

DATA ANALYTICS AT WORK: A VIEW FROM ISRAEL ON EMPLOYEE PRIVACY AND EQUALITY IN THE AGE OF DATA-DRIVEN EMPLOYMENT MANAGEMENT

Arianne Renan Barzilay†

INTRODUCTION

This article is concerned with the use of data analytics at work—algorithmic determinations concerning the management of workers, provided on the basis of large quantities of data about employees, or potential employees, collected, collated, mined, and classified from various sources. The article considers such practices as they pertain to two stages of employment management: the hiring phase and the on-the-job phase. This seems especially important today as a developing field of people analytics emerges by injecting data mining into human resource management, aiming to eschew gut feelings in favor of the more systemic and supposedly scientific data analysis as a tool to guide hiring, promotion, demotion, scheduling, wages, and discharge determinations,¹ yet raising serious concerns about employee privacy and equality.² As a comparative project, the article provides a view from Israel to show that on-the-ground practices of data analytics seem to be permeating the Israeli workforce. The Israeli experience shows that while on-the-books equality and privacy are fundamental values

† Dr. Arianne Renan Barzilay is an Associate Professor at the University of Haifa Faculty of Law. She is grateful to Michael Birnhack for excellent comments on an earlier draft and to Matthew Finkin, Guy Mundlak, Faina Milman-Sivan, Tal Zarsky, Eldar Haber, and Tammy Katzabian for insightful conversations and support at different stages of this project. She is also thankful to Rotem Cesna, Hagar Ronen, and Itai Zoref for research assistance, and to Erica Melko and the *Comparative Labor Law & Policy Journal* staff for editorial support.

1. Matthew T. Bodie et al., *The Law and Policy of Big Data and People Analytics*, 88 COLO. L. REV. 961 (2017).

2. Other, related and important concerns that these technologies raise pertain to diminishing workers' power and increasing information asymmetries. For a discussion of such concerns see Valerio De Stefano, "Negotiating the Algorithm": *Automation, Artificial Intelligence and Labour Protection* (ILO Working Paper No. 246, 2018), available at https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_policy/documents/publication/wcms_634157.pdf. See also Brishen Rogers, *Beyond Automation: The Law & Political Economy of Workplace Technological Change* (Feb. 4, 2019), available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3327608.

in Israeli employment law, in-action data analytics currently may pose unspoken risks to both.

The article proceeds as follows. Part I provides an overview of the literature on data mining and people analytics at work and the privacy and equality concerns it raises. Part II provides evidence that people analytics is permeating the Israeli workforce. Part III explains the protections currently afforded to privacy and to equality in Israeli employment law, describing the relevant basic rights, statutes, cases and regulatory guidelines. It shows that despite important advances already made in protecting privacy at work and in prohibiting discrimination, data analytics may currently hold risks to both. Part IV concludes with some preliminary suggestions for thinking about privacy and equality in Israeli law in the era of data-driven employment management.

I. DATA-DRIVEN EMPLOYMENT MANAGEMENT

Various companies are now experimenting with a data-driven approach to the management of hiring, promotion, scheduling, demotion, and discharge determinations. This approach utilizes systemic, and supposedly trustworthy, rigorous, and scientific big data analysis.³ To conduct such analysis, employers seek to collect, store, mine, and collate information on job candidates and employees. The data is analyzed in automated ways using sophisticated mathematical algorithms to gain managerial insights.⁴

Analytics is a business-world term to describe such knowledge discovery in data.⁵ This process is comprised of five parts: data collection, data preparation, data mining, interpretation, and determination.⁶ In the employment context, data collection can be done in a variety of ways, such as through interviews, games, digitized tests, and Internet searches, e-mail, GPS, phone, and biometric monitoring.⁷ Data mining (“an automated analysis of data, using mathematical algorithms, in order to find new patterns and relations in data”⁸) is a crucial step in knowledge discovery in databases.⁹ Data mining seeks to find bottom-up patterns and methods from data, and

3. Ifeoma Ajunwa, Kate Crawford, & Jason Schultz, *Limitless Worker Surveillance*, 105 CAL. L. REV. 735 (2017). Bodie et al., *supra* note 1. Bart Custers, *Data Dilemmas in the Information Society: Introduction and Overview*, in *DISCRIMINATION AND PRIVACY IN THE INFORMATION SOCIETY* 4 (Bart Custers et al. eds., 2013). See also Steve Lohr, *Big Data, Trying to Build Better Workers*, N.Y. TIMES, April 20, 2013, <http://www.nytimes.com/2013/04/21/technology/big-data-trying-to-build-better-workers.html> [https://perma.cc/J5PA-XD9W].

4. Custers, *supra* note 3, at 7. Bodie et al., *supra* note 1. See also Josh Bersin, *The Geeks Arrive in HR: People Analytics is Here*, FORBES, Feb. 1, 2015, <https://www.forbes.com/sites/joshbersin/2015/02/01/geeks-arrive-in-hr-people-analytics-is-here/#765f0aa273b4>.

5. Bodie et al., *supra* note 1.

6. Custers, *supra* note 3.

7. See Ajunwa et al., *supra* note 3. Bodie et al., *supra* note 1.

8. Custers, *supra* note 3.

9. *Id.*

then highlights these patterns as best practices, although it may also be used top-down to confirm theories via data.¹⁰

Employers' quest for knowledge about employees and thus employee surveillance of workers is nothing new.¹¹ Supervision and monitoring have long been assumed as necessary to ensure managerial goals; for example, that employees complete work in a timely manner and in a way that meets quality standards. However, rather than the inspecting eye of the foreman of the past, today, advances in technology allow for constant electronic monitoring and data gathering. Facebook posts and likes, LinkedIn profiles, e-mails, smartphones, and even mouse and keystrokes leave digital signals. These digital trails can be amassed and mined for insights into how people work.¹² Technology enables employers to log keystrokes, track cell phones, and pinpoint a worker's precise location at any given time through GPS.¹³ With new technology, worker surveillance can apparently go beyond monitoring productivity to detect workers' personal mood and attitudes.¹⁴ Technological advances in monitoring, gathering, and processing allow employers to utilize information about their workers; oftentimes personal data, raising serious concerns about the lack of workers' privacy to control information about themselves, to keep personal facts and feelings to themselves, and to determine how information about themselves will be used.¹⁵ Surveillance also raises concerns about the ability of employers to control workers in insidious new ways, further enhancing power imbalances between employees and employers.¹⁶

10. Bodie et al., *supra* note 1.; *See also* Custers, *supra* note 3, at 7, 9. For a definition of data mining, see Toon Calders and Bart Custers, *What Is Data Mining and How Does It Work?*, in *DISCRIMINATION AND PRIVACY IN THE INFORMATION SOCIETY*, 27, (Bart Custers et al. eds., 2013) ("Data mining is often defined as the automated or convenient extraction of patterns representing knowledge implicitly stored or catchable in large databases, data warehouses, the Web, other massive information repositories, or data streams" *Id.* at 29)

11. Ajunwa et al., *supra* note 3, at 737-738, 741-742.

12. *See id.*; Lohr, *supra* note 3.

13. *The Rise of Workplace Spying*, WEEK (July 5, 2015), <http://theweek.com/articles/564263/rise-workplace-spying> [<https://perma.cc/NKP9-VSIZ>].

14. Sue Shellenbarger, *Work at Home? Your Employer May Be Watching*, WALL ST. J. (July 30, 2008, 11:59 PM), <http://www.wsj.com/articles/SB121737022605394845> [<https://perma.cc/HU36-HUGQ>].

15. *See* Michael Birnhack, *Surveillance at Work: Taylor, Bentham and the Right to Privacy*, 12 LAB., SOC'Y & L. 9, 28 (2010)(Hebrew).

16. Jefferey M. Hirsch, *Future Work*, U. ILL. L. REV. (forthcoming 2020), available at SSRN (Feb.14, 2019): <https://ssrn.com/abstract=3334667>. *See also* Ajunwa et al., *supra* note 3.

Moreover, in the era of big data analysis, most aspects of human life are deemed quantifiable.¹⁷ Managing workers is becoming data-driven¹⁸ and algorithms control various aspect of work, from sorting through job applications,¹⁹ to continuous tracking of workers' behavior to performance evaluations.²⁰ In the hiring phase, algorithmic screening can provide shortlists of candidates to be interviewed.²¹ Predicting retention may be done by analyzing data from job applications or information from third parties.²² During employment, some firms offer software that compile data from e-mails and calendars to show how employees spend their time;²³ others have designed software that registers everything that happens on an employee's computer, searching for signals that may indicate poor productivity and scanning e-mails to understand how employees' sentiments change over time.²⁴ Data mining may aid in deciding when to give an employee a raise based on performance and relative pay.²⁵

Thus, algorithmic predicative analysis that is based on large quantities of data is becoming instrumental in recruiting, retentions and management decisions, and in how employment is managed and organized. Yet, beyond the possible infringement on privacy at work, privacy invasions may also serve as conduits for discrimination.²⁶ Many have argued that technology is "automating inequality,"²⁷ pointing to the dangerous new ways in which historically disadvantaged groups may be re-confined to subordination

17. danah boyd and Kate Crawford define Big Data as:

[A] cultural, technological, and scholarly phenomenon that rests on the interplay of: (1) Technology: maximizing computation power and algorithmic accuracy to gather, analyze, link, and compare large data sets. (2) Analysis: drawing on large data sets to identify patterns in order to make economic, social, technical, and legal claims. (3) Mythology: the widespread belief that large data sets offer a higher form of intelligence and knowledge that can generate insights that were previously impossible, with the aura of truth, objectivity, and accuracy.

See danah boyd & Kate Crawford, *Critical Questions for Big Data*, 15 INFO. COMM. & SOC'Y 662, 663 (2012).

18. *GrAlt Expectations, There will be little privacy in the Workplace of the Future*, ECONOMIST, Mar. 28, 2018, <https://www.economist.com/special-report/2018/03/28/there-will-be-little-privacy-in-the-workplace-of-the-future>.

19. *GrAlt Expectations, Non-Tech business are beginning to use Artificial intelligence at scale*, ECONOMIST, Mar. 28, 2018, <https://www.economist.com/special-report/2018/03/31/non-tech-businesses-are-beginning-to-use-artificial-intelligence-at-scale>; See also, *GrAlt Expectations, Human Resources is about to Become Easier*, ECONOMIST, Mar. 28, 2018, <https://www.economist.com/special-report/2018/03/28/managing-human-resources-is-about-to-become-easier>.

20. See also JANINE BERG ET AL., DIGITAL LABOR PLATFORMS AND THE FUTURE OF WORK: TOWARDS DECENT WORK ONLINE (ILO 2018); Mareike Möhlmann & Lior Zalmanson, Hands on the Wheel: Navigating Algorithmic Management and Uber Drivers' Autonomy (ICIS Dec. 10, 2017) (Conference paper available at <https://aisel.aisnet.org/icis2017/DigitalPlatforms/>).

21. *GrAlt Expectations, Human Resources*, *supra* note 19.

22. *Id.*

23. *GrAlt Expectations*, *supra* note 18.

24. *Id.*

25. *GrAlt Expectations, Human Resources*, *supra* note 19.

26. Ajunwa et al., *supra* note 3, at 736.

27. VIRGINIA EUBANKS, AUTOMATING INEQUALITY: HOW HIGH-TECH TOOLS PROFILE, POLICE, AND PUNISH THE POOR (2017).

through high-tech tools and search engines.²⁸ Feminist scholars have long argued that employment inequality may be a result of structural disadvantages resulting from the way work is organized, and that workplace structures have a dramatic influence on gender equality.²⁹ Discrimination itself is increasingly understood as a product of dynamic workplace processes and structural features,³⁰ which also reflect and recreate social patterns and gendered norms.³¹ Often such managerial processes and structural features of the workplace are assumed as natural and gender neutral.³² In fact, data analytics are one such workplace feature that seems facially neutral.

However, a growing literature has recently highlighted the discriminatory power of data mining, machine learning, and algorithmic predicative analysis. Scholars warn of the potential risks of collecting and using big data-driven analysis into employment decisions and consider such practices as possible instigators of discrimination.³³ They argue that sorting, scoring, and selecting for the best or most profitable employees through data collection, machine learning, and algorithmic analysis may actually drive discrimination.³⁴ This is largely because the process of data mining, and classifications used in that process, can reproduce existing patterns of discrimination, inherit the prejudice of prior decision makers, reproduce past prejudice, specify problems to be solved in ways that affect different groups differently, fail to recognize or address statistical biases, consider an insufficiently rich set of factors, or make correlations when they are not necessarily indicative of job performance.³⁵ Classification biases that may plague data-driven algorithms that instruct hiring for employers or job performance evaluations have thus raised serious concerns to equality.³⁶

28. *Id.*; SAFIYA UMOJA NOBLE, *ALGORITHMS OF OPPRESSION: HOW SEARCH ENGINES REINFORCE RACISM* (2018).

29. See, e.g., Kathryn Abrams, *Gender Discrimination and the Transformation of Workplace Norms*, 42 VAND. L. REV. 1183 (1989); JOAN WILLIAMS, *UNBENDING GENDER: WHY FAMILY AND WORK CONFLICT AND WHAT TO DO ABOUT IT* 64 (2000); Naomi Cahn, June Carbone & Nancy Levit, *Gender and the Tournament: Reinventing Antidiscrimination Law in the Age of Inequality*, 96 TEX. L. REV. 425 (2018).

30. Laura T. Kessler, *Employment Discrimination and the Domino Effect*, 44 FLA. ST. U. L. REV. (2017), Part IV.A.

31. See Catherine Albiston, *Institutional Inequality*, WIS. L. REV. 1093 (2009).

32. Joan Acker, *Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations*, 4 GENDER & SOC'Y 139, 140 (1990).

33. Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 CALIF. L. REV. 671, 677, 694–712 (2016); boyd & Crawford, *supra* note 17, at 666–68; Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857, 884–92 (2017).

34. Barocas & Selbst, *supra* note 33; Danielle Keats Citron & Frank Pasquale, *The Scored Society: Due Process for Automated Predictions*, 89 WASH. L. REV. 1 (2014); In scoring, for example, algorithms mine for a prospective-employee's personal information to make predictions about her and use these predictions in hiring decisions. *Id.* at 3. See Tal Z. Zarsky, *Understanding Discrimination in the Scored Society*, 89 WASH. L. REV. 1375 (2014).

35. Barocas & Selbst, *supra* note 33, at 674, 677; Kim, *supra* note 33, at 881.

36. Barocas & Selbst, *supra* note 33, at 674, 677; Kim, *supra* note 33, at 881.

Their opacity has led some to argue for disclosure, oversight, and auditing of such algorithms.³⁷

Nonetheless, some note the equality-enhancing potential of algorithmic technology,³⁸ suggesting algorithms will pick up differences in pay between genders and races that human managers consciously or unconsciously overlook.³⁹ They claim that algorithms have a capacity for reducing bias⁴⁰ by activating “blinding screens” designed to reduce stereotypes,⁴¹ or by setting hiring qualifications as a first line sorter of job seekers.⁴² Scholars have noted that algorithms could be tailored with the prospect of offsetting discrimination through techniques in computer sciences such as randomness (which can prevent hidden biases in the design of an algorithm from leading to consistent discriminatory outcomes), or building in (contested) definitions of fairness, and have argued to incorporate a priori such techniques into algorithms.⁴³ Others nonetheless stress the limits of these strategies and the importance of auditing such algorithms and techniques for possible discriminatory outcomes.⁴⁴

Despite the dangers associated with data analytics at work for employees’ privacy and equality, it seems that the Israeli labor market is being messaged with the advantages of data-analytics, and that some organizations may be beginning to use such tools in their day-to-day recruitment, management, and retention programs.

II. A VIEW FROM ISRAEL: LAW IN ACTION

It appears that algorithmic determination for hiring may already be in use in the Israeli workforce. Recruiting is often preformed via recruiting agencies or placements services. Adam-Milo, one of the most well-known firms in Israel to conduct talent assessment, development & recruitment,⁴⁵

37. Citron & Pasquale, *supra* note 34, at 25. Pauline T. Kim, *Auditing Algorithms for Discrimination*, 166 U. OF PENN. L. REV. 189 (2017); Zarsky, *supra* note 34, at 1392, 1394.

38. Stephanie Bornstein, *Antidiscriminatory Algorithms*, 70 ALABAMA L. REV. 520 (2018). See also Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857, 884–92 (2017).

39. *AI-Spy: The Workplace of the Future*, ECONOMIST (Mar. 28, 2018), available at <https://www.economist.com/leaders/2018/03/28/the-workplace-of-the-future>.

40. See Andrea Romei & Salvatore Ruggieri, *A Multidisciplinary Survey on Discrimination Analysis*, KNOWLEDGE ENGINEERING REV. 1, 39–40 (2013).

41. Stephanie Bornstein, *Reckless Discrimination*, 105 CAL. L. REV. 1055, 1100–1102 (2017); See David Hausman, *How Congress Could Reduce Job Discrimination by Promoting Anonymous Hiring*, 64 STAN. L. REV. 1343 (2012). Claudia Goldin & Cecilia Rouse, *Orchestrating Impartiality: The Impact of “Blind” Auditions on Female Musicians*, 90 AM. ECON. REV. 715 (2000).

42. Bornstein, *supra* note 41, at 1100.

43. Joshua A. Kroll, Joanna Huey, Solon Barocas, Edward W. Felten, Joel R. Reidenberg, David G. Robinson & Harlan Yu, *Accountable Algorithms*, 165 U. OF PENN. L. REV. 633 (2017).

44. Kim, *supra* note 37, at 189, 191 (2017).

45. ADAM MILO, <https://www.adam-milo.com/#elevating>. It should be noted, however, that the information provided in this paragraph is based on companies’ web marketing, and it is difficult to know exactly if, how, and how much data analytics is actually used, thus more research is needed to attest fully for the law in action.

boasts itself to employers that want to outsource recruiting, or otherwise use its services, based on its large databases of candidate resumes.⁴⁶ It also claims that these datasets combined with digital tools, such as its “Veritas” software for talent, personality, and trustworthiness assessment, or its “Callnet” system for collecting and analyzing CVs can provide for “smarter and safer” hiring, suggesting the use of data analytics in its processes.⁴⁷ It seems the market is taking note as major Israeli companies in industries ranging from transportation to telecommunications, healthcare, retail, pharmaceutical, and banking are listed as clients using its digital tools.⁴⁸ Ethosia is another Israeli-based human resources company geared toward the high-tech and biotech industries.⁴⁹ It also uses data from various sources in claiming to make recruiting, retention, and human resource management more efficient and accurate.⁵⁰ Its big data system purports to use powerful data mining technologies, developed within the company, to systematically screen textual data throughout the web, from Internet sites to social media, track candidates’ online behavior, past choices, or changes in profiles to determine fit with the employer.⁵¹

Human resources and general media publications echo the importance and benefits of using big data analysis for managers,⁵² noting that recruitment is superior when based on data collated from numerous sources such as Facebook, LinkedIn, or other social media, together with CV databases and governmental public data on job seekers.⁵³ Such media coverage additionally accents that through surveillance and the monitoring of workers’ performance, human resource managers can have a better understanding of workers’ work-life and can analyze which workers are worthy of promotions. Big data, so is noted, can also help in predicting who is likely to leave the employer by analyzing data from HR reports, contentment surveys, and social media.⁵⁴ Other online portals focus on conveying the benefits of data

46. *Recruitment Process Outsourcing*, ADAM MILO, <https://www.adam-milo.com/#services> (Recruitment Process Outsourcing).

47. *Assessment and Recruitment Products*, ADAM MILO, <https://www.adam-milo.com/#talent-assessment>; *Recruitment*, *supra* note 46.

48. ADAM MILO, <https://veritas.adam-milo.co.il/veritasm/>; *Talent Assessment Software Suite*, ADAM MILO, <https://www.adam-milo.com/#customers/>.

49. ETHOSIA HUMAN RESOURCES, <https://www.ethosia.co.il/companies>.

50. ETHOSIA HUMAN RESOURCES, *When the Big Data World Meets the World of Recruitment*, (Sept. 15, 2014), https://www.ethosia.co.il/knowledge_base/article/big-data-recruiting.

51. *Id.*

52. Daniel Dotan, *Adoption of Big Data Technologies for Human Resources* (2017), available at <https://www.hrus.co.il/%D7%90%D7%99%D7%9E%D7%95%D7%A5-%D7%98%D7%9B%D7%A0%D7%95%D7%9C%D7%95%D7%92%D7%99%D7%95%D7%AA-big-data-%D7%91%D7%9E%D7%A9%D7%90%D7%91%D7%99-%D7%90%D7%A0%D7%95%D7%A9/>. See also Ravit Oren, *Artificial Intelligence – The Key to Preserving Human Resources in Organizations*, CALCALIST (Nov. 16, 2018), available at <https://www.calcalist.co.il/local/articles/0,7340,L-3749935,00.html> (Hebrew).

53. Dotan, *supra* note 52. For governmental data see *Data on Job Seekers*, <https://www.taasuka.gov.il/he/InfoAndPublications/pages/jobseekersdata.aspx>.

54. *Id.*

analytics to determine which employees are best at their jobs. While noting that collating data on employees—from e-mails, online chats with customers, entrances and exits from the workplace, and supervisor reports—and analyzing such data may seem Orwellian, when done correctly, the argument goes, it may benefit workers because it would spot their strengths and suggest the most fitting career paths.⁵⁵

During the employment stage, Synerion (another human resources company operating in Israel) uses a data set derived of diverse sources⁵⁶ to provide advanced tools for effective human-capital management by giving employers a comprehensive view of employees to manage their time efficiently, improve productivity, and monitor employees attendance.⁵⁷ Its services are used in Israel by hotels, supermarkets, and city councils.⁵⁸ Moreover, video camera surveillance and GPS monitoring of company cars or cellphones are common in the workplace.⁵⁹ Public schools, for example, have enacted closed circuit television systems (CCTV), primarily with the scope of ensuring student safety. However, a recent study revealed several forms of teachers' surveillance, such as tracking teachers' attendance and punctuality, inspecting their teaching and disciplining of students, monitoring their nonclassroom time management, and observing them during recess duty, exposing the ways CCTV surveillance is used as an oppressive tool that enhances management's power at the employees' expense.⁶⁰

The Israeli association for human resources management, development, and research recently invited several industry leaders to discuss data analytics⁶¹ (mostly referred to as "HR analytics").⁶² Measuring "everything that moves"⁶³ and the analysis of big data is becoming an important managerial tool, according to the association.⁶⁴ Different industry experts

55. Daniel Dor, *Big Data in the Department of Human Resources—What is the Connection*, STARTISRAEL (Oct. 27, 2014), available at <https://www.startisrael.co.il/article/568>.

56. *People Analytics*, SYNERION, <https://www.synerion.co.il/people-analytics/>

57. SYNERION, <https://www.en.synerion.co.il/>; *Workforce Management Solutions*, SYNERION, https://www.en.synerion.co.il/wfm_solutions.

58. https://www.en.synerion.co.il/wfm_solutions (scroll to bottom of page for the logos of such companies).

59. The Multi-Year Survey of the center for the study of organizations & Human Resource management at the University of Haifa (2008), <http://organizations3.haifa.ac.il/images/Monitoring-article.pdf> [in Hebrew]; Tal Golan, *The Observant and Watchful Eye: The Regulation and Governance of Employee Conduct at Work*, in *THE GOVERNANCE OF REGULATION: LAW AND POLICY* 515, 529 ft 47 (Y. Blank, R. Kreitner & D. Levi-Faur eds., 2016) (Hebrew).

60. Lotem Perry-Hazan and Michael Birnhack, *Caught on Camera: Teacher's Surveillance in Schools*, 78 *TEACHING & TCHR EDUC.* 193 (2019).

61. THE ISRAELI ASSOCIATION FOR HUMAN RESOURCES MANAGEMENT, DEVELOPMENT, AND RESEARCH, *HR ANALYTICS AND MEASUREMENTS IN HUMAN RESOURCES* (2016), available at <https://synduimages-synduweb.netdna-ssl.com/uploads/54e32c785d715/voice/d1d00f65-5499-4f85-8f47-a37bafc95dbb/58276f48584ca.pdf> (Hebrew).

62. See Naftali Leder et al., *HR Analytics: The Challenges and Opportunities*, in *HR ANALYTICS AND MEASUREMENTS IN HUMAN RESOURCES*, *supra* note 61, at 7.

63. Shlomit Kaminka, *We Measure Everything that Moves*, in *HR ANALYTICS AND MEASUREMENTS IN HUMAN RESOURCES*, *supra* note 61, at 4.

64. *Id.*

note that the data that can be accumulated by employers may be comprised of demographic data, data on education and experience, attendance, productivity and outputs, client reviews, supervisor reviews, and data on workers' engagement with the employer.⁶⁵ Specifically, the Bank of Israel representative noted, for example, the importance of gathering information about employee/employer interactions to analyze connectivity within organizations.⁶⁶ From the vast quantity of information, and the predictive analysis associated with it, employers are encouraged to gain managerial tools. For example, one leader in the field noted that the number of days a worker is absent from work is considered predictive of motivation and productivity.⁶⁷ However, such predictive analysis raises serious concerns to equality, because in a society in which mothers do the most family caregiving,⁶⁸ such a correlation has dramatic gendered effects.

III. A VIEW FROM ISRAEL: LAW ON THE BOOKS

Questions concerning data analytics' possible infringement on employees' privacy and equality are likely to arise in the future. As of yet, there is no specific case law that addresses data analytics per se in the employment context. However, issues of privacy and equality with regards to recruiting, and questions concerning the boundaries of employers' prerogative that infringes on workers' privacy, as well as the right to equality at work, have long been developed, and will likely frame the discussion and guide courts in this matter. Thus, a discussion of privacy at work will be followed by a discussion of equality in Israeli employment law.

A. Privacy

The legal framework pertaining to the issue of privacy at work is set primarily by the Basic Law: Human Dignity and Liberty, the Protection of Privacy Act and by subsequent administrative guidelines and case law.⁶⁹ The

65. See Leder et al., *supra* note 62, at 7.

66. Pnina Keren, *HR Analytics, World Trends and Their Application in The Bank of Israel*, in HR ANALYTICS AND MEASUREMENTS IN HUMAN RESOURCES, *supra* note 61, at 11-12. The Bank of Israel is the central bank of the state of Israel whose duty it is to maintain price stability, to support other objectives of the Government's economic policy, and to support the stability of the financial system. See <https://www.boi.org.il/en/AboutTheBank/Pages/Default.aspx> (Hebrew).

67. Shlomit Kaminka, *We Measure Everything that Moves*, in HR ANALYTICS AND MEASUREMENTS IN HUMAN RESOURCES, *supra* note 61, at 5-6.

68. Arianne Renan Barzilay, *Working Parents: Multidimensionalism and Working-Class Social Feminism: A New Theoretical Framework for Reconciling Work and Family*, 35 TEL AVIV L. REV. 307, 314 (2012) (Hebrew).

69. For a discussion of the right to privacy in Israel, see MICHAEL BIRNHACK, PRIVATE SPACE: THE RIGHT TO PRIVACY, LAW AND TECHNOLOGY 453 (2010) (Hebrew). For a discussion of the right to privacy at work, see Michael Birnhack, *Surveillance at Work: Taylor, Bentham and the Right to Privacy*, 12 LAB., SOC'Y & L. 9-69 (2010) (Hebrew); Additional sources of interpretation are comparative (mostly EU) law, ILO codes, and collective bargaining agreements. See Nat'l Labor Court 90/08 Issacov Inbar v. The State of Israel, Commissioner on Women's Labor Law et al. 26, 31 [2011] (Isr.) (Hebrew).

Basic Law provides a general constitutional right to privacy, and specifies that there shall be no entry into private premises without consent, no search on private premises nor in a person's body or personal effects, and there shall be no violation of the confidentiality of conversation, or of the writing or records of a person.⁷⁰ Under the Basic Law, a violation of the right to privacy is prohibited, unless it is enacted for an appropriate purpose, and to an extent no greater than required.⁷¹ The right to property, too, is constitutionally guaranteed, and both rights have been extended to the relationship between employer and employee.⁷² The Protection of Privacy Act further states that no person shall violate the privacy of another without consent.⁷³ Privacy infringements include, for example, spying or trailing a person in a manner that is likely to harass him or her, unauthorized wiretapping, photographing a person while in private domain, using, or passing onto another information on a person's private affairs other than for the purpose for which it was given.⁷⁴ Possible defenses include circumstances whereby the infringement was conducted in good faith, for a legitimate interest, within the capacity of the infringer's occupation, and in the ordinary course of work (provided it was not committed by way of public publication).⁷⁵ The Act further provides a legal presumption that if the conditions of the defense are met, the alleged infringer shall be considered to have acted in good faith if the infringement was proportionate and did not exceed the reasonable scope under the circumstances.⁷⁶

Specifically with regards to recruiting technologies, and although it was decided before the age of big data, the case of *Tel Aviv University* is illuminating.⁷⁷ As noted, it is common practice in Israel for employers to outsource the process of examining candidates' suitability, and during such process potential employees may be asked a host of personal queries by the recruiting agencies or placement services, from questions about personal status, health, substance abuse, and personal finances to past job performances.⁷⁸ In *Tel Aviv University*, the National Labor Court considered whether the University could require its administrative employees who

70. Article 7 of the Basic Law: Human Dignity and Liberty, 5752-1992, Sefer Ha-Chukkim No. 1391 of the 20th Adar Bet, https://www.knesset.gov.il/laws/special/eng/basic3_eng.htm. See also ERAN LISS AND DAN ADIN, INTELLECTUAL PROPERTY AND PRACTICE IN ISRAEL 571 (2012).

71. Article 8 of the Basic Law. If the infringement is enacted by law, the law must also be in accordance with the values of the State of Israel. *Id.*

72. See Issacov Inbar, *supra* note 69, at 12.

73. Consent can be implicit or explicit. Articles 1 and 3 of the Protection of Privacy Act, 5741-1981.

74. *Id.* Article 2. See also LISS & ADIN, *supra* note 70, at 570-571.

75. The Protection of Privacy Act, Article 18.

76. The Protection of Privacy Act, Article 20. See also LISS & ADIN, *supra* note 70, 571.

77. See Nat'l Labor Court 4-70/97 *Tel Aviv University v. Gen. New Histadrut, Haagaf Leigud Mikzoi, et al.*, PDA 20:385 [1996-1997] (Isr.). I use the term "recruiting technologies" to note various means that assist in recruiting. The case used exams as explained *infra* note 82 and accompanying text. Data mining and people analytics technologies have not been challenged as of yet. See *supra* Part III.

78. Section 1, Guidelines of the Databases Registrar, number 2/2012, available at <https://www.justice.gov.il/Publications/News/Documents/22012.pdf> [in Hebrew].

applied for a position within the organization to undergo external exams to determine their fit for the coveted job (hereinafter: suitability exams). The union in that case argued the exams are superfluous since the employer had enough information on its employees anyway, and because suitability exams infringe on the employees' privacy. The University argued that suitability exams are a necessary, mundane, and important managerial tool to assess suitability for the job.

The National Labor Court held that job screening necessarily requires collating information and screening candidates, and that suitability exams are indeed a tool to help the employer determine hiring and promotion. It held that suitability exams have long been in use, and are varied, including achievement tests, IQ tests, aptitude tests, psychological tests, psychometric tests, personality tests, and integrity tests. While generally allowing suitability tests, the court noted that some tests are controversial,⁷⁹ and each test must be examined for accuracy, validity, and reliability.⁸⁰ For an employer to be able to require applicants to take suitability tests, the test has to be acknowledged as reasonably accurate to justify the harm to privacy, even if consent was given; furthermore, the responsibility to act in good faith requires the test be reasonably valid and reliable.⁸¹ The court declared that the employer should set clear guidelines as to the use of suitability exams and check their validity and reliability.⁸² It held that there are limitations to the right of an employer to determine management tools.⁸³ The court relied on the Protection of Privacy Act to note that an employer is unable to use information gleaned from suitability tests for a purpose other than the purpose for which the data was given, as the law deems the "use or passing on of information on a person's private affairs, for a purpose other than which was prescribed"⁸⁴ as an infringement of privacy.⁸⁵ Thus, the employer must also take all reasonable steps to ensure the privacy of those examined so that the results of test are confined to the relevant department in the University.⁸⁶

79. *Id.* at 399 (Relying on MATTHEW W. FINKIN, ALVIN L. GOLDMAN, & CLYDE W. SUMMERS, LEGAL PROTECTION FOR THE INDIVIDUAL EMPLOYEE, 55-59 [1996]).

80. *Id.* at 397, 399.

81. *Id.* at 399-400. In explaining these requirements, the court cited MATTHEW W. FINKIN, ALVIN L. GOLDMAN, CLYDE W. SUMMERS, LEGAL PROTECTION FOR THE INDIVIDUAL EMPLOYEE, 157-158 (1996):

Before employers decide to use psychological tests, they should determine whether they are practical, reliable, and valid. . . . Tests are reliable if people score in the same ranges when they retake them. Tests are not reliable if people who take them receive significantly different scores each time they take them. Validity is the most important criterion for such tests. A valid test measures what it purports to measure, such as intelligence, honesty, or personality traits, and its results can be applied to a particular situation.

82. Tel Aviv University, *supra* note 77, at 400.

83. *Id.* at 407.

84. Article 2(9) of the Protection of Privacy Act 5741-1981.

85. Article 2(9) of the Protection of Privacy Act 5741-1981.

86. Tel Aviv University, *supra* note 77, at 411.

Additionally, the court noted that the right to privacy is considered a fundamental right, pursuant the Basic Law: Human Dignity and Liberty, which cannot be infringed without consent.⁸⁷ Yet consent in the context of employment may be tricky, the court noted, since the employer and employee (or candidate) do not have equal bargaining power, and therefore consent may not always be of free will. Thus, questions posed in suitability exams must serve an “adequate purpose,” and this depends on their validity and reliability. If they are valid and reliable, then they can bring benefit to the purpose of determining fit for the job; otherwise they may hurt the employee. Thus, the employer must provide its internal recruiters with information concerning the validity and reliability of the suitability exam. Furthermore, the court noted, questions must not be excessive, meaning they must conform with the principle of proportionality.⁸⁸

The practice of conducting suitability tests was followed in other cases, noting that suitability tests are an important, equality-enhancing tool for the employer, who can require them as part of the managerial prerogative, and in the case of some government workers they are even mandated by law.⁸⁹ Furthermore, employers’ reliance on recruiting agencies or placement services (who administer and profit from conducting the suitability exams) regarding the validity and reliability of suitability exams was deemed acceptable in a subsequent proceeding involving *Tel Aviv University* (hereinafter: *Tel Aviv University II*). In that case the recruiting agencies were considered “professional” as a general matter by an expert for the employer, while an expert for the union claimed that the exams’ validity was not proven vis-à-vis the specific positions in question.⁹⁰ Despite this, the court held that using suitability exams is common and acceptable, de facto loosening the validity and reliability requirements.⁹¹ If big data predictive analytics, like suitability exams, will be assumed as valid and reliable, then this might be a major blind spot, especially given big data predictive analytics’ possible classification bias and disparate impact.

Moreover, in the *Laxman* case, a seasoned bus driver was required to undergo an external exam to predict the likelihood of being involved in future car accidents. Laxman scored poorly on the test. The test in that case was not proven to be valid, and the court ruled that relying on the test *alone* was unjust

87. *Id.* at 411-412. Article 7 of the Basic Law: Human Dignity and Liberty 5752-1992. Basic laws hold constitutional standing in Israel’s legal system.

88. Tel Aviv University, *supra* note 77, at 412. For the principle of proportionality in Israeli Labor Law, see Guy Davidov, *The Principle of Proportionality in Labor Law and its Impact on Precarious Workers*, 34 COMP. LAB. L. & POL’Y J. 63-80 (2012).

89. Reg’l Labor Court (Jer.) 2/09 Gen. New. Histadrut v. Social Security Institute (2009) (Isr.); Nat’l Labor Court 70/90 Gen. New. Histadrut v. Social Security Institute [2010] (Isr.). See also Golan, *supra* note 59, at 540; Nat’l Labor Court 766/07 Ben-Haim v. 1 Social Security Institute (2011) (Isr.); Nat’l Labor Court 260-3/56 Alfreih v. National Security Institute, PDA 30:543 (1997) (Isr.).

90. Nat’l Labor Court 8/99 Gen. New Histadrut, Haagaf Leigud Mikzoi, et al. v. Tel Aviv University, PDA 29:791, 800-802 [2004] (Isr.).

91. *Id.* at 802-804.

cause for termination.⁹² Since then, courts have noted that suitability exams need to be accompanied by an interview or some other screening tool.⁹³ Taken together with *Tel Aviv University II*, it seems that de facto validity and reliability requirements are downplayed and substituted with the showing of some additional tool that was used in the employer's decision-making process. Yet, if this ruling will apply in the context of data analytics, it is hard to fathom an employer receiving an exam result from a well-known recruitment agency, based on big data algorithmic predictive analysis on which a candidate scored poorly, persist with the recruiting process and furthermore keep an open mind during an interview. Moreover, the National Labor Court has noted that for prospective employees an external suitability test must carry greater weight in the managerial decision-making process than for employees already on the job for which internal information is available.⁹⁴

In 2012, the Israeli Privacy Protection Authority, then called the Israeli Law, Information and Technology Authority (ILITA) at the Ministry of Justice published guidelines for privacy protection in recruitment procedures and in the activities of work placement services.⁹⁵ Accordingly, a placement service may not transfer data to another employer without the candidates' specific and separate consent, or use the data for a purpose other than that which the candidate consented to, and can retain the data only for the time relevant to the purpose for which it was collected (except if data is anonymized).⁹⁶ Moreover, concurrent with the principle of proportionality, the recruitment agency must present the employer only with the relevant information, and the employer must limit the number of staff privy to that information.⁹⁷ Nonetheless, a subsequent agreement between recruiting agencies and ILITA, which was approved by the court, determined that

92. Reg'l Labor Court 1006/00 Laxman v. The Regional Council of Gredrot, PDA 27:91 [2002] (Isr.).

93. See e.g. Nat'l Labor Court 1020/01 Agudat Hayitonaim BeIsrael v. Rashut Hashidur, PDA 27:451 [2002] (Isr.); Reg'l Labor Court (HA) 1630/05 Yehezkel v. Haifa port company Ltd. [2008] (Isr.). See also Nat'l Labor Court 76/07 Yehud Monoson Municipality v. Kapiloto [2007] (Isr.).

94. Laxman, *supra* note 92, at 95-96.

95. Guidelines of the Databases Registrar, number 2/2012, available at <https://www.justice.gov.il/Publications/News/Documents/22012.pdf> (Hebrew). Unauthorized data use and unlawful monitoring by employers may result in civil action, and in some cases in criminal liability. It should be noted, however, that civil actions for privacy infringements conducted by employers or recruiting agencies are litigated in the general civil system rather than labor courts, see Section 24(a) of the Labor Courts Law, 5729-1969 §§ [1969] (Isr.) and see Reg'l Labor Court (HA) 1619/06 Keinan Sheffy Ltd. V. Shalev [2007] (Isr.). However, in some cases the labor court was willing to rule nonmonetary damages of privacy infringements in cases where there was a close relationship between the infringement and labor issues. See Reg'l Labor Court (TA) 29090-05-12 Gorlik v. Anbinder [2014] (Isr.); Nat'l Labor Court 7541-04-14 New Gen. Histadrut Haovdim v. Qalansawe Municipality [2017] (Isr.); Reg'l Labor Court (TA) 41363-03-13 Yoskovitz v. Telrad Networks Ltd. [2017] (Isr.); Reg'l Labor Court (TA) 29476-03-12 Dalal v. Harry Steele Community Center [2016] (Isr.).

96. Section 2, Guidelines of the Databases Registrar, number 2/2012, available at <https://www.justice.gov.il/Publications/News/Documents/22012.pdf>. [in Hebrew]. See also DC (TA) 52961-03-12 Elshalom v. Adam Milo Ltd. (2012) (Isr.).

97. Guidelines of the Databases Registrar, *supra* note 96.

candidates are to be given access to review the information collected but not the suitability analysis.⁹⁸ Taking this into the context of big data predictive analysis, the fact that candidates may not be privy to the algorithmic analysis⁹⁹ raises serious concerns about the practicality of challenging reliability and validity, and harms to equality.

Once hired, employee monitoring on-the-job raises significant privacy concerns as well. While cases note that employees do have a right to privacy in the workplace,¹⁰⁰ courts balance employer's property right and their managerial prerogative with employees' right to privacy.¹⁰¹ *Issacov Inbar* is the guiding case in which the National Labor Court imposed significant restrictions on an employer's ability to monitor employees' e-mail.¹⁰² In that case, the employee requested it be determined that her termination was illegal because it was done during her pregnancy in violation of the Women's Work Act.¹⁰³ In defense, the employer filed her e-mail correspondence showing she was looking for another job during her employment. In determining privacy in the context of employee computer usage in the workplace and employers' right to review employees' e-mails, the court noted employers have a proprietary right in the computers and should be entitled to run their business as they see fit, so long as it is done in good faith. However, employees have a right to privacy at work, and e-mails often include private information, providing ample data from which to build a profile of the employee that includes personality traits, hobbies, aspirations, and family affairs. The court noted that digital technologies enable constant, long term and accurate tracing and monitoring of such personal information gleaned from digital trails and therefore the managerial prerogative is subject to restrictions,¹⁰⁴ noting that Israeli law has chosen to broadly protect employee privacy at work.¹⁰⁵

Thus, the use of employers' property right and managerial prerogative vis-à-vis employees' privacy right is subject to principles of legitimacy, proportionality, sticking to an adequate purpose, transparency, and good faith. These general principles are hereby elaborated upon: (a) legitimacy and adequate purpose means that there must be a legitimate justification and adequate goal for the privacy infringement such as employee criminal

98. DC (TA) 4749-04-12 Adam-Milo et al. v. The Databases Registrar at the Ministry of Justice (2012).

99. For the general need to receive an explanation for algorithmic determinations, see Maayan Perel, *Privacy, Control, and Oversight in the Era of Big Data Analytics: Adopting a Right to Explanation for Israeli Data Protection Law*, in 167 PRIVACY, LAW AND THE SURVEILLANCE SOCIETY (Michael Brinhack, ed., 2019).

100. See e.g. *Issacov Inbar*, *supra* note 69; Reg'l Labor Court 30929-12-10 Salman v. Alyami [2012] (Isr.).

101. LISS & ADIN, *supra* note 70, at 573.

102. *Issacov Inbar*, *supra* note 69.

103. Employment of Women Act, 5714-1954 §§ (1954) (Isr.).

104. *Issacov Inbar*, *supra* note 69, at 10-17.

105. *Id.* at 23.

conduct or abusive behavior; (b) proportionality means that the violation of privacy must be proportionate, hence, if the employer can obtain the information by using less intrusive means, it must do so, and the infringement must not exceed the necessary; (c) sticking to the purpose refers to the fact that even when data collection is permitted, it must be used for the sole purpose for which it was collected; (d) transparency and consent means that employers must set clear and comprehensible company policy to which employees must have consciously consented; (e) good faith denotes that actions must be conducted in good faith.¹⁰⁶

In the *Issacov Inbar* case, the court noted employers must establish a clear policy regarding the use of corporate IT and e-mails and delineate in the employment contract the technologies in which monitoring will occur.¹⁰⁷ An employer may allocate accounts to employees and designate them for: (1) professional purposes only—in such a case employers are entitled to monitor the account and inspect its content provided they have put forth a clear and detailed policy indicating the ability to monitor and inspect employees' e-mails.¹⁰⁸ If an employee conducts personal correspondence in this account, the employer may inspect it only for a legitimate purpose, and subject to specific consent.¹⁰⁹ In accordance with the principle of proportionality, the employer must also first seek less intrusive measures for its goals. (2) for personal or mixed (personal and professional) use—in order to justify inspection in these accounts, employers must prove extreme circumstances or employee wrongdoings and first seek less intrusive measures. Additionally, the employee must provide specific consent to the company policy and to each and every e-mail inspection or monitoring action.¹¹⁰ (3) external personal accounts—are such that the employer cannot access without a court order, which shall only be granted in very extreme circumstances.¹¹¹ In the *Issacov Inbar* case, the court held the evidence in the e-mails inadmissible because the employer obtained it while unlawfully invading employee privacy: the company did not have a clear policy governing inspection of e-mails, the legitimacy requirement was not fulfilled, and the company did not prove it considered less intrusive measures.¹¹² It follows that only in certain circumstances, in accordance with the court's articulated principles, employers may monitor employees' e-mails.

In a subsequent case, a lower court extended the ruling to monitoring text messages on company cellphones.¹¹³ In that case, the employer wished

106. *Id.*, at 27-39. LISS & ADIN, *supra* note 70, at 573.

107. *Issacov Inbar*, *supra* note 69, at 28-36.

108. *Id.* at 50.

109. *Id.* at 51.

110. *Id.* at 53-54.

111. *Id.* at 56-59. LISS & ADIN, *supra* note 70, at 573-574.

112. LISS & ADIN, *supra* note 70, at 575.

113. Reg'l Labor Court 33733-12-16 Magen Vehandasa Inc. v. Goita [2018] (Isr.).

to submit as evidence e-mail and text correspondence via Whatsapp on a cellphone given to the employee by the employer. The court noted that in the employment contract there was a detailed policy regarding monitoring of e-mails and given the employer's suspicions that the employee was now working for a competitor, he had legitimate cause to review the e-mails. However, there was no policy regarding text monitoring, and therefore the court deemed that correspondence as inadmissible.¹¹⁴

It seems that the court has set a high threshold for biometric monitoring too, extending the ruling in *Issacov Inbar* to biometric information such as fingerprints in the *Qalansawe* case.¹¹⁵ The question at issue was whether a municipality was allowed to demand its employees to provide fingerprints for its biometric attendance system, and whether it was allowed to sanction employees that refused to do so. In that case, the municipality notified its school workers that if they refuse to sign in using the biometric clock, they'd risk losing their salaries because it would be deemed as if they were not in attendance. The court remarked that biometric characteristics can be physiological pertaining to the shape of the human body, such as fingerprints, geometry of the hands, DNA, or the color and shape of the iris, and can include behavioral characteristics, such as body movements, voice, or typing rhythm. It noted that the use of biometric information infringes on employee privacy and autonomy.¹¹⁶ The court held that fingerprints cannot be obtained without consent, and reiterated *Issacov Inbar* in noting that given the unequal bargaining power between employee and employer, consent needs to be given specifically and can only be given based on specific information.¹¹⁷ It noted that even if consent was given, it should be examined through the prism of the principles of reasonableness and proportionality and should be applied in good faith.¹¹⁸ Moreover, it reiterated that whether the purpose was adequate depended on the specific employer at hand and suspected that sometimes declared purposes may cover others. Importantly, it noted that the biometric system itself should be examined for its validity and reliability pursuant to *Tel Aviv University*, and that to do so the employer must produce an independent expert's opinion.¹¹⁹ Insofar as biometric systems are concerned, it seems that reliance on their manufacturer will not suffice.

The court furthermore noted that the employer's sanction must also be examined through the principles of reasonableness, proportionality, and good faith.¹²⁰ Finally, in that case it was determined that there was no consent to provide fingerprints, the means applied were not proportional to the goals

114. *Id.*

115. *Qalansawe*, *supra* note 95.

116. *Id.* at 52.

117. *Id.* at 53-54.

118. *Id.* at 60-61, 64.

119. *Id.* at 62.

120. *Id.* at 63-64.

and could be achieved with less intrusive measures, and the sanction was unlawful. It nonetheless noted that this does not mean that in all cases the use of biometric information will not be allowed, and each case should be examined meticulously in accordance with the aforementioned principles.¹²¹

However, a lower court permitted monitoring via GPS of employees using company cars to help employers determine the exact working hours of these employees.¹²² It noted that employees drive company cars during working hours and the GPS reports are needed in order to verify work hours and are not an infringement on privacy.¹²³ In another case, a court determined that locating data (as opposed to textual information) is technical and therefore does not require an employee's explicit consent if the employer has a legitimate business purpose to monitor the employee's whereabouts, such as in the case of an employee whose work is mobile.¹²⁴ This distinction does not seem to take into account data analytics, which can amass a story about the employee based on technical data alone.

The National Labor Court also recently enabled the exposure of tracking information derived from an employee's cellphone (which was supplied by the employer) in the recent *Fisher* case.¹²⁵ In that case, an employee was fired because the employer suspected he did not work his assigned hours because he was working simultaneously for another employer, and thus also refused to pay overtime. The employer requested data from the cellphone company on the whereabouts of the employee to prove his case. The employee claimed he was never informed that he would be under surveillance and exposing the information is an invasion of privacy. In the interest of an efficient trial, the court enabled the tracking information to be derived from the cellphone company—limiting the information to regular business hours only—and held that it be handed to the employee who can black out private information and then can proceed to hand in the cellphone company's tracking information to the employer. At those times when information was blacked out, it will be assumed that the employee was not at a work-related location. The court distinguished its ruling from *Issacov Inbar* and *Qalansawe* on the basis that they were supposedly concerned with a company policy of surveillance, and the *Fisher* case is concerned with discovery during trial.¹²⁶ But that distinction is hard to maintain given that *Issacov Inbar* was concerned with discovery as well. It's too early to tell whether *Fisher* is an anomaly to the *Issacov Inbar* and *Qalansawe* rulings, or whether it signifies a shift in the court's jurisprudence.

121. *Id.* at 36.

122. Reg'l Labor Court (BS) 1026/06 Gen. New. Histradrut Haovdim v. TSN, Tashtiot Neft Ve'energia 9 (2006) (Isr.).

123. *Id.*

124. Civil case (Herzliya) 28812-05-11 Bider v. Halperin Optics (2013) (Isr.). See also Reg'l Labor Court (HA) 31589-05-10 Kadosh v. Nawi Yitzhak & Shahar Ltd. (2013) (Isr.).

125. Nat'l Labor Court 40711-04-17 Fisher Taasiot Pharamcetirot v. Shtater (2018) (Isr.).

126. *Id.*

In several cases concerning audio and visual surveillance in which employees were unaware of the surveillance, courts noted such monitoring was in violation of the right to privacy, and even justified employees resigning upon its discovery and collecting benefits as if they were fired.¹²⁷ When surveillance cameras were installed to prevent criminal actions by clients, or when the employers sought to prevent employees from slacking, they were permitted as long as the scope of surveillance was related to the purposes of surveillance and the employees were notified in advance.¹²⁸ In cases where surveillance cameras were installed to investigate a crime that the employee was suspected of committing, they were deemed acceptable even without the employees' prior knowledge as long as they were in place temporarily and with the specific purpose of investigating the issue.¹²⁹

In 2017, the Israeli Privacy Protection Agency published guidelines inspired by *Issacov Inbar* to apply in the context of camera surveillance at work. It noted at the outset that constant camera surveillance at work enables employers to inspect all historical activity and conduct sophisticated big data analysis gleaned insights that cannot be reached solely by human observance of employees.¹³⁰ Employers are thus subject to the principles of *Issacov Inbar* and must inform the employees of their camera surveillance policy, and only on such basis can consent be given; they must also act in accordance with the legitimacy principles and show an adequate purpose such as protection of property or management of workers, but the use may not extend the specific purpose. The proportionality principle is important in deciding where to set up cameras, and personal offices and open work spaces require greater privacy protection than hallways and public spaces.¹³¹ Thus, in the case of big data analysis derived from camera surveillance or GPS monitoring, it could be argued that the principles of *Issacov Inbar*, including proportionality, legitimacy, sticking to the purpose, transparency, and good faith, could apply regarding its collection.

Therefore, despite significant limitations on privacy infringements, employers may nonetheless be able to collect vast amounts of data on employees and potential employees if they abide by the principles articulated

127. DC (BS) 29624-01-12 Wietz v. Ifrah (2012); DC (TA) 1285/89 Zukerman v. Morgenstern (1999); Reg'l Labor Court 30929-12-10 Salman v. Alyami (2012).

128. Reg'l Labor Court Eisner v. Richmond Mifalei Sruga, PDA 29:41 (2004); Reg'l Labor Court (HA) 15540-09-09 Malul v. Amar accounting services Ltd. (2013) (Isr.).

129. Reg'l Labor Court 2887/03 Reban- Matperat Sergei v. Maxim (2006); Reg'l Labor Court (HA) 2673/04 Olga v. Mishan Ltd. (2008) (Isr.). *But see* Reg'l Labor Court 41111-02-12 Blkirsky v. Halperin Optics (2013) (in which the court held that in public spaces within the workplace there is no expectation of employee privacy).

130. Section 5, Guidelines of the Privacy Protection Authority at the Ministry of Justice regarding the use of surveillance cameras in the workplace and in employment relationships, available at https://www.gov.il/BlobFolder/policy/workplace_camera/he/3-17_0.pdf (Hebrew).

131. *Id.* at section 13-31. *See also* Annex to the Guidelines of the Privacy Protection Authority at the Ministry of Justice regarding the use of surveillance cameras in the workplace and in employment relationships, available at https://www.gov.il/BlobFolder/policy/workplace_camera/he/3-17_0.pdf (Hebrew).

by the courts. Given the vast amount of data that may be gleaned via different sources, in the pre-employment and on-the-job stages, data analysis can be conducted to assist employers in managing hiring, promotion, scheduling, and termination decisions. Beyond the possible infringement on privacy at work, such analysis may also serve as a conduit for discrimination.¹³²

B. Equality

While the Basic Law: Human Dignity and Liberty does not provide in its text a constitutional right to equality, courts have interpreted the right to human dignity to include the right to equality,¹³³ and the constitutional right to equality has been extended to the relationship between employer and employee.¹³⁴ The cornerstone of employment antidiscrimination jurisprudence is the law of Equal Opportunities in Employment¹³⁵ and its implementation in case law.¹³⁶ That law prohibits discrimination based on a long list of identity-based criteria.¹³⁷ *Inter alia* an employer cannot discriminate on the basis of race, sex, sexual preference, age, religion, nationality, pregnancy, parenthood, and place of residence, in acceptance for employment, terms of employment, advancement, training, dismissal, or compensation for dismissal, except if there is a bona fide occupational qualification that justifies distinction; the setting of irrelevant conditions shall be seen as discrimination.¹³⁸ An equal opportunities in employment commission was established to implement the law.¹³⁹ There is even some affirmative action legislation in public service in Israel. The principle of affirmative action was codified into the Women's Equal Rights Law,

132. Ajunwa et al., *supra* note 3, at 735-737.

133. H CJ 4541/95 Miller v. Minister of Security et al. [1995] IsrSC 49(4) 94 (Isr.) Under the Basic Law, a violation of the right to equality is generally prohibited, unless it is enacted for an appropriate purpose, and to an extent no greater than required. Section 8 of the Basic Law.

134. *See, e.g.*, Nat'l Labor Court 1842-05-14 City of Jerusalem v. Kedar (2016) (Isr.); Even before the basic law, the labor court was willing to apply the principle of equality in the employment sphere. *See* Nat'l Labor Court 37/71-3 Elite v. Lederman PDA 9:255 (1978).

135. Employment (Equal Opportunities) Law, 5748-1988 (1988)(Isr.). Additional relevant legislation includes the Employment of Women Law, 5714-1954 (1954)(Isr.), which protects women from dismissals at times of pregnancy; the Male and Female Equal Pay Law, 5756-1996 (1996) (Isr.), which advanced the principle of equal pay between men and women performing the same work, or work of comparable value. The Equal Rights of Persons with Disabilities Law, 5758-1998 (1998) (Isr.) relates more generally to employment equality of persons with disability and extends an adequate representation requirement to the private sector. The Genetic Information Law, 5761-2000 prohibits genetic discrimination.

136. *See* Guy Mundlak, *The Law of Equal Opportunities in Employment: Between Equality and Polarization*, 30 COMP. LAB. L. & POL'Y J. 213, 217 (2009).

137. The list is not exhaustive. *See* Employment (Equal Opportunities) Law, 5748-1988 (1988)(Isr.) article 2, and *see* Nat'l Labor Court 52/12-4 Gen. Histadrut and Sea Officers' Union v. Zim PDA 26:3 (1993)(Isr.), in which the labor court interpreted the law to include a prohibition to discriminate based on trade union membership.

138. Employment (Equal Opportunities) Law, 5748-1988 (1988)(Isr.). Section 2. Relevancy of conditions is determined based on their being reasonably related to the job. *See* H CJ 4191/97 Rekanat v. The National Labor Court, PD 54(5): 300 (2000)(Isr.).

139. *Id.* section 18.

requiring “appropriate representation” for women in public board of directors, governmental ministries, local authorities, municipal corporations, statutory corporations, and government corporations.¹⁴⁰ The Civil Service (Appointments) Law extended a requirement of adequate representation in civil service appointments to women, Arabs, people of Ethiopian descent, new immigrants, Ultra-Orthodox Jews, and persons with disabilities.¹⁴¹

Yet, despite well-developed law on-the-books, in action there is widespread employment inequality.¹⁴² Women, for example, are under-represented in lucrative positions and over-represented among those earning low wages.¹⁴³ While the number of women in the Israeli labor-force has been rising, by and large, women’s earnings are substantially lower than men’s; they are segregated in less prestigious and prosperous occupations and rank lower in organizational hierarchies.¹⁴⁴ Unequal pay is common, even when performing similar work to that of men.¹⁴⁵ And workplace structures such as long work hours (in many coveted jobs hours are long with an expectation of complete availability) tend to be difficult for those with caregiving responsibilities, still most often, women.¹⁴⁶ Even the legal requirements of “adequate representation” in public board of directors did not have a trickling down effect and adequate diffusion in the civil service has not taken place.¹⁴⁷ Similarly, studies indicate that since its first implementation, affirmative action legislation has not been successful in promoting major change in women’s employment equality. While in governmental companies the number of women serving as directors has improved, this has not changed the likelihood of women being appointed to top leadership roles in these organizations as board chairs or corporate CEOs. This lack of mobilization in women’s professional empowerment is also reflected in the public sector

140. The Women’s Equal Rights Law, 5177-1951, sections 6c and 6c1 (1951, as amended in 2011)(Isr.) established a requirement of “adequate representation” of women in certain public bodies, and adequate representation of women from diverse backgrounds in certain public committees.

141. Civil Service Law (Appointments) 5719-1959 section 15A (1959, as amended 2016) (Isr.), establishing adequate representation in civil service appointments for women, Arabs, people of Ethiopian descent, new immigrants, Ultra-Orthodox Jews, and persons with disabilities.

142. See generally Equal Opportunities in Employment Commission, *The Diversity Index: Representation and Pay in the Private Sector in Israel* (2016), available at <http://economy.gov.il/publications/publications/doclib/variabilitymeasure2016.pdf> (Hebrew).

143. I focus here on discrimination against women, but this is just one sector in Israeli society that is discriminated against: Arabs are discriminated against relative to Jews, the elderly discriminated against relative to the young, persons with disabilities are discriminated against in comparison with the able. See Mundlak, *supra* note 135, at 228.

144. See Noya Rimalt, *Between Segregation and Integration: Towards a New Feminist Agenda of Gender Equality in the Workplace*, 24 BAR ILAN U. L. REV. 299-342 (2008) (Hebrew); Noya Rimalt, *From Law to Politics: The Path to Gender Equality*, 18 ISR. STUD. 5 (2013).

145. See e.g. HCJ 1758/11 Goren v. Home Center (Do it Yourself) Inc. (2011)(Isr.)

146. See Renan Barzilay, *supra* note 68, at 326. See also Arienne Renan Barzilay, *Between the Market and Regulation Following Goren: Equal Pay, Sex Discrimination and Familial Responsibilities*, 31 BAR ILAN U. L. REV. 343-378 (2017) (Hebrew). Nat’l Labor Court 44776-05-16 Sirato v. The Phoenix (2018)(Isr.).

147. See Mundlak, *supra* note 136, at 220.

as a whole: despite the fact that women account for the majority of workers, they still occupy primarily low and intermediate positions and are significantly underrepresented at the top.¹⁴⁸

Against this backdrop it is especially disconcerting to think of the effect data mining and data-driven employment management may have on women's equal opportunities. This is because in data-driven employment decisions, an algorithm makes predictions and assessments based on learning from data at hand: data that, as noted above, is already laden with discriminatory outcomes. Data analytics may thus exacerbate inequality in the Israeli labor market.

Furthermore, significant difficulties in “naming, blaming, and claiming”¹⁴⁹ processes may be encountered in this context, given hurdles in equal opportunity doctrine,¹⁵⁰ combined with “the strong individualistic thrust of equal-opportunities litigation”¹⁵¹ and the “black box” of algorithmic decision-making.¹⁵² While the law of equal opportunity was extended beyond employers to placement and recruiting agencies,¹⁵³ the doctrine nonetheless makes it difficult to prove discrimination in hiring, promotion, and other managerial determinations in the context of data-driven determinations. Indeed, employment discrimination may be proven not only based on disparate treatment, but also on disparate impact,¹⁵⁴ with the showing that a neutral criterion (possibly big data analysis) has an indirect disparate impact on a protected group. Already in *Tel Aviv University*, the court noted that if suitability tests are not reliable or valid, this could infringe on worker's equality.¹⁵⁵

Yet, cases dealing with disparate impact are relatively rare, and usually employment discrimination cases that are successful are based on a showing of disparate treatment, pointing to a racial slur,¹⁵⁶ gendered stereotype,¹⁵⁷ or employer behavior from which courts infer disparate treatment.¹⁵⁸ Moreover, discrimination, especially in hiring, is challenging to prove because of lack

148. See e.g. Noya Rimalt, *From the Case of Haran and the Case of Hemo: The Story of Gender Inequality in Israel*, 15 HAIFA J. L. & GOV'T 11-26 (2013) (Hebrew).

149. William L.F. Felstiner, Richard L. Abel, Austin Sarat, *The Emergence and Transformation of Disputes: Naming, Blaming, Claiming*, 15 LAW AND SOC'Y REV. 631 (1980-1981).

150. Sharion Rabin-Margalioth, *The Elusive Case of Employment Discrimination: How to Prove it?* 44 HAPRAKLIT 529 (1999) (Hebrew).

151. See Mundlak, *supra* note 136, at 239

152. See generally FRANK PASQUALE, *THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION* (2015).

153. Nat'l Labor Court 1038/99 The State of Israel v. Tafkid Plus Inc. et al (2003) (Isr.); Reg'l Labor Court 27042-02-11 Fishkin v. Hometech Personnel Services Inc. (2013).

154. Rabin-Margalioth, *supra* note 150, at 529.

155. Tel Aviv University, *supra* note 77, at 409. See also Tafkid Plus Inc., *supra* note 153. Reg'l Labor Court 3863/09 Abdulcarim Kadi v. Rakevet Israel (2009) (Isr.).

156. See Reg'l Labor Court 3816-09 Michel Malka v. Taasia Avirit Le'Israel Inc. (2013) (Isr.).

157. Nat'l Labor Court 3-129 Plotkin v. Eisenberg Brothers Inc. PDA 33:431 (1999) (Isr.); Nat'l Labor Court 16136-05-15 Dizengof and Co. v. Moskowitz Skorchesky (2018) (Isr.).

158. Reg'l Labor Court 9690/09 Ababa v. A.A. Moked 101 Inc. (2012) (Isr.).

of knowledge as for the reason a resume was turned down, for example. The law is aware of this difficulty and established that the burden of proof switches over to the employer to prove she did not discriminate if the job seeker or employee met conditions and qualifications set by the employer.¹⁵⁹ In pursuant case law, in the matter of *Goren*, the Supreme Court ruled on a case in which a women earned two-thirds of what a man earned doing the same job, and the employer claimed this decision was a result of the employees' negotiation and not sex discrimination.¹⁶⁰ The court noted in that case that if the gap between what a man and woman are earning for performing the same job is significant, that can be initial proof to switch the onus onto the employer to prove that the gap is not related to discrimination on the basis of sex. It noted that when there are vast gender pay gaps, this could itself switch the burden of proof in certain circumstances over to the employer to prove she was not discriminating.¹⁶¹ This could mean that if, for example, the result of data-driven employment determinations demonstrate significant gaps in pay or hiring of women or other minority groups, then this could similarly shift the burden of proof onto the employer or recruiting agency to prove that they did not discriminate. Following the ruling in *Goren*, in which it was determined that relying exclusively on the negotiation was insufficient proof, it could further be argued that relying on an algorithm would be inadequate justification for the decision. Moreover, in 2010 the law of equal opportunities in employment was amended to note that if an employer asked, directly or indirectly, for information concerning an issue for which discrimination is forbidden, then the onus is on the employer to show that she did not act in violation of the law.¹⁶² Case law has explained that personal questions related to identity-based protected criteria—such as procreational prospects or parenthood—asked in a job interview raise concerns of possible discrimination and may shift the burden onto employers to show that they had a justification unrelated to these questions for making the determination.¹⁶³

But knowledge here is crucial. Because discrimination claims are largely based on an individual cause of action, in order to instigate a discrimination claim, an employee or job candidate must become somewhat knowledgeable of the discrimination to name it, blame the employer, and claim her rights. In *Goren*, the woman found out about the unequal pay on a cigarette break with a chatty male colleague.¹⁶⁴ In the *Malka* case, a job-candidate found out about a derogatory identity-based slur from a friend who

159. Section 9(a) of the Employment (Equal Opportunities) Law, 5748-1988 (1988) (Isr.).

160. HCJ 1758/11 *Goren v. Home Center (Do it Yourself) Inc.* (2011) (Isr.)

161. *Id.* See also Renan Barzilay, *supra* note 146, at 343-378.

162. Section 9(c) of the Employment (Equal Opportunities) Law, 5748-1988 (1988) (Isr.).

163. Dizengof, *supra* note 157.

164. Arianne Renan Barzilay and Vardit Avidan, *A Coalesced Effort: The Case of Goren*, 10 TEL AVIV U. J. L. SOC. CHANGE 83 (2019)(Hebrew).

overheard the employer.¹⁶⁵ But precisely with regards to algorithmic decision-making, data-related power imbalances here are crucial.

In data-driven algorithmic decision-making, the employee may not know why they may have been rejected for promotion, and as noted, currently even the analysis of suitability tests is not disclosed.¹⁶⁶ Sometimes given the black box, even the employer will not know exactly why the candidate was turned down. Consider, for example, the fact that motivation might be a factor in the determination regarding promotion, but that the algorithm finds a correlation between motivation and taking time off. It could be that a working parent is highly motivated yet needs to tend to her kids if they are sick. The algorithm might not recommend her for promotion because it might determine she is unmotivated. The employer—let alone the employee—would have difficulties knowing why the employee was rejected and may not know that the determination was unlawfully related to parenthood; the employee may thus be hesitant to launch a law suit for discrimination (especially if she is also afraid to lose her job).

It could thus be instructive to take the *Goren* ruling a step further to develop doctrines that place an initial onus on employers to prove that their algorithmic decision-making processes resulted in equitable outcomes. This could be justified given the vast amount of questions that are asked, and information gleaned—some personal—on the one hand and given the employees' and job candidates' difficulties in not knowing if and why an employment decision was made. However, at the very least, for this measure to be somewhat effective, the burden of bringing suits cannot be on the individual employees or job-candidates alone. The equal opportunities in employment commission could be instrumental in investigating, implementing, and enforcing such processes.

IV. CONCLUSION

The right to privacy at work has been widely accepted and provides guidelines for employers to abide by, which limit the excess, purpose, and ways in which to perform data collection. However, such data collection may be permissible once employers conform with the principles of proportionality, good faith, adequate purpose, sticking to the purpose, transparency, and consent. Such data collection can then be followed by the process of data mining, which makes predictions based on the data. Yet, while accuracy, validity and reliability of recruitment technologies are required de-jure, they have been largely neglected in practice in the context of exams performed by employers via recruiting agencies. In the era of data mining and data-driven managerial determinations, it may be important to

165. Malka, *supra* note 156.

166. See DC (TA) 4749-04-12 Adam-Milo et al. v. The Databases Registrar at the Ministry of Justice (2012).

revive these requirements because of the growing concerns that algorithmic determinations may classify in a biased manner or make correlations that are not necessarily related to the job. In doing so, algorithms may enhance inequality by creating disparate impact and reproducing bias. But accuracy, validity, and reliability checks may be able to capture some, albeit not all of the possible instigators of discrimination. Therefore, it seems important to insist on the principles articulated in *Issacov Inbar*, especially the principles of adequate purpose and sticking to the purpose. If the result of the algorithm is that it disparately impacts women, for example, because it gives them a bad score for motivation based on having gaps in employment (which might have nothing to do with their qualifications for the job and everything to do with past parental leave for example), then, it could be argued, the test is not fulfilling its purpose to make adequate employment determinations, in which case information might not have been lawfully collected in the first place.

However, victims of discrimination might be hard-pressed to name, blame, and claim *as* discrimination such adverse managerial determinations when they occur, in the context of data-driven managerial decisions. Equal employment opportunity law is currently rather ill-equipped to deal with such claims. This is because at a fundamental level, it relies on an underlying assumption that the market acts equitably and that discrimination thus must be proven by plaintiffs. But such an assumption is especially bewildering in the context of data mining in which an algorithm makes predictions based on history, a history laden with discriminatory outcomes. And, it does so in a way that makes it difficult for workers to know whether and why exactly the prediction was made. Therefore, it might be necessary to change assumptions about equality at work, and it could be instructive to develop doctrines that place an initial onus on employers (who hold information about managerial determinations) to prove equality in data-driven employment management.