Big data, people analytics and employment decisions: The rewards and often overlooked risks

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"Big data analysis" and its subset, "people analytics" (along with its alternate forms and titles), have become buzzwords in the business world. This should come as no surprise, given the exponential developments we have seen in technology and processing power over the past 20 years and the popularity of analytical success stories like "Moneyball." (Some have even referred to people analytics as the Moneyball of human resources.[1])

We now have the ability to gather and synthesize ever-growing data sets, allowing us to identify trends that were previously physically or practically impossible to spot.

Generally, big data analytics focuses on examining large data sets to gather useful information to help organizations make more-informed business decisions. Businesses are capitalizing on this newfound ability by overhauling the ways in which they source and evaluate candidates, analyze attrition risks, optimize individual and team performance, identify safety risks, provide wellness guidance and resources, and much more.

The 2017 Deloitte Global Human Capital Trends report, which collected responses from over 10,000 business and human resources leaders in 140 countries, reveals that "companies are investing heavily in programs to use data for all aspects of workforce planning, talent management, and operational improvement [in response to the widespread adoption of cloud HR systems]."[2]

While 76 percent of U.S. respondents in the Deloitte survey said their organizations consider people analytics "important" or "very important,"[3] Deloitte's HR consulting branch says companies worldwide have been slower to adopt people analytics, with only 8 percent actively using predictive analytics as of early 2016.[4]

Considering that investors spent $2 billion in 2015 alone backing companies that are making applications for hiring, performance management and wellness,[5] it is easy to identify the untapped market opportunity.

Given these findings, many employers seem to agree they should be using these tools. However, there is also evidence suggesting that companies may delay their own implementation to piggyback in specific areas where others have first demonstrated success.

In a recent KPMG survey, 80 percent of respondents said they expected their organization to begin or increase use of big data and advanced analytics over the next three years, though a majority did not know exactly how.[6]

While employers of various sizes in a variety of industries are building out their own people analytics divisions or restyling their HR departments to become more data-driven, third-party vendors are also springing up to offer the same types of benefits and services to companies that may find it difficult to complete an internal build-out themselves.[7]

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These vendors, with their turnkey offerings that can be applied to a variety of companies, may be the key to helping understand which trends are valuable and actionable, which are merely distracting, and which may cause illegal disparate impact or create other legal vulnerabilities.

The most common people analytics applications focus on all levels of the recruitment process, followed by performance measurement, compensation, workforce planning and retention. These applications collectively integrate a host of "predictive" functions, including computer-automated sourcing and matching,[8] screening interviews,[9] personality tests, automated online reference checking,[10] text analytics, audio and video analytics, and modeling.

The past few years have also seen an explosive growth in the use of organizational network analysis and "interaction analytics." These tools help businesses better understand how their employees navigate their increasingly complex matrixed organizations and identify opportunities for business improvement.

These solutions are business-driven, not internally HR-focused, thus challenging HR departments to move beyond their own

internal view of data and leveraging people data for a broad range of business problems. But the promise of people analytics comes with unanswered questions and potential risks.

THE BENEFITS

The ultimate question driving most business decisions is, "How much will this cost/save me?" Indeed, the goal or benefit of every people analytics application relates back to organizational efficiency and cost savings.

For example, making faster, better hires and providing more effective onboarding and training translate to shorter vacancies and a workforce that can begin to add greater value sooner.

Structuring performance feedback models so employees can more effectively receive the message, as promised by Cisco's Team Space software,[11] means less time wasted through miscommunication and improves relationships such that employees may be more likely to stay, meaning less money spent on recruiting costs.

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Also, addressing wellness issues preemptively helps create a healthier employee base, thus reducing time spent out of work and health-related costs.

Access to specific data also enables employers to precisely construct targeted strategies to reap maximum bang for their buck. Take, for example, Google's historic quest to find the perfect shade of blue for its hyperlinks. Though most people probably could not consciously distinguish the 40 blues tested from one another, Google proved that minute differences matter when it netted an extra $200 million per year in ad revenue from the winner.[12]

People analytics can also help companies identify and address hidden biases, using data to separate true potential high performers from candidates who merely look good on paper.

During the final year of the Obama administration, the Equal Employment Opportunity Commission, Federal Trade Commission and Executive Office of the President all expressed hope that employers would adopt a goal to root out biases through the myriad applications of people analytics — particularly when hiring and promoting employees.[13]

The Trump administration has not yet addressed the subject but has generally garnered a more business-friendly reputation, erring on the side of less regulation. Yet current

EEOC acting Chair Victoria Lipnic, who spearheaded an EEOC hearing on this subject in October 2016, appears to remain dedicated to researching the impact of big data analytics in the workplace.

In practice, by reducing decision-making subjectivity, employers can cut back on the "affinity bias" that can steer managers to hire candidates like themselves.[14] This in turn will allow them to better consider nontraditional candidates and solutions that might otherwise be overlooked or ruled out.

Employers may wish to reconsider the relative importance and predictive nature of traditional hiring criteria such as educational experience and grade point averages. Google discovered that its heavy reliance on GPA and its fixation on using "brainteaser" questions during interviews produced a homogenous group of employees. It then modified its interviewing practices to reduce the potential effect that possible interviewing biases might have on hiring decisions.[15]

People analytics can help companies improve their hiring processes in other ways. Using people analytics to preliminarily screen a large pool of candidates reduces the amount of time that hiring teams spend reviewing applicants and the volume of records the company must maintain to document its process in filling the open position.

It also decreases the degree of legal risk incurred by limiting applicants, as a larger applicant pool can unfavorably affect adverse impact analysis and otherwise increase potential liability in discrimination cases.

This is particularly important for federal government contractors in light of the Labor Department's Office of Federal Contractor Compliance Programs' record-keeping requirements, which are set forth in the Internet Applicant Rule.

The IAR requires federal contractors and subcontractors to maintain race, gender and ethnicity data for two to three years from all individuals who are "applicants" for employment. Use of simplistic data-mining techniques provided by analytics vendors may decrease the applicant pool and therefore minimize recordkeeping requirements.

But companies must be careful to not allow their use of analytical tools at early stages of the recruiting process to inadvertently convert individuals into "applicants" under the IAR.

Under the IAR, individuals become "applicants" when comparative techniques are used. This means that a contractor's use of technology/analytics that rank, stack or score an individual renders that person an "applicant" under the IAR.[16]

Because a larger pool of applicants means a larger amount of data that a contractor must retain (and protect from

ever-frequent data breaches), there is great value in systems that can cull candidates before they become applicants.

Employers, however, should be mindful that the EEOC more broadly defines "applicant" and thus holds employers to different record-keeping requirements.

THE RISKS

While the potential benefits of people analytics are many, they come with risks.

The flip side to the possibility of identifying hidden biases is "the potential for incorporating errors and biases at every stage — from choosing the data set used to make predictions, to defining the problem to be addressed through big data, to making decisions based on the results of big data analysis."[17]

> Employers should bear in mind that their liability for disparate impact is not limited to their own actions, but may extend to actions taken by third-party vendors acting on their behalf.

In a May 2016 report, the Executive Office of the President identified challenges with both the data used as inputs to an algorithm and the inner workings of the algorithm itself. These include data sets that lack information or disproportionately represent certain populations as well as poorly designed or outdated matching systems, to name a few.[18]

Critics warn that the potential to incorporate existing biases is especially pronounced when the people evaluating data and constructing algorithms are few or come from similar backgrounds. In these situations, those individuals are thus less likely to realize or appreciate the nature of any personal biases.

Because algorithmic outputs are only as good as the instructions within the algorithm itself, an algorithm based on flawed assumptions or instructions will produce flawed conclusions. As they say, garbage in, garbage out.

Employers should also be mindful not to "set and forget" their selection algorithms, failing to update selection criteria to reflect changes in the legal landscape.

For example, some companies may historically have used questions regarding compensation history to eliminate applicants who might be dissatisfied with the projected salary range for an open position. However, recent legislative trends show that more states and localities now prohibit the practice of soliciting salary history information from applicants.[19]

Employers in those jurisdictions who fail to update their algorithms risk liability for continuing the practice. Moreover, in some of these cases an applicant need not show

discrimination to recover in a lawsuit. Instead, the applicant may need to show only that the question was asked.

Proposed people analytics applications remain unproven. While it is important to be aware of their existence, employers would be wise to resist early adoption without an appropriate degree of skepticism.

For example, the Israeli startup Faception claims its facial analysis software can "profile ... people and reveal ... their personality based only on their facial image."[20] The technology uses algorithms that purport to "score an individual according to their fit" relative to a list of 15 classifiers, including: high IQ, academic researcher, professional poker player, white collar offender, terrorist and pedophile (each with a corresponding list of defining traits).

While the company's chief executive, who also serves as its chief ethics officer, claims that the technology can "evaluate with 80 percent accuracy certain traits," external experts are not convinced, calling the evidence of accuracy "extremely weak."[21]

This example also illustrates one of (if not the) most important tenets of data analysis. Correlation does not equal causation.

It can be exciting to identify links between seemingly unrelated trends, but those links are not always meaningful (a famous example is the corresponding increases in ice cream consumption and murder rates during summer months).

Thus, the FTC cautions that when employers use correlations to make decisions about people without truly understanding the underlying reasons for those correlations, the decisions may be faulty and lead to unintended consequences or harm.

Just as all potential benefits track back to cost savings, all risks come back to the potential for disparate impact — impact rather than treatment because the evaluator may have good intentions and the criteria may be facially neutral.

While the data itself may not be protected characteristics, it may relate back to or serve as a proxy for protected characteristics (e.g., screening out candidates who live farther than a certain distance from work may disparately affect certain protected racial classes based on neighborhood composition and using an internet-based application system may disproportionately screen out older applicants or applicants with disabilities).

And, because algorithms operate based on a written set of instructions, an employer basing decisions on algorithm results offers a substantial degree of transparency into the variables on which it relies — a plaintiff's dream if the instructions are legally suspect.

Disparate impact does not mean automatic liability for an employer. Instead, disparate impact is sometimes unavoidable or justifiable.

In such cases, employers may defend against such claims by relying on the "business necessity" defense, provided they can demonstrate there is a manifest relationship between the challenged discriminatory practice and the work being performed in the specific job and that the challenged discriminatory practice is significantly correlated to performance in that job.

Employers should also bear in mind that their liability for disparate impact is not limited to their own actions. Rather, it may extend to actions taken by third-party vendors acting on their behalf.

Therefore, while it is important for employers to verify the nondiscriminatory nature of their own activities, they should also take steps to understand and verify the means employed by all of their agents — including those advertised as offering "validated and nondiscriminatory" products or programs.

Employers and vendors alike should also recognize that when collecting data, each incurs a duty to responsibly maintain and, when appropriate, dispose of that data. It is almost a certainty that disparate impact challenges will be mounted as to employment decisions based on people analytics.

Thus, employers should closely scrutinize validation claims by the provider of programs they will use to help make employment decisions. Employers should also consider including indemnification or hold harmless clauses in agreements with vendors of these services.

RECENT DEVELOPMENTS AND A LOOK AHEAD

As people analytics continues to receive attention, it will likely be subject to additional scrutiny — especially as its applications become more complex and creative and as new discrimination challenges are raised.

The EEOC has begun to bring more class-action claims in recent years challenging the use of uniform policies, tests or other employee selection procedures that allegedly have a statistically significant disparate impact and insufficient business necessity justification.

Moreover, the EEOC's commitment to its E-RACE (Eradicating Race and Colorism from Employment) program and the priorities outlined in its 2017-2021 Strategic Enforcement Plan and 2018-2022 Strategic Plan indicate it is likely to continue to aggressively pursue the issue.[22]

It is important to keep in mind that the Office of Federal Contractor Compliance Programs and EEOC have different record-keeping requirements, and the EEOC is also cracking down on improper documentation of hiring evaluation practices.

A federal court in the Eastern District of Pennsylvania recently allowed the EEOC to bring one such case, in which the commission alleged that an employer using a criminal background screen during its hiring process was not keeping records needed to determine if the screen unfairly discriminated against black, Hispanic and male applicants.[23]

While the court did not consider the adequacy of the record-keeping, leaving that as a question of fact for trial, it allowed the EEOC's claim to proceed even though there was no showing of harm to any specific individual.

The court held it was sufficient for the EEOC to allege that the employer violated Title VII and agency record-keeping regulations by failing to maintain sufficient information regarding the effects of the test.

The court also affirmed the EEOC's authority to issue the record-keeping regulations in question, employers' responsibility to preserve and produce those records at the agency's request, and the agency's ability to compel compliance under the record-keeping obligations in the Uniform Guidelines on Employee Selection Procedure — requirements developed many decades before the birth of people analytics.[24]

The EEOC is not the only agency paying attention to the uses and effects of people analytics. The Executive Office of the President released a string of studies and reports through 2016, and the FTC released a lengthy report in January 2016 titled "Big Data: A Tool for Inclusion or Exclusion? Understanding the Issues."

The most recent of these reports, the Executive Office of the President's "Big Data: A Report on Algorithmic Systems, Opportunity, and Civil Rights," released in May 2016, examines case studies in big data analytics as applied to the fields of employment, higher education, criminal justice and access to credit.

While these agencies and others will continue to monitor compliance under current regulations, they may simultaneously update them or add new ones. Likely candidates include the EEOC's regulations governing statistical analysis (adopted in 1978), and regulations regarding employee health tracking and privacy laws, many of which were not developed with data analytics in mind.

It is also important to keep in mind that the number of individuals protected from discrimination may expand. The EEOC has redefined the protected category of "sex" over the past few years by interpreting existing Title VII language to include sexual orientation and gender identity.[25] In addition, some scholars speculate that entirely new categories might be added.[26]

Although there is no present indication of an impending update under the current administration, it is also worth noting that the IAR is now more than 10 years old and has not substantially changed since its implementation.

EMPLOYER CONSIDERATIONS

To quote the FTC, "The challenge for companies is not whether they should use big data ... [but] how companies can

use big data in a way that benefits them and society, while minimizing legal and ethical risks."

To that end, employers implementing big data solutions should keep in mind the following points to limit their risk and ensure a smooth transition.

When choosing a third-party vendor, take the time to find the best possible fit for your company's needs. Investing the time up front to understand what those needs are relative to the organization's goals, and involving stakeholders from across the business in the selection process, will help ensure that you get what you need the first time around.

Consider posing the following questions to your internal decision-makers:

- What is the main goal we are attempting to achieve with the data?

- Are decision-makers properly trained on using the data?

Evaluate how the vendor mitigates risk, and integrate indemnification provisions into any agreements with the vendor. A company's liability for disparate impact resulting from people analytics products is not limited to its own actions. It may also extend to any actions taken by third-party vendors acting on its behalf.

Thus, it is important to establish contractual protections, and to understand how the vendor proactively mitigates risk. To this end, employer should ask:

- What safeguards have been put in place to prevent any potential discrimination?

- Has the process demonstrated an adverse impact in any context?

- What validation evidence has been collected to establish the job-relatedness of the algorithm? For each job?

- Does the validation evidence comply with the requirements of the Uniform Guidelines on Employee Selection Procedures?

- Does the product or survey include a periodic audit of its effectiveness?

- What steps have been taken to ensure the security of the test?

- What kind of ongoing monitoring does the vendor provide during continued use of the instrument?

Ensure that any data collected is lawfully stored and protected. Know the answers to these questions:

- Where and for how long will the data be stored?

- How much information will be provided about the data collected, and in what form? Who will have access to it?

- When and how will data be disposed of?

- If the company is multinational, are European Union or other applicable countries' data collection and protection requirements being met?

Though there is still much to learn, employers must continue to validate people analytics-based selection processes just as they have with less robust systems in the past. Otherwise, the promise of people analytics may become the peril of people analytics.

NOTES

[1] Steven Pearlstein, *People Analytics: 'Moneyball' for Human Resources*, Wash. Post (Aug. 1, 2014), http://wapo.st/1TlD8am.

[2] Deloitte Univ. Press, Rewriting the Rules for the Digital Age: 2017 Deloitte Global Human Capital Trends 97 (2017), https://bit.ly/2tjCz8D.

[3] *Id*. at 97-98.

[4] Jennifer Alsever, *Is Software Better at Managing People Than You Are?*, Fortune (Mar. 21, 2016), http://for.tn/1Zk62sz.

[5] *Id*.

[6] KMPG Capital, Going Beyond the Data: Achieving Actionable Insights with Data and Analytics, (2014), https://bit.ly/2sV41ge.

[7] John Bersin, *The People Analytics Market Heats Up With New Cloud Offerings*, Forbes (Nov. 4, 2014, 7:05 PM), https://bit.ly/2pyTT9E.

[8] *See* Scouted, http://scouted.io/.

[9] *See* HireMojo, https://www.hiremojo.com; *Predictive Analytics*, Hire IQ, https://bit.ly/2INVYGE.

[10] *See Online Reference Checking That's Predictive*, Outmatch, https://bit.ly/2FYds5o.

[11] Alsever, *supra* note 4.

[12] Jillian D'Onfro, *Google Is Testing a Change to One of Its Most Iconic Designs*, Bus. Insider (May 9, 2016, 10:57 AM), http://read.bi/2G5DkIt.

[13] Fed. Trade Comm'n, Big Data: A Tool for Inclusion or Exclusion? Understanding the Issues ((2016), https://bit.ly/1n52gG6.

[14] Exec. Office of the President, Big Data: A Report on Algorithmic Systems, Opportunity, and Civil Rights 14 (2016), https://bit.ly/2lCSs8H.

[15] Fed. Trade Comm'n, *supra* note 13 at 7-8.

[16] According to the Labor Department, an "internet applicant" is an individual who satisfies all four of the following criteria: (1) the individual submitted an expression of interest in employment through the Internet or related electronic data technologies; (2) the contractor considered the individual for employment in a particular position; (3) the individual's expression of interest indicated that the individual possesses the basic qualifications for the position; and (4) the individual, at no point in the contractor's election process prior to receiving an offer of employment from the contractor, removed himself or herself from further consideration or otherwise indicated that he/she was no longer interested in the position. *Internet Applicant Recordkeeping Rules*, U.S. Dep't of Labor, https://bit.ly/2Gi2cQB.

[17] Fed. Trade Comm'n, *supra* note 13 at 25.

[18] Exec. Office of the President, *supra* note 14 at 6-9.

[19] Cal. Lab. Code § 432.3 (West 2017); Mass. Gen. Laws ch. 149, § 105A (2016); N.Y.C. Admin. Code § 8-107(25) (2017). For analyses of these laws, *see* Jonathan M. Brenner & Rhea G. Mariano, *California's*

Ban on Salary History Inquiries: New Law Brings Changes to the Job Application and Hiring Process, Epstein Becker Green (Oct. 20, 2017), https://bit.ly/2IM5Q3J; *Massachusetts Ban Salary History Question: An Interview with Mickey Neuhauser*, Epstein Becker Green (Aug. 15, 2016), https://bit.ly/2uhwH4q; Susan Gross Sholinsky, Nancy L. Gunzenhauser & Amanda M. Gómez, *New York City's Impending Salary History Inquiry Ban: What You Need to Know*, Epstein Becker Green (Oct. 10, 2017), https://bit.ly/2I1YrMC.

[20] Faception, https://bit.ly/2GlkFM4.

[21] Matt McFarland, *Terrorist or Pedophile? This Start-Up Says It Can Out Secrets by Analyzing Faces*, Wash. Post (May 24, 2016), http://wapo.st/1syJklF.

[22] U.S. Equal Emp't Opportunity Comm'n, *U.S. Equal Employment Opportunity Commission, Strategic Enforcement Plan, Fiscal Years 2017-2021*, https://bit.ly/2eEl3pc; U.S. Equal Emp't Opportunity Comm'n, *U.S. Equal Employment Opportunity Commission, Strategic Plan for Fiscal Years 2018-2022*, https://bit.ly/2pAe06A.

[23] *Equal Emp't Opportunity Comm'n v. Crothall Servs. Grp. Inc.*, No. 15-cv-3812, 2016 WL 3519710 (E.D. Pa. June 28, 2016).

[24] The parties ultimately entered into a four-year consent decree Dec. 16, 2016, under which Crothall Services Group, if it intends to obtain or assess any person's criminal history information, must first make and keep records identifying the person's gender, race and ethnicity. Furthermore, once Crothall has reviewed any person's criminal history information or conducted any criminal history assessment, it must also keep records of the criminal history information, the results of any criminal history assessment, and any employment decision made based on any criminal history assessment. Press Release, Equal Emp't Opportunity Comm'n, Consent Decree Entered in EEOC Record-Keeping Suit Against Crothall Services Group (Dec. 16, 2016), https://bit.ly/2G21yY0.

[25] The EEOC's position that Title VII covers sexual preferences was recently upheld, over the objection of the Trump Department of Justice, in an en banc decision of the 2nd U.S. Circuit Court of Appeals in *Zarda et al. v. Altitude Express Inc et al.*, No. 15-3775, 2018 WL 1040820 (Feb. 26, 2018). Less than two weeks later, the 6th Circuit sided with the agency in *Equal Employment Opportunity Commission v. R.G. & G.R. Harris Funeral Homes Inc.*, No. 16-2424, 2018 WL 1177669 (6th Cir. Mar. 7, 2018), in concluding that Title VII covers discrimination on the basis of transgender or transitioning status.

[26] *See* Michael T. Anderson, *When You Gaze Into the Abyss, the Abyss Gazes Into You — The Unintended Consequences of Data Analytics*, at 6, https://bit.ly/2pBbzAz.

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