

ARTIFICIAL INTELLIGENCE AND ALGORITHMS IN EMPLOYMENT RELATIONS: NEW SOURCES OF DISCRIMINATION

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SUMMARY

I - The Digital Economy and its projections in the world of work - the 4th Industrial Revolution

- Factors identified at the base of the Digital Economy
- In particular New ICTs, AI and the algorithm
- Digital Economy implication on labour relations

II - Main areas using NICTs, AI, automated and algorithmic decisions in labour relations

- Recruitment
- Contract execution

III – Detecting of sex discrimination practises and addressing them

IV – Final remarks

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I. THE DIGITAL ECONOMY AND ITS PROJECTIONS ON THE WORLD OF WORK - 4TH INDUSTRIAL REVOLUTION

The world of work 4.0 in the digital economy - four major factors:

- 1. *The digitalisation movement itself:*** Digital Connectivity and *On-line* Information Technology (NICT); Robotics; Artificial Intelligence (AI)
- 2. *Globalisation trends:*** worldwide exchange of goods and services, decentralised production facilitated by digital technologies; massive access to information for consumers; migratory movements
- 3. *Demographic changes:*** increase in average life expectancy; fall in the birth rate; overall increase in qualifications.
- 4. *The evolution of people's cultural and social expectations:*** importance of the professional component in people's lives; evolution of family models; loss of homogeneity of the subordinate worker profile; increase in practices of sharing goods (collaborative economy).

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NEW ICTS, AI, AUTOMATED AND ALGORITHMIC DECISIONS IN LABOUR RELATIONS

New ICTs - Set of technological and digital means of supplying information and communication and that even allow new business models (mobile phones, internet, e-mail, various digital platforms)

Algorithm - finite sequence of executable actions aimed at obtaining the solution to a problem (very old mathematical concept, found for example in Euclid, and used modernly in computer science); acts from simpler instructions or complex data structures and can be simpler or more complex, including the power to make decisions and to choose between several possible solutions;

Artificial intelligence (AI) - Ability of a computer system to interpret external data, learning from it and using it in a "human-like" way (capacity for reasoning, learning, pattern recognition, logical inferences that support decision making) - automated decisions



These digital tools use existing databases, therefore transport and project the cultural paradigms to such data

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DIGITAL ECONOMY IMPACT ON EMPLOYMENT AND LABOUR RELATIONS

1. Level and employment quality and new business and employment models
2. Recruitment processes
3. Workplace and working time
4. Organisation changes, worker-machine relations and digital activity control
5. Personal rights; access, processing and protection of workers' personal data
6. Vocational training
7. Worker's health and safety
8. In-company communication models between employees, employer and collective representatives
9. Social security

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II – USE OF THESE DIGITAL TOOLS IN LABOUR RELATIONS WITH POSSIBLE DISCRIMINATORY IMPACTS

1. RECRUITMENT

2. EXECUTION OF THE EMPLOYMENT CONTRACT

- Working time
- Job evaluation / productivity monitoring
- Career
- Dismissals on objective grounds

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II – USE OF THESE DIGITAL TOOLS IN LABOUR RELATIONS WITH POSSIBLE DISCRIMINATORY IMPACTS

1. RECRUITMENT

- Traditional recruitment tools: CV, verification of qualifications, various tests, interviews
- Modern tools: Google, Linkdin, Facebook, other digital platforms; AI, using algorithms for profile selection

Depending on the databases it uses, AI applied to this context can lead to direct and indirect sex discrimination by supporting and projecting the content of those databases



The algorithm is not neutral

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II -USE OF THESE DIGITAL TOOLS IN LABOUR RELATIONS WITH POSSIBLE DISCRIMINATORY IMPACTS

2. EXECUTION OF THE EMPLOYMENT CONTRACT

- **Working time** – assess an employee's performance according to the effective working time, using an algorithm (for example, how many keystrokes typed on a computer keyboard, which is an objective method) may be a source of discrimination on the grounds of sex, since the male worker is, by definition, more extensive than intensive, and the family and care responsibilities are mostly feminine
- **Job evaluation / productivity monitoring** – assess an employee's productivity using an algorithm will be different when used in the morning or in the evening (because women work less in the evening); or, for example, in the case of a driver, if it takes into account driving through the the city (female drivers tend to avoid unsafe areas)

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USE OF THESE DIGITAL TOOLS IN LABOUR RELATIONS WITH POSSIBLE DISCRIMINATORY IMPACTS

2. EXECUTION OF THE EMPLOYMENT CONTRACT

- **Career** – considering the objective promotion criteria using an algorithm can have different results for men and women because it incorporates their career history: so if it weights in the same way, for example, technological literacy or experience in management positions (both of which are statistically higher for men), the algorithm will choose to promote men, perpetuating the gender discrimination that already exists in career advancement
- **Dismissals on objective grounds (collective dismissal)** - the criteria for choosing workers to be dismissed, when applied by algorithm, may be discriminatory if it does not exclude, for example, attendance or productivity due to parental leave, part-time work and time-off for family reasons

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III - DETECTING AND ADDRESSING RELATED DISCRIMINATION WITH AI

- **Detecting the discrimination: difficulties**
- **Addressing the discrimination: tools**

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III - DETECTING AND ADDRESSING RELATED DISCRIMINATION WITH AI

The simple detection of discrimination can be difficult for several reasons:

- Opacity of the system - algorithms are complex mathematical and computing system that are difficult to understand
- The employer may not be responsible for the computer programme that applies the algorithm, as he asks experts to build the program
- Often discrimination is indirect (because the criteria used by the algorithm are apparently neutral) and systemic (i.e. not individualised)



Detection will almost always come afterwards, by evaluating the results of the algorithm implementation to the present situation

III - ADDRESSING DISCRIMINATION INVOLVING ALGORITHMS AND AI

The use of these digital technologies in employment relations must respect the general rules on equal treatment and equal opportunities for working men and women:

- Decisions taken by algorithm cannot lead to discriminatory results (direct or indirect discrimination) – Articles 4 and 14 of Dir. 2006/54/EC, of 5 July 2006
- It is possible to apply the reversal of the burden of proof to the allegation of algorithmic discrimination – Article 19 and 14 of Dir. 2006/54
- There is a right to compensation for these discriminatory practices – Article 18 of Dir. 2006/54
- Dismissal on the grounds of discrimination arising from the application of an algorithm is unlawful - Article 14(1)(c) of Dir. 2006/54

III - ADDRESSING DISCRIMINATION INVOLVING ALGORITHMS AND AI

Some measures are especially relevant :

- ***The job evaluation systems must be transparent and based on objective criteria, common to women and men and non-discriminatory*** - Article 4 of Dir. 2006/54. These rules apply in the case of algorithmic evaluation.
- **Working conditions should be transparent and predictable** (Dir. 2019/1152/EU of 20 June 2019, which is more demanding on the employer to provide information on working conditions) - thus the use of algorithms should not be an impediment to this transparency.

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III - ADDRESSING DISCRIMINATION INVOLVING ALGORITHMS AND IA (2)

Proposal for a Directive on platform work (COM (2021)762 final) of 9/12/2021, already submitted to the Council (12 June 2023), and with a section on "algorithmic management":

- Automated decision-making processes are admitted, but they involve risks (Article 6);
- The application of such processes has to be monitored by humans (Article 7)
- Relevant automated decisions are subject to human review at the request of the workers concerned (Article 8);
- Workers have the right to be informed about relevant changes in the way automated processes are used that may affect them (Article 9)



If the proposed Directive is approved, these rules will apply to platform workers; but they could be extended to other workers when the management of their employment relationship involves the use of this type of technology

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IV – FINAL REMARKS

- Discrimination linked to AI is both a very difficult subject to discuss and to recognize, given the complexity of the system
- Addressing this matter is still at an early stage
- European Union's general principles and rules on equal treatment for men and women workers apply
- An extension of the rules of the proposed Directive on the working conditions in platform work could be considered

THANK YOU FOR YOUR KIND ATTENTION!



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