on longer term information recall by capturing initial attention and

thereby improving memory trace strength (e.g., Childers & Houston, 1984). Similarly, initial reactions to advertising stimuli prompt further attention and eventual recall (e.g., Baumgartner et al., 1997) or influence the set of options consumers are willing to consider further (Garber, 1995). Just as aesthetics help consumers sort through the large amount of advertising to which they are exposed, so too should they aid job seekers as they evaluate recruiting information available online. This suggests that good aesthetic properties cause job seekers to develop a deeper impression of Web-based recruitment messages, enhancing the likelihood of subsequent information recall. In particular, it is probable that good aesthetic qualities predispose a job seeker to spend time processing content (i.e., process more centrally) and thus later recall that content.

Whereas aesthetics may predispose a job seeker to attend to a job posting, continued processing is a function of the content that is discovered. The predisposition to process information afforded by good aesthetics is likely to persist only if the subsequent message is useful or memorable to the viewer. As Cober, Brown, Levy, Cober, Kermes, and Baznik (2002) suggested, after initial attention is drawn to a Web site, job seekers turn to satisfying informational requirements. As mentioned, the ELM suggests that information that is more personally relevant will be processed to a greater degree, thus satisfying these requirements to a greater degree. Thus, the personal relevance of customized messages should facilitate more central processing of those messages, causing job seekers to attend to them to a greater degree. In turn, this more careful processing should engage the job seeker for a longer period and facilitate greater recall of specific information related to an image of a job or organization (Williamson et al., 2002).

To summarize, researchers have suggested that when a job posting exhibits poor aesthetics, a job seeker will not initially be drawn to the posting. Central processing of the message will thus not occur, even if that message is personally relevant, leading to decreased viewing time. This in turn is likely to negatively affect recall. By contrast, given good aesthetics, the personal relevance of the message will determine the degree of central processing and, thus, viewing time and recall that occur. If the message is not personally relevant, central processing will be curtailed, whereas peripheral processing will occur. Viewing time will thereby be inhibited, which will lessen recall. By contrast, higher levels of personal relevance in the form of customized information will be associated with enhanced outcomes when good aesthetics are present. This theorizing suggests the following hypotheses:

Hypothesis 1: Aesthetics and the provision of customized information will interact such that the relationship between customized information and viewing time will be positive and significant when aesthetics are good and nonsignificant when aesthetics are poor.

Hypothesis 2: Aesthetics and the provision of customized information will interact such that the relationship between customized information and information recall will be positive and significant when aesthetics are good and nonsignificant when aesthetics are poor.

Hypothesis 3: Job posting viewing time will mediate the interaction effect of aesthetics and customized information on information recall.

Aesthetics and Customized Information: Moderators of the Objective Fit–Attraction Relationship

Whereas viewing time and information recall have been studied only minimally in a recruitment context, several researchers have examined the extent to which job seekers' level of attraction to a job or organization is consistent with their level of objective fit with these entities. Whereas one might expect a strong relationship between objective fit and attraction, results have indicated that the relationship tends to be relatively weak (e.g., average $r = .18$; Kristof-Brown et al., 2005). Other work has shed light on this weak relationship by showing that job seekers are likely to hold inaccurate beliefs about organizations' cultures (e.g., Cable, Aiman-Smith, Mulvey, & Edwards, 2000). For example, Kristof-Brown and colleagues (2005) noted that objective fit and perceived fit (individuals' beliefs about their levels of fit) are sometimes disconnected early in the recruitment process, causing application decisions to be made on flawed information. This suggests a greater likelihood that dysfunctional application decisions by poorly fitting individuals will result. Thus, similar to the research attention given to RJPs (Phillips, 1998), it is important to attend to the means by which the objective fit–attraction relationship might be strengthened among these lower fitting individuals to enable them to self-select out of the hiring process before ever applying.

Studies examining the objective fit–attraction relationship in a Web-based context are rare (see Dineen et al., 2002, for an exception). Researchers have instead focused mostly on main effects of aesthetic properties on attraction or pursuit intentions. For example, Zusman and Landis (2002) examined the relationship between Web site quality (in terms of fonts, colors, pictures, etc.) and attraction, finding that participants were more attracted to jobs posted on higher quality sites. Similarly, Scheu et al. (1999) and Cober et al. (2003) found associations between aesthetic properties and job pursuit intentions.

Although these studies provide a useful starting point in understanding Web-based recruitment, a common thread limits their contribution. In particular, none of these studies has focused on content that might be classified as negative or screening-oriented in terms of describing vacancies (Williamson, Lepak, & King, 2003). That is, the content of the job postings used in these studies tended to present only positive or neutral information about the jobs. For example, in developing their model hypothesizing positive links among aesthetics, Web site attitude, and attraction, Cober et al. (2004) acknowledged a lack of consideration of negative Web site orientation. Indeed, by focusing on positive information, it is difficult to discern whether aesthetic properties themselves lead directly to greater attraction or whether the aesthetics merely draw individuals' attention to the posting, causing them to relate the generally positive content contained in that posting to enhanced attraction. It is also important to focus on the effects of negative information given the rich research tradition examining negativity effects through a prospect theoretical lens (e.g., Kahneman & Tversky, 1979; Skowronski & Carlston, 1989). This work has found that the effects of negative information on outcomes generally exceed the corresponding relative effects of

positive information. This suggests that the effects we propose are more likely to materialize when content associated with the job posting tends to be negative. In this study, negative content was operationalized as information that would lead a job seeker to sense a lower level of fit with the job or organization. For example, information indicating a high level of travel associated with a job is not inherently negative, but it would be negative from the perspective of a job seeker who prefers less travel.

To specifically examine the effects of this negative fit information, and given our interest in predicting how the dark side of Web recruitment might be averted by decreasing attraction among lower fitting job seekers, we focused on these lower fitting individuals and considered how objective fit relates to attraction in various aesthetics and customized information conditions. By contrast, we did not expect hypothesized effects to materialize among higher fitting individuals and, thus, did not consider these individuals in our analysis. Consistent with earlier hypotheses, we expected aesthetics and customized information to moderate the relationship between objective fit and attraction by combining to make the relationship stronger. That is, we proposed that those who exhibit progressively lower levels of fit would be relatively less attracted and, thus, less likely to apply for a position when good aesthetics and customized information are both provided. The work of Cober et al. (2003) was foundational to our hypothesis. Specifically, in one of the few studies to simultaneously examine aesthetics and content, these researchers did not find independent effects of aesthetics on attraction, yet they found that content and usability did influence attraction. Their results thus ran counter to what several other studies had found previously. Importantly, they suggested that aesthetics may not necessarily affect attraction directly but, rather, may "open the door" to make the effects of such characteristics as content and usability more salient. The logic of this argument clearly calls into question whether aesthetics lead directly to attraction, and the ELM is consistent with this suggestion in stating that the effects of peripherally processed cues, such as aesthetics, tend to be weak or fleeting at best.

Thus, we proposed that good aesthetic properties make it possible for content (i.e., information that facilitates an individual's assessment of fit) to have an effect on attraction by capturing initial attention. This initial attention should at least allow for weak effects of objective fit on attraction, consistent with past research (Kristof-Brown et al., 2005). However, if good aesthetics are provided and fit information is made more personally relevant (e.g., customized) to the individual job seeker, deeper processing should result. Deeper processing, in turn, makes it more likely that this objective fit information will influence attraction to a greater degree than when it is not customized to job seekers (Dineen et al., 2002) by enhancing the job seekers' ability to discern specific characteristics of a job or organization (Williamson et al., 2002). In contrast, when poor aesthetics are present, the job seeker will not be initially engaged by the posting, disallowing any subsequent processing of the message. That is, given poor aesthetics, there will be no relationship between fit and attraction, whether or not message content is customized. Taken together, this suggests the following three-way interaction hypothesis:

Hypothesis 4: Among lower fitting individuals, aesthetics and the provision of customized information will moderate the relationship between objective fit and attraction. When aes-

thetics are poor, there will be no relationship between objective fit and attraction regardless of whether or not customized information is provided. When aesthetics are good, the relationship between objective fit and attraction will be positive but weak when customized information is not provided and positive and strong when customized information is provided.

Method

Participants and Procedure

Data were collected in two waves, each comprising two parts occurring approximately 4 weeks apart. Upper level undergraduate students enrolled in business courses at a large public university participated in Wave 1 ($n = 192$) and Wave 2 ($n = 158$), with 240 total students providing usable data from both parts of the study.[1] Students earned course credit for their participation through an established college research experience program. Of these students, 93% were business majors, and 57% were men. Participants averaged 22.3 years of age, 5.1 years of full- and part-time work experience, and had applied for 1.4 jobs previously over the Web. No differences were found between those who were and were not included in the final sample on any of these demographics, all t statistics < 1.50, $ps > .10$.

Part 1 involved completion of a Web-based questionnaire that assessed participant needs, abilities, and values consistent with the needs–supplies (NS), demands–abilities (DA), and person–organization (PO) fit categories found by Cable and DeRue (2002), as well as the complementary categories (person–job [PJ] needs–supplies and PJ demands–abilities) and supplementary category (PO value congruence) discussed by Kristof-Brown et al. (2005). These data enabled customized fit feedback to be provided to participants in relevant study conditions during Part 2. First, consistent with the NS fit conceptualization, participants were asked on the Part 1 questionnaire to indicate needs levels for training, travel, salary, and vacation (e.g., "What starting salary would you expect to receive at your next full-time job?"). These four needs were chosen on the basis of a content analysis of 100 actual management-related job postings randomly selected from monster.com or careerbuilder.com. Of these postings, 42% included information about training, 23% about travel, 46% about salary, and 19% about vacation. Salary and training (i.e., advancement opportunities) can also be linked to prior research (cf. Barber, 1998), whereas travel and vacation reflect the increased importance of work and life issues in the academic (Han & Collins, 2002) and practitioner ("Work–Life Balance," 2005) literature.

Second, consistent with conceptualizations of PO fit in terms of values (e.g., Kristof-Brown et al., 2005), we asked participants to rank order their preferences for four organizational values. Third, participants separately ranked their ability to demonstrate four job demands (to assess DA fit). These latter sets of four values and four job demands appear in the Appendix and were determined on the basis of the pilot study procedure explained therein. The Part 1 questionnaire also assessed each participant's major field of study, previous work experience, and Web-based job application experience.

The primary study instrument used in Part 2 consisted of an actual job posting from monster.com. The name of the organization was changed and the posting revised to include specific values

and job demands information relative to the four values and four job demands described in the Appendix, as well as information about salary and number of days of training, vacation, and travel supplied by the job (see Figure 1). Depicted levels of these various characteristics were determined on the basis of participant responses from the first wave of data collection. In particular, taking responses to the Part 1 questionnaire from the first wave of participants ($n = 192$), we determined median levels of needs for salary, vacation, travel, and training; we used these as the amounts actually advertised in the job posting viewed during Part 2 by participants from both waves. For example, in the first wave, participants indicated a median salary expectation of $35,000; thus, the position was advertised as providing this salary level to create a realistic depiction with a distribution of cases in which an excess and deficiency of supplies naturally existed. Median days of training, vacation (per year), and travel (per month) were 14, 10, and 4, respectively, and were advertised as such in the job posting.

Values and job demands were depicted hierarchically in terms of importance in the job posting (Figure 1). An example job demands statement was, "The number one skill that will help you get ahead is your customer and personal service orientation" (customer service). In addition to the job demands determined through pilot testing and presented in the job posting, four other generic job demands appeared (computer skills, communication skills, authorization to work in the United States, and a bachelor's degree); thus, a total of four values and eight job demands were depicted.

Approximately 4 weeks after completing the Part 1 questionnaire, participants visited a computer laboratory and were asked to view the job advertisement (Part 2). We used a 2×2 experimental design whereby aesthetic properties associated with the advertisement were manipulated to be either good or poor and customized information regarding likely fit was provided or not provided. When the participants arrived at the computer laboratory, we randomly assigned them to one of these four conditions. Cober et al. (2004) identified such features as fonts, colors, pictures, and use of white space as key elements of aesthetics in a Web-recruitment context. Thus, in the poor aesthetics conditions, a black-and-white job posting was presented without pictures, backgrounds, or varying fonts (i.e., the information featured plain black text on a white background with a border around the message body). In contrast, participants in the good aesthetics conditions viewed a job posting that featured colors, pictures, multiple fonts, and a patterned background (see Figure 1).

All content in the body of the job posting was the same across conditions. Those in customized information conditions, however, also received feedback indicating levels of fit in DA (i.e., abilities), PO (values), and NS (salary, training, travel, and vacation) categories. Specifically, in customized information conditions, feedback was provided regarding the degree of congruence between an individual's stated needs, values, and abilities (from the Part 1

[1] Sample size was reduced for reasons including failure to show up for Part 2 or to follow study instructions and technical problems related to the study Web site. Also, given that the company represented on the study Web site was fictitious, we eliminated several individuals on the basis of responses to a manipulation check item included to verify that they were unfamiliar with the company.

SEARCH JOBS | MY JOB SEARCH | CAREER CENTER | FOR EMPLOYERS

MANAGEMENT TRAINEE

Location: US-
Status: Full Time
Job Category: Open

Job Description

LONGWOOD
OFFICE PRODUCTS AND SERVICES

Longwood Corporate Headquarters

Are you looking for a Career instead of a job??

LONGWOOD COMPANY is a premier producer, marketer, and distributor of office branded products and services, and is seeking energetic and professional applicants to start, or further their careers. Management opportunities/advancement available in ALL AREAS including Marketing, Accounting, Finance, Human Resources, MIS, Sales, Operations Management and Logistics.

Description:

As a management trainee, you will learn the operations of our business and be provided with daily assistance from our training manager. This paid training program is 14 days. Upon completion of training, you will be placed in your own facility as a manager in your functional area.

The key to our recent success and orderly geographic expansion has been our ability to assemble the finest group of managers in the industry. Clients receive daily support from on-site management, and are also actively supported by the company's District Manager. The development of experienced management back up is reassuring to owners and administrators.

This is GREATER THAN the expected amount of training you indicated on the survey you previously completed.

Company Culture:

- Our culture is primarily performance-driven
- Competition among associates is not universal, but not uncommon either
- We also maintain a people-orientation in and outside company boundaries
- Finally, we seek associates who enjoy an unstructured environment that is not organized to the point of stifling creativity

"It appears that your preferences for a company culture are INCONSISTENT with what you will find at Longwood.

Required Skills and Abilities:

- The number one skill that will help you get ahead is your customer and personal service orientation
- We also seek managers with sound negotiating skills, as this will help you interact more effectively with co-workers, distributors and suppliers, and customers alike
- Being able to visualize problems and deal effectively with them is also important
- To a lesser degree, time management is useful although you will find that the unstructured nature of our environment makes this a challenge

In addition, as a manager in our organization, you will need to possess:

- Bachelors Degree
- Strategic, analytical, oral and written communication skills
- Computer skills (PowerPoint, Excel, and Word)
- Applicants must be authorized to work in the United States

Salary and Benefits:

We offer our associates a salary starting at $35,000 along with a comprehensive benefits package.

"This salary appears to be CLOSE TO your expected salary.

In addition to official company holidays, our vacation allotment is 10 days a year.

"This is LESS THAN the amount of vacation you indicated expecting

Travel varies, but averages 4 days per month.

"This is LESS travel than what you indicated as your expected amount.

TO APPLY FOR THIS POSITION, please select the Apply button if it is provided below. If there is not an Apply button provided, please copy and paste the URL below into your address bar. This will take you to our career center.

We are proud to be an Equal Opportunity Employer-M/F/D/V

No phone calls please.

WE DO NOT ACCEPT RESUMES FROM THIRD PARTY RECRUITERS (AGENCIES); FOR ANY OF OUR OPENINGS UNLESS WE HAVE A SIGNED AGREEMENT IN PLACE TO FILL A SPECIFIC POSITION

LONGWOOD COMPANY

Management Trainee
Job Ref. #7589646

Figure 1. Sample job posting from the good aesthetics–customized information condition.

questionnaire) and what the position actually supplied or demanded for each of the six primary information categories. Indication was given that the feedback was based on Part 1 responses.

To determine PO and DA fit for each participant, we computed rank order correlations between (a) individual rank orders of the four values and four abilities indicated by participants on the Part 1 questionnaire and (b) rank orders of the four corresponding values and job demands as depicted in the job posting (Dineen, 2003; Kendall, 1970). Three subject matter expert doctoral students verified, with perfect agreement, the illustrated rank order of values and job demands in the job posting. NS fit in terms of training, travel, salary, and vacation levels was operationalized as the difference between the supply of these characteristics depicted in the job posting and the desired amounts indicated by participants on the Part 1 questionnaire. On the basis of these fit scores, feedback for those in customized information conditions indicated either a high, medium, or low level of fit (for values and job demands information) or supplies that were greater than, close to, or less than expectations (for training, travel, salary, and vacation).[2]

The following procedure determined whether a particular participant was a high, medium, or low fit (or had needs that were greater than, close to, or less than supplies) for a particular category of information: Again using the Part 1 questionnaire data from the first wave of participants, we assessed needs levels for the 33rd and 66th percentile responders to determine cut points to create three equivalent groupings of participants in terms of high, medium, or low fit. For example, salary cut points were determined to be $30,000 and $40,000, meaning that one third of these respondents indicated salary expectations of $30,000 or less, one third indicated expectations of between $30,000 and $40,000, and one third expected to receive greater than $40,000 per year. Thus, for those in customized information conditions, the job posting provided feedback indicating an excess of salary supplies for those expecting to receive a salary below $30,000 (i.e., "This salary appears to be GREATER THAN your expected salary") and deficient supplies for those expecting to receive a salary above $40,000. Those indicating salary needs anywhere between $30,000 and $40,000 were provided feedback indicating that supplies were close to their needs. Using this same procedure, we determined training cut points to be 10 and 20 days, travel cut points were 3 and 5 days per month, and vacation cut points were 8 and 14 days per year. A similar procedure was used to determine the top, middle, and lower thirds of the sample in terms of PO and DA fit, with corresponding messages in customized information conditions indicating highly consistent, moderately consistent, or inconsistent fit for individuals in these respective categories (e.g., "It appears that your skills and abilities are HIGHLY CONSISTENT with what we are looking for").

Participants were able to view the job posting for as long as they wished. On completion of viewing, participants were linked to a follow-up survey in which attraction was assessed. Then, participants were asked to complete individual assessments in which they attempted to recall specific features of the job posting (e.g., information about the values espoused by the organization, job demands, vacation days, location, industry, training time, salary, and so forth). These assessments occurred at times ranging from 14 to 50 min into a laboratory session (randomly varied by session such that all participants in a given session completed the assessment

simultaneously). During the time between the follow-up survey and the recall assessment, we asked participants to complete other instruments unrelated to the current study. A full debriefing was conducted at the end of each session.

Measures

Time spent viewing the job posting. The Web site syntax automatically recorded the time (to the second) when a person clicked into and out of the job posting. Total time spent viewing the job posting was the difference between these two recorded times.

Information recall. A paper-and-pencil recall assessment asked participants to "Please answer, to the best of your ability, the following questions pertaining to the job posting that you viewed at the beginning of the session." Sixteen completion questions were included on this assessment (Cable & Turban, 2003), with a maximum possible score of 24. Specifically, responses were tallied as either correct (1) or incorrect (0) for 14 of these questions. Example questions included, "What is the number one skill [job demand] looked for by this firm in potential employees for this job?" and "What was the job title for the job advertised?" Two additional questions asked participants to list other values and job demands portrayed in the job posting (besides the number one value and job demand), with 1 point for each additional value or job demand listed, up to a maximum of 3 points for values and 7 points for job demands.

Attraction. This was assessed using the 5-item measure developed by Highhouse, Lievens, and Sinar (2003). An example item is "This company is attractive to me as a place for employment" (1 = *strongly disagree*; 5 = *strongly agree*). Coefficient alpha was .93.

Objective fit. Kristof-Brown et al. (2005) recently called for more investigations simultaneously incorporating multiple categories of fit, stating, "Now that more is known about various types of fit, perhaps it is time to revisit the field's earlier notion of an overall assessment of PE [person–environment] fit" (p. 321). Although it is less common than assessing fit separately for separate categories, other researchers have developed and used holistic fit indices (e.g., Bretz & Judge, 1994). By developing a holistic objective fit index that simultaneously captured the PO, DA, and NS fit categories incorporated in our job posting, we thus extended prior fit research that has tended to proceed in a parallel but separate fashion, as noted by Cable and Edwards (2004).

As described earlier, we asked participants to provide specific training, travel, salary, and vacation expectations as well as to rank the four personal values and four abilities on the Part 1 questionnaire. On the basis of these data, we created variables for each of these six categories, representing the degree of fit for each participant in each category, and standardized each measure. A single

---

[2] Cable and Edwards (2004) suggested that oversupply may be the most optimal outcome for NS fit; thus, fit was considered higher as oversupply increased. For fit in terms of travel and training days, however, an additional question on the Part 1 survey asked participants to indicate whether an oversupply was positive or negative. For example, some individuals may view additional travel days as appealing, whereas others may view them as unappealing. When oversupply was viewed as unappealing, the sign of the corresponding fit dimension score was reversed.

Table 1
Means, Standard Deviations, and Correlations Among Study Variables (N = 240)

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Aesthetics condition (0 = poor aesthetics; 1 = good aesthetics)	a	a	—									
2. Customized information condition (0 = no customized information provided; 1 = customized information provided)	a	a	−.02	—								
3. Time between viewing job posting and recall assessment (seconds)	1433.84	587.31	−.06	−.06	—							
4. Major (0 = business; 1 = other)	a	a	−.09	−.07	.06	—						
5. Previous job application via the Web (0 = no; 1 = yes)	a	a	−.04	−.03	.03	.00	—					
6. Study wave (0 = first wave; 1 = second wave)	a	a	−.04	−.10	.24**	.07	.09	—				
7. Work experience (years)[b]	5.08	2.81	−.00	.04	−.12	−.01	.11	.01	—			
8. Objective fit index	−.00	.48	.02	.07	.05	−.03	−.11	.03	−.10	—		
9. Job posting viewing time (seconds)	174.93	52.56	.07	.32**	−.03	.00	.08	−.05	.05	.06	—	
10. Information recall	7.59	2.58	.20**	.08	−.17**	−.07	.08	.01	−.15*	.01	.25**	—
11. Overall attraction	3.48	.84	−.12	−.17*	−.01	−.08	.06	.04	.05	.12	−.05	−.02

[a] Dummy coded variable. [b] Square root transformed in all analyses to normalize distribution. *M* and *SD* are raw values.
* $p < .05$. ** $p < .01$.

NS fit score was then calculated by averaging the standardized scores across the four NS fit categories, whereas DA and PO fit scores were the respective standardized profile correlations.

To create the holistic index, we first determined relative importance weights for each of the three fit categories, and then we computed a weighted average across the three fit category scores. Kristof (1996) proposed that importance would moderate the relationship between forms of fit and outcome variables, and empirical evidence supports this proposition (Kristof-Brown, Jansen, & Colbert, 2002). For example, individuals might not view a low supply of values as negatively as a low supply of needs. Such differences have been found in regard to job satisfaction facet importance (McFarlin & Rice, 1992). We used meta-analyzed correlations between fit and attraction from Kristof-Brown et al. (2005) as our weights, and we believe our approach to be superior to simply summing across the categories and overlooking potential differences in importance with regard to fit in the various categories.[3]

Control variables. We controlled for work experience by asking, "How many years of work experience would you say you have (full- and part-time)?" We also used dummy variables to control for data collection wave, whether or not a participant had previously applied for a job using the Web, and whether or not a participant was majoring in a business discipline. Finally, in testing hypotheses involving information recall, we controlled for the amount of time (in seconds) elapsed between viewing the job posting and the recall assessment to better isolate the effects of aesthetics and customized information on information recall. Whereas everyone in a given session began their recall assessment simultaneously, individuals in the session finished viewing the position posting at different times, which were tracked by the Web site syntax to the second. Subtracting the time a participant completed viewing the job posting (tracked by the Web syntax) from the time the assessment began (recorded by the session coordinator) resulted in a continuous distribution of elapsed times ranging from 359 to 2,599 s.

Results

The means, standard deviations, and correlations among study variables are shown in Table 1. We included manipulation check items on the Part 2 follow-up survey that asked participants to report the degree to which the job posting had contained customized information and good aesthetic properties. Those in customized information conditions reported viewing a job posting that had significantly more customized information than those in noncustomized information conditions, $F(1, 238) = 5.09, p < .05$, and those in good aesthetics conditions reported viewing a posting that had significantly better aesthetic qualities than those in poor aes-

---

[3] The meta-analyzed correlations were .38 (PO fit–attraction), .35 (NS fit–attraction), and .34 (DA fit–attraction). Whereas the PO fit–attraction correlation, which included direct and indirect measures of PO fit, appears in Table 2 of Kristof-Brown et al. (2005), a PJ–attraction relationship found in Table 1 of this meta-analysis collapsed across NS and DA fit categories. Thus, we contacted Amy Kristof-Brown to ascertain the specific studies used in meta-analyzing this relationship to more specifically assess NS fit–attraction and DA fit–attraction relationships. We recomputed correlations on the basis of 3 DA and 2 NS effect sizes found in these studies, resulting in the .35 (NS) and .34 (DA) values. An example using the participant's data from Figure 1 illustrates a fit score calculation. On the Part 1 survey, this person indicated expecting $40,000 in salary ($5,000 higher than provided by the job, resulting in a −.11 standardized difference), 28 vacation days per year (18 more than provided, for a −3.06 standardized difference), 3 days of training (the job provided 11 more than this, and this participant rated oversupply as appealing, thus a .38 standardized difference), and 10 travel days per month (6 more than provided, and this participant rated oversupply as appealing, thus a −1.01 standardized difference). The average standardized NS fit score was thus −.95. The rank order correlation between the job demands and this person's self-reported ranked abilities was .20 (standardized score of .04). The rank order correlation between organizational values and this person's self-reported values was −.60 (standardized score of −.63). Finally, using the correlation weights, the overall fit score was thus [(−.63 × .38) + (−.95 × .35) + (.04 × .34)] / 1.07, or −.52.

Table 2
Regression Results Predicting Viewing Time and Information Recall

	Viewing time			Information recall		
Step	β	R^2	ΔR^2	β	R^2	ΔR^2
Hypotheses 1 and 2						
1. Study wave (0 = first wave; 1 = second wave)	−.06	.01	.01	.06	.08	.08**
Major (0 = business; 1 = other)	.01			−.06		
Work experience	.03			−.19**		
Applied for job on the Web (0 = no; 1 = yes)	.08			.10		
Time between viewing and recall assessment				−.21**		
2. Aesthetics (0 = poor aesthetics; 1 = good aesthetics)	.08	.12	.11**	.20**	.12	.04**
Customized information (0 = no customized information provided;						
1 = customized information provided)	.33**			.08		
3. Aesthetics × Customized Information	.21*	.14	.02*	.25*	.14	.02*
Hypothesis 3—Mediation analysis (final step)						
Study wave (0 = first wave; 1 = second wave)				.07	.19	.04**
Major (0 = business; 1 = other)				−.04		
Work experience				−.21**		
Applied for job on the Web (0 = no; 1 = yes)				.09		
Time between viewing and recall assessment				−.20**		
Aesthetics (0 = poor aesthetics; 1 = good aesthetics)				.06		
Customized information (0 = no customized information provided; 1 = customized information provided)				−.11		
Aesthetics × Customized Information				.20		
Viewing time				.23**		

* $p < .05$. ** $p < .01$.

thetics conditions, $F(1, 238) = 116.45$, $p < .01$. We also verified that participant objective fit scores were invariant across conditions, $F(3, 235) = 0.788$, $p > .10$.

To test Hypothesis 1, we conducted moderated regression analysis with control variables entered in the first step, customized information and aesthetic condition dummy variables in the second step, and their cross-product in the third step. Results revealed a significant Customized Information × Aesthetics interaction on viewing time ($\beta = .21$, $\Delta R^2 = .02$, $p < .05$; see Table 2), with the form of the interaction generally conforming to the predicted relationship (Figure 2A). As shown, significant simple slopes materialized along the lines representing good aesthetics, $t(236) = 5.22$, $p < .01$, and poor aesthetics, $t(236) = 2.43$, $p < .05$, consistent with the main effect of customized information shown in Table 2. That is, it appears that customized information increases viewing time regardless of the quality of aesthetics, although the significant interaction indicates that viewing time differences are greater across customized versus noncustomized information conditions when good aesthetics are present. A significant analysis of variance (ANOVA), $F(3, 236) = 11.16$, $p < .01$, $\eta^2 = .12$, and post hoc comparison tests further suggested that those in the good aesthetics–customized information condition spent more time viewing the posting than those in any other condition, which is consistent with the notion that greater central processing occurs when both good aesthetics and customized information are present. Mean viewing times were 202 s (good aesthetics–customized information condition), 182 s (poor aesthetics–customized information), 155 s (good aesthetics–noncustomized information), and 160 s (poor aesthetics–noncustomized information). We calculated Cohen's d effect sizes

to assess mean differences between the good aesthetics–customized information condition and these other conditions (with .20 considered a small effect, .50 a medium effect, and .80 a large effect; Cohen, 1988). These effect sizes were .34, .89, and .81, respectively.[4]

We next tested this interaction effect with information recall as the dependent variable (Hypothesis 2). Results of a moderated regression analysis supported this hypothesis ($\beta = .25$, $\Delta R^2 = .02$, $p < .05$; Table 2) and are illustrated in Figure 2B. As shown, the relationship between customized information and recall was positive and significant when good aesthetics were present, $t(236) = 2.59$, $p < .05$. In contrast, when poor aesthetics were present, recall was virtually unchanged when customized information was provided compared with when it was not, $t(236) = -0.84$, $p > .10$. Moreover, when good aesthetics and customized information were both provided, recall scores were more than 1 point higher than in the next highest condition. A significant ANOVA and post hoc comparison tests again confirmed this pattern, $F(3, 236) = 5.10$,

---

[4] Because of the fit feedback, a greater number of words appeared in the customized information conditions, which could have increased viewing times. Although there were no changes in the results when we reran this analysis controlling for number of words, it is interesting to note the differences in mean viewing times across conditions. Specifically, there was a 47-s difference between the customized and noncustomized information conditions when aesthetics were good, whereas the difference in viewing times between the good and poor aesthetics conditions was 20 s when customized information was provided. This suggests that, on average, 27 additional seconds were devoted to simply reading the customized text, with the remaining 20 s attributable to deeper message processing.
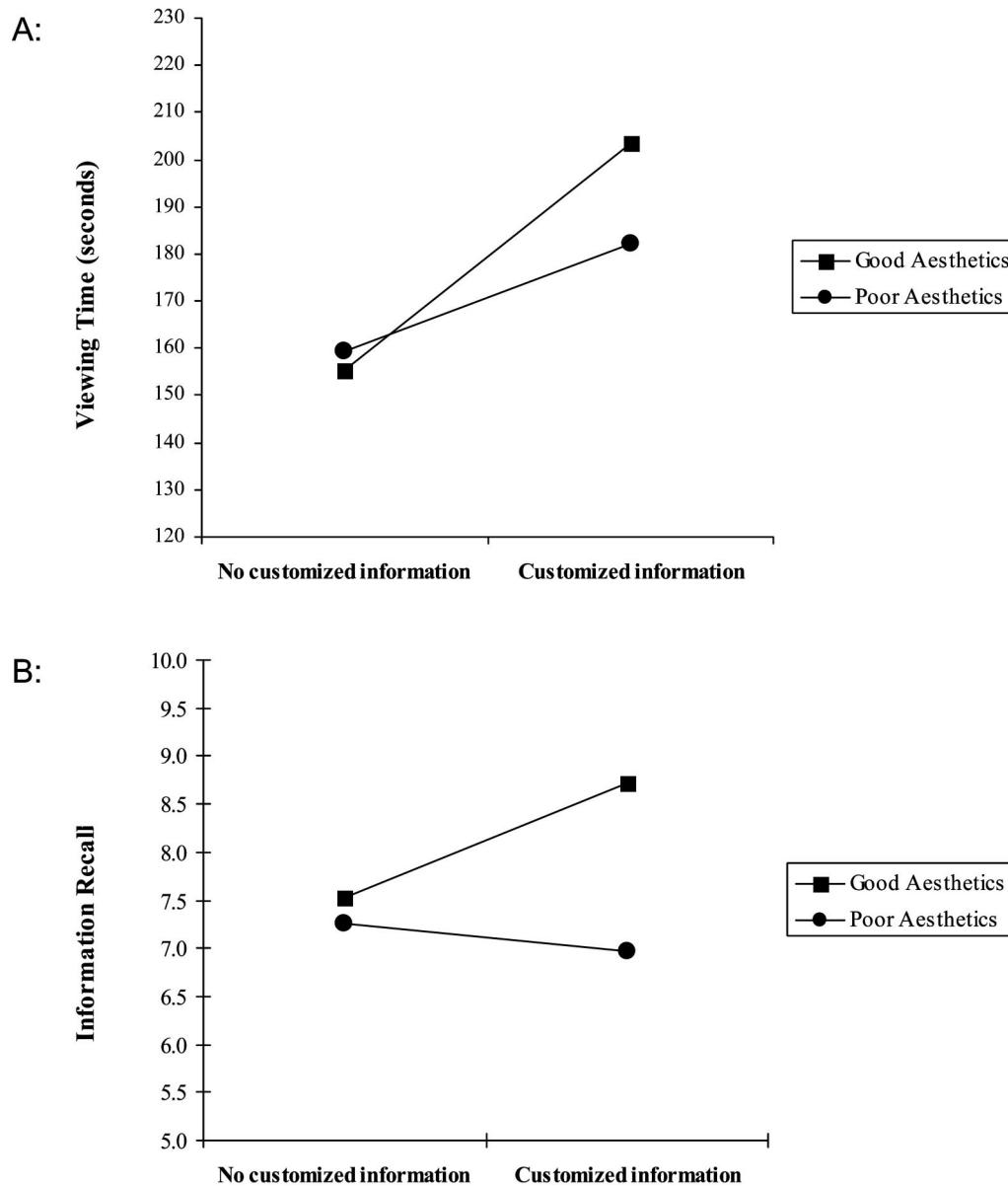
A:

B:

Figure 2. Interaction of customized information and aesthetics conditions on viewing time (A) and information recall (B).

$p < .01$, $\eta^2 = .06$. Recall levels were highest in the good aesthetics–customized information condition ($M = 8.64$) and lower in the other three conditions (no customized information–poor aesthetics, customized information only, good aesthetics only), with means of 7.00, 7.62, and 7.17, and Cohen's ds of .70, .38, and .58, respectively.

Because of the apparent distinction between recall in the good aesthetics–customized information condition and the other three conditions, we conducted a supplemental analysis to examine whether these differences would also persist over time, such that those in the good aesthetics–customized information condition would recall information about the job posting to a greater extent across time than those in the other three conditions. This analysis

addressed calls by researchers to better incorporate time into studies of organizational phenomena (Goodman, Ancona, Lawrence, & Tushman, 2001; Rynes & Cable, 2003) and allowed for a closer examination of memory decay patterns across conditions.

To conduct this test, we used the Kaplan and Meier survival analysis procedure because it allows for the test of the hypothesis that survival functions of discrete groups are equivalent and is commonly used with and provides an unbiased treatment of right-censored data (e.g., O'Reilly, Chatman, & Caldwell, 1991; Wright, 2000). Survival analysis depends on precise measurement of time data and the delineation of an "event" that indicates a change in status from "survival" to "nonsurvival" (Wright, 2000). For this analysis, an "event" was deemed to occur when a participant's

recall score was lower than the median score across the sample ($Mdn = 7$). Similar to our ANOVA results above, the overall log rank statistic was significant for this analysis (log rank $= 10.23$, $df = 3$, $p < .05$; Cox, 1972; Wright, 2000). A planned comparison of the good aesthetics–customized information condition with the other combined study conditions also revealed a significant log rank statistic, suggesting superior recall survival rates across time for those in this condition compared with those in the other three conditions (log rank $= 5.43$, $p < .05$; see Figure 3). In total, more than 81% (47 of 58) of the cases in the good aesthetics–customized information condition were right-censored at the time of corresponding recall assessments (i.e., scores were above the median), whereas only 62% were right-censored in the next closest condition. In addition, closer inspection of Figure 3 shows that differences between conditions did not appear until approximately 1,000 s had elapsed. This is highly consistent with the nature of peripheral versus central processing in suggesting that some degree of recall does occur for peripherally processed information. Such recall, however, is considered to be only fleeting, whereas more centrally processed information persists longer in memory.

Hypothesis 3 proposed that job advertisement viewing time would mediate the Aesthetics $\times$ Customized Information interaction effect on information recall, and the results supported this relationship (see Table 2). Following Kenny, Kashy, and Bolger's (1998) approach to mediation testing, previous results suggested direct relationships between the Aesthetics $\times$ Customized Information interaction and (a) the dependent variable (recall) and (b)

the mediator (viewing time). Next, controlling for the Aesthetics $\times$ Customized Information interaction (i.e., direct effect), we found that the relationship between viewing time and information recall was significant ($\beta = .23$, $\Delta R^2 = .04$, $p < .01$). Full mediation was demonstrated given that the Aesthetics $\times$ Customized Information interaction beta coefficient became nonsignificant in relation to information recall when viewing time was included in the regression.

Among the lower fitting half of our sample, results also provided partial support for Hypothesis 4 (three-way interaction of Customized Information $\times$ Aesthetics $\times$ Objective Fit on attraction; $\beta = .70$, $\Delta R^2 = .04$, $p < .05$; Table 3). As illustrated in Figure 4, only in the good aesthetics–customized information condition did a significant simple slope of the objective fit–attraction relationship materialize, $t(114) = 2.46$, $p < .05$. Whereas the slope was also positive in the good aesthetics–noncustomized information condition, this slope was nonsignificant, counter to our prediction. To further illustrate this pattern of results, the correlations between objective fit and attraction were .38 in the good aesthetics–customized information condition, while averaging only .01 across the other three conditions. Also of interest, Figure 4 shows that the strong relationship between objective fit and attraction that occurred in the good aesthetics–customized information condition resulted in much lower attraction levels when fit was lowest, whereas attraction levels were relatively similar across conditions when fit was moderate. This pattern was confirmed by a supplemental ANOVA, $F(3, 57) =$
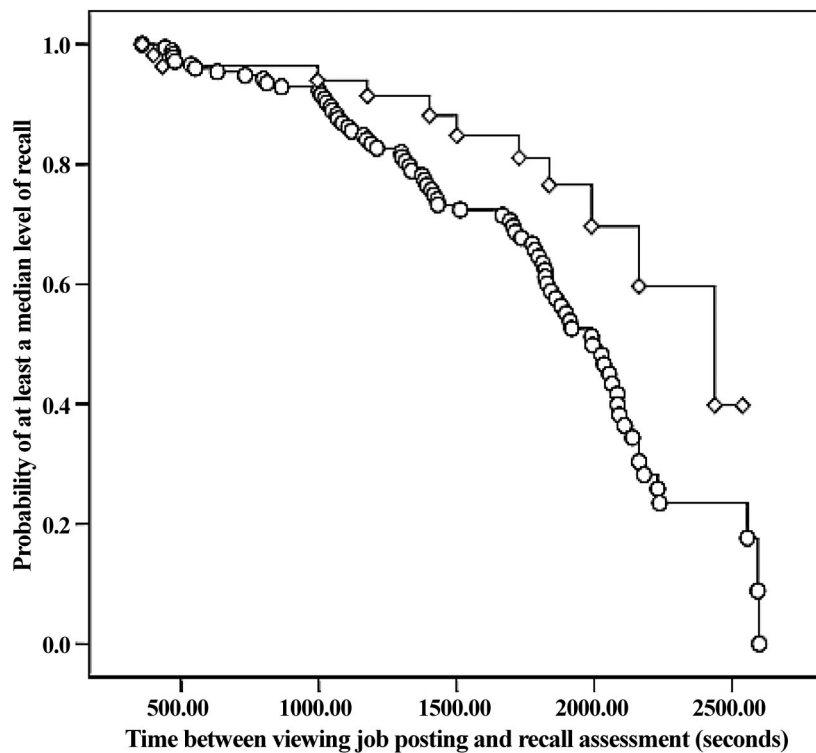

Figure 3. Kaplan and Meier hazard function comparing information recall in the good aesthetics–customized information condition with that in the other three study conditions combined. The line with diamonds represents the good aesthetics–customized information condition, and the line with circles represents all other study conditions.

Table 3
Regression Results Predicting Attraction (Hypothesis 4)

	Attraction		
Step	β	R^2	ΔR^2
1. Study wave (0 = first wave; 1 = second wave)	.04	.02	.02
Major (0 = business; 1 = other)	−.01		
Work experience	.01		
Applied for job on the Web (0 = no; 1 = yes)	.13		
2. Aesthetics (0 = poor aesthetics; 1 = good aesthetics)	−.17	.10	.08*
Customized information (0 = no customized information provided; 1 = customized information provided)	−.18		
Objective fit	.14		
3. Aesthetics × Customized Information	−.07	.11	.01
Aesthetics × Objective Fit	.24		
Customized Information × Objective Fit	.01		
4. Aesthetics × Customized Information × Objective Fit	.70*	.15	.04*

* $p < .05$.

3.78, $p < .05$, $\eta^2 = .17$, with corresponding post hoc differences between the good aesthetics–customized information condition and all other conditions among the lower fitting half of the sample used to test the three-way interaction hypothesis (Cohen's *d*s ranged from .83 to .96). These strong effects suggest that the combination of good aesthetics and customized information allows job seekers to better recognize when they are a low fit, leading to far less attraction among the lowest fitting individuals.

Discussion

With the increased amount of information available about jobs on the Web, organizations face a more difficult yet increasingly critical challenge in terms of capturing and retaining job seekers' attention. Given the proclivity for the Web to increase unqualified application traffic, it is vital for recruiters to move beyond simply trying to encourage attraction among all job seekers to encouraging attraction among those who are likely to be viable job candidates while discouraging attraction among those who are unlikely

to be good candidates. This study extended theory and research related to the cognitive processing of recruitment messages in addressing these issues. The results show that information recall is increased when customized information is provided, but only when a job posting also contains good aesthetic properties. Customized information also has a greater effect on viewing time when aesthetics are good versus when they are not, although the significant simple slope relating customization to viewing time when aesthetics are poor suggests that some individuals may be inherently involved in viewing the content of the job posting and less affected by aesthetics. Considered in tandem, the effects of aesthetics and customized information on information recall are fully mediated by viewing time.

The three-way interaction results provide further support for our theoretical development. Specifically, the relationship between objective fit and attraction was stronger in the good aesthetics–customized information condition compared with other conditions. Of particular interest, this effect appears to be
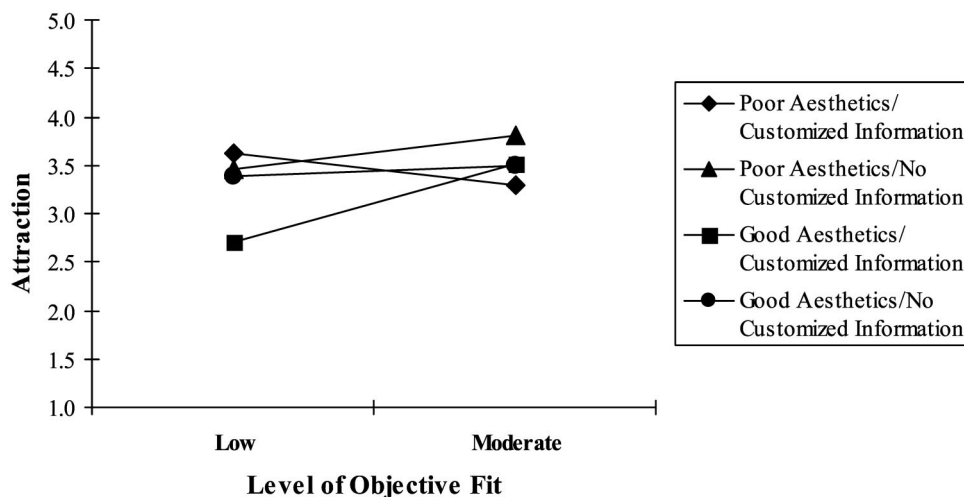

Figure 4. Interaction of aesthetics, customized information, and objective fit on attraction.

driven primarily by far lower attraction levels among poorly fitting individuals who view messages containing good aesthetics and customized information, compared with relatively stable attraction levels among more moderately fitting individuals. Further supporting this assertion, a supplemental three-way interaction analysis among the higher fitting half of the sample was nonsignificant. This is consistent with the negativity bias literature (Skowronski & Carlston, 1989) in suggesting that good aesthetics and customized information are more influential in encouraging poorly fitting people to self-select out than they are in encouraging good-fitting people to self-select in. Such a finding is also consistent with image theory in suggesting that individuals tend to screen out options more than they screen them in (e.g., Ordonez, Benson, & Beach, 1999), and it suggests a means of redressing the dark side of Web recruitment that manifests when too many poorly fitting individuals are attracted to organizations' online job postings.

This study contributes to theory and practice in several ways. First, it helps clarify the role of aesthetics in a job search environment. Specifically, whereas most prior recruitment research examining aesthetics has proposed (Cober et al., 2004) or found (Zusman & Landis, 2002) main effects, the present study suggests that aesthetics do not necessarily relate directly to outcomes but, rather, allow for content to influence outcomes if the content is made more personally relevant and, thus, useful to the job seeker. Our results, although novel in a recruitment context, are consistent with findings in the marketing and human–computer interaction literatures in suggesting greater subsequent effortful processing when initial impressions are favorable (e.g., Baumgartner et al., 1997; Schenkman & Jonsson, 2000). Although we did not formally test the Cober et al. (2004) model, our results do suggest greater support for their proposed links among aesthetics, search behavior, and attraction than for a direct link among aesthetics, Web site attitude, and attraction. Although prior studies have tended to find that aesthetics relate directly to attraction, most of that work has confounded good aesthetics and positive message content, making it unclear whether aesthetics were directly affecting attraction or merely causing the job seeker to elaborate more deeply on the positive content. Thus, it is likely that the more direct path proposed by Cober et al. is limited to sites or advertisements in which content tends to be clearly positive or at least not negative.

A second contribution was made by providing further evidence for the benefits of customization in a recruitment context. This extended prior work (Dineen et al., 2002) by examining customized information and aesthetics simultaneously and showing that the personal relevance of customized messages exerts effects only when good aesthetics are also present. Also notable is the fact that additional forms of customization (e.g., presenting certain types of information to some individuals and different types of information to others) were not necessary to bring about these effects; simply providing indication of likely fit was sufficient. Third, the study examined three outcomes that are critically important to those using the Web to recruit. For example, the study answered calls to examine recruitment message viewing time (Lievens & Harris, 2003) and information recall (e.g., Cable & Turban, 2003), two outcomes that have received little attention to date in the recruitment literature. Viewing time and recall, already established as critical in the marketing literature (e.g., Keller, 1993), are important recruitment outcomes given the proliferation of vacancy in-

formation available on the Web and concomitant increased stakes for companies trying to gain a competitive advantage in sourcing human capital by first capturing and retaining job seeker attention. Fourth, we focused on not simply increasing attraction among all job seekers but actually decreasing attraction among poorly fitting job seekers. This is a novel yet logical approach given current-day realities, and it is consistent with recent calls to focus on applicant quality instead of quantity (e.g., Rynes & Cable, 2003).

Our findings also extend RJP research and may actually help to explain previously weak effects found in that literature (Phillips, 1998; Premack & Wanous, 1985). In particular, RJPs used in previous research generally have not been customized to individuals but, instead, have been provided generically across job seekers or incumbents. Our results suggest stronger effects when both customized information and good aesthetics are provided. Phillips (1998) also found stronger effects when verbal (more personal) RJPs were provided, although we extended this by providing personally relevant, self-diagnostic fit information rather than a common message.

Strengths and Limitations

This study has several strengths that increase our confidence in the results. First, study measures were gathered at different times by different methods, including two Web-based questionnaires separated by 4 weeks, a paper-and-pencil recall assessment, rankings of job characteristics by subject matter experts, and objective ratings via Web site syntax. Moreover, we took a rigorous approach to designing our job posting, which was adapted from an actual monster.com posting. This included a content analysis of 100 actual job postings to determine relevant information categories to incorporate, pilot studies to determine relevant values and job demands, and the advertisement of median levels of desired characteristics (e.g., salary, travel) in the job posting to ensure realism. We also view our approach to assessing objective fit as a strength in that it accounts for both amounts (e.g., training days) and relative importance (e.g., values) of various characteristics in accordance with Cable and Edwards's (2004) simultaneous effects model and call for integration of fit research into a broader framework. Also, whereas we acknowledge the literature's predominant focus on perceived fit (Judge & Cable, 1997; Kristof-Brown et al., 2005), we believe our focus on the direct relationship between objective fit and attraction to be most appropriate for our purposes, given that the ultimate goal is to attract those who objectively fit the organization or job and not necessarily those who think they fit but often harbor inaccurate perceptions (Cable et al., 2000; Kristof-Brown et al., 2005). Additional strengths include the use of multiple analytical approaches and investigation of a key mediating variable (viewing time) that highlights the central processing that occurs when both good aesthetics and customized information are provided and assists in understanding the associated cognitive dynamics.

Although the study is strong in many respects, we acknowledge some limitations. First, although models that incorporate Web site aesthetics tend to posit an initial affective reaction by job seekers (e.g., Cober et al., 2004), we did not actually measure initial affective reactions. Another limitation is that we did not consider corporate reputation or familiarity, given that the job postings did not include the name of an actual, recognizable organization. This

suggests that our results might be limited to lesser known organizations that lack reputational capital, although a large majority of companies fit this description and more than 50% of U.S. workers are employed in companies of fewer than 500 employees (U.S. Census Bureau, 2002). Third, fit in the six primary customized information categories was assessed using difference scores and profile correlations. Although we acknowledge relevant criticisms (Edwards, 1994), we also recognize recent advice by Kristof-Brown et al. (2005), who stated, "Researchers must consider their research question, sample characteristics, and prior evidence regarding the specific fit relationship before determining how to assess fit in a particular investigation" (p. 325). It was necessary for us to calculate overall profile scores representing various aspects of fit to provide customized fit feedback in relevant categories, making our choice imperfect but defensible. Moreover, the differences in effects across study conditions are not readily attributable to this issue. Fourth, by focusing only on lower fitting individuals in assessing attraction, we reduced our power to detect significant results. Thus, whereas our three-way interaction test was significant, and it is reasonable to infer the practical significance of the differences found across conditions (Cohen, Cohen, West, & Aiken, 2003), we did not detect specific slope differences between certain conditions. Fisher's z tests revealed, for example, that the correlation relating objective fit to attraction in the good aesthetics–customized information condition (.38) did not significantly differ from that in the poor aesthetics–noncustomized information condition (.15). It is likely that our prediction of a weak objective fit–attraction relationship in the good aesthetics–noncustomized information condition also did not materialize for this reason.

Finally, our participants were a convenience sample of students who were not actually looking for jobs, which might limit the generalizability of our results to actual job seekers of varied ages (Jaffe, 2005), although Jaffe (2005) has suggested that convenience sampling is less of a problem in areas such as perception, attention, and memory. Also, Pew research (Pew Internet and American Life, 2002) has suggested that 18- to 29-year-olds are the most likely to search the Web for jobs. Indeed, as opposed to studies in which they are intended to mimic actual employees, students are a more relevant sample for studies examining job seeker behavior.

Practical Implications and Future Research Directions

This study helps alleviate concerns that Web recruitment research is atheoretical (e.g., Anderson, 2003); it also addresses concerns that recruitment research does not focus enough on practical issues (Cober et al., 2004). Indeed, the results hold rich, practical implications for companies vying to capture and retain job seeker attention as well as attract the most promising human capital. Developing means of capturing and retaining job seeker attention also has the simultaneous benefit of decreasing job seeker attention to competitors' recruitment messages. Dissuading poorly fitting individuals from applying should also reduce screening costs and increase chances of making good selection decisions that portend the retention of a more satisfied, committed workforce (O'Reilly et al., 1991). Future studies should examine these as well

as other longer term outcomes, such as performance, given that companies are beginning to use Web technology in this manner (e.g., Cappelli, 2001).

In particular, our results imply that companies should design their job postings to include good aesthetic properties. This is critical given estimates that fewer than 10% of Web surfers scroll past what is immediately visible on an encountered Web page (cf. Cober et al., 2002). In fact, researchers have suggested using peripheral cues to initially capture job seeker attention before attempting to communicate more detailed information related to the organizational image using a more central route (Williamson et al., 2002). Yet, good aesthetics are likely to be useful only if accompanied by useful content. Customization appears to be one way to make content more personally relevant and, thus, useful. The method of customizing information proposed in this article is particularly useful because it can be provided anonymously via a job board or organizational Web site. Anonymity is critical in decreasing socially desirable or faked responses among job candidates and even potentially averting adverse impact (Cappelli, 2001), although these issues deserve more research attention. For example, a job seeker may respond in a socially desirable manner on an organizational Web site, causing potential mismatched applications. However, it is likely that this type of job seeker would apply whether or not they received customized feedback, rendering the provision of feedback "no worse" than not providing it. In addition, in an effort to avoid socially desirable responding, companies should seek to assess fit using characteristics that are not innately socially desirable. For example, one of our values was "degree of organization." For some people, an organized environment is appealing, whereas for others a disorganized environment is more attractive (see the Appendix). Similarly, some environments are themselves more or less organized.

Finally, whereas some of the effects detected in this study were strong (e.g., differences in attraction among the most poorly fitting individuals; ds between .83 and .96), others were more modest. It is worth noting, however, that both good aesthetics and customized information can be incorporated on a Web site with nominal cost. In turn, lower implementation costs increase the overall utility of these approaches.

We join others in recognizing a continuing need for clarity and directedness in Web-based recruitment communications. As Kristof-Brown et al. (2005) stated, "From the beginning of the recruitment process . . . managers should pay attention to how clearly they are communicating work unit and organizational values. This should aid in the attraction, hiring, and retention of individuals who share those values" (p. 326). Cober et al. (2004) also noted the importance of fit and how the Web might be leveraged to enhance it among applicants; that is, by leveraging Web technology, better self-selection might be encouraged among potential applicants by strengthening the link between objective fit and attraction. Given that fit is viewed as crucial because of the positive benefits accrued to better fitting incumbents and the organizations they enter (Rynes & Cable, 2003), further investigating and developing means to avert the dark side of Web recruitment by more closely aligning objective fit and attraction are worthwhile endeavors.

References

Anderson, N. (2003). Applicant and recruiter reactions to new technology in selection: A critical review and agenda for future research. *International Journal of Selection and Assessment, 11,* 121–136.

Barber, A. E. (1998). *Recruiting employees: Individual and organizational perspectives.* Thousand Oaks, CA: Sage.

Baumgartner, H., Sujan, M., & Padgett, D. (1997). Patterns of affective reactions to advertisements: The integration of moment-to-moment responses into overall judgments. *Journal of Marketing Research, 34,* 219–232.

Breaugh, J. A., & Starke, M. (2000). Research on employee recruitment: So many studies, so many remaining questions. *Journal of Management, 26,* 405–434.

Bretz, R. D., & Judge, T. A. (1994). The role of human resource systems in job applicant decision processes. *Journal of Management, 20,* 531–552.

Cable, D., Aiman-Smith, L., Mulvey, P. W., & Edwards, J. R. (2000). The sources and accuracy of job applicants' beliefs about organizational culture. *Academy of Management Journal, 43,* 1076–1085.

Cable, D., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology, 87,* 875–884.

Cable, D., & Edwards, J. R. (2004). Complementary and supplementary fit: A theoretical and empirical integration. *Journal of Applied Psychology, 89,* 822–835.

Cable, D., & Judge, T. (1996). Person–organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes, 67,* 294–311.

Cable, D., & Turban, D. (2001). Establishing the dimensions, sources and value of job seekers' employer knowledge during recruitment. In K. Rowland & G. Ferris (Eds.), *Research in personnel and human resource management* (pp. 115–163). Greenwich, CT: JAI Press.

Cable, D., & Turban, D. (2003). The value of organizational reputation in the recruitment context: A brand-equity perspective. *Journal of Applied Social Psychology, 33,* 2244–2267.

Cappelli, P. (2001). Making the most of on-line recruiting. *Harvard Business Review, 79,* 139–146.

Chapman, D., Uggerslev, K. L., Carroll, S. A., Piasentin, K. A., & Jones, D. A. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology, 90,* 928–944.

Chapman, D., & Webster, J. (2003). The use of technologies in the recruiting, screening, and selection process for job candidates. *International Journal of Selection and Assessment, 11,* 113–120.

Chen, M., & Bargh, J. (1999). Consequences of automatic evaluation: Immediate behavioral predispositions to approach or avoid the stimulus. *Personality and Social Psychology Bulletin, 25,* 215–224.

Childers, T. L., & Houston, M. J. (1984). Conditions for a picture-superiority effect on consumer memory. *Journal of Consumer Research, 11,* 643–655.

Cober, R. T., Brown, D. J., Keeping, L. M., & Levy, P. E. (2004). Recruitment on the net: How do organizational web site characteristics influence applicant attraction? *Journal of Management, 30,* 623–646.

Cober, R. T., Brown, D. J., Levy, P. E., Cober, A. B., & Keeping, L. M. (2003). Organizational web sites: Web site content and style as determinants of organizational attraction. *International Journal of Selection and Assessment, 11,* 158–170.

Cober, R. T., Brown, D. J., Levy, P. E., Cober, A. B., Kermes, J., & Baznik, D. (2002, April). *The effects of job-seeker reactions to corporate employment Websites.* Paper presented at the 17th annual meeting of the Society for Industrial/Organizational Psychology, Toronto, Canada.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohen, J., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences.* Mahwah, NJ: Erlbaum.

Cox, D. R. (1972). Regression models and life tables. *Journal of the Royal Statistical Society, 26*B, 103–110.

Dineen, B. R. (2003). *The effects of customizing recruitment information to individual job seekers in a Web-based recruitment context: A multi-level experimental investigation.* Unpublished doctoral dissertation, The Ohio State University.

Dineen, B. R., Ash, S. R., & Noe, R. A. (2002). A Web of applicant attraction: Person–organization fit in the context of Web-based recruitment. *Journal of Applied Psychology, 87,* 723–734.

Edwards, J. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Processes, 58,* 51–101.

Ehrhart, K., Mayer, D., & Ziegert, J. (2005, April). *Web-based recruitment: Exploring the effects of Web-site content and characteristics.* Paper presented at the 20th annual meeting of the Society for Industrial/Organizational Psychology, Los Angeles, CA.

Garber, L. L. (1995). The package appearance in choice. *Advances in Consumer Research, 22,* 653–660.

Goodman, P., Ancona, D., Lawrence, B., & Tushman, M. (2001). Introduction to special topic forum on time and organizational research. *Academy of Management Review, 26,* 507–511.

Grossman, R. J. (2004, June). HR on the board. *HR Magazine, 49,* 56–63.

Han, J., & Collins, C. J. (2002). The effects of company recruitment practices on job seekers' perceived employment brand equity and intentions to pursue job opportunities. *Academy of Management Proceedings,* HR: A1–A6.

Highhouse, S., & Hoffman, J. R. (2001). Organizational attraction and job choice. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 16, pp. 37–64). New York: Wiley.

Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational and Psychological Measurement, 63,* 986–1002.

Hoffman, D. L., & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: Conceptual foundations. *Journal of Marketing, 60,* 50–60.

Internet misuse may contribute to long joblessness. (2003, February 18). *Silicon Valley/San Jose Business Journal.* Retrieved May 2005, from http://sanjose.bizjournals.com/sanjose/stories/2003/02/17/daily17.html

Jaffe, E. (2005, September). How random is that? *APS Observer, 18.* Retrieved January 2006, from http://www.psychologicalscience.org/observer/getArticle.cfm?id=1838

Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organization attraction. *Personnel Psychology, 50,* 359–395.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47,* 263–293.

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing, 57,* 1–22.

Kendall, M. G. (1970). *Rank correlation methods* (4th ed.). London: Griffin.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., Vol. 1, pp. 233–265). New York: McGraw-Hill.

Kristof, A. (1996). Person–organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology, 49,* 1–49.

Kristof-Brown, A., Jansen, K. J., & Colbert, A. E. (2002). A policy-capturing study of the simultaneous effects of fit with jobs, groups, and organizations. *Journal of Applied Psychology, 87,* 985–993.

Kristof-Brown, A., Zimmerman, R., & Johnson, E. (2005). Consequences

of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology, 58,* 281–342.

Lievens, F., & Harris, M. (2003). Research on Internet recruiting and testing: Current status and future directions. In C. Cooper & I. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 18, pp. 131–165). Chichester, England: Wiley.

Mass customization: The holy grail of marketing. (2001, November 6). *DSstar.* Retrieved May 2004, from http://www.tgc.com/dsstar/01/1106/103660.html

Maurer, S. D., Howe, V., & Lee, T. (1992). Organizational recruiting as marketing management: An interdisciplinary study of engineering graduates. *Personnel Psychology, 45,* 807–834.

McFarlin, D. B., & Rice, R. W. (1992). The role of facet importance as a moderator in job satisfaction processes. *Journal of Organizational Behavior, 13,* 41–54.

Ordonez, L., Benson, L., III, & Beach, L. R. (1999). Testing the compatibility test: How instructions, accountability, and anticipated regret affect prechoice screening options. *Organizational Behavior and Human Decision Processes, 78,* 63–80.

O'Reilly, C. A., III, Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person–organization fit. *Academy of Management Journal, 34,* 487–516.

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change.* New York: Springer-Verlag.

Pew Internet and American Life. (2002, July 17). *Online job hunting: A Pew Internet Project data memo.* Retrieved May 5, 2004, from http://www.pewinternet.org

Phillips, J. M. (1998). Effects of realistic job previews on multiple organizational outcomes: A meta-analysis. *Academy of Management Journal, 41,* 673–690.

Premack, S. L., & Wanous, J. P. (1985). A meta-analysis of realistic job preview experiments. *Journal of Applied Psychology, 70,* 706–719.

Roberson, Q., Collins, C., & Oreg, S. (2005). The effects of recruitment message specificity on applicant attraction to organizations. *Journal of Business and Psychology, 19,* 319–340.

Rynes, S., & Cable, D. M. (2003). Recruitment. In W. Borman, D. Ilgen, & R. Klimoski (Eds.), *Comprehensive handbook of psychology: Vol. 12. Industrial and organizational psychology* (pp. 55–76). Tampa, FL: Personnel Decisions Research Institutes.

Rynes, S. L., & Gerhart, B. (1990). Interviewer assessments of applicant "fit": An exploratory investigation. *Personnel Psychology, 43,* 13–36.

Schenkman, B. N., & Jonsson, F. U. (2000). Aesthetics and preferences of web pages. *Behaviour & Information Technology, 19,* 367–377.

Scheu, C., Ryan, A. M., & Nona, F. (1999, April). *Company web-sites as a recruiting mechanism: What influences applicant impressions?* Paper presented at the 14th annual meeting of the Society for Industrial/Organizational Psychology, Atlanta, GA.

Skowronski, J., & Carlston, D. (1989). Negativity and extremity biases in impression formation: A review of explanations. *Psychological Bulletin, 105,* 131–142.

Sumser, J. (2004, May 18). Consider the audience. *Electronic Recruiting News.* Archived at http://www.interbiznet.com/ern/archives/040518.html

Taylor, M. S., & Collins, C. J. (2000). Organizational recruitment: Enhancing the intersection of research and practice. In C. Cooper & E. Locke (Eds.), *Industrial and organizational psychology: Linking theory with practice* (pp. 304–334). Oxford, England: Blackwell Publishers.

Tinsley, H. E. A. (2000). The congruence myth: An analysis of the efficacy of the person–environment fit model. *Journal of Vocational Behavior, 56,* 147–179.

Tractinsky, N., Katz, A. S., & Ikar, D. (2000). What is beautiful is usable. *Interacting With Computers, 13,* 127–145.

U.S. Census Bureau. (2002). Statistics about business size (including small business) from the U.S. Census Bureau. Retrieved March 8, 2006, from http://www.census.gov/epcd/www/smallbus.html

Williamson, I. O., Cable, D. M., & Aldrich, H. (2002). Smaller but not necessarily weaker: How small businesses can overcome barriers to recruitment. In J. Katz & T. Welbourne (Eds.), *Advances in entrepreneurship, firm emergence, and firm growth* (Vol. 5, pp. 83–106). Greenwich, CT: JAI Press.

Williamson, I. O., Lepak, D. P., & King, J. (2003). The effect of company recruitment web site orientation on individuals' perceptions of organizational attractiveness. *Journal of Vocational Behavior, 63,* 242–263.

Work–life balance is the key. (2005, March). *Personnel Today* (Suppl.)*,* 34.

Wright, R. E. (2000). Survival analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 363–407). Washington, DC: American Psychological Association.

Zusman, R. R., & Landis, R. S. (2002). Applicant preferences for Web-based versus traditional job postings. *Computers in Human Behavior, 18,* 285–296.

(*Appendix follows*)

Appendix

Procedure Used to Determine PO and DA Fit Dimensions Used in the Study

Determination of PO Fit Dimensions

To determine relevant values representing person–organization (PO) fit in the present study, we used values appearing in the version of the Organizational Culture Profile (OCP) developed by Cable and Judge (1996). It was important to consider values that are likely to be idiosyncratically important to different organizations and job seekers, thus generating a wider range of fit scores that include over- and undersupply situations (e.g., Rynes & Gerhart, 1990; Tinsley, 2000) as well as reducing the potential for socially desirable responding. Also, values were chosen that were not correlated with each other and were from different values categories identified by O'Reilly et al. (1991).

To satisfy these criteria, we gathered pilot data from 97 undergraduate students, whereby mean rankings for each of the 40 values on the OCP were assessed. Twenty-six of these 40 values fell within 1 standard deviation of the median importance ranking across the 40 values. These 26 values were then rank ordered in terms of their standard deviations to retain those with relatively higher standard deviations (i.e., less universally desirable). Next, a correlation analysis was conducted among these 26 values, resulting in 4 values that (a) had moderate mean importance ratings relative to the overall distribution, (b) were not correlated with

each other, (c) were from 4 different values categories identified by O'Reilly et al. (1991), and (d) still had the highest standard deviation values possible. These values were *being competitive, being people oriented, being organized,* and *holding high performance expectations.* The 4 values were then depicted within the "company culture" section of the job posting (see Figure 1). For example, being organized was depicted as relatively unimportant, whereas being performance-driven was most important.

Determination of DA Fit Dimensions

A similar process involving an additional 65 students was conducted to arrive at job demands used to determine demands–abilities (DA) fit. Job demands (i.e., knowledge, skills, and abilities) appearing in the Occupational Information Network (O*NET) database were narrowed to the following four job demands dimensions: *customer and personal service, time management, negotiation,* and *visualization of problems.*