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Hiring as cultural gatekeeping into occupational communities: implications for higher education and student employability

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Abstract
With the rising price of college and anxiety about graduates' job prospects, the employability of graduates is a dominant narrative shaping postsecondary policy and practice around the world. Yet, completion and the acquisition of a credential alone do not guarantee employment, and research on hiring reveals its subjective aspects, particularly when cultural signals of applicants are matched to those of organizations. In this qualitative study of 42 manufacturing firms in the US state of Wisconsin, cultural capital theory is used to investigate the prevalence of hiring as "cultural matching" using thematic and social network methods to analyze interview data. Results indicate that 74% of employers hire for cultural fit, but, contrary to prior research, this matching process is not simply a matter of fitting applicant personalities to monolithic "organizational cultures" or interviewer preferences. Instead, employers match diverse applicant dispositions (e.g., personality, attitude) and competencies (e.g., cognitive, inter-personal, intra-personal) to the personalities of existing staff as well as to industry-specific norms that are dominant within specific departments. The paper explores implications of these findings for college students, faculty, and career advisors, especially in light of the potential for discriminatory practices during the job search and hiring process.

Keywords Organizational culture · Workplace skills · Employability · Hiring · Skills gap · Student employment · Labor market

Introduction

Mary, a manufacturing executive, told me during an interview at a boatmaking facility in the US state of Wisconsin that "When people ask what keeps you from hiring someone, it's not that they don't have technical skills," but it is a lack of what she called "professional skills"

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such as teamwork, problem-solving, and a strong work ethic. That hiring decisions are not made solely on the basis of technical acumen was also emphasized by Russell, a manager: "Brilliant jerks don't last very long here." These observations contradict one of the most influential narratives about higher education in the early twenty-first century—that of graduate employability—where the employment of college graduates is largely contingent upon students acquiring skills in high-demand fields, where plenty of well-paying jobs await (Holmes 2013; McQuaid and Lindsay 2005; Tomlinson 2017). Solutions to this situation typically focus on the "supply" side of the equation, primarily through the creation of articulated pathways through college that lead to credentials in "hot" fields such as computer science or nursing (Cleary et al. 2017). Thus, so the story goes, students simply need to get into college, work hard to complete a program in a marketable discipline, and gainful employment will follow. But is this really an accurate depiction of the relationships among college, skills, credentials, and graduate employment?

As Mary and Russell's observations suggest, how applicants actually secure employment is more complicated than acquiring technical skills and credentials—measures underlying the human capital view of status attainment and employability—and presenting them on a job application (Bills 2004). While a postsecondary degree confers a wage premium over a person's lifetime, and credentials "signal" to an employer information about applicants' capabilities (Spence 1973), a considerable body of evidence shows that employment is also influenced by other resources or forms of capital. These other forms of capital include information about job opportunities conveyed through social or professional networks (i.e., social capital) (Lin 2001), and symbolic information regarding individuals' social class, status, and character conveyed through objectified, institutionalized, and embodied forms (i.e., cultural capital) (Bourdieu 1986). In particular, research has demonstrated the importance of embodied or internalized forms of cultural capital—such as excelling at teamwork or exhibiting professional mannerisms—that are also called "non-cognitive" or "soft" skills, and contribute to positive academic and labor market outcomes (Farkas 2003; Heckman and Kautz 2012).

Besides overlooking the critical roles that social and cultural capital play in job acquisition, perhaps the most glaring shortcoming of the employability discourse is the lack of attention to the "demand" side of the supply-demand dynamic, which implicates job quality, the structure of local labor markets, and the hiring process itself (Tomlinson 2017). Recently, scholars such as Rivera (2012, 2015) have emphasized the cultural aspects of hiring, particularly the process of "cultural matching" where applicants' personalities, hobbies, and dispositions are fit or matched to hiring managers' own experiences and preferences in elite firms. This attention to the subjective and cultural facets of hiring stands in contrast to views that hiring processes are a "straightforward, probabilistic assessment of job candidates' skills, abilities, and future performance" based primarily on credentials (Deterding and Pedulla 2016, p.157). Instead, the evidence is growing that hiring is an organizational function that involves "active cultural work by employers" (Rivera 2012, p.1018), which means that the role that culture plays in facilitating (or thwarting) employment is a crucial question for higher education researchers and practitioners, as we aim to better understand the nature of student employability and how colleges can best prepare graduates for a challenging and potentially capricious labor market.

Yet several empirical, conceptual, and practical questions remain about hiring as an exercise in cultural matching. First, research on cultural matching has focused on hiring in fields such as law or finance, with less being known about how these phenomena may unfold in blue-collar occupations or industries. Second, the use of cultural capital theory in empirical research can

be hindered by inattention to the multi-dimensional manifestations of the construct (e.g., objectified, institutionalized, and embodied forms), and insufficient accounting for the specific fields in which cultural capital is acquired, valued, and rewarded (Lareau and Weininger 2003). Third, too often when the culture construct is used in educational research, especially in reference to organizational or professional cultures, it is rarely defined and frequently deployed as a decontextualized and catch-all construct (Ferrare and Hora 2014; Lizardo 2017). In the case of cultural matching, such an approach results in an imprecise account of precisely which job applicant attributes are being "mapped" onto which specific features of an organization's culture, and how contextual forces salient to both applicant and firm play a role in these processes.

In this paper, I describe a new approach for documenting the content and procedures of hiring as cultural matching, applying social network analysis techniques to discern patterns and relationships among themes derived from interview text (Pokorny et al. 2018; Leifeld 2013). The analysis centers on how a group of 58 manufacturing employers from Wisconsin conceptualized desirable forms of job applicants' embodied cultural capital, and how they map onto features of organizational cultures and contexts. Specifically, I sought to address the following questions: (1) How prevalent is hiring for cultural fit? (2) How, if at all, do employers conceptualize their organizational cultures in relation to hiring procedures? (3) What are the primary attributes and competencies employers seek in job applicants? (4) What features of organizational cultures and contexts are these attributes and competencies being matched to? Insights into these questions promise to contribute not only to research on cultural matching and the potentially exclusionary nature of hiring practices, but also to the pragmatic issue of how faculty and career advisors can best prepare college and university students for entry into the workforce.

Background

Research on the relationship between education and employment frequently draws on the notion of capital as a critical determinant of an individual's ability to get a job. In each of the three distinct forms of capital that typically appear in the literature—human, social, and cultural—the general idea is that various types of resources are invested and utilized (whether consciously or not) to acquire prestige, power, and position in society (Lin 2001; Tomlinson 2017). The most influential approach has been human capital theory, which posits that education effectively influences "future real income through the embedding of resources in people" (Becker 1964, p.9). Human capital theory has informed decades of research examining why people with higher levels of education have higher wages and status, including work on sorting models that focus on how credentials may act as a "signal" about an applicants' competencies and potential performance to an employer (Bills 2004; Spence 1973).

A persistent question in this literature pertains to how employers interpret the value of credentials, and their worth relative to other applicant attributes. Despite debate about whether schooling itself (and not credentials) confers advantages in the labor market, evidence indicates that credentials from high-status institutions convey a sense of legitimacy and cultural prestige to applicants for elite positions, while for less-skilled positions, employers may be more focused on candidates' technical skills (Deming et al. 2016). Further complicating matters, studies of the criteria employers use when conducting job interviews have found that evaluations of candidates focus on firm-specific criterion rather than general employability or personality traits (Rynes and Gerhart 1990). Taken together, these studies suggest that

interpretations of credentials and skills may be shaped by considerations of the symbolic nature of credentials as well as the personnel needs and norms of specific firms.

A theoretical perspective that is uniquely well suited to examining the interplay among education, employment, and hiring—especially with respect to the role of symbols and signals—is that of cultural capital. Advanced as a critique to human capital theory, which Bourdieu (1986) felt reduced the social world to an ahistorical "mercantile exchange," the idea of cultural capital focuses instead on the role that culturally specific symbols, norms, and dispositions play in enabling a person to gain (or not) prestige, power, and position. According to Bourdieu (1986), cultural capital takes three forms: Objectified forms refer to paintings and other physical artifacts that denote cultural knowledge; institutionalized forms include academic credentials that convey symbolic (or actual) knowledge and social standing; and embodied forms refer to dispositions, knowledge, and habits. The latter type of cultural capital is particularly relevant with regard to this paper's focus on education and hiring, as it encompasses the skills, knowledge, and abilities that are internalized through socialization and schooling (Bourdieu 1986).

While early research on cultural capital within education focused on the construct primarily in terms of elite or highbrow tastes, later theorists argued that cultural capital should refer to a broader range of knowledge and habits—even technical and academic knowledge—that are reproduced across generations and are used for "social and cultural exclusion" (Lareau and Weininger 2003, p. 587). One of the critical features of Bourdieu's (1986) theory was that capital did not exist in a vacuum, but instead was part of a synergistic triad composed of distinct forms of capital (e.g., cultural, social, and economic), the field or social structure in which people and organizations are positioned, and the habitus (i.e., internalized dispositions and norms). The context-dependency of cultural capital is especially relevant for this paper because the dispositions and knowledge that a student may acquire in their homes, K-12 schooling, or their college education may or may not be highly valued (and rewarded) when they attempt to gain entry into a new field, industry, or company. Thus, cultural capital should be viewed as embedded in specific places, situations, and contexts, where particular dispositions or credentials are assigned value, reproduced, and rewarded.

In a study of the role that culture plays in the relationship between education and employment, Rivera (2015) drew upon cultural capital theory to examine cultural aspects of labor market sorting, viewing culture as, "frames of knowledge, perception, interpretation, and behavior we use to navigate the social world" (p. 6). Rivera (2012, 2015) interviewed 120 employers in elite law, banking, and management firms, finding that hiring decisions were largely based on a process of cultural matching that unfolded in three ways. First, some companies had policies to assess cultural fit, where hiring managers evaluate the degree to which applicants are aligned with the "organizational culture" (e.g., an independent or a sporty culture) and/or with "a firm's existing employee base in leisure pursuits, background, and self-presentation" (Rivera 2012, p. 1007). Second, hiring managers paid close attention to similarities between their own experiences and backgrounds and those of job applicants. Finally, hiring managers evaluated "fit" on the basis of their own affective, personal connections with applicants, such as positive responses based on similar hobbies or backgrounds.

As a result, hiring can act as a form of cultural gatekeeping and exclusion, where applicants lacking not only desirable skills but also similar characteristics to existing staff (e.g., race, age, gender) could be less likely to obtain a job. Given that discrimination during the hiring process on the basis of these attributes has been repeatedly confirmed (Quillian et al. 2017), it is evident that college graduates' prospects in the labor market are not solely determined by their

major or their academic accomplishments, but are also shaped by employer preferences (whether explicit or not) for applicants of particular backgrounds and dispositions.

A new approach to studying cultural capital in organizations and hiring practices

While the theory of cultural capital is particularly well suited to address the subjective and cultural nature of hiring, conceptual and methodological challenges with how the construct is used in empirical research must first be addressed. One of the primary issues facing cultural research in sociology and education is the tendency for the construct of culture itself to be poorly defined and operationally specified. For instance, Lizardo (2017) argues that too often scholars adopt "one-size-fits-all proposals, deploying the term 'culture' as a generic category of analysis" that fails to specify the form, content, and enactment or use of cultural phenomena (p. 88). This problem especially applies to the notion of "organizational culture," which is commonly defined as a singular, internally coherent system of norms that can be ascribed to entire institutions and group members (DiMaggio 1997; Martin 2002). However, many culture theorists have long dispensed with this unitary view in favor of the notion that culture is contested and variable within organizations, positing that cultural meaning is best viewed as constructed within and operative at smaller units (i.e., sub-cultures) (Van Maanen and Barley 1984). Thus, research on cultural matching needs to avoid broad characterizations of a firm's culture (e.g., a "sporty" culture), and instead specify precise features and processes that comprise cultural forms within an organization.

A related issue is the ambiguity regarding the relationship between cultural phenomenon at the individual and organizational levels. In some accounts, members of a particular group or company are by default identified as members of and adherents to an organizational culture (Martin 2002), but people can be members of a variety of different social and organizational groups, and encode a variety of norms and standards from various spheres of influence in the society (e.g., family, peers, school, work) (Strauss and Quinn 1997). This has implications for research on cultural matching because the internalization process involves not only the norms and behaviors of one's social or familial group(s), but also the environment itself—whether through an organization's policies or status hierarchies—which then acts as a form of source material for individuals to internalize into their own cognitive structures (Lizardo 2004). Thus, cultural capital at the individual level is not just derived from parental tastes and habits but also involves the "subjectification of objective structures" from the entirety of one's environment into "the mind and body of the singular actor" (Emirbayer and Johnson 2008, p.25), a perspective that is also shared by theorists of situated and embodied forms of cognition (Hora 2012).

Consequently, the cultural capital that a hiring manager possesses or demonstrates should not be viewed solely in terms of the norms and/or knowledge of a single cultural group or organizational unit (e.g., a yachting club or a manufacturing company), but must also take into account the contextual factors play in shaping how he or she approaches the evaluation of job applicants. Thus, documentation of the cultural matching process becomes one of mapping the relationships between and among contextualized attributes of applicants and organizations.

Methods

For this project, I visited six regions of Wisconsin, a state in the Upper Midwest of the USA, with two colleagues to conduct interviews with staff in 42 firms as part of a larger study

examining how postsecondary educators and employers conceptualized and taught or trained valued workplace competencies (Hora et al. 2016). We elected to focus on the advanced manufacturing field, given its central and historic role in the state's economy and its absence in prior studies on cultural matching, and within each region used a non-random purposive sampling technique to populate sampling frames using searches of online Chamber of Commerce listings and industry-specific membership guides. Then, companies were included in the sampling frame if they employed more than two people and met industrial sub-sector criterion (e.g., no pharmaceutical or food manufacturers). Individuals included in the sampling frames were limited to human resource staff and/or company executives, based on the premise that these individuals would have direct knowledge of hiring procedures in their firms.

Respondents were contacted via telephone or email requesting their participation. We contacted 171 companies, and ultimately 42 companies participated with a response rate of 25%. A total of 58 individuals from these companies ultimately self-selected into the study, with the larger number of subjects than companies based on the fact that in some cases, more than one interviewee participated from a single company, with company representatives often selecting who would attend the interviews (see Table 1).

Data collection

All data were collected by a team of three researchers between late 2013 and early 2015, as part of a US National Science Foundation (DGE#1348648) supported research projec. A semi-structured interview protocol was designed for this study that included 13 questions, all of which were explicitly focused on non-managerial entry-level positions within a firm. Each respondent was asked the same battery of questions such as, "What are your thoughts on the quality of the applicant pool for entry-level positions?" "What factors influence your hiring decisions?" and "Does anything else influence your decision to hire someone besides if they meet the necessary skill qualifications for the position?" Each interview lasted approximately 45 min, and all interviews were audio-recorded and transcribed for later analysis.

Data analysis

The first stage of data analysis involved an inductive process of theme identification, where an open-coding process was used by two analysts. The analysts reviewed the raw data, made margin notes about important details related to hiring and/or noted incidents where ideas or events were repeated across respondents (Miles et al. 2014). Then, upon encountering that detail in later text fragments, analysts compared each successive instance of a code with previous instances to confirm or alter the definition of that code (i.e., the constant comparative

Table 1 Description of full sample

	Respondents *n*	Companies *n*
Total	58	42
Company size		
1–49	13	10
50–99	13	11
100–249	21	13
250+	11	8

method) (Glaser and Strauss 1967). After several rounds of reliability checking and revision to the code list, the entire dataset was reviewed once more and instances of codes within the data were noted in a separate document. The major code categories included applicant attributes, organizational cultures, and contextual factors associated with these attributes and cultures.

Next, social network analysis was used to analyze the underlying structure of respondent conceptualizations of these phenomena, and especially how specific features of applicant attributes, organizational cultures, and contextual factors were associated with one another. The data for the analysis was in the form of a two-mode (or "affiliation") matrix that consists of respondents as rows (mode 1) and codes pertaining to themes related to organizational culture, applicant attributes, and contextual factors as columns (mode 2). Using UCINET (Borgatti et al. 2002), the two-mode data matrix was transformed into a one-mode (code-by-code) matrix, which resulted in a co-occurrence matrix in which each cell corresponds to the number of instances where code i is affiliated with code j. In order to document the relative importance of each code, I report measures for centrality that include degree (i.e., number of links to other codes) and eigenvector (i.e., number of links to strongly connected nodes) (Borgatti 2005; Kadushin 2012). Next, I created graphs of the co-occurrences between pairs of codes for three sets of data: applicant attributes and contextual factors, organizational cultures and contextual factors, and all datasets. In order to enhance the interpretation of resulting graphs, nodes were manually located to cluster applicant attributes and features of organizational cultures on one side, and contextual factors on the other side.

Several limitations should be considered when interpreting the evidence reported in this paper. First, the small and self-selected nature of the sample precludes the generalizability of the results to the larger population of employers in Wisconsin and/or in manufacturing. Second, despite drawing upon Bourdieu's field theory, due to a lack of data on topics such as the role of social class in mechanisms of exclusion, this analysis does not explore in depth some key facets of this framework. Third, the data reflect self-reported behaviors and perspectives, and the lack of independent verification means that it is possible that the specific hiring behaviors and interpretations described by respondents are not consistent with actual behaviors. Fourth, the relationships between and among codes described in this and other approaches to discourse network analysis are not based on explicit, causally linked relationships reported by interlocutors, but instead rely on proximity or co-occurrence within an utterance. Finally, these data do not include the perspectives of those who have a unique and important perspective on the issues addressed in this paper—that of students and employees.

Results

Prevalence of and rationale for hiring for "cultural fit"

In response to questions regarding employer experiences with the labor market and criterion used for hiring, respondents from 74% of the firms (31) in the study explicitly stated that the hiring process involved assessing applicants fit with the "organizational culture." For instance, a human resource manager observed that "people who are just absolutely perfect on paper" may not be the best choice, and that other characteristics influence hiring decisions, especially "fit" with the corporate culture. As for why matching applicants to organizational culture was desirable, respondents reported that employees' good fit with the company led to reduced turnover, enhanced cohesion among department and/or work group members, and employee satisfaction and productivity. However,

not all respondents reported hiring with cultural fit in mind. For some, hiring was simply a matter of finding technically astute and/or competent individuals who could adequately perform the job, while others utilized different screening criterion altogether such as health (i.e., explicitly seeking healthy applicants) or geography (i.e., only hiring people living near company facilities).

Conceptions of organizational culture

When respondents discussed their own company cultures, several spoke in vague and ill-defined terms. For instance, one respondent stated that "I would describe the culture as being very family-like," whereas another reported that their culture was about "our values, our vision, and our mission." Such ambiguous conceptions of culture are not dissimilar from the ways in which the construct is often used in the literature, which underscores the need for defining the term in as precise manner as possible (Lizardo 2017; Martin 2002). In other cases where culture was not discussed in vague terms, study respondents thought of culture in terms of four distinct yet inter-related elements: shared beliefs, routinized practices, group member characteristics, and the features of local contexts in which both beliefs and practices regularly arise (see Table 2).

Shared beliefs Several respondents discussed beliefs and assumptions that they felt were widely held by company leaders and employees as a key part of their organization's culture. For nine respondents, the notion of corporate values—such as "the customer comes first"—was seen as a pervasive yet ambiguous aspect of their company's culture. Four respondents were more specific and stated that an employee-focused culture was held by company leaders, where company practices reflected the belief that employees should be treated fairly. Another shared belief pertains to that of work-related norms and expectations. These views encompass ideas about professionalism and matters such as appropriate working hours. For instance, one executive stated, "We had one fellow ask if he could come in at 10 at night, and I thought, what good does it do for you to be here all by yourself at 10 when we're working together as a team?"

Routinized practices The next aspect of organizational culture discussed by study respondents was that of routinized behaviors and practices within the company. In this context, 13 respondents discussed the nature of the work that employees performed on a daily basis, whether running lab experiments, trouble-shooting CNC machines, or cutting molds—as being core features of the workplace culture. As one employer said, "We basically define

Table 2 Respondent conceptions of the organizational culture

Shared beliefs	Routinized practices	Characteristics of personnel	Factors shaping organizational culture
Corporate values (9)	Nature of work (13)	People/existing staff (7)	Industry (10)
Employee-focused (4)	Team-oriented tasks (8)		Climate/atmosphere (8)
Work-related norms and expectations (4)	Hierarchy/autonomy (4)		Admin unit/level of organization (7)
Business goals (3)			Age of employees (6)
			Size of company (3)
			Ownership type (5)
			Organizational structure (5)
			Hierarchy/authority (4)
			Age of company (2)

culture as the way things get done around here." In addition, a supervisor emphasized the importance of teamwork, noting that their organizational culture was "team-driven," and that he tells people that "if you are not comfortable working in a team and having the collaborative mentality on how to reach a solution you will not be successful within this organization—you can't be a cowboy."

Characteristics of personnel Seven employers described their company culture in terms of characteristics of existing staff. One manufacturer spoke of culture as synonymous with his staff, which was comprised of "strong personalities" who created a climate where, "you have to earn their respect." Thus, the work units and personnel within them can be viewed as a type of community or social group, and it is for this group that hiring managers are often trying to find a good "match" for.

Salient contextual factors Several themes were identified that captured features of organizational contexts that respondents discussed as influencing or being closely tied to their cultures. For instance, ten employers pointed to the unique nature of their industry as shaping their firm's cultures. In fact, some equated these cultures with the industry itself, stating that their company had a "lean manufacturing culture" or a "continuous improvement culture," two terms associated with modern approaches to manufacturing. In this way, how work was organized and performed within specific industrial contexts was seen as synonymous with "culture." Eight respondents also discussed the climate or atmosphere of their firm, using terms such as "regimented" or "enlivened" to interpret or assign meaning to the policies and practices of their organization. The work or administrative unit (e.g., department, work group) where a job opening existed was described by seven respondents as the principal venue where culture existed. Five respondents stated that their culture was inextricably tied to company size. For instance, in small companies, many staff played multiple, overlapping roles, which one respondent described as necessitating "a culture of flexibility" and another as "a culture of wearing many hats to get the work done."

Other organizational features considered synonymous with or closely linked to organizational cultures include ownership type and the age of the company. For example, some employers stressed that they have a "young" company culture, with an energetic and casual work environment that results in a culture that is similar to the prototypical Silicon Valley "startup culture." In contrast, three different employers characterized their companies (and employees) as having "traditional cultures," which was tied to the age of the firm. One manufacturer, observing that his decade-old company was largely staffed by men in their mid- to late-50s who had been with the company for over 20 years, had "an older culture (where people) are very set in their ways." Similarly, six respondents discussed their organization's culture in terms of the age of employees (e.g., "young" or "older and traditional"), and the attendant beliefs and norms exhibited by these groups, such as older workers having less flexibility and more conservative personalities and worldviews than younger employees.

Conceptions of valued applicant cultural capital

Next, I report data on applicants' characteristics that employers seek when making entry-level hires (see Table 3).

Table 3 Job applicant attributes (i.e., embodied cultural capital) considered valuable by employers

Dispositions	Inter-personal competencies	Intra-personal competencies	Cognitive competencies	Factors shaping applicant attributes
Positive attitude (17)	Teamplayer (10)	Work ethic (14)	Handy/mechanical (3)	Upbringing (9)
Personality type (13)	Communication skills (6)	Learnability (9)		Age (5)
Patience (1)	Personable (3)	Honesty/integrity (5)		Ethnicity (1)
	Cultural competency (1)	Adaptability (4)		Military (1)
		Adhere company values (4)		
		Self-motivated (4)		
		Takes responsibility (2)		

Applicant attributes discussed by respondents encompassed four categories: dispositions (i.e., attributes commonly associated with embodied forms of cultural capital), inter-personal skills, intra-personal skills, and cognitive skills. These categories are based on a combination of the data and a widely used framework for essential academic and workplace competencies (Pellegrino and Hilton 2012). Respondents also spoke about contextual factors associated with these attributes.

Dispositions One of the most commonly discussed characteristics of applicants pertained to their personalities and demeanors, or what can be considered people's dispositions. Seventeen employers spoke about the importance of a positive attitude, with some viewing it as the most important indicator of cultural fit and suitability for the job. One stated that they hire for "Attitude, attitude, attitude, and attitude" alone, while another unequivocally stated that "the cultural fit is the attitude fit." Thirteen employers reported that personality traits of applicants were considered indicators of whether or not the person would fit the organizational culture, particularly applicants with "cheerful" or "respectful" personalities. In other cases, a specific personality type was not the issue, but finding someone who could match the personalities of existing staff was the over-riding concern. For example, one employer stated, "You're not necessarily plugging in the right skill set but you gotta plug in the right personality."

Inter-personal competencies Another set of attributes that employers sought pertains to inter-personal competencies such as the ability to effectively work in teams and communication skills. Given that many manufacturing facilities are organized around small teams, these aptitudes were in some cases a non-negotiable skillset that applicants needed to have. One issue that respondents raised in relation to these competencies was that of humility, which was seen as an indispensable part of being a team player. As one hiring manager said, "We are a 'we' place…the football Randy Mosses of the world or Terrell Owens of the world would not be successful here," referring to athletes who are popularly known as being rather self-centered.

Intra-personal competencies The next set of desirable attributes were intra-personal competencies, or characteristics pertaining to an individuals' values, beliefs, and motivations as well as their ability to manage themselves. The most valued intra-personal attribute was work ethic, which 14 respondents discussed in varied terms that included hard work,

delayed gratification, persistence, and basic employability. Given the changing nature of the work procedures and industrial developments, nine respondents highlighted the importance of applicant's ability and/or willingness to learn new things as a critical attribute. Respondents also discussed the need for people who were honest and adaptable or not stuck in their ways based on prior work experience. For example, four respondents described looking for "moldable" applicants, or those who were a "fresh slate" that could be trained in the company's own unique procedures.

Cognitive competencies Respondents also discussed the need for applicants to have certain cognitive competencies, which included mechanical skills such as familiarity with machinery and tools and/or a general understanding of electrical or scientific principles related to the work.

Salient contextual factors Finally, respondents discussed four themes that were closely associated with these applicant attributes, as explanations for their origins or factors that strongly shaped them. The issue of upbringing or how someone was raised by their family and cultural milieu was discussed by nine respondents, such that a person's work ethic or inter-personal skills were largely attributed to how they were socialized and raised. In particular, some respondents discussed a rural upbringing as being synonymous with a good work ethic. In addition, five mentioned the age of job applicants as being closely tied to their dispositions and approach to work (i.e., younger generations have a poor work ethic and little patience). One respondent each mentioned ethnicity and a military background as factors that also influence how people acquire certain competencies.

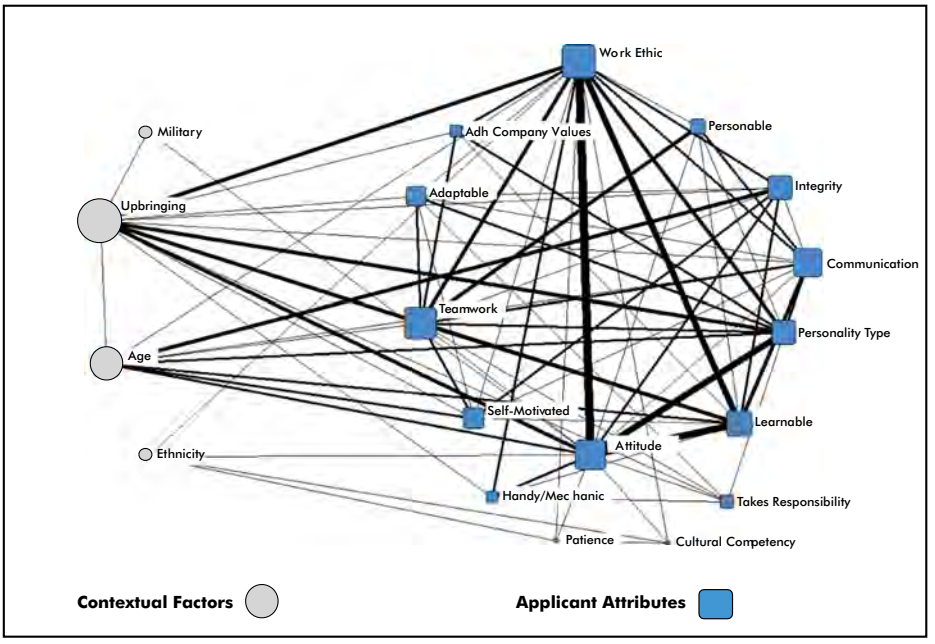

Fig. 1 Applicant attributes and related contextual factors. Note: Icon size depicts eigenvector centrality nodes (nodes with large number of ties to other highly connected nodes) for each node

How attributes of organizational culture are associated with attributes of applicants

Finally, social network analysis techniques were used to explore the relationships between and among themes related to applicant attributes, organizational cultures, and contextual factors. The first graph depicts affiliations or linkages between and among pairs of codes related to applicant attributes and contextual factors related to them (see Fig. 1).

The 15 codes related to applicant attributes are located at the right of the figure, with the most highly co-occurring code pairs linked by thick, dark lines (e.g., work ethic and attitude, 6 ties; work ethic and learnable, 5 ties). The analysis indicates that respondents considered upbringing and applicants' age to be particularly important contextual factors that shaped applicant attributes, especially work ethic, attitude, being learnable, and personality type. Icons depicting each code also vary in size depending on their eigenvector centrality measure, which measures how frequently codes are linked to other codes that are themselves highly linked in a network. Results from analyses of centrality measures including degree and eigenvector values are reported in Table 4.

The second graph depicts affiliations between and among codes related to organizational cultures, and the contextual factors that respondents associated with them (see Fig. 2). This graph depicts a more restricted set of seven organizational culture codes in contrast to Fig. 1, and with several more contextual factors.

The most highly co-occurring code pairs link features of organizational cultures with contextual factors (e.g., nature of work and industry, 6 ties; nature of work and administrative unit, 4 ties), with the most central codes for organizational culture being nature of work and corporate values, and the most central contextual factors including particular industries, administrative units, and organizational structures. This graph represents an alternative depiction of organizational culture that departs from more catch-all approaches that view entire organizations as being synonymous with a single label (e.g., a "sporty" culture, a managerial culture).

Finally, the third graph indicates where distinct features of applicant attributes are "matched" to specific aspects of organizational cultures. This graph reveals that while certain co-occurring code pairs reflect important relationships between applicant attributes and organizational cultures (e.g., attitude and nature of work, 7 ties; integrity and nature of work, 4 ties), some of the most recurrent code pairs instead included contextual factors (e.g., industry and nature of work, 6 ties; existing staff and personality, 5 ties). These results highlight the role that specific industrial and/or occupational contexts play in the cultural matching process itself, and also the view that matching applicant personalities to those of existing staff is an important consideration. Ultimately, these results illustrate that the role organizational culture, applicant attributes, and contextual factors play in the cultural matching process is complex, multifaceted, and strongly influenced by considerations of personality, occupation, and place (Fig. 3).

Discussion

The data reported in this paper contradicts the conventional wisdom in the US and abroad regarding college student employability, which is dominated by supply-side human capital arguments that investments in schooling, credentials and graduates' acquisition of cognitive skills will lead to employment (Cappelli 2015; Holmes 2013). Instead, the findings extend

Table 4 Centrality measures for individual nodes within the three affiliation graphs

Applicant attributes			Organizational culture			Applicant attributes and organizational cultures		
Code	Degree	Eigenvector	Code	Degree	Eigenvector	Code	Degree	Eigenvector
Work ethic	35	.88	Nature of work	32	1.0	Attitude	69	1.0
Attitude	33	1.0	Corporate values	24	.59	Nature of work	68	.89
Learnable	27	.63	Industry*	21	.69	Industry*	56	.73
Teamwork	25	.46	Administrative unit*	17	.44	Corporate values	55	.61
Upbringing*	23	.50	Organizational structure*	17	.39	Work ethic	66	.84
Personality	23	.62	Climate/atmosphere	17	.40	Teamwork	57	.67

* Contextual factor

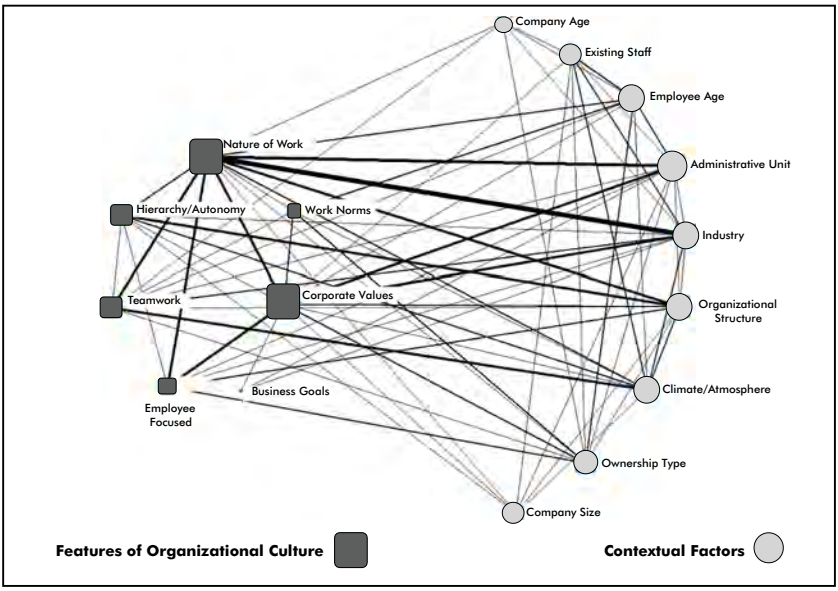

Fig. 2 Organizational cultures and related contextual factors. Note: Icon size depicts eigenvector centrality (nodes with large number of ties to other highly connected nodes) for each node

prior work by reinforcing the importance of demand-side elements of the employability question (Tomlinson 2017), and highlighting the importance of applicants' possession (or lack thereof) of various forms of cultural capital and their role in the cultural matching processes (Rivera 2012). This paper also contributes to this critical line of inquiry by examining these issues in a non-elite employment context, and by applying techniques from social network analysis to document the mechanisms of the "cultural matching" process at a more fine-grained level than previous work. In addition, the analytic techniques used in this paper are part of a growing effort to link ethnographic perspectives with networked features of cognition and behavior (Ruis et al. 2018; Shaffer et al. 2009), and in this case, new insights into hiring practices are made possible (and visible) through the technique of discourse network analysis (Leifeld 2013). In the final pages of this article, I elaborate on specific aspects of the cultural matching process, and discuss subsequent implications for students and higher education professionals.

New insights into cultural matching: the importance of personality and occupation

The data reported here highlight the importance of personality and intra-personal competencies (i.e., work ethic), and how occupations and characteristics of incumbent employees act as a critical point of reference for employers when engaging in the cultural matching process. At the same time, the findings support a broad conception of cultural capital that includes not only highbrow markers of taste and distinction but also academic knowledge, inter-personal competencies, and personality and dispositional traits (Lareau and Weininger 2003). Consequently, researchers should consider how a wide range of applicant characteristics may act as cultural signals during the hiring process, and not only attributes associated with class

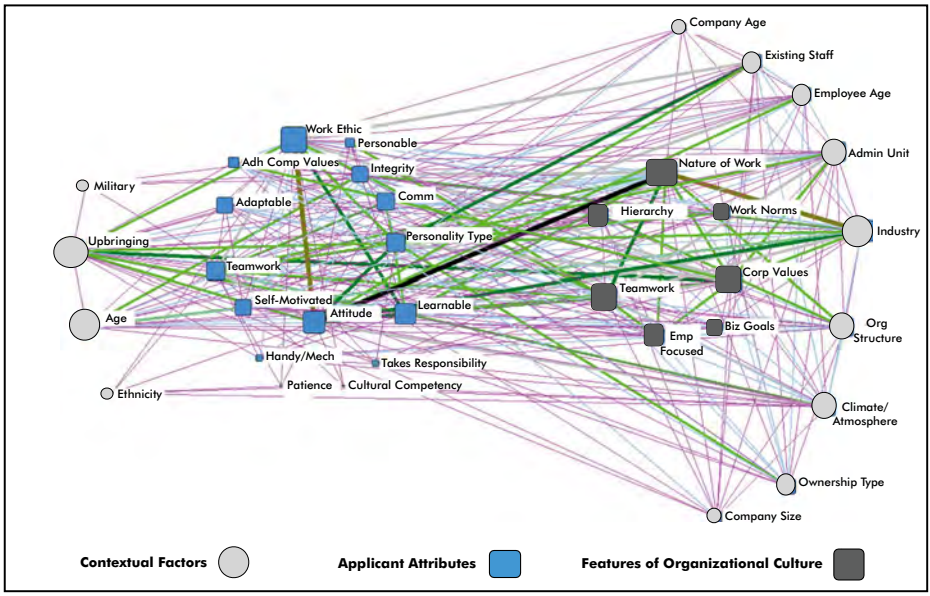

Fig. 3 The cultural matching process: applicant attributes, organizational cultures, and contextual factors. Note: Icon size depicts eigenvector centrality (nodes with large number of ties to other highly connected nodes) for each node

distinctions (e.g., hobbies). This is especially true with respect to aspects of applicant personalities in general, and specifically their dispositions and beliefs regarding work.

In highlighting the importance of personality, this study confirms prior research on cultural matching (Rivera 2012) and person-organization fit (Kristof-Brown et al. 2005), but two considerations arise with respect to these new findings. First, the associations between personality and the nature of work (i.e., occupation-specific tasks) raise questions about the relationship between personality and occupations, a long-standing topic of interest in vocational psychology (e.g., Volodina et al. 2015). While no claims regarding this relationship can be made on the basis of the present evidence, the prospect that employers (and students) may perceive that only certain personality types (e.g., artistic) or traits (e.g., conscientiousness) are suitable for certain occupations is an issue that higher education researchers should investigate. Second, the data indicate the importance of work ethic, which respondents discussed in ways ranging from the abstract, to specifying desirable attributes (e.g., showing up on time) and social and occupational groups (i.e., farm kids) that were viewed as inherently embodying this trait. Future research should examine precisely what employers (and others) mean when they refer to "work ethic," given its demonstrated multi-dimensionality (Miller et al. 2002), and how in practice it may encode views about socio-demographic factors such as race, social class, and gender.

The data also indicate that from the employer's perspective, the cultural matching process is not solely about matching applicant attributes to those of hiring managers or an ambiguous "organizational culture." Instead, the matching process involved employers first considering the nature of workplace tasks (e.g., operating CNC machines) and the people who worked within those departments or units. It is within these meso-level units, or what Van Maanen and Barley (1984) called occupational communities, where cultural phenomena should be considered most salient or active with respect to cultural matching. Within these communities, there exists

assumptions about order, meaning, and classifications, such that "work" becomes another cultural group to which an individual may have membership in addition to their families, religious groups, ethnic community, and so on (Strauss and Quinn 1997). As a result, the cultural aspects of hiring that involve matching individual applicants to group-level phenomenon are not about fitting individuals to amorphous "organizational cultures," but to specific "cognitive, social, and moral contours of [an] occupation" such as the welders, machinists, and CNC operators within a firm (Van Maanen and Barley 1984, p. 292). This finding also aligns with research in personnel psychology on more granular types of person-organization fit, such as person-group or even person-supervisor fit (Kristof-Brown et al. 2005), thereby underscoring how cultural matching is in large part dependent on the types of people who work at a firm at the time of recruitment. Put another way, the cultural matching process involves an applicant's cultural capital being "referenced against the values and social mores" of a firm, and the "types of field dynamics by which it operates" (Tomlinson 2017, p.344).

Hiring as cultural gatekeeping: prospects for exclusion and discrimination

One of the implications of the cultural matching process that researchers and higher education professionals alike should pay close attention to is the potential for discrimination and the exclusion of applicants who are dissimilar from existing occupational communities. One of the central ideas in Bourdieu's (1986) field theory is that dominant classes effectively reproduce inequality through excluding those without the requisite capital from obtaining positions of power or prestige. At the institutional level, whether it is a firm or a public university, this exclusion may happen when individuals' own cultural resources—whether their personality, inter-personal competencies, or their appearance—do not meet the standards or expectations of the institution (Lareau and Weininger 2003).

While our research did not reveal any explicit instances of hiring discrimination on the basis of gender, race, sexual orientation, or other attributes, the prevalence of cultural matching should give one pause. At the least, the preference for hiring applicants who match the personalities and predilections of current employees raises questions about the prospects for discrimination in the event incumbent employees represent a dominant group, which in the case of Wisconsin manufacturers tends to be White males. Whether encoded in policy or in the cognitive frames of individual interviewers, matching applicants to these groups effectively introduces the likelihood that applicants who are not White males will be excluded on the basis of attributes other than skill, merit, and educational accomplishments. Given considerable evidence that hiring discrimination continues to be a problem (Quillian et al. 2017) and the fact that cultural matching may exacerbate or even embody discriminatory practices, additional research is needed across a variety of industries, occupational groups, and geographic regions, and postsecondary professionals should explicitly address these issues while advising students and considering student employability.

Conclusions

The fact that employers regularly hire for cultural fit, and not just on the basis of educational credentials and technical expertise, has important implications for higher education professionals and how we think about (and advise) students who are about to enter the job market. While structural forces of cultural reproduction and inequality may be beyond the control or

influence of faculty and career or academic advisors, some steps can be taken, particularly for students of color, first-generation students, and others whose dispositions, appearances, and/or cultural signals may not align with those of the dominant culture.

First, career services offices at colleges and universities would be well advised to request statements of organizational culture and hiring criterion from key employers and/or encourage students to seek information on these points so that job candidates can prepare their applications and for interviews with these cultural criteria in mind. Second, students should be provided with opportunities to participate in programs and venues where they have opportunities to observe, acquire, and model the inter- and intra-personal skills unique to a discipline or occupation such as an internship, coop program, or other forms of work-based learning. Finally, higher education faculty and advisors should inform students about the cultural nature of hiring, especially the prospect that discrimination on the basis of gender, class, and race will be encountered by some graduates. This can be a simple matter of raising awareness of the issue, but faculty and advisors should also facilitate students' development of racial and ethnic self-concept (Leong, 2010), which "may serve as a protective factor against potentially deleterious contextual experiences such as racial discrimination by enhancing coping efficacy" (Byars-Winston 2010, p.451).

Contrary to dominant supply-side conceptions of student employability, the empirical evidence is growing that students' entry into the workforce is not a simple matter of obtaining the "right" set of credentials, and instead is also a process whereby professional sub-cultures restrict entry to newcomers based on if they look, act, and think like incumbents. While addressing these practices so that they do not act as mechanisms of discriminatory gatekeeping implicates actors such as the legal system, corporate leadership, and the human resources profession, postsecondary faculty and advisors do have a role to play in interrupting these cycles of inequality and exclusion. Towards this endd, college and university personnel can and should work to cultivate students' varied competencies, identities, and savvy with navigating the cultural aspects of the job search process, while also advocating for the rights and well-being of workers (i.e., their alumni) in the labor market of the 21st century.

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