Internet Recruiting 2.0: Shifting Paradigms

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Abstract

This article adopts the premise that technology in general, and Internet-based communication tools and social media in particular, have fundamentally changed the nature of recruitment. However, theory and scholarship on recruitment has *not* kept pace with this rapidly changing landscape. This article suggests that electronic job boards, recruitment Web sites, and social media platforms such as LinkedIn are not simply more efficient electronic versions of paper-based job postings, classified ads, or employee referrals. Instead, we suggest that Internet-based technology has changed the nature of organizational communication, recruitment practices, and job seeker expectations in ways that warrant substantial additional research attention. Thus, this article has two primary purposes: to identify key ways technology-based recruitment is changing recruitment paradigms and to identify a future research agenda to aid scholars in pursuing these issues.

Key Words: internet, recruitment, paradigm, media richness, customization, push-pull, decentralization

Few would debate that Internet technology has transformed virtually all aspects of business, from now-routine virtual meetings to mass or highly customized marketing campaigns by which companies engage existing or potential customers. We begin with the premise that technology in general, and Internet-based communication tools and social media in particular, have fundamentally changed the nature of recruitment. Recruitment can be defined as the actions organizations take to generate job applicant pools, maintain viable applicants, and encourage desired candidates to join those organizations (Dineen & Soltis, 2011). Theory and scholarship on recruitment has not kept pace with the rapidly changing landscape.

Over a decade ago, 90 percent of large U.S. organizations reported using their Web sites to communicate job information to potential applicants, and organization Web sites have become the major source of new hires for many U.S. companies

(Brown, Cober, Kane, Levy, & Shalhoop, 2006; Capelli, 2001). The last decade has also seen explosive growth of electronic job boards and integrated applicant tracking systems, with social media the latest evolution of technology-enhanced recruitment. Over 50 percent of human resource professionals now use social networking sites for recruitment; most frequently LinkedIn (95 percent), Facebook (58 percent), and Twitter (42 percent) (SHRM, 2011). For example, UPS attributed just under 1,000 new hires to social media efforts in 2010 (Raphael, 2011). Cincinnati Children's Hospital Medical Center regularly uses YouTube as a means of promoting its employment brand via videos depicting its culture and current events (Bisabeth Baldock, personal communication, February 7, 2011).

This rapid evolution is expected to continue with dynamic customized job postings that use cookie-based targeting to communicate job advertisements to relevant individuals based on their

online behaviors, incorporation of mobile technology to access Internet-based job information, use of semantic search technologies and advanced search syntax with sophisticated search engines, and the application of convergence models that provides opportunity information wherever an individual happens to be on the Internet—including job boards, social media, online gaming sites, and mobile platforms (Rossheim, 2011).

We suggest that electronic job boards, recruitment Web sites, and social media platforms such as LinkedIn are *not* simply more efficient electronic versions of paper-based job postings, classified ads, or employee referrals. Instead, we suggest that Internet-based technology has changed the nature of organizational communication, recruitment practices, and job seeker expectations in fundamental ways that warrant substantial additional research attention.

Dineen and Soltis (2011) recently summarized relevant scholarly research on Internet-based recruitment. They identified two primary research streams: one on how organizational Web site design influences job seeker attraction to the organization (e.g., Allen et al., 2007; Cable & Yu, 2006; Cober, Brown, Keeping, & Levy, 2004) and one on how using Web sites to provide customized feedback to job seekers influences attraction or application decisions (e.g., Dineen and colleagues, 2002, 2007, 2009). Dineen and Soltis also identified a few studies addressing other issues such as the use of generalized versus specific job posting boards (e.g., Jattuso & Sinar, 2003; see also, Dineen & Williamson, 2012).

Although clearly addressing important topics, it is striking how nearly all Internet-based recruitment research falls in the generating applicants recruitment stage (Barber, 1998) and fails to address what appear to be key issues, including what drives job seekers, recruiters, and organizations to use technology-based recruitment methods; how do technology-based recruitment methods compare with more traditional methods in terms of yields, job performance, retention, or organizational performance; how do technology-based recruitment methods affect the nature of communication among organizations and job seekers; and how has control of the recruitment process shifted from frontline recruiters to a broader base of employees and even to job seekers themselves. Thus, we have two primary purposes: to identify key ways technology-based recruitment is changing recruitment paradigms; and to identify a future research agenda to aid scholars in pursuing these issues. This chapter complements

and extends Dineen and Soltis (2011) in at least three ways. First, whereas their chapter focused on the recruitment literature as a whole, we delve more specifically into Internet-based recruiting and expand on their brief treatment of Internet-based approaches. Second, we focus on identifying four specific paradigm shifts associated with Internet recruiting as a means of expanding the repertoire of future research possibilities. Third, we map these paradigm shifts onto key established theories that help explain them.

Definition and Scope

For purposes of this chapter, we define *Internet recruitment* as the means by which organizations and their agents use Internet-based technologies to develop relationships with potential job candidates, generate applicant pools, maintain viable applicants, and encourage desired candidates to join those organizations. This definition integrates prior definitions (e.g., Barber, 1998; Breaugh, Macan, & Grambow, 2008; Dineen & Soltis, 2011) with the focus on candidate relationship development and maintenance that we develop later in the chapter. We believe relationship building with promising job candidates is a cornerstone of the Internet-based recruitment approach and often occurs well before companies attempt to generate applicant pools from those promising candidates. For example, organizations have begun to develop relationships with talented individuals using Internet-based means before actual vacancies exist (and thus before the need to generate an applicant pool).

We intend in this chapter to provide an overview of the ways Internet technology has fundamentally changed the nature of recruitment. We do not intend to provide a comprehensive review of every study that has been conducted on the subject of Internet-based recruitment, but to focus on critical work that has occurred with an aim toward illuminating these fundamental differences. Nor do we necessarily seek to identify and explore all possible ways Internet technology is used in recruitment. For example, we will discuss methods such as Internet job boards, Twitter, and Facebook throughout this chapter. However, we acknowledge that by the time this chapter is published, newer methods are likely to emerge, making any attempt to identify all possible methods ineffectual. At the same time, by focusing on prior scholarly work, identifying several current uses of Internet technology, and identifying ways we believe the Internet has fundamentally changed recruitment, we will necessarily identify critical

gaps in the current research literature in terms of studying the mechanisms and processes by which the Internet differs from traditional approaches. It is our hope that the research questions we identify along the way will be broad enough to encapsulate additional Internet-based recruitment methods that are sure to emerge in the years and decades ahead.

Thus, the primary focus of this chapter is on identifying key paradigm shifts associated with Internet technology use in recruitment. Figure 21.1 provides an overview of our approach. As shown, we identify two overarching themes that we believe capture the essence of change in the recruitment area brought about by Internet technology: the nature of information exchange and levels of actor control. These two themes are further broken down into four primary paradigm shifts that will frame the majority of the chapter: media richness, customization, push-pull communications between organizations and job seekers, and decentralization of the recruitment function to a broader base of employees. Each paradigm shift is further reflected in Figure 21.1 by a primary change statement and a series of specific change mechanisms. Finally, we map nine relevant theoretical perspectives onto these four primary paradigm shifts.

Following Figure 21.1, the chapter will progress as follows. First, we review the existing literature by identifying how Internet-based recruitment fits into the most recent process model of recruitment and by providing an overview of critical Internet-based recruitment research that has occurred to date. From this research, as well as from discussions with actual field recruiters and perusal of the practitioner literature, we identify and discuss the four key dimensions by which Internet based recruitment is fundamentally differentiated from traditional means of recruitment, and we discuss specific mechanisms and theories as they apply to these key differentiators and why they matter. Finally, we describe where future research needs to go to keep pace with developments in this area. After more than a decade of research on Internet-based recruitment, this chapter therefore fills a critical need to take stock of research progress during that time, identify how the landscape has changed, and begin to plot a course toward using what the field has accomplished thus far so as to advance it to where it needs to go to better inform organizations in their Internet-based recruitment pursuits.

Literature Review
Generating Viable Candidates Stage

Dineen and Soltis (2011) provide a model of the recruitment process that, similar to that of Barber (1998), spans three stages: generating viable candidates, maintaining the status of viable applicants, and postoffer closure. Dineen and Soltis (2011) identify key processes, strategies, and considerations within each stage, as well as important contextual considerations across the stages. We believe research on Internet recruitment is warranted across these stages and processes. Within the generating viable candidates stage, targeting and messaging strategies are most relevant to the current chapter. For example, in terms of targeting strategies, companies must decide whether to target individual job seekers or take a broader approach, or whether to target active or passive job candidates. As will become apparent, advances in customization capabilities and social media applications via the Internet directly impact these targeting decisions. Messaging strategies include dissemination of information to job seekers regarding likely fit with jobs or organizations (e.g., Dineen & Noe, 2009), the orientation of the message (e.g., recruitment or screening oriented; Dineen & Williamson, 2012), and reaching a diverse population of potential job candidates. Whereas Dineen and Soltis (2011) also identify the use of the Internet as one particular messaging strategy, we believe that Internet technology in general represents a broader shift in the recruitment paradigm that, as we discuss below, spans the time from initial contact with job seekers through their eventual acceptance of offers.

It is at the stage of generating viable candidates where the Internet most clearly differentiates past and current approaches to recruitment. First, means of clarifying perceptions of fit for job seekers are now more available via real time, interactive Internet technology and its associated media and informational capabilities. Although job seekers have always attempted to assess fit, companies can now more easily and interactively collect fit-relevant information and provide real-time feedback. At the same time, job seekers may be more accustomed to providing and receiving this type of information (e.g., via shopping preferences, online dating, social networking sites). Furthermore, these capabilities are now available before an individual ever applies for a job with a company.

Second, as mentioned earlier, it is clear from practitioner accounts (e.g., Baldock, personal communication, Feb. 7, 2011) and publications (Lievens & Harris, 2003; Raphael, 2011; Roberts, 2008) that *candidate relationship management* has increased in prevalence and is greatly facilitated by Internet technology, especially the rise of social media. Similar to customer relationship management in the marketing area (e.g. Kumar, Sunder, & Ramaseshan, 2011), candidate relationship management refers to organizations' attempts to develop long-term relationships with individuals thought to be potentially valuable employees. Along with this, targeting passive versus active job seekers and decisions to send mass messages versus targeted one-on-one messages to individuals are particularly relevant. This does not imply that companies have previously failed to establish relationships with potential job candidates but that the Internet has fundamentally altered the scope and timeline of how and when during the recruitment process this is accomplished.

Later Stages and Key Processes

In Dineen and Soltis's (2011) stage of maintaining the status of viable candidates, it is again relationship management issues facilitated by Internet technologies that are vastly (although perhaps not fundamentally) different from traditional recruitment processes. In addition, relationships are likely to be more distributed, meaning that more organizational representatives are now likely to be connected to job candidates. A similar phenomenon likely occurs at Dineen and Soltis's (2011) postoffer closure stage. Finally, we view Internet technology as impacting virtually all the processes Dineen and Soltis (2011) identify at the bottom of their Figure 21.1. For example, the greatly enhanced interactivity and aesthetic capabilities of the Internet relate directly to job seeker information processing and signaling phenomena (e.g., Breaugh et al., 2008).

Advances in social networking and rapport building are also ubiquitous via Internet technology, despite some debate over the quality of relationships developed and maintained using Internet means. Even competitive intelligence (i.e., gathering, analyzing, and distributing information by which to make strategic decisions) is fundamentally enhanced, as both job seekers and recruiters have greater access to and control over information about each other and competing opportunities in the broader labor market.

Previous Internet-Based Recruitment Research

Despite the Internet's potential to broadly impact all three stages of recruitment, previous research on Internet-based recruitment has tended to focus primarily on the generating applicants stage of recruitment and the nature of organizational Web sites (see Dineen & Soltis, 2011, for a review).

Some of this research has been descriptive in nature. For example, Feldman and Klaas (2002) surveyed managers and professionals searching for jobs via the Internet. They found that job seekers perceived the Internet as more effective than newspaper ads but less effective than personal networking. Characteristics of their job search (e.g., geographical scope) influenced the likelihood of using the Internet. Design issues (e.g., information, navigation) affected satisfaction with Internet job searching. As another example, Cober, Brown, and

Fig. 21.1 Recruitment paradigm shifts brought about by Internet technology.

Overarching Theme	Paradigm Shift	Primary Change	Mechanisms	Applicable Theoretical Perspectives								
				Media Richness Theory	Channel Expansion Theory	Elaboration Likelihood Model	Technology Acceptance Model	Signaling Theory	Cognitive Resources Theory	Image Theory	Social Networks Theory	Trust
Information Exchange	Media Richness	*Sensory Quality*	reach vs. richness, evolution of richness, cognitive involvement, ease of use, credibility	✓	✓	✓	✓	✓				✓
	Customization	*Message specificity*	uncertainty reduction, cognitive involvement, PE fit assessments			✓		✓	✓	✓		
Actor Control	Push-Pull	*Candidate control*	usability, cognitive involvement, relationship development, uncertainty reduction, PE fit assessments, credibility			✓	✓		✓	✓		✓
	Decentralization	*Breadth of organization-candidate contact*	PE fit assessments relationship development, credibility							✓	✓	✓

Levy (2004) presented a qualitative description of the form, content, and function of the recruitment Web sites used by companies listed in *Fortune*'s Best Companies to Work For.

Other studies have drawn from media richness theory (Daft & Lengel, 1986) and technology acceptance models (Davis, 1989) to examine the extent to which organizational Web site design and content interact with organizational image, familiarity, and vacancy characteristics to influence attraction to the organization. For example, Cober, Brown, Keeping, and Levy (2004) developed a conceptual model suggesting that Web site façade and system features influence applicant attraction through affective reactions, perceptions of usability, Web site attitudes, and search behavior. Cober, Brown, Levy, Cober, and Keeping (2003) provide some evidence that both content and style are related to attraction. In a similar vein, Allen, Mahto, and Otondo (2007) found that the amount of information presented on a Web site was related to attitudes toward the organization and job pursuit intentions over and above prior perceptions of organizational image. Williamson, Lepak, and King (2003) found that Web site orientation (i.e., recruitment, screening, or dual-purpose) influenced attraction through perceived usability. Cable and Yu (2006) investigated the role of recruitment media richness in aligning organizational image beliefs with a firm's intended recruitment message.

More recent research has further explored interactions among Web site characteristics and organizational image, as well as beginning to explore diversity-related issues. Williamson, King, Lepak, and Sarma (2010) found a three-way interaction among information, vividness, and firm reputation such that the effectiveness of certain Web site attributes depends on firm reputation. Walker, Field, Giles, Bernerth, and Short (2011) used a priming explanation to explain how technologically advanced Web site features and depictions of racially diverse organizational members influence image perceptions, while Walker, Field, Giles, Armenakis, and Bernerth (2009) found that employee testimonials, media richness, and representation of racial minorities influence credibility and attraction. Goldberg and Allen (2008) found that race moderated relationships among Web site design characteristics, the presence of diversity statements, engagement, and intentions to pursue employment. Taken together, these studies indicate a heavy scholarly emphasis on message and design characteristics associated with companies' Internet-based recruitment approaches.

Focusing more specifically on differences between Internet and more traditional means of recruitment, other research has addressed how organizations can take advantage of the potential interactivity of Web sites. For example, in a series of studies, Dineen and colleagues have investigated customization of information regarding potential person–environment (PE) fit and attraction or application decisions. In an initial study, Dineen, Ash, and Noe (2002) found that random, manipulated levels of feedback regarding likely person–organization (PO) fit ("it appears that your fit with this company would be 80 percent [40 percent]") that followed a candidate self-assessment on the site were associated with higher (lower) levels of attraction, compared with attraction among those in a control condition, and that job seeker agreement with the feedback strengthened this relationship, and lower self-esteem caused individuals who received lower levels of feedback to indicate lower attraction. In a follow-up study, Dineen et al. (2007) found that when good aesthetics were used in a job advertisement, customization increased viewing time and information recall. In addition, the poorest fitting job seekers were less attracted when aesthetics and customized information were provided, lending credence to the notion that customized information disproportionately causes poorly fitting job seekers to self-select out of applicant pools. Dineen and Noe (2009) found more evidence linking customization to higher quality applicant pools in a study where participants viewed multiple job advertisements and made application decisions based on those advertisements.

Limited research has directly compared Internet-based and other types of recruitment communication. Cable and Yu (2006) found that career fairs were perceived as providing richer and more credible information than Web sites or an electronic job board. Zusman and Landis (2002) found that applicants preferred paper job postings to Internet-based postings, but that attraction was positively related to the quality of recruitment Web sites. Limited research has also compared subsources within Internet-based recruitment. For example, Jattuso and Sinar (2003) found that generalized job boards were less effective in terms of generating high-quality applicants than industry- or position-specific job boards.

Thus, there is a vibrant and growing body of research on Internet-based recruitment. However, efforts have largely focused on explaining how organizational Web site design interacts with myriad other factors to influence applicant attraction. While these efforts are important, we believe there may be value in thinking more broadly about how technology may be changing the very nature of recruitment communication and the relationships among organizations, recruiters, and active and passive job seekers. We turn now to discussing these fundamental changes.

Changing Recruitment Paradigms

Taken together, the preceding literature review and key processes and strategies adopted from prior recruitment models (e.g., Dineen & Soltis, 2011) suggest several mechanisms by which Internet-based methods or sources influence individual job seeker reactions and behavior. We briefly review these mechanisms next, before using them to discuss in the subsequent section how the Internet has fundamentally altered the recruitment paradigm.

Mechanisms Underlying Paradigm Shifts

Specifically, we have identified nine key mechanisms that underlie the proposed recruitment paradigm shifts brought about by the Internet (see Figure 21.1). Five pertain to message or media characteristics, and two each pertain to job seeker cognitions and interactions with the environment. In terms of message/media characteristics, one mechanism by which the Internet is changing recruitment is by altering trade-offs among reach, targeting, and richness. Traditionally, strategic recruitment message design has required making decisions about the relative importance of, for example, reaching a broad versus targeted audience or providing limited versus extensive information. We discuss how the Internet alters these trade-offs, allowing extensive rich information to be presented to a wider audience. A second mechanism relates to how user experiences with an organization can evolve over time. For example, channel expansion theory (Carlson & Zmud, 1999) suggests that some ostensibly lean media, such as email, can become richer over time as users become more experienced. Similarly, we discuss how recruitment richness can evolve over time as users interact with organizational recruitment media. Two other mechanisms relate to acknowledging that the use of technology plays an important role in understanding Internet recruiting. For example, extensive research on technology acceptance (e.g., Davis, 1989) demonstrates that ease of use and usability are key components that influence how users interact with technology. Thus, we discuss the role of the ease by which a job seeker can navigate information provided through specific media, as well as perceptions of how useful the information is to the job seeker in terms of the extent to which the information helps him or her evaluate the suitability of job opportunities. Finally, credibility is a key mechanism in understanding recruitment messaging in general (Allen, Van Scotter, & Otondo, 2004) that may be particularly important in the Internet-based recruitment arena (Breaugh, 2008). Breaugh et al. (2008) reviewed four aspects of credibility, all of which relate to our discussion below: presenting balanced information about the position, employee testimonials, access to employees to discuss the positions, and external verification avenues.

In terms of job seeker cognition mechanisms, uncertainty reduction is another key recruitment process that may be particularly relevant to Internet-based recruitment, given the explosion of available information. Job seekers, like other decision-makers, tend to be "cognitive misers" and seek to reduce uncertainty in their environments by adopting or relying on certain decision aids (Fiske & Taylor, 1984). That is, they look for cognitive "cues" or shortcuts to aid their decision-making and reduce uncertainty (e.g. Rindova et al., 2005). At the same time, research suggests that information seekers allocate different resources to different types of information (Petty & Cacioppo, 1986). Job seeker cognitive involvement refers to how much effort job seekers exert to carefully process recruitment information to which they are exposed. Thus, we discuss how uncertainty reduction and cognitive involvement aid understanding of the impact of the Internet on recruitment.

Finally, two mechanisms pertain to job seeker interactions with their environments. First, relationship development refers to building interpersonal ties during the recruitment process, typically between job seekers and organizational representatives. Relationship building necessarily implies greater access to information about the organization. Second, PE fit perceptions refer to a mental calculus performed by job seekers by which they assess their own characteristics and preferences (e.g., in terms of their skills, abilities, or values) and compare this with what the environment (i.e., new organization or job) will offer them so as to develop a perception of fit that likely drives actual attraction and application decisions (e.g., Cable & Judge, 1996; Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Dineen & Noe, 2009; Kristof-Brown et al., 2005).

Once again, given advances in Internet technology, there is now a greater quantity, and the potential for a greater quality, of information available regarding jobs and organizations. This has implications for the accuracy with which job seekers can perceive and process this information to form accurate (or inaccurate) perceptions of characteristics associated with the advertised opportunity (Cable, Aiman-Smith, Mulvey, & Edwards, 2000).

In the next section, we discuss four ways the Internet has fundamentally shifted the recruitment paradigm. As shown in Figure 21.1, two of these shifts pertain to the way information is exchanged with job seekers, and two pertain to levels of actor control, with actors comprising both job seekers and organizational representatives. We acknowledge the potential for some overlap across these fundamental shifts, but we believe our differentiation is most suitable for future Internet-based recruitment research.

Paradigm-Shifting Dimensions
RICHNESS

A first way the Internet has shifted the recruitment paradigm is by changing the nature of and expectations about communication richness during the recruitment process. Specifically, as indicated in Figure 21.1, the Internet has fundamentally changed the sensory quality of information presented during the recruitment process, especially in the earliest stages. Persuasive communication about job and organizational attributes is a key component of recruitment (Allen, Van Scotter, & Otondo, 2004). Media richness theory (MRT) suggests that communication media vary in terms of richness, and that the fit between richness and message characteristics plays an important role in determining communication effectiveness (Daft & Lengel, 1984, 1986). For example, communication richness is a function of the opportunity for immediate feedback and two-way communication; the ability to convey multiple types of cues; the ability to convey a sense of personal focus; and language variety (Schmitz & Fulk, 1991).

Another key aspect of media richness is increased opportunities for interactivity. By interactivity, we mean that individuals and organizations have more opportunities to share information about themselves, collect information about the other party, develop relationships, and participate in both synchronous and asynchronous forms of communication earlier in the recruitment process. Traditionally, recruitment has been viewed as a series of alternating communications wherein individuals and organizations take turns sharing information with each other. Consider, for example, Carlson and Connerly's (2003) depiction of the first two phases of the staffing cycle, which they characterize as a series of discrete decisions controlled alternately by individuals and by organizational decision-makers. Individuals and organizations make independent decisions to enter the workforce (individuals) and to create positions (organizations). Individuals then decide whether to apply for positions; organizations then decide to whom to make job offers; individuals then decide whether to accept those offers.

Although this is a useful heuristic for considering decision-making, the rapid growth of Internet technology may be making these processes and decision points messier and less discrete. For example, organizations use job boards and social networking sites to communicate job information to as wide a network as possible, including individuals in and out of the workforce, as well as both active and passive job seekers. Indeed, one purpose of Internet-based recruitment communication appears to be to entice individuals who are not job seekers to consider other options. Thus, we propose that the Internet allows organizations and recruiters to communicate richer messages to a wider audience. We further propose that this capability is shifting the recruitment paradigm via five of the mechanisms introduced earlier.

First, we believe the Internet has largely mitigated previous trade-offs between communication richness and communication reach. Prior to the Internet, recruitment communication sources with the potential to reach the widest audience of potential applicants (e.g., newspaper ads) tended to be relatively low in richness. On the other hand, communication sources potentially highest in richness (e.g., referrals from current employees) could not typically reach as wide an audience. The Internet allows organizations and recruiters to reach very wide audiences with potentially quite rich communication. For example, Internet job postings and organizational Web sites are able to present multiple types of cues and language variety (e.g., written text, graphics, videos, testimonials, symbols, financial data, etc.) to a potentially global audience. Similarly, they may also be able to provide personalized communication and feedback (e.g., searchable job databases, user-driven information search, user-created profiles, fit assessments, etc.).

The Internet may also enable communication of richer information earlier in the recruitment process. It seems likely that pre-Internet recruitment relied largely on leaner communication media early in the recruitment process while trying to reach a large audience of potential applicants. As applicant pools decreased in size throughout the recruitment and selection process, richer information could be delivered to these smaller groups of job seekers. The Internet enables organizations to communicate rich information even in the generating viable applicants stage of recruitment.

A second mechanism underlying the media richness paradigm shift involves the ease of use now expected by those going through the recruitment process and interacting with recruitment media. One of the cornerstones of the Technology Acceptance Model (TAM; Davis, 1989) is that ease of use relates to technology adoption and use. For example, Web sites are less effective when they require job seekers to click many times to find job information, information consists of large unbroken blocks of text that deter Web surfers, Internet content is not updated regularly, or online resume submission sites require certain levels of technological savvy (when such savvy is not relevant to the job). Some recruitment research is beginning to consider these issues (e.g. Allen et al., 2007; Cober et al., 2004); however, there may be much to learn from technology design and experience models such as the TAM.

In addition, given the widespread availability of information in the Internet age, job seekers may expect organizations to provide ever richer communication. This may manifest in several ways. One, as we describe in more detail when we address "pull" recruitment approaches below, job seekers are likely to expect an increasing ability to drive and customize their information search. Instead of passively accepting the information offered by organizations and recruiters, job seekers can more actively search for their own information (e.g., controlling the order in which information is presented when searching an organizational Web site; Dineen & Noe, 2009). Similarly, Braddy et al. (2003) found that navigational ease affected individuals' willingness to apply for jobs and their perceptions of organizations.

Two, job seekers are likely to expect more rapid communication. For example, research suggests that communication delays during recruitment lead some applicants to abandon the process (Rynes et al., 1991). The ubiquity of rapid, practically instantaneous communication capabilities associated with Internet technology may lead to shorter expectations regarding appropriate communication delays during recruitment. Research also suggests Internet users are quite impatient with respect to loading speeds of Web pages and content. Job seekers may have similar expectations regarding the loading speed of recruitment information on organizational Web sites.

Three, job seekers may have increasing expectations regarding the technological sophistication of organizations and recruiters. The effective use of technology during recruitment may serve as a signal about job and organizational attributes. For example, signaling theory (Spence, 1973) suggests that decision-makers rely on certain environmental cues to extrapolate information about likely conditions or environmental states around them. Signaling theory was originally developed to describe organizations' use of cues or signals about job seekers (e.g., grade point average) as a means of reducing uncertainty about those job seekers' suitability for open positions. More recently, signaling theory has been applied to job seekers' search for employment opportunities, in terms of the signals about a company that job seekers sometimes use in place of more concrete information (Earnest, Allen, & Landis, 2011; Rynes & Cable, 2003). In this vein, a job seeker may view a recruiter's lack of timeliness in responding to a job application as a signal that the organization doesn't care about its employees or is disorganized (e.g., Rynes et al., 1991).

A third mechanism relates to the evolving nature of recruitment communication. Specifically, richness may not be a static attribute of communication media. Channel expansion theory (CET) suggests that the richness of a communication medium can evolve over time as users develop experience using media or develop relationships with communication partners (Carlson & Zmud, 1999). For example, although email may be somewhat lean text-based communication, as users gain experience (with, for example, emoticons or commonly used abbreviations) or develop communication patterns through repeated interactions with certain partners, the experience of richness may increase. CET has at least two implications for recruitment.

First, the proliferation of new technologies and their adoption for recruitment purposes may be likely to continue. Just within the last decade, technologies that originally had little or nothing to do with recruiting have transformed how organizations and recruiters interact with job seekers (e.g., Web pages, social networking sites, Internet search engines, Twitter). CET suggests that users will rapidly adapt to the use and experience of any

communication technology, even those that may not initially seem well suited to recruitment communication. Further, an institutional theory perspective (e.g., DiMaggio & Powell, 1983) suggests that job seekers may come to view organizations slow to adopt current technologies as less legitimate.

Second, experienced communication richness may increase as job seekers move through stages of the recruitment process and develop relationships with the organization and its agents. For example, initial visitors to an organization's recruitment Web site may have a very different experience from visitors who have visited the site previously, customized their interests and search parameters, received feedback concerning possible fit, and interacted electronically with organizational representatives. Thus, it is apparent that the experience of richness may differ depending on when in the recruitment process it is experienced.

A fourth mechanism relates to cognitive involvement of job seekers and their reliance on central versus peripheral cues in decision making. Job seekers become involved in processing recruitment messages to different degrees, such that they are more involved in processing certain messages or parts of messages than they are in processing others. Here, the elaboration likelihood model of persuasion (ELM; Petty & Cacioppo, 1986) has received due attention in the recruitment literature (Cable & Turban, 2001; Jones, Shultz, & Chapman, 2006; Lievens & Harris, 2003; Roberson, Collins & Oreg, 2005), more recently in regard to Internet-based approaches (e.g. Dineen & Noe, 2009; Maurer & Cook, 2011). This model suggests that deeper processing of information is likely to occur when the processor (e.g., job seeker) is both able and motivated to process the message. Motivation is thought to depend on message characteristics such as personal relevance or vividness.

Specifically, because of enhanced personal relevance, we believe that increased interactivity fostered by Internet-based technology is likely to lead to increased job seeker involvement and deeper information processing, especially early in the recruitment process. Later in the process (e.g., during a job interview, or contemplating a job offer), individuals are likely already highly involved in processing the information presented. Traditionally, early recruitment messages were likely to be low-involvement communication (e.g., newspaper or magazine ads, brochures, job postings). Internet-based technology allows individuals to be much more interactively involved (e.g., creating online profiles, using

interactive search engines to look for opportunities, participating in online assessments or fit checks, managing a LinkedIn account, signing up to follow a recruiter's Twitter account, following corporate blogs, participating in online recruiter chats and webinars). Further, individuals have more choice among both synchronous (e.g., online job fairs, chat rooms, webinars) and asynchronous (e.g., email) communication methods. The ELM suggests that this interactivity will increase user involvement, leading to more careful information processing.

Finally, media richness implies a credibility mechanism by which trust perceptions are fostered in the organization advertising the position. For example, Allen et al. (2004) found that recruitment messages that conveyed more information were perceived to be more credible. In addition, richer media in terms of interactivity (such as synchronous video-based chat) are likely to conjure up greater credibility perceptions among job seekers. Edwards and Cable (2009) found that trust of the organization and its members, more so than attraction, was a primary mechanism linking perceptions of individual and organizational values to positive work outcomes.

CUSTOMIZATION

A second way we believe Internet technology has fundamentally shifted the recruitment landscape is via customization capability. *Customization* refers to the provision of information that is specifically directed at and is personally relevant to an individual job seeker, based on information that job seeker has either knowingly or innocuously supplied (e.g., Dineen et al., 2007).

Thus, as shown in Figure 21.1, this shift is primarily in terms of message specificity. For example, prior to an application decision, a job seeker might provide anonymous information about personal values preferences via a Web site. These responses can then be compared to responses of current employees that reflect the organization's values, and self-diagnostic feedback regarding likely degrees of objective fit (i.e., mathematical fit; Kristof-Brown, Zimmerman, & Johnson, 2005) between the two values profiles can be provided to the job seeker via the Web site (Dineen & Noe, 2009). As another example, many individuals now maintain updated candidate profiles, not necessarily intended for specific current openings but in anticipation of the possibility that relevant positions may become available. In turn, organizations sometimes create or redesign positions in response to skill sets of desirable candidates.

Or, in the case of a recent television advertisement from Wilkes College, information about a particular highly desired recruit might be gleaned innocuously from Internet social networking channels and an advertisement crafted to specifically mention that individual and reach his or her network of contacts. Specifically, in the Wilkes advertisement, a target student's extracurricular involvements (e.g., art club, choir, tennis team) were listed along with her name (Megan Smith) and the following message: "Come to think of it, she probably doesn't have time to watch TV...so can one of Megan's friends let her know that Wilkes University really hopes she joins us this fall?" Ostensibly, Wilkes also chose a target (Megan Smith) who had many social contacts, such that the advertisement would be personally relevant to several local viewers (i.e., Megan Smith's contacts) while also disseminating the Wilkes name to passive viewers (Sullivan, 2011).

The use of customization by marketers has preceded its use among recruiters. For example, Levi's and Dell pioneered online customization of products to individual consumer needs. eHarmony. com and match.com allow for customized lists of potential romantic partners. In a similar way, the Internet allows for a real-time "conversation" between job seeker and company, such that with information provided by the job seeker, the company can provide information back that is directly relevant to the job seeker, crafting and specializing the message on a per-job-seeker basis. We argue that this approach has been made available only through the growth of Internet technology.

As shown in Figure 21.1, there are three mechanisms by which we believe customization has changed the recruitment paradigm. First, customization reduces job seeker uncertainty. It is well known that decision-makers take steps to reduce uncertainty, either by seeking and finding additional relevant information or by substituting nonrelevant information such as that related to aesthetics, company products and reputation, and so forth (e.g., Fiske & Taylor, 1984).

Customization is a way to increase the availability of highly relevant, personalized information with which job seekers can reduce uncertainty about a vacancy (and their fit with or suitability for that vacancy) and thus make better job pursuit decisions. Whereas signaling theory (Spence, 1973) might suggest that customization itself would be used as a signal by the job seeker of certain organizational characteristics (e.g., care and concern), it also suggests that customization likely reduces the

use of extraneous signals (such as appealing aesthetics or pictures) by job seekers.

Second, customization is likely to work by increasing job seeker cognitive involvement (Cable & Turban, 2001; Highhouse & Hoffman, 2001). One of the cornerstones of the previously described ELM is that personally relevant information is processed more carefully, whereas less personally relevant information is likely to be processed more peripherally, if at all (Petty & Cacioppo, 1986). Thus, whereas customized information likely leads to greater uncertainty reduction via providing more fine-grained personalized information, it also likely engenders more careful processing of this information. In turn, the job seeker is likely to retain it in memory longer and discern it more accurately (Dineen et al., 2007). Cognitive resources theory (Fiske & Taylor, 1991; Kanfer & Ackerman, 1989) suggests that individuals engaged in tasks (e.g., job search) have limited ability to process large amounts of information and that a relative *deemphasis* of certain information allows relatively greater *emphasis* on other information (Kanfer & Ackerman, 1989). Thus, to the degree that customization allows a job seeker to filter out superficial information and thus focus more on highly relevant information, the job seeker will place greater emphasis on customized information, having reserved sufficient cognitive capacity to do so.

A third mechanism by which customization is shifting the recruitment paradigm is by allowing for more precise estimates of one's fit with the organization, job, or workgroup portrayed in a position vacancy. That is, rather than leaving fit assessment accuracy up to the job seekers' ability to view passive information and accurately match it with their personal skills or desires, the job seeker can be provided with direct information regarding his or her fit with various elements of the position. Image theory (Beach, 1993) is relevant to the use of these fit assessments and has been used in the recruitment literature to describe a dual-phased screening process that job seekers use to narrow the pool of job opportunities under consideration. The first phase consists of screening out options that violate one's ideal image of an organization, job, or so forth (i.e., identifying a misfit, such as heavy travel when the job seeker was hoping for a job with little travel). The second phase is the actual final choice among remaining alternatives. Importantly, decision-makers engaged in a screening activity tend to start with a pool of options and *screen out* those options for which "violations," or negative information about the

option (such as information indicating a low level of fit), are discovered (e.g., Beach, 1993; Ordonez, Benson, & Beach, 1999).

Moreover, job seekers tend to screen out options based on violations rather than screen in options based on positive features discovered about an opportunity. Thus, accurately uncovering violations is critical to a successful job seeker screening process. Perceiving these violations is arguably made easier by greater access to information via the Internet. More specifically, violations related to aspects of misfit are more likely to be accurately discovered when customized information is provided and used in in turn in the application decision-making process (e.g., Chapman et al., 2005; Kristof-Brown et al., 2005).

Finally, regarding when in the recruitment process the effects of customization are most likely relevant, we make three points. First, we believe it is in the "generating viable candidates" stage of Dineen and Soltis's (2011) recruitment model that customization is most fundamentally groundbreaking. This is because Internet technology now allows customization to be provided before a job seeker ever makes formal contact with a company (i.e., "pre-application").

Second, customization can be considered a *high-involvement* strategy, such that job seekers are more actively involved in assessing customized information (e.g., Collins & Han, 2004; Petty & Cacioppo, 1986). In a recruitment context, research suggests high-involvement recruitment strategies are more effective when firm reputation is already favorable (e.g., Collins & Han, 2004). Similar work has suggested there may be differences in reactions to selection practices depending on organizational status (Sumanth & Cable, 2011). Third, customization is likely to be most beneficial when recruitment goals are to achieve higher quality, lower quantity applicant pools rather than higher quantity pools (e.g., Dineen & Noe, 2009).

FROM "PUSH" TO "PULL"

A third major shift in the recruitment paradigm brought about by Internet technology is the relative balance between "push" and "pull" strategic recruitment approaches. Discussed most often in marketing and supply chain circles, push strategies typically focus on organizations disseminating information or products out to target audiences who are thought to benefit from or need such information or products the most. For example, newspaper or general print campaigns disseminated to a largely unsorted audience fall under a push approach. Conversely, a pull approach focuses on the consumer, or in our case, the job seeker, as the active agent in the transaction. That is, the job seeker actively pulls information deemed necessary for his or her job search rather than having this information pushed on him or her by companies.

It is recognized that the Internet makes it much easier for job seekers to apply for a multitude of jobs in a short amount of time, and to access a greater breadth of company- and third-party-sponsored information that is less costly to provide than in the past (Lievens & Harris, 2003). For example, rather than waiting for the Sunday newspaper job advertisements to come out (i.e., be "pushed" out to job seekers), job seekers can now more easily find and access via the Internet information they deem useful to their job searches at any time. Thus, as shown in Figure 21.1, this shift can be described primarily in terms of candidate control. Although our discussion of customization above may overlap somewhat with the pull approach, we will describe six specific mechanisms by which the pull strategy works, along with relevant theoretical perspectives, to illuminate this paradigm shift.

A first mechanism by which the Internet facilitates a pull approach to recruitment is through the proliferation over the last several years of candidate relationship development and management (Lievens & Harris, 2003; Roberts, 2008). Simply put, companies are now focusing, through their Internet-based recruitment approaches, on not merely trying to lure job candidates to apply for open positions, but on developing relationships with star players in a given industry, whether those stars are active or passive job seekers (e.g., Breaugh, 2008).

For example, Cincinnati Children's Hospital Medical Center culls Facebook and LinkedIn profiles and approaches potentially interesting candidates. From this initial contact, they attempt to develop one-on-one relationships and either eventually entice contacts to consider employment with them or ask them whether they know anyone else who might be interested (Baldock, personal communication, February 7, 2011). Indeed, organizations such as Cincinnati Children's may or may not actually have open positions, but they are trying to develop a long-term pool of talent by educating potential job seekers about the company and its recent developments. Somewhat similarly, *narrowcasting* is geared toward providing focused groups of potential candidates with periodic information that might help them professionally but at the same time educates them about the company and builds the company brand, in hopes of eventually enticing them to consider working for the company (e.g., Sullivan & Burnett, 2011).

Blau (1993) characterized job seekers as active (e.g., those actively engaged in job pursuit with organizational agents for specific openings) or passive (e.g., those who may keep abreast of labor market conditions and opportunities, perhaps by reading newspaper classified ads, but not actively pursuing a specific opening). Traditionally, organizations have struggled with how to reach passive job seekers, sometimes assuming that happily employed individuals may be more successful and desirable than those actively searching for employment. The candidate relationship management mechanism is clearly borne out of social network theory (e.g. Borgatti & Foster, 2003). Social network theory suggests that social networks and network characteristics play a key role in shaping individual perceptions, decisions, and behaviors.

Second, once again the notion of job seeker cognitive involvement is highly relevant to the pull approach to recruitment. Specifically, by enhancing user control, the pull approach guarantees that job seekers are only accessing information they deem personally relevant and useful. This then relates to a third mechanism—usability—to the extent that information gleaned by a job seeker via a pull approach will necessarily be more useful to that job seeker. Consider again the implications of the Technology Acceptance Model (TAM; Davis, 1989).

The TAM suggests that technology is most likely to be adopted and used when it is both usable (meaning instrumental to meeting the user's needs) and easy to use. Thus, reliance on technology-mediated communication requires attention to messaging issues beyond content and how the message is delivered. In order to attract attention and engage interest, technology-mediated recruitment communication must work with the technology to create a user experience that is both instrumental (i.e., useable) and easy. In addition, according to the ELM (Petty & Cacioppo, 1986), job seekers will then likely process this information more carefully. Furthermore, the cognitive resources perspective (e.g., Kanfer & Ackerman, 1989) suggests that individuals have finite capacity to cognitively process information. By allowing job seekers to pick and choose what information they access, they are likely to fill their cognitive "space" with information more useful to them, thus avoiding less useful information that would unnecessarily fill their cognitive space under the traditional push-based recruitment paradigm.

Fourth, in comparison with more traditional push approaches, a recruitment pull approach acts as an uncertainty reducing mechanism. Again, by allowing for greater user control, a pull approach affords the job seeker greater capability to access the information he or she deems most critical to reducing uncertainty about the most relevant aspects of the company or job. This then relates to a fifth mechanism, which involves assessing key job and organizational characteristics for appropriate levels of PE fit. For example, through candidate relationship management, a passive job seeker can choose to peruse information about the latest new product initiatives being narrowcasted to him or her through social media channels. Or that job seeker has a direct line of communication via social media to a company representative should the job seeker have a quick question about a proposed overseas expansion of the company. Such a question can be directed toward the company representative well before the job seeker ever applies for a job or even indicates a direct interest in working for the company. Pre-Internet, such correspondence would have typically come after a formal job application (and probably much later in the recruitment/selection process; e.g., by telephone) or, if pre-application, might have seemed out of place (e.g., hearing about a proposed overseas expansion on a radio news report and just calling a company representative out of the blue to ask more questions about it).

This uncertainty reduction mechanism, brought about by enhanced user control and ability to quickly and precisely access needed information, also can be tied to image theory (Beach, 1993). As described earlier, image theory casts job seekers as relying on perceived violations in order to screen opportunities out of their consideration set. As suggested by studies such as Reeve et al. (2006), these violations tend to carry more "weight" than corresponding positive information does. With traditional push strategies, however, companies would not typically push information that would likely be viewed as a violation by a large segment of job seekers (unless adopting a realistic job preview approach; Wanous, 1980). Even with more traditional Internet-based approaches that rely on static information placed on a Web site, companies are known to embellish their images (e.g., Young & Foot, 2005).

Thus, a job seeker's task of uncovering violations to effectively screen out opportunities is more arduous. However, with a pull approach, job seekers can quickly access information they know may reveal violations of job/organizational characteristics critical to those job seekers. For example, a job seeker who is a smoker can quickly find third party testimonials about strict no-smoking policies at a company of interest, without the discomfort of asking a company representative during a telephone call.

Finally, credibility is a key mechanism related to the pull approach that is grounded in trust theory and research. For example, Van Hoye and Lievens (2009) found that information provided by third parties had more credibility. In addition, as one recruiter pointed out, use of real-time social media recruitment necessarily implies the need for a continuous stream of information about a recruiting company, versus static information that might have been placed in a print advertisement (or even Web site) under the more traditional model (Springer, personal communication, Jan. 11, 2011). This more real-time, continuously updated communication likely enhances credibility, as recruiters are sometimes tasked with responding to real-time company happenings on short notice (e.g., the recent split at Netflix into direct mail and streaming businesses).

We believe the push-pull recruitment differentiation brought about by Internet technology will actually be relevant across all three of Dineen and Soltis's (2011) recruitment phases. Specifically, while at first glance it might seem that accessing personally relevant information via a pull strategy might be most important to job seekers at the earliest stage of job search to reduce initial uncertainty about the opportunity and to facilitate screening, we believe it continues to be important as the job seeker progresses through the maintaining status of viable applicants and postoffer closure stages. Consider, for example, a job candidate who has recently been offered a job but is trying to decide between this job and a job offer at another company (i.e., Dineen and Soltis's postoffer closure stage).

At this point, recruitment information that has been pushed on the job seeker via a push strategy may not be sufficient to make a sound decision. Similarly, asking certain questions of company representatives may be "touchy" and not necessarily yield direct answers (e.g., "why are many of the associates you hired five years ago no longer with the company?"). However, via social media and accessible online employee testimonials, that job seeker can now find out much more information about this issue by "pulling" the information from Internet-based sources that are either company sponsored (Cisco's "employee perspectives"; cisco.com/web/about/citizenship/employees/index.html) or third party based (e.g., employee testimonials from various companies found on vault.com).

Decentralization

A fourth and final way the Internet has fundamentally altered the recruitment paradigm is by largely decentralizing the recruitment function. Consistent with Figure 21.1, this change manifests in terms of the breadth of contact between job seekers and organizational representatives. For years, organizations trended toward the centralization and standardization of recruitment messaging by hiring professional recruiters, requiring managers to complete standardized position requisitions, and crafting company-wide recruiting messages. Indeed, one of the most robust findings in recruitment research has been that employee referrals tend to source more successful candidates precisely because this method provides candidates with unique information they could acquire nowhere else in the recruitment process. However, Internet technology—especially that related to the proliferation of social media—has pushed recruitment processes down to virtually every employee in a company, such that everyone in a sense is now a recruiter (whether they are advocates or naysayers for the company and whether this ultimately helps or hurts the company).

Specifically, because job seekers, through informal relationships or company-sponsored links (e.g., testimonials), now have access to a wider range of company insiders, those job seekers rely on many more sources within a company from which to draw recruitment information relevant to their job searches. Consistent with this trend, messages are likely less uniform in their dissemination to different job seekers because (1) dissemination can now come from multiple organizational representatives who might not be sending consistent messages, and (2) job seekers have greater ability to pull messages that best suit them, also making those messages inconsistent. For example, when multiple company insiders are responsible for passing along information to different job seekers about things like organizational culture, typical work weeks, or how much socializing occurs outside of work, just to name a few, these messages are much more likely to be inconsistent. While this has always happened to a certain extent during later stages of the recruitment process, its potential early in the process is unprecedented.

Because of this, decentralization of recruiting via Internet technology is likely to set in motion at least three relevant mechanisms by which the Internet (versus traditional media) will influence job seeker reactions: relationship-building, fit assessments, and credibility. First, with current employees either purposefully or innocuously becoming recruitment agents for the organization via social networking channels, more individualized relationships are likely to develop between organizational members and job seekers, rather than a job seeker relating to perhaps only a few organizational members in the job search process. Thus, relationship development and management is a key mechanism by which the Internet is changing the face of recruitment.

Here, social network theory is highly relevant (e.g., Borgatti & Foster, 2003; Brass, 1995), as social media has transformed how companies reach both active and passive job candidates, build relationships with them, and use their ties to reach even more potential candidates. For example, the strength of weak ties argument (e.g., Granovetter, 1973), used mostly to describe the benefits accrued to job seekers of having a large number of weakly connected ties, can also be used to describe organizations' efforts to find out information about and reach potential job candidates, for example via Internet-based social media channels. Somewhat counterintuitively, this perspective suggests that weak ties may be more useful for job seekers because they expose the individual to a wider and more diverse range of information than strong ties, which may contain largely redundant information. Although there is some conflicting evidence about when strong or weak ties are more effective (see Dineen & Soltis, 2011), the importance of social networks and weak ties seems to be borne out by the growing use of social network technology for recruitment purposes by both organizations and individuals.

In turn, social network ties and relationship building have implications for candidate fit assessments with the company, a second relevant mechanism. Specifically, given that it is now easier to connect with varied organizational insiders, it is correspondingly more likely to receive varied messages from those insiders. This portends inconsistent fit information with which to make assessments of potential "violations," per image theory (Beach, 1993).

The decentralization of recruitment may also have important implications for understanding how job seekers arrive at perceptions of fit. Signaling theory describes how an organization might send certain signals to potential job candidates regarding job and organizational attributes. However, we know little about which sources of information provide the strongest signals. We know even less about the impact of conflicting signals. While the potential for conflicting recruiting signals has always existed, the Internet has dramatically changed the number and type of potential signals available. If information posted on an organizational Web site (likely created outside the HR function) is at odds with information posted on Twitter by a recruiter, which is at odds with information in an online job posting from an HR professional, which is at odds with information posted on Facebook by another employee, which source of information carries more weight, and what is the impact of these conflicting signals on how candidates assess their fit with organizations? For example, individual differences in media experience, savvy, or expectations may influence which sources of information job seekers focus on and perceive as most credible.

There are also corresponding implications for company employment branding efforts, with consistency a key aspect of employment branding efforts in recruitment. Furthermore, these inconsistent messages might decrease credibility of any individual message, a third and final mechanism portending decreased fairness perceptions among job seekers who later join the organization and learn that "I received a different message or set of promises in the recruitment process than my new coworker did." That is, different organizational insiders may broker different deals or make different promises to individual job seekers, who later may discover these discrepancies. Such discrepancies were less likely when recruitment messages were more uniform, controlled, and consistent under the centralized model that existed pre-Internet. On the other hand, information credibility may be enhanced under the newer decentralized model, at least in the generating job applicants stage of recruitment. Here, with job seekers corresponding more directly with organizational representatives in a one-on-one manner rather than receiving broadly disseminated messages, they are exposed to more personal correspondence. Even though this correspondence may not be as personal as later on in a traditional recruitment process, there still exists more credibility potential earlier in the recruitment process with the Internet and its ability to connect job seekers to organizational insiders.

Thus, decentralization likely affects all three stages of the recruitment process. It may be most important when generating applicants by providing a larger number of potential sources of information and other signals. However, decentralization may be uniquely important when maintaining applicants, influencing their job choice decisions, and even after hire because of the potential for myriad sources of ongoing and perhaps conflicting information. That is, while candidates are evaluating the organization and making decisions about employment, they now have many more sources of information. Substantial research has investigated which factors are most important in making job choice decisions; however, research is needed that considers which information sources, many of which may now be outside HR's control, candidates rely on. We have also suggested that decentralization can lead candidates to acquire not only conflicting information but also idiosyncratic promises that may or may not be met. Substantial research has investigated the role of realistic information and met expectations on posthire job performance and turnover; however, research may be needed that considers the role of decentralized sources of information in managing expectations and posthire outcomes.

Future Research Agenda

As should be evident from the foregoing review and integration, there are several fruitful directions for future research on Internet recruitment. Indeed, despite our review of progress to date, we continue to agree with Ployhart's (2006, p. 875) conjecture that research on Internet-based recruitment has "barely scratched the surface." Therefore, we provide a framework below that will hopefully translate into a research agenda for the field moving forward.

First, given the changes documented above, several traditional areas of recruitment research may be in need of updating. For example, one of the most researched topics in recruitment concerns the impact of recruitment sources on long-term outcomes such as job performance and turnover (Zottoli & Wanous, 2000). Future research may need to address how Internet-based sources compare in terms of subsequent performance and retention, both across more traditional sources and within different types of Internet-enabled sources.

However, beyond this, we believe it is less fruitful for the field to continue to merely pursue questions of "whether or not" Internet recruitment should be used, and associated applicant pool outcomes or more distal outcomes that might result.

As evident from practitioner accounts and data (e.g., Rossheim, 2011; SHRM, 2011), organizations use Internet recruitment ubiquitously. We see no signs of this changing and indeed see its use increasing and broadening. In fact, we share the disappointment of Breaugh et al. (2008, p. 63) that "given the number of studies conducted, we do not have a better understanding of why recruitment methods 'work,' in which situations they 'work' best, and for what types of individuals they 'work' best" (see also Lievens & Harris, 2003; Rynes & Cable, 2003).

Thus, we call on researchers to shift the research conversation from "whether" an Internet-based approach should be used (e.g., Twitter, job board) to "when" and "how" it should best be used and perhaps "for whom" it is best suited. That is, we need to pursue more investigations that explicitly consider contextual issues, with the understanding that there just may not be that many "generalizable" practices in this area. For example, Maurer and Cook (2011) recently reviewed evidence suggesting that RJP effects may materialize more in the early stages of job seeker attitude formation. This suggests that Internet-based customization might be more effective earlier in the recruitment process (see also Breaugh, 2008, for a discussion of how RJP effects might be understated).

There are several contextual characteristics that might be considered. First, when a company crafts its Internet recruitment strategy, it might need to explicitly consider recipient characteristics, and how those characteristics are likely to make certain media choices more or less optimal. For example, characteristics could include whether the recipient is an active or passive job seeker, generational differences in technology use, or international or crosscultural issues. Similarly, research that uncovers what drives job seekers (of different ages, functional backgrounds, etc.) to use (or not use) various technologies, as well as the information sources on which candidates rely at different points in the recruitment process might lead to a more nuanced understanding of how these processes unfold over time.

Another obvious contextual factor that should be incorporated into the Internet recruitment research conversation is firm reputation, or the degree to which an organization is well known or even disliked. For example, Collins and Han (2004) provided evidence suggesting that high involvement recruitment practices yield better applicant pool quality and quantity when firm reputation (assessed as making "best employer" lists) is relatively better,

whereas low involvement practices are better when it is not (i.e., firms do not make best employer lists).

Collins (2007) found that high-information recruitment practices are more effective when prior product knowledge is high. Similarly, in an Internet context, it might be that reactions to or use of various online or social media vary as a function of these firm or product characteristics, such that job seekers might be more prone to use either high or low involvement approaches to job seeking. For example, the recent work by Williamson et al. (2010) and Sumanth and Cable (2011) on the moderating effects of firm reputation and status that we reviewed earlier is an important step in the direction of ascertaining which recruitment methods or advertised firm characteristics work best, depending on reputation.

In terms of paradigm shifting dimensions, the media richness paradigm shift discussed earlier suggests several additional avenues for future research. Specifically, this paradigm shift suggests that the sensory quality of recruitment communication is evolving, especially during the early stages of the recruitment process. At a basic level, research is needed to assess whether Internet-based recruitment communication enables the transmission of richer information to wider or different audiences compared to more traditional recruitment media. Research has shown that perceptions of recruitment media differ (Allen, Van Scotter, & Otondo, 2004) but has not incorporated the Internet. Such research should also assess the possibility that communication receivers differ in how they perceive and process Internet-based messages. Research has shown, for example, that race moderates how individuals respond to recruitment Web sites (Goldberg & Allen, 2008), but more research on interactions among technology characteristics and individual differences such as race, gender, age, and generation would be valuable. Source research has also addressed the possibility that sources reach different populations of potential job seekers. Research on the diversity implications of Internet penetration and use may be warranted. Researchers could also pursue the extent to which crosscultural differences affect the use or impact of Internet-based recruitment.

Next, we have suggested that use of Internet technology may have different implications across the stages of the recruitment process. Research is needed on what drives organizational adoption of new technologies to recruitment and whether there are differences in the types and richness of media

used by organizations across stages. For example, richer communication enabled by Internet technology even at the earliest recruitment stages may affect user involvement (Petty & Cacciopo, 1986). Research is needed on whether and how the Internet might affect involvement in the early stages of recruitment. Research also suggests that user experiences may change the perceived richness of media over time (Carlson & Zmud, 1999). Research is needed on whether user experiences become richer over time as they interact with Internet-based recruitment media such as organization Web pages and even how job seeker expectations and use evolve over time as technologies develop. For example, research has shown that individuals react negatively to time lags and communication delays during recruitment; future research may need to address whether expectations about appropriate delays are evolving in the digital age.

Recruitment scholars may also benefit from drawing more extensively on research in other fields related to technology use. We see opportunities for recruitment researchers to draw from the information systems literature to identify ways to study job seeker search patterns or customization capabilities for companies offering different types of jobs. Such integration might allow companies to put the right jobs in front of the right job seekers at the right time. Researchers already draw from the TAM (Davis, 1989) to suggest how the ease of use and usefulness of technology impact use. Future research into these issues would be of great value for organizations considering the best technologies to use for recruitment purposes. There may also be useful research concerning how individuals search the Internet for information that would be relevant to recruiting.

To illustrate this point, we provide an example from the marketing area. Take a 35-year-old male using the Internet to make three separate purchasing decisions—a flat screen television from a national electronics store, a restaurant at which to eat with an old friend who has come into town, and a Caribbean cruise with his family. We believe there may be marked differences in how this man will interact with Internet media in making purchasing decisions as varied as these. Scholars might begin to identify dimensions by which Internet job seekers (or passive candidates) might be differentiated and gear studies to address exchange patterns among job seekers in these categories. For example, in this example, two natural categories might be the permanence of the decision (permanent as in the

flat screen or transitory as in the vacation or restaurant) and the price of the decision (inexpensive as in the restaurant or expensive as in the cruise or flat screen). Similarly, among job seekers, the anticipated tenure of the job seeker (i.e., anticipated permanence of the job choice) and job level (i.e., price, or potential earnings) might drive different search strategies and thus different optimal Internet-based approaches to recruiting such job seekers.

Turning to the customization paradigm shift, theory suggests at least four potential avenues for future research. One avenue involves the implications of customization for the signals that organizations provide to job seekers (Earnest, Allen, & Landis, 2011; Spence, 1973). For example, does customization signal that the organization cares for the well-being of the individual, or that it is thorough in its approach to interacting with outside constituents? Does customization reduce the relative importance of other signals, such as Web site aesthetics? What are the most important signals job seekers are looking for? A second avenue is related to job seeker involvement. Whereas research has suggested increased cognitive involvement when customization is provided (e.g., Dineen & Noe, 2009), research should attempt to gauge actual levels of involvement among job seekers, and whether this involvement leads to different outcomes. A third avenue is related to image theory. For example, does the Internet affect screening processes as described by image theory by providing more customized information that might enable quicker or more effective screening out of alternatives?

Finally, a key idea underlying customization is that it enables job seekers to make more informed judgments of potential organizational and job fit (Dineen & Noe, 2009). Future research should continue to examine the effects of customization on different types of PE fit and extend this research to consider outcomes such as turnover, performance, and positive word-of-mouth recommendations to other job seekers. On the other hand, our discussion of paradigm shifts raises the possibility that the proliferation of information, customization, and decentralization may make the rich information provided by referrals relatively less important. Research that addresses the possibility would be valuable.

The push-pull and decentralization paradigm shifts raise further intriguing research possibilities. For example, given the increased control of seekers over information search, research into the types of information that job seekers choose to pull, potential differences across recruitment stages, and

whether these choices differ between active or passive seekers may provide new insights into attraction and job choice processes. To the extent the decentralization of recruiting can lead to mixed and even conflicting messages being delivered, research into the effects of conflicting signals and message inconsistency from multiple sources on attraction, credibility, and job choice would be valuable. We may, through such research, be able to determine which sources of information provide stronger signals to prospective applicants.

Another "actor control" issue pertains to differences in reactions to information that is "pushed" to job seekers versus information the job seeker himself or herself "pulls" from Internet sources. For example, it might be possible for researchers to conduct laboratory experiments that vary with whether the exact same information is pushed to job seekers or is pulled by job seekers who find the information and process it themselves. Differences in reactions to such information, in terms of application decisions, depth of information processing, and so forth could be examined. The decentralization perspective suggests more extensive research into the role of social networks in recruitment. It has long been recognized that who you know matters in obtaining a job. However, research into the changing nature of social networks might address issues such as the role of the Internet in building networks (e.g., through LinkedIn or other social media platforms), the nature of Internet-based links, and whether the size or breadth of online social networks affects the speed or quality of job search outcomes.

Related to suggestions for better contextualizing Internet recruitment research, we believe that companies need to explicitly consider their recruitment goals before deciding on Internet recruitment approaches or methods. For example, one question has to do with whether technology use in recruitment is driven more by organizational or human capital strategy, or by Internet recruitment trends current in the environment, and how these choices might affect more distal recruitment outcomes. In addition, since Lievens and Harris (2003) recognized that Internet recruitment was marketing oriented and geared toward attracting applicants, several authors have called for more of a shift toward assessing applicant pool quality (e.g., Dineen & Noe, 2009; Maurer & Cook, 2011). However, beyond this important and appropriate shift, we believe the repertoire of possible goals and outcomes in need of consideration should be expanded. For

example, scholars might consider improvements in company reputation, brand equity, product sales, or other metrics perhaps not directly associated with applicant pool outcomes.

Finally, the pervasive impact of technology and the Internet may require new conceptualizations of the recruitment process as a whole. Most process models depict a somewhat linear recruitment process comprised of sequential stages (e.g., Barber, 1998) or discrete decision points (Carlson & Connerley, 2003). The Internet may be altering the very nature of the process, moving toward a fuzzier process that is less linear. For example, organizations are increasingly maintaining Internet-based social networks of former and potential employees, attempting to manage signals and communicate fit even though no current opportunities exist. They are in a sense maintaining applicants and attempting to influence future job choice before reaching the stage of generating applicants for a particular opportunity. That is, many Internet recruitment methods and approaches are likely to spill over to other areas, creating value for companies beyond better, larger, or more diverse applicant pools. For example, the narrowcasting movement, which uses social media to target messages to specific segments of job seekers, is a relationship development–based approach by which company representatives gradually educate prospective job candidates about a company's jobs, but also its products, innovations, awards, and so forth. This approach assumes that a certain percentage of these narrowcasting relationships will not end up translating into job candidates; however, many of these contacts could end up spreading positive word of mouth about the organization or becoming customers. We think that qualitative research into the potentially changing experiences and nature of the recruitment process might provide valuable new insights in this regard.

Conclusion

We began with the premise that technology in general, and Internet-based communication tools and social media in particular, have fundamentally changed the nature of recruitment. We described how electronic job boards, recruitment Web sites, and social media platforms such as LinkedIn are not simply more efficient electronic versions of paper-based job postings, classified ads, or employee referrals. Instead, we suggested that Internet-based technology has changed the nature of organizational communication, recruitment practices, and job seeker expectations in ways that warrant substantial

additional research attention. Thus, we identified key ways technology-based recruitment is changing recruitment paradigms. By developing a future research agenda grounded in these shifts, we hope to encourage scholars to continue pursuing these critical issues.

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