A TEXTUAL ANALYSIS OF RACIAL CONSIDERATIONS IN HUMAN RESOURCE ANALYTICS VENDORS' MARKETING

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Abstract
The field of HR analytics is rapidly developing with innovations such as machine learning and artificial intelligence. At the same time, questions about whether HR analytics tools will be used in ways that help or harm racial fairness in employment have been raised. In fact, in some instances the use of HR analytics has triggered lawsuits and new legislation. To assess HR analytics vendors' positions on the matter of racial fairness, a study was conducted of their webpage content pertaining to the matter. Among 121 vendors included in the sample, only nine had content on their webpages pertaining to racial fairness. This may be a surprisingly low frequency in view of the current global attention being given to racism. The goal of this study was to generate some initial data and stimulate interest in additional research. In particular, future research is needed to determine why so few HR analytics vendors mentioned racial concerns on their webpages. Since this study was exploratory in nature, definitive conclusions would be inappropriate. Nevertheless, findings suggest an HR analytics vendor could differentiate itself among competitors if it were to use its website landing page to clearly emphasize concern for racial fairness in how their products are used. The current study did not find HR analytics vendors had much to say about the effects of their products and services on racial fairness.
Keywords: human resource analytics, Racial biases, algorithms, artificial intelligence, discrimination, socially responsible marketing

1. INTRODUCTION

Racial discrimination in employment is an international phenomenon with multigenerational negative consequences. Patterns of racial discrimination in employment are found on all continents (Gradin, 2019; Hedegaard & Tyran, 2018; Hirata & Soares, 2020; Kerdpitak & Jermsittiparsert, 2020; Kosny, Santos, & Reed, 2017; Tesfai & Thomas, 2020). Discrimination in various human resource management functions leads to inequitable outcomes. Racial inequalities are seen in periods of unemployment, fewer opportunities for career advancement, lower income (Pew Research Center, 2015), and psychological stress and poorer health (Undurraga, 2019). For instance, one study found black men in 2010 were 28 percent less likely to be employed than white men, and earned 31 percent less annually than white men when employed (Kahn-Lang, 2018). With less favorable careers and earnings, those subjected to racial discrimination in employment and their families also experience disadvantages in the form of poorer nutrition and health (Fradkin et al., 2018; Kothari et al., 2016; Psaltopoulou et al., 2017; Woolf et al., 2020), poorer quality medical care (Gyasi & Phillips, 2020), lower quality of educational opportunities (Lumpkin, 2016), and poorer community safety and security (Henry et al., 2019; Hwang, 2016). Managers who value justice (cf. Rawls, 1971), or who want to support public policy initiatives striving to eliminate racial discrimination in employment, will want to monitor and support racial fairness in their human resource management activities.

With innovations in the tools known as human resources (HR) analytics, there is the opportunity to reduce racial unfairness as well as the risk of exacerbating it. HR analytics refers to the use of advanced technologies to analyze human resources data and guide decision making, often using artificial intelligence (Marler & Boudreau, 2017). Recent technology advances in areas such as machine learning and artificial intelligence, big data analytics have created many opportunities for employers to use HR analytics tools (Hamilton & Sodeman, 2020). Just as a hammer can be used to build or demolish, HR analytics tools have the potential for creating significant good and serious harm. The primary rationale for using HR analytics tools in an organization is to make HR processes more efficient and effective. Furthermore, automation can lessen the influence of

organizational decision makers who may have conscious or unconscious biases against others (Foley & Williamson, 2019). However, recent instances have shown HR analytics can be discriminatory. Analytics used in recruitment of new employees have led to charges of ethnic discrimination (Speicher et al., 2018). HR analytics can also be used to identify employees who are likely to have high healthcare costs and allow employers to discriminate against them (Gumbus & Grodzinski, 2015), which could have an adverse impact on racial minorities. For the sake of racial justice in employment, it is essential that HR analytics tools be designed and used with fairness in mind.

This paper reports an exploratory study of HR analytics vendors' expressed sensitivity to racial discrimination concerns. The literature on racial biases in HR is reviewed. Then, HR analytics is explained in detail, and concerns about the potential for unfair biases when HR analytics tools are implemented are presented. Next, the issue of whether HR analytics vendors would choose to include concerns about racial fairness in their marketing communications to prospective customers is considered. The methods used to conduct this exploratory study of HR analytics vendors' communications about racial fairness is then described. Results drawn from a sample of marketing communications on HR analytics vendors' websites are reported. Finally, implications for future research and managerial practice are provided.

2. LITERATURE REVIEW

2.1. Racial biases in HR

The study of race in organizations has progressively grown since Nkomo (1992) proclaimed, "the Emperor has no clothes," and admonished management scholars to ask the unasked questions about race. Race is typically defined as social categorizing that can involve individuals' color, religion, or ethnicity (Kerdpitak & Jermsittiparsert, 2020; Triana, Jayasinghe, & Pieper, 2015). When racial discrimination occurs, it is typically discrimination against a member of a minority racial group (Borowczyk-Martins, Bradley, & Tarasonis, 2017). Biased treatment on the basis of race can be intentional or unintentional (Foley & Williamson, 2019). Racial biases in employment can create important disparities among members of a community and its elimination is a goal of the United Nations (Malaihollo, 2017).

Racial biases can affect any human resources activity. Populations that have been historically segregated by race continue to be segregated many years after equal opportunity legislation in nations where it has been enacted (Gradin, 2019). Consequently, historically disadvantaged racial groups can be concentrated in less lucrative occupations. Biases can interfere with securing employment many ways. Implicit racial biases can affect recommendation letters written for internships (Houser & Lemmons, 2018). Assumptions made about the racial identity of job seekers based on their names on their resumes can influence the likelihood that they will get a "callback" for a job interview (Fryer, Jr. & Levitt, 2004). Race can affect interviewers' evaluations of applicant's performance in their job interviews (Purkiss et al., 2006). Field experiments find substantial racial biases in post-interview hiring decisions (Quillian, Lee, & Oliver, 2020). Race affects the impressions of pre-hire salary negotiating behavior (Hernandez et al., 2019). Additionally, biased treatment can occur once a member of a minority racial group is hired. Racial differences have been observed in training, development, and mentoring experiences (Dreher & Cox, 1996). Race influences pay levels (Borowczyk-Martins et al., 2017). Race has also been found to be a factor in employee discipline (Hasan, 2014). Finally, racial differences exist in employee exits (Elvira & Zatzick, 2002; Hargis et al., 2006). Research has found that a high rate of African American males report being unjustly terminated in their first year in a position (Slonaker, Wendt, & Williams, 2003). Downward mobility can be greater for racial minorities as well. Studies find that African American men experience higher rates of downward mobility than White men in the United States (Wilson & Roscigno, 2018).

2.2. HR analytics vendors and concerns about biases

The market for HR analytics products and services is rapidly developing, and it has the potential to help or harm racial fairness. Although the fundamental principles of HR analytics have existed as long as the profession of human resource management (Marler & Boudreau, 2017), the term appears to be relatively new and the analytical tools used are evolving. Lawler, Levenson, and Boudreau (2004) defined HR analytics as statistical techniques and experimental approaches that can be used to show the results of HR activities. Subsequently,

Marler and Boudreau (2017) conducted a systematic literature review to, in part, reevaluate the definition of HR analytics. They produced the following definition: "An HR practice enabled by information technology that uses descriptive, visual, and statistical analyses of data related to HR processes, human capital, organizational performance, and external economic benchmarks to establish business impact and enable data-driven decision-making." (Marler & Boudreau, 2017, p. 15). Synonymous terms include people analytics, talent analytics, and workforce analytics. They also suggest HR analytics are viewed as an area of innovation in the field of human resource management.

Many important developments in HR analytics are associated with the application of big data analytics to the functions of human resource management. Advances in computing capabilities have increasingly permitted large data sets to be analyzed in a process called machine learning. In machine learning, software continuously processes a segment of a large data set until it learns the associations among variables through pattern recognition and produces algorithms, which are subsequently compared to the full data set to identify variables that can predict others (Hamilton & Sodeman, 2020). Machine learning is a common component of artificial intelligence, which is a type of technology that can learn and automatically adapt what it does based on data in a given situation (Glikson & Woolley, 2020). The most common use of machine learning and artificial intelligence in the field of human resources is applicant screening. There are HR analytics tools that can learn the characteristics of employees who perform well and use algorithms to evaluate job applicants based on those characteristics. While applicant screening has been the most common use, there is tremendous growth potential for HR analytics in areas such as determining the employee incentive systems that have the greatest impact on customer service, motivational programs that promote product quality, training that predicts productivity and innovation, employee development programs that support rising stars, and job experiences that stimulate management development (Hamilton & Sodeman, 2020).

Importantly, although machine learning identifies relationships that exist, it will not always be clear to users exactly what the nature of those relationships are or whether those relationships involve fair treatment of human resources. Human users define the goals for machine learning tasks (referred to as "training"), but the software allows the computer to train itself and produce algorithms without human awareness of the calculations involved (Glikson & Woolley, 2020). If there are undesirable biases in a large data set, the computer will learn them and include them in the algorithms without the computer or user being aware that some of the algorithmic associations among variables are undesirable (Saltz & Dewar, 2019). Even when data on race is not part of the data set, racial biases can occur (Williams, Brooks, & Shmargad, 2018). A human resources data set that has biases in factors such as hiring decisions, performance appraisals, compensation decisions, and terminations will produce algorithms that reflect those biases.

There are growing concerns about unintended biases, including race discrimination concerns, associated with the use of HR analytics tools. For instance, the Facebook advertising platform is an analytics tool many human resources professional use for recruiting prospective employees, and its inclusion of an "ethnic affinity" attribute for ad targeting was the subject of a civil rights charge (Speicher et al., 2018). HireVue is another controversial HR analytics vendor. It serves over 100 business clients and automates initial employee interviews (Harwell, 2019). Its artificial intelligence uses data on video interviews of jobholders and facial recognition software to develop algorithms for screening applicants through the internet using webcams and then eliminating applicants determined to be a poor fit for the positions sought (Shellenbarger, 2019). The decision criteria applied by the artificial intelligence are not transparent, and rejected interviewees do not receive an explanation of the decision (Harwell, 2019). United States Senators Kamala Harris, Patty Murray, and Elizabeth Warren have asked the Equal Employment Opportunity Commission to review the use of facial-recognition software in pre-employment screening (Raghavan, 2020). Similarly, the State of Illinois passed the Artificial Intelligence Video Interview Act that requires applicants to be notified and asked for their consent if their video interviews will be analyzed by artificial intelligence (Jimenez, 2020). Ethical concerns with HR analytics extend beyond recruitment and hiring. As an additional example, HR analytics can be applied to data on employees' healthcare costs in a way that could lead employers to discriminate against racial minorities (Gumbus & Grodzinski, 2015).

2.3. HR analytics vendors' sensitivity to racial discrimination concerns

Many parties are concerned about racial fairness in employment, and it is reasonable to assume many individuals with decision-making authority in organizations believe they have a responsibility to promote fairness. Calls for racial justice in employment are made worldwide. Since 1965, the United Nations has publicly committed to the elimination of racial disparities in opportunities and economic outcomes (Otieno, 2007). Legal requirements for racial fairness in employment exist in countries such as Canada, South Africa, and the United States (Myors, et al., 2008). In the United States, ultimate responsibility for avoiding racial discrimination in employment decisions rests with the employer rather than the HR analytics tool vendor (Calvasina & Calvasina, 2016). However, as the example of broad international adoption of product liability laws suggest (Reimann., 2003), it is a nearly universal expectation that vendors will not sell products that cause harm. Vendors may also have principled, moral reasons for accepting responsibility for the fairness of their HR analytics tools.

In addition to being shaped by the priorities of the vendor, the content of marketing communications is heavily influenced by the vendor's perceptions of their prospective customers' priorities, which could include achieving and sustaining racial fairness. Understanding and addressing customers' concerns is a key to effective marketing (Melnyk & Stanton, 2017). Many employers are facing increasing stakeholder pressures to increase the racial diversity of their workforce and have made public commitments to do so (Sweet, 2020). Moreover, in view of the business case for employee diversity, prospective buyers might be concerned about the harm to organizational performance that could result if they used HR analytics tools that engendered racial biases. Research has found organizational racial diversity to be positively associated with sales revenue, market share, and profitability (Herring, 2009). This may result from racially diverse organization members having different backgrounds and therefore having perspectives that can expand the range of ideas available for performing tasks (Richeson & Sommers, 2016). There can be a favorable return-on-investment (ROI) in ensuring the racial diversity of a firm's workforce. Employers who are aware of the business case for racial diversity could have nondiscrimination as a criterion for selecting an HR analytics vendor. Furthermore, many prospective customers are committed to socially responsible buying, which is defined as taking into account the public consequences of a purchase decision or attempting to bring about positive social change through procurement activities (Drumwright, 1994). In other words, socially responsible buying goes beyond maximizing the ROI on employee diversity. Socially responsible buying criteria can be difficult to satisfy (Drumwright, 1994). In some situations, it can require working with smaller, less capable vendors, and accepting higher costs and inconvenience. Alternatively, the buyer could prod established vendors to adapt their offerings in order to meet the criteria of the socially responsible buyer. Since socially responsible organizational buying can be so difficult, it could present an opportunity for vendors to gain a competitive advantage by emphasizing how their offerings would promote racial fairness in their marketing communications. Doing so would be a form of socially responsible marketing communications.

Socially responsible marketing communication is "the use of marketing communications tools for the purpose of ethical/CSR (corporate social responsibility) message conveyance" (Jahdi & Acikdill, 2009, p., 103, parentheses added). The concept of socially responsible marketing predates the world wide web (e.g., Murray & Montanari, 1986). However, webpages are an ideal medium for socially responsible marketing communications. Webpages are a "pull" medium for marketing communications as they allow target audiences more control over the content they view (Pollach, 2005). Unlike traditional print and broadcast communications, the amount of information provided on corporate webpages is unbounded (Jahdi & Acikdill, 2009). Socially responsible marketing communications are perhaps most effective when they are a part of a vendors' socially responsible organizational strategy that involves monitoring and responding to concerns of all major stakeholder groups such as the community, customers, employees, regulators, shareholders, and suppliers (Maignan et al., 2011). When a "stakeholder orientation" is reflected in the organization's culture, research finds it is associated with superior financial performance, organizational reputation, and employee commitment (Maignan et al., 2011).

3. RESEARCH QUESTION

The review of the scholarly and practitioner literatures summarized above prompts the question of whether HR analytics vendors address concerns about racial fairness associated with their products and services in the marketing communications on their webpages. Racial biases in human resources are present internationally, and they are considered by many parties to be a problem worth addressing. Furthermore, there are concerns that HR analytics tools could be prone to biases. However, HR analytics also have the potential to be used to identify and correct racial biases. It is possible that automated processes could be less biased than human-involved processes. Stakeholder-oriented HR analytics vendors may use their webpages, in part, to convey to prospective customers that they are concerned with racial biases and committed to avoiding them. This study examines HR analytics vendors' webpages to determine the incidence and nature of their marketing communications regarding racial fairness. With this being a new realm of inquiry pertaining to innovative product offerings, an exploratory research question is used rather than tests of hypotheses. The research question is as follows:

What do HR analytics vendors' webpages say about racial fairness?

4. METHODS

HR analytics vendors' webpages were the form of marketing communications specified in the research question and examined in this study because webpages are a primary medium for marketing communications in the 21st Century. Vendors vary greatly in the range of marketing communications media they use, including broadcast and print advertisements, outdoor advertising, sponsorships, direct mailing, e-mailing, direct selling, tradeshows, etc. Comparing marketing communications across such diverse media would present enormous challenges in collecting all the media and interpreting the findings. Vendors with greater marketing budgets would typically have more content and a greater chance of mentioning racial fairness somewhere within their content even if it was a low priority for them. On the other hand, corporate webpages are ubiquitous. The vendors can vary tremendously in how extensive their websites are, but it is very unlikely that any HR analytics vendors are entirely without webpages for their product offerings. This makes direct comparisons more meaningful and feasible.

Specifically, the webpages used in this study are landing pages. Landing pages are the first webpages a prospective customer sees on a vendor's website, they create the first impression of the product offering and vendor, and they can be standalone or within a multipage website (Dvir & Gafni, 2018). The majority of prospective customers arrive at landing pages by either entering a web address communicated to them, clicking a hyperlink in an online advertisement, or clicking on internet search results (Viswanathan & Svaminathan, 2017). Although the amount of information provided on landing pages is determined by the vendor and can vary considerably (Dvir & Gafni, 2018), there is even greater variability in the amount of total content vendors' websites contain (Raghavan et al., 2020). Content such as user forums, blogs, white papers, and testimonials are potentially relevant to this study's research question, but they are not included on all vendors' websites. Moreover, it is unlikely that prospective customers read the entirety of vendors' websites. Websites can provide "information overload," and shorter webpages have been shown to lead to a higher rate of sales per visit (Dvir & Gafni, 2018). This study's focus on landing pages emphasizes the marketing communications that the vendors have chosen to prioritize.

The webpages were located and downloaded during the second week of June 2020. Globally, it was a historic week for attention to racial justice. In the United States, as in much of the world, the COVID-19 pandemic had led to the closing of most workplaces and schools for roughly three months, and the World Health Organization and other authorities had encouraged people to remain in their homes (Matias, Dominski, & Marks, 2020). Three weeks previously, George Floyd had died while being held down by a police officer in the city of Minneapolis, and cellphone videos of the incident spread to audiences around the world. International outrage followed for weeks with protests in cities such as Amsterdam, Johannesburg, Mexico City, Paris, and Sao Paulo (So other people would be also free, 2020). Protestors called for an end to police brutality and an end to systemic racism. Systemic racism is a pattern of institutionalized practices in a society, often including racial

biases in human resource management, that provide advantages to some races and disadvantages to others (Schell et al., 2020).

The search for HR analytics vendors' webpages for this study began with a published directory, and continued using an internet search engine in the same way many prospective customers would seek out HR analytics vendors. A directory of "workforce analytics vendors" was obtained from the Society for Human Resource Management (List of Workforce Analytics, 2020). The directory contained 88 listings. Each of the vendors' listings in the directory included a web address, and that page served as the landing page for use in the study. However, nine of the webpages could not be found from the listing or by searching for the company's website, which yielded 79 vendors' landing pages from the directory. Internet searches were then conducted to find additional vendors. Google was selected as the search engine, as it is by far the global market share leader in internet searches, and therefore it is the search engine an individual shopping for HR analytics tools and providers would normally use. The search terms used were "HR analytics." "human resource analytics," "people analytics," "talent analytics," and "workforce analytics" (see Marler & Boudreau, 2017). Within Google settings, the language was set to English, which is widely regarded as the business *lingua franca* (Du-Babcock & Tanaka, 2017). Google also requires specification of a location, and Eastern Europe was set as the location, which is centrally located among the major population centers of Africa, Asia, and Europe. Google's personalized search function was disabled for these searches. Landing pages were collected from organic search results and advertisements accompanying them. For each of the search terms, results pages were reviewed until three consecutive pages occurred without new and relevant results. These searches produced 42 HR analytics vendors and their landing pages that were not included in the published directory, thus yielding a total sample of 121 HR analytics vendors' landing pages.

Textual analysis was performed on the landing pages electronically and manually. For the electronic analyses, a dictionary of racial fairness terms was developed from published literature searches on the topic (Jones et al., 2016; McCord et al., 2018; Triana, Jayasinghe, & Pieper, 2015). Search terms included discriminat*, harass*, aggression, hostil*, violen*, bully*, incivil*, mistreat*, ostraci*, assualt*, abus*, victim*, divers*, inclusion, bias*, race, racial, racism, and stereotyp*. Each occurrence of one of these terms in a webpage was then manually analyzed for relevance. In several instances, the terms only appeared in the webpages hypertext markup language (HTML) source code and were not visible on webpages. Additionally, "false positives," meaning appearances of the search terms in contexts that were irrelevant to this study, were identified through manual inspection and not included in the results. Words such as "race" and "diverse" have multiple definitions and are often used in ways that are irrelevant to this study's research question.

5. RESULTS

Table 1 contains a summary of the HR analytics vendors' landing page content related to racial fairness that was identified in this research. The first column from left to right lists the term most relevant to racial fairness for each of the webpages that had at least one such term. Only four of the website landing pages explicitly addressed concerns of racial fairness, and only five others included content that could be interpreted as pertaining to racial fairness. The second column includes the nature of the content located on the landing pages. The most informative type of webpage content, as it has the potential to provide the most detail on the landing page, is the textual content ("Text" in Table 1) on the page. Five of the vendors had textual content pertinent to racial fairness on their respective landing pages. Three of the vendors had "Internal Links," meaning they had hyperlinks on their landing pages to other webpages within their websites that pertained to racial fairness. Table 1 shows one of the vendors had an "External Link," which is a term referring to a hyperlink on their landing page that led to a webpage on a different website, that had content relating to racial fairness. As the third column in Table 1 indicates, five of the vendors mentioned matters of racial fairness or related concerns as part of their claims about their respective products. Two vendors' landing pages had links to statements from their leaders pertaining to racial fairness, and another vendor had a link to a blog post in which racial fairness was obliquely referenced by the vendor's top management. The last column of Table 1 contains the excerpt that was most relevant to racial fairness on each landing page. Additionally, since four of the vendors' landing pages included links to other webpages that clearly indicated a concern for fairness, those links were also examined, and the most relevant excerpt from the linked pages also appear in Table 1.

The results indicate only nine of the HR analytics vendors' landing pages, which is less than 8% of those examined, referenced concerns relating to racial fairness. In other words, more than 92% of the HR analytics vendors' landing pages made no comment about racial fairness issues relating to their products. Furthermore, only four vendors explicitly used the term "race," "racism," or "racial."

TABLE 1 - CONTENT RELATED TO RACIAL FAIRNESS ON HR ANALYTICS VENDORS' WEBPAGES

Race Specificity of Content	Content Type	Description	Excerpt
"Race"	Text	Product functionality	"Establish benchmarks for diversity ... find age, gender, and race/ethnicity data for every occupation and industry, anywhere in the U.S."
"Racial injustice"	Internal Link	President's statement	[From landing page] "A Statement on Racial Injustice and Affirmative Action"
			[From linked page] "We will always be committed to helping our clients and communities grow stronger through equity and diversity. Not only is it our mission, but it's the American imperative." *
"Racism"	Internal Link	CEO's letter on racism and bias	[From landing page] "…open letter about unlearning racism and bias"
			[From linked page] "For our clients: … We are providing free unconscious bias training for all of our learning clients."
"Racism"	External Link	Link to an article on the *Harvard Business Review* website	[From landing page] "U.S. Businesses Must Take Meaningful Action Against Racism"
			[From linked page] "Anyone, at any level of the organization, can take small steps to exercise greater compassion and initiate action that provides needed support and promotes racial justice for Black workers as well as others who are marginalized."
"Diversity" and "Bias"	Text	Product functionality	"Recruitment analytics provide a look at diversity and fairness of the recruiting process ... Assess diversity and find hidden bias"
"Biases"	Text	Product functionality	"Uncover things that would otherwise go unfixed ... hiring biases"
"Bias"	Text	Product functionality	"Helps managers and senior talent leaders unlock the power of data—increasing rigor, … reducing bias, and improving performance
"Bias"	Text	Product functionality	"See how people analytics helps teams run proactively and reduce bias in decision-making."
"Inclusion"	Internal Link	A link to a blog post	[From landing page] "Employee Connectedness: Inclusion in the Workplace"
			[From linked page] "We believe 'compassion takes courage' and through this message we are raising money for charity"

The infrequency of vendors' comments about their products' racial fairness on their landing pages is difficult to explain. With this being an exploratory study, there is no body of prior research or theory directly explaining this finding. Racial biases and racism were receiving attention internationally at the time of data collection, but very few of the vendors' landing pages indicated responsiveness to the trending topic. *Post hoc* analyses were conducted to address possible explanations for the small number of HR analytics vendors' landing pages that mentioned a hot topic that was relevant to their products.

The first potential explanation examined through *post hoc* analyses was the possibility that the landing pages did not contain topical content, and instead emphasized content that would be relevant month-after-month, year-after-year. To assess this, the webpages were searched using the terms "COVID*" and "corona*". A much higher percentage of the websites mentioned the COVID-19 pandemic in some form than addressed racial fairness. There were 27 landing pages that had been updated at some time during the year to include content relating to the pandemic, which is three times as many as appear in Table 1 for including racial fairness content. Clearly, some of the webpages had been updated for important current events, but Table 1 shows they were very rarely updated for racial fairness concerns.

The second potential explanation for the low frequency of content relating to racial fairness on HR analytics vendors' landing pages that was examined in *post hoc* analyses was the possibility the vendors were reluctant to call attention to an objection prospective customers might have to the products. Marketing content primarily seeks to emphasize products' features and the benefits customers could obtain from them while trying not to call attention to disadvantages associated with the products. As the literature review presented earlier in this article indicates, there has been increasing media and legal attention to the possible drawbacks to using various HR analytics tools. If the vendors were worried that calling attention to those potential problems associated with their products on their landing pages could discourage prospective customers, then they might avoid mentioning the topic of race. On the other hand, while customer objections can block prospective sales, anticipating the objections and presenting effective responses to the objections in marketing communications helps capture sales that would otherwise be lost (Campbell & Davis, 2006). Consider, for instance, the costs to the customer of patronizing an HR analytics vendor. Although the prospective customers would need to pay the HR analytics vendors, and financial outflows are a disadvantage, the vendors can communicate in a way that frames those cash outflows as wise "investments" rather than as expenses. To explore this, the landing pages were searched with the terms "return on investment," "ROI," and "cost-effective." Forty-one landing pages included one or more of those terms. Vendors claimed that their product "delivers ROI," and that they could "increase ROI for HR" and "Human Capital ROI." Therefore, a reluctance to call attention to a potential buyer's objection by trying to address it in a positive frame did not explain the infrequency of comments on the vendors' webpages about race in this study.

A third *post hoc* analysis was conducted to discover the domains in which HR analytics vendors claimed to be the leaders. It is noteworthy that the initial search using race-related terms did not find an instance of a vendor claiming to be a leader in racial fairness (see Table 1). Marketing communications that tout a leadership position can help a vendor create positive impressions among customers (Kamins, Alpert, & Perner, 2007), so some of the HR analytics vendors' landing pages were expected to have claims of leadership. The 121 landing pages were searched with the term "lead*", and eleven vendors were located who claimed leadership in some form. For instance, vendors claimed to be "The Leaders in HR ANALYTICS"; to offer "leading-edge analytics for HR"; and, to be "the world's leading talent acquisition platform."

To summarize the results, less than 8% of the vendors' landing pages had content that pertained to racial fairness, and less than half of those explicitly mentioned race. The low frequency of those occurrences did not seem to be due to the webpages ignoring current events, as there were three times as many landing pages that mentioned the COVID-19 pandemic than mentioned race. Furthermore, the possibility that the vendors would not want to mention racial concerns as they could call attention to prospective customers' objections to HR analytics was considered. A comparison was made to the risk of calling attention to prospective customers' concerns about their financial outlays for HR analytics. Both racial concerns and financial concerns can be positively framed by vendors. In forty-one instances, financial concerns were addressed on vendors' landing pages by framing the outlays as investments with favorable returns rather than as expenses. Far less attention was given to addressing customers' potential concerns pertaining to racial fairness. Finally, since no vendor

claimed to be a leader in racial fairness, a search was conducted to see how often some form of leadership among competitors was proclaimed by the vendors, and eleven of them claimed a type of leadership.

6. DISCUSSIONS

This exploratory study did not find evidence that promoting racial fairness is a high priority for most HR analytics vendors. Corporate websites are important communication channels for conveying marketing messages, and landing pages are where websites' first impressions are made. In a sample of 121 HR analytics vendors, only nine included content relating to racial fairness, and only four specifically mentioned race. This means 112 of the landing pages, or more than 92%, did not express any concern for reducing race discrimination in employment.

6.1. Implications for future research

This study not finding evidence that racial fairness is a priority is not the same as finding evidence that the HR analytics vendors do not care. This study is an initial effort in this realm, and many more studies will be needed before conclusions about the priorities of HR analytics vendors can be confidently made. First, different samples might find noticeably different results. When building this sample, the goal was to use an approach that an HR manager who is interested in identifying HR analytics vendors would follow to create a large sample of landing pages for HR analytics vendors. The number of approaches that could have been used is limitless. This study's search was conducted in English as it is the *lingua franca* of business. A somewhat different sample would have likely been created if a different language had been used, and thus the results might have differed. Additionally, although Google dominates the global market share of internet searches, different search engines could have been used, which would have produced a somewhat different sample. Eastern Europe was the geographical region specified in Google, and it might have influenced which HR analytics vendors were identified. Future research can determine the extent to which these factors matter when studying HR analytics vendors' landing pages.

Second, while this study focused on world wide web landing pages, there are many other forms of marketing communications, and studying them might lead to different results than were obtained in this study. For instance, studying entire websites rather than landing pages creates a new set of limitations, but it would also likely increase the number cases in which an HR analytics vendor is identified as having referenced racial fairness. It should be noted that studying entire websites creates several important challenges though. Many of the HR analytics vendors offer very diverse products and services that have little or no association with HR analytics. Similarly, many of the websites have pages devoted to recruiting their own employees, and references to racial inclusion on those pages would be examples of false positives that would need to be carefully identified and removed. Vendors can also add a tremendous amount of content to their websites for very little cost, and consequently it is unrealistic for prospective customers to read it all, and a reference to racial fairness on an obscure webpage within a large and elaborate website might not be a meaningful form of socially responsible marketing communication. In addition to considering different ways to study HR analytics vendors' comments about racial fairness on their websites, there are many other media for marketing communications that could be studied. Future research may be able to create samples of marketing emails from HR analytics vendors, postal mailings of marketing materials, and print advertisements in magazines and trade publications. Personal communications from HR analytics vendors' representatives during sales calls or at conventions and tradeshows are other opportunities for vendors to express concern for racial fairness, and there might be a way to form a sample of such communications for research purposes.

Beyond the possibility that the results of future studies might be different with different sampling approaches and different forms of marketing communication, another reason to not definitively conclude the low percentage of references to racial issues on landing pages means HR analytics vendors do not value the racial fairness of the products and services they offer is that do so would be to overlook the numerous reasons the vendors who may truly care about race could have for not expressing their concerns. The landing pages might be a better reflection of what the vendors think their prospective customers' concerns are than they are what the vendors' concerns are. If the vendors have assumed or have analytically determined that customers in their market are

not interested in racial fairness, then the vendors might choose not to broach the issue on their landing pages. Moreover, even though very few vendors mention race on their landing pages, it is still possible the vendors have established policies for, procedures for, and assurances of racial fairness they can share with their prospective customers if asked.

Related to the previous point, marketing content pertaining to racial issues is an indication that someone cares—the vendor, the prospective customers, or third-party observers—but it might be difficult to determine exactly who cares. Although HR analytics vendors control the content on their webpages, value-laden statements about racial fairness on a vendor's website are not definitive proof that those values are internalized by organizational leaders or by the company's culture. Responding to stakeholders' concerns can be instrumental, and sensing and responding to others' values does not require the vendor to internalize those values. If the vendor's goal with such adaptations is to signal solidarity with a social movement or a sensitivity to such, this is called corporate virtue signaling. Corporate virtue signaling is when an organization sends socially desirable messages without taking meaningfully virtuous actions (Jas, 2020; Wallace, Buil, & De Chernatony, 2020).

Finally, moral values such as racial fairness can be held by organizational leaders and their organizations' cultures even if those values are kept private. Despite the potential advantages to vendors of publicly communicating that they value racial fairness, there is nothing that formally obligates them to espouse those values in their marketing communications. Espoused values are stated by organizations, and they do not always match their enacted values that guide the organization's actions (Bourne, Jenkins, & Parry, 2019). Actions are needed to improve racial fairness in employment and avoid future discrimination, not merely statements. Determining whether HR analytics vendors privately place high importance on racial fairness and act accordingly is an opportunity for future research.

6.2. Implications for practice

This study has managerial implications for HR analytics vendors from both the shareholder perspective and the stakeholder orientation. First, from the shareholder perspective that focuses on profit maximization and competitive advantage (Ellis & Keys, 2015), this study finds an HR analytics vendor can differentiate itself from competitors by clearly communicating an intent to promote racial fairness through the use of its analytics tools on its product's landing pages. This study finds very few competitors in the market have done so. Concise, sincere explanations of how HR analytics tools can prevent and possibly even correct racial unfairness were not identified in this study. Providing such explanations would distinguish an HR analytics vendor. Moreover, racial fairness and racial inclusion through superior HR analytics can be presented in the context of the business case for diversity. However, from the shareholder perspective, it would be necessary to evaluate whether such messages would be well received by prospective customers. Being different is not sufficient for an effective differentiation strategy; it is essential that the point of differentiation is viewed favorably in the marketplace (Porter, 1980).

Second, this study also has managerial implications from a stakeholder perspective in which the profit motive is balanced with the concerns of all stakeholders (Maignan et al., 2011). As Table 1 indicates, there were a few HR analytics vendors who appear to have recognized that racial fairness was an important issue for their stakeholders and added content to their websites that specifically addressed current events. Other socially-conscious vendors can do this and more. HR analytics, if applied correctly, have the potential to reduce racial biases (Gumbus & Grodzinski, 2015). Vendors can use their webpages to explain this and explain how they are committed to only using their tools in ways that promote equity.

Whether approached from a shareholder perspective or stakeholder orientation, this study's critical finding is there is a glaring opportunity for HR analytics vendors to say more about racial fairness. For many years, public policy initiatives have attempted to promote racial fairness. Nevertheless, racial inequities in employment continue. Although innovations in HR analytics present opportunities to remove biases, instances in which they have failed to do so have led to regulatory actions. Given the current climate of social unrest relating to racial fairness, now might be a good time for HR analytics vendors to consider adding new content to their webpages.

7. CONCLUSIONS

Parties that accept the calls to action from the United Nations and others to address the problem of racial discrimination in employment might hope to see, within HR analytics vendors' marketing communications, that these organizations are also concerned with racial fairness. This is particularly true because, as this paper's literature review shows, media has reported several problems with algorithmic big data analytics being applied to human resource management, and some legislative bodies have begun to address a few of the problems. Furthermore, in June 2020 when this study was conducted, racial problems were being publicly protested around the world. Nevertheless, this study did not find many instances in which HR analytics vendors mentioned racial fairness.

This exploratory study needs to be followed by many and diverse subsequent studies. All studies have limitations, especially exploratory studies such as this, and no definitive conclusions can be drawn about a topic as complex as this one until there is a large body of research. Future research can approach this study's research question from different theoretical perspectives, and with different samples and analytical techniques. As the numerous implications for research and practice identified in this paper reveal, future research related to the study reported here would be very valuable.

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