

BIASES IN THE USE OF ARTIFICIAL INTELLIGENCE FOR THE MANAGEMENT OF LABOUR RELATIONS:

**analysis from the EU anti-
discrimination law**

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SUMMARY



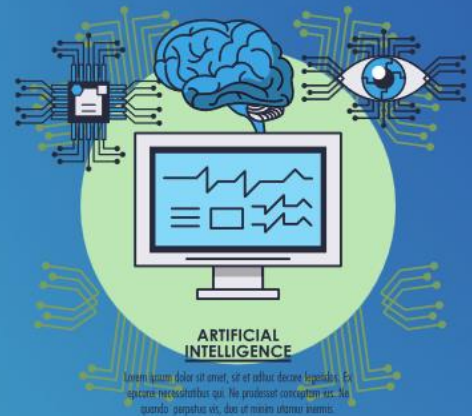
- I. Introduction: AI and Law
- II. Applications at the workplace and biases
- III. Rol of Law
- IV. Legal analysis of discrimination and procedural strategy



I. Introduction: AI and Law



classification
 categorization
 decisions
 dataism
 datification
 machine-learning
 deep-learning
 automated
 algorithmocracy
 biometrics
 inferences



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Law and AI

lack of legal concept

Proposal for a regulation of the European Parliament and of the Council (artificial intelligence law) (April 21, 2021)



"High Risk AI System":

- **Biometric identification and categorization of natural persons:** for "real-time" or "deferred" remote biometric identification of natural persons
- **Employment, management of workers and access to self-employment:**
 - a) for the recruitment or selection of natural persons, especially to advertise vacancies, classify and filter applications or evaluate candidates in interviews or tests
 - b) to make decisions regarding the promotion and resolution of contractual relationships of an employment nature, the assignment of tasks and the monitoring and evaluation of the performance and conduct of people within the framework of those relationships

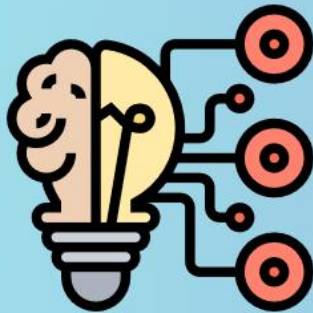
"Artificial intelligence system (AI system)" means software that is developed using one or more of the techniques and strategies and that can, for a given set of human-defined goals, generate output information such as content, predictions, recommendations or decisions that influence the environments of interaction



II. Automated decisions applications at the workplace



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MACHINE LEARNING

- optimization: training
- the relationship between the input and output data is not known
- errors in the data or its labeling
- historical patterns

indirect discrimination

black box



BIOMETRIC DATA AND PERSONAL CHARACTERISTICS

- Company DNA (and *employer branding*) : filtering of characteristics related to the company
- constitutes **direct discrimination** -STJUE 7/10/2008, *Firma Feryn*



SCREENING used in selection interviews

- psychometry and psychogenics
- language and behavior analysis tools
- data capture

risks of AI systems





the robot focuses on the "calculation of the maximum affinity between the emotional behavior of the candidates, the company and the functions to be performed"

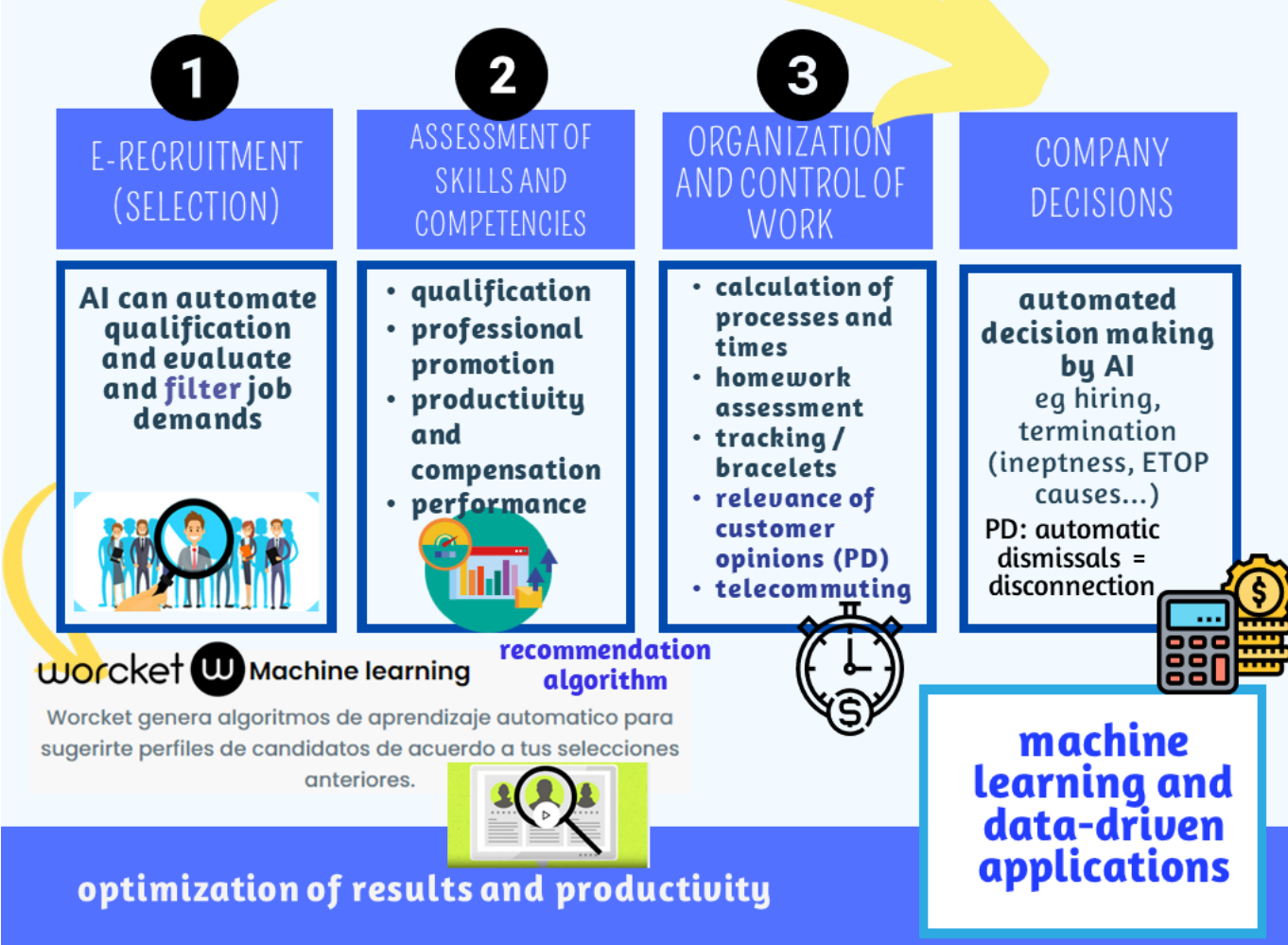
BIOMETRIC DATA AND PERSONAL CHARACTERISTICS

↓

SCREENING
used in selection interviews



automated selection systems: two examples



III. Rol of Law



- **EU:**
 - ✓ AI
 - ✓ anti-discrimination law
 - ✓ GDPR
- **Spain: equality (also data)**



IA Regulation Proposal 2021

- high risk AI
- obligations for companies

Comprehensive equality law proposal 2021

- bias minimization
- transparency in design and implementation
- interpretability
- public administrations

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EU



IA 2021 Regulation Proposal

complements the GDPR 2016/67

“user”: any natural or legal person,... that uses an AI system under its own authority (art. 3.4)

employers

RIGHTS of those affected

- **informative rights (individuals): to know the emotion recognition or biometric categorization systems - their operation (art. 52) - they are admitted**

- **the regulation does not include labour rights**

- **the proposal refers to relations between supplier companies and users**

drawbacks



to the extent that you exercise control over the data



guarantee

- **training, validation and test data sets**
- **transparency** and traceability and strong ex post controls
- minimal impact on the right to protection of **intellectual property** (art.70)
- **public evaluation**
- **human surveillance** (art. 14) - supervision

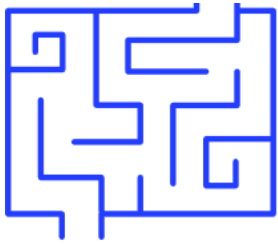


obligations for user companies

- **transparency**
- **proper use**
- **data relevance**
- **high risk AI surveillance**
- **data impact assessment**

administrative responsibilities (art. 71)





unsolved legal issues



INADEQUACY OF THE LEGAL RESPONSES FROM THE PROTECTION OF PERSONAL DATA

- **human intervention** required by art. 22 GDPR does not prevent automated filtering of applications - mass screening- in personnel selection and profiling
- the **transparency** of the source code does not guarantee the exclusion of bias (art. 15 RGPD)
- the **explanation** of the AI system or algorithm does not guarantee its understanding, much less the mitigation or correction of the bias
- the **source code** does not clarify anything without the training data
- the right to obtain **human intervention** and challenge the decision already existed at the workplace: the ultimate responsibility of the company that uses the technology
- access to source code and training data with interposition of companies **not based in the country or within the EU**

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IV. Legal analysis of discrimination and procedural strategy



- **legal analysis of discrimination:**
 - a) conceptual problems in fitting technique and law
 - b) translation of legal concepts
 - c) guardianship
 - d) additional problems
- **procedural strategy:**
 - a) in claims about discrimination
 - b) in terms of data protection
 - c) cases



Legal analysis of discrimination

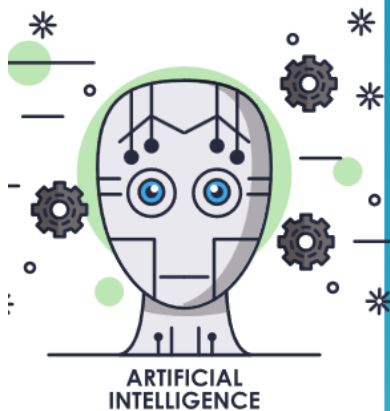
- a) conceptual problems in fitting technique and law
- b) translation of legal concepts
- c) guardianship
- d) additional problems



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conceptual problems - fitting technique and law

A Legal discrimination versus algorithmic discrimination



INTERFERENCES BETWEEN LANGUAGE

- **Algorithmic opacity** against legal vagueness and non-translatable concepts of their own (proportionality, necessity, justification...)
- problems of translation of the **legal concepts** of anti-discrimination law in the **computational language (Anglo-Saxon)** and of equivalences between them:
 - **discrimination by association**
 - **discrimination by mistake**
 - **multiple and intersectional discrimination**
 - **irrelevance of intentionality**

direct discrimination/ indirect discrimination

- **in design: direct**
- **in training: indirect**
- **in data labeling**
- **liability for mistake?**



AI for good: is an AI tool for job discrimination detection possible?

B

translation of concepts of anti-discrimination law



- **comparison**: comparison items individual versus universe of data?
- **indicative elements**: comparison between individuals admitted or excluded, or individuals prioritized over the rest, or individuals not prioritized over prioritized
- proxy inferences: problem of **identification** of the cause of discrimination (consideration of "unprotected causes" interacting with others that are: eg place of residence + ethnic origin) and problem of *distance* between inferred characteristics and cause
anonymization is not enough
- **objective justification** for the difference in treatment: human intervention
- **indirect discrimination for non-inclusive design**

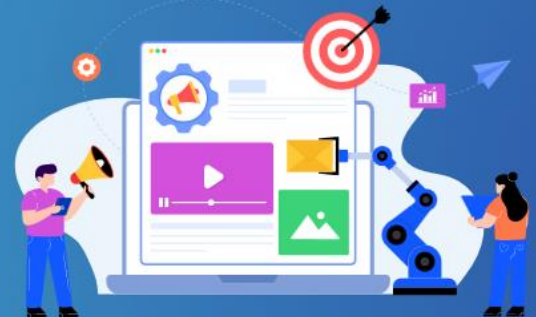


conceptual problems of fitting technique and law

C Guardianship

key issues

- **human intervention** : concept
- **transparency versus opacity**: synonymous with motivation and intelligibility (technical opacity?): *explainability*
- access to **source code and data**: intellectual property rights and industrial secret
- **intersectionality** and inferences
- **association** and inferences



workers ignore how they operate



D

additional legal issues



APPLICATION PROBLEMS

- **UNINTELLIGIBILITY after explanation provided**
 - intelligibility vs. explainability
- **PERSONAL INFORMATION**
- **RESPONSIBILITIES: due to passivity/use**
 - Is ownership or being a user of the algorithm enough to derive responsibility for its impact?
 - what is the extent of responsibility for past decisions replicated upon assesment based in an historical pattern?
- **AI SYSTEM OWNERSHIP**
 - location of the company's headquarters to demand responsibilities
 - outsourcing



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procedural strategy

Litigation against automated labour decisions



- a) in antidiscrimination field
- b) in terms of data protection
- c) cases

- discrimination detection
- discrimination claim
- obtaining the invalidation of the measure (+ economic compensation)

challenge of automated labour decisions



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DETECTION AND IDENTIFICATION

- anti-discrimination right
- data protection and right to privacy

- signs of discrimination
 - source code search
 - searching in the data
- comparison items

- right to an explanation
- algorithmic transparency

A

- objective?
 - detect motivation
 - identify bias or pattern of discrimination
- difficulties
 - copyright protection of source code and data feed
 - trade secret
- risks
 - the source code does not guarantee bias detection
 - insufficiency: accessing it does not guarantee its intelligibility either



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qualification and difficulties

STRATEGY

- discrimination detection
- discrimination claim
- obtaining the annulment of the measure + compensation if applicable



Directives
2000/78, 2000/43
and 2006/54



discrimination

QUALIFICATION

- direct/indirect discrimination
 - in source code and data
 - in the decision itself
- inferences and proxy

Doubts

- discrimination by association be applied? association in proxy inferences?
- non-inclusive design - discrimination?

Reg. IA EU

Glovo: Bologna Court judgment of

12/31/2020 no. 2 9491



DIFFICULTIES

a) identification of discrimination: lack of positivization of multiple discrimination, which would fit the proxy inferences

STJUE 11/24/2016, C-443/15, Parris

b) liability for acquisition or use

c) responsibility for past decisions?

B

3

Use of data linked to discriminatory decisions

STRATEGY

- detection of irregularities in data use or profiling
- claim
- obtaining the annulment of the measure (DDFF)



GDPR
Reg. 2016/67



TRANSPARENCY

- right to know source code and data
- right to know the reasons for the decision

RIGHT TO PRIVACY

art. 8 ECHR
respect for **privacy**,
massive data collection
and opacity

(Judgment of the Hague Court
of 5/2/2020, NJCM cs/De
Staat der Nederlanden, SyRi)

DIFFICULTIES

- a) liability for acquisition or use
- b) responsibility for former decisions?

Reg. AI EU



privacy and data protection

algorithm access procedural strategy

Reg.2016/67

RIGHT TO AN EXPLANATION

- right to knowledge of the **underlying reasoning** in data processing when its results are applied to it
(intelligence: Convention 108 Council of Europe)
- explanation about source code and automated decision
- right to obtain **human intervention** and to challenge the decision

ALGORITHMIC TRANSPARENCY PRINCIPLE

source code

- It does not consist in revealing codes, but in making intelligible the parameters and criteria of the decisions that are made

ECJ decision, Infopaq International, C-5/08, ECJ, Grand Chamber, 2/5/12, SAS Institute Inc v. World Programming Ltd



DIFFICULTIES

- a) **access** : intellectual property code and data
 - Art.70 regulation proposal AI - **confidentiality** -
 - art. 5 Directive 2016/943 trade secrets
 - Par. 63 GDPR
 - Directive 2016/943
- b) **exceptions**
 - right to information RLT
 - art. 5 Directive 2016/943
 - (Law 1/2019 companies secrets Spain)
 - disclosure right in administrative or judicial procedure (art. 135 LPI Spain)

What legal framework do we have?



GDPR 2016/67
Regulation proposal (artificial intelligence law) EU -2021



- transparency and traceability and solid ex post controls: effective compensation to those affected
- minimal affectation to the right to the protection of intellectual property (art.70)- they will only demand the necessary transparency towards public authorities
- public evaluation
- automatic event registration



EU Regulation Proposal -2021

training, validation and test data sets:

- they will be subject to appropriate governance and data management practices and, in particular, "taking into account possible bias" (art. 10.2)
- pseudonymization or encryption if anonymization is not sufficient
- relevant and representative, error-free and complete



special attention to the probability of minors accessing the high-risk AI system (art. 9.8)



human surveillance (art. 14) -supervision



Anti-discrimination Law

"user": any natural or legal person,... that uses an AI system under its own authority (art. 3.4)

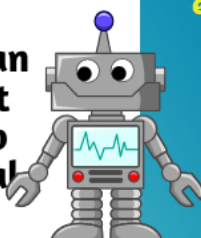


cases



Amsterdam Court, SS.
March 11, 2021
(C/13/689705/HA RK 20-258,
C/13/687315/HA RK 20-207 and
C/13/692003/HA RK 20-302)

access to the algorithm to proves the existence of an employment relationship and dismissal



right to know the logic of the decision (art. 15 RGPD)

Keys

Duty to provide useful information about the logic underlying the automated decision

Workers' right:

- verify the accuracy and legality of data processing (Ola sentence)
- right to obtain human intervention in the application of the decision and challenge
- right not to be discriminated against by automated decision

RESOLUTION OF THE CASE

Ola and Uber employment relationship sentence: lack of adequate motivation of the "legal" or "significant" effect in art. 22 RGPD to justify an employment relationship, but yes in the case of monetary fines

Uber dismissal ruling: art. 22 GDPR: an 'operational risk team' made the extinctive decision based on the signal of potential fraud it received from the algorithm: explanation accepted by not combated (procedural rule)



dismissal of the lawsuit: drivers are not entitled to relevant information about the algorithm

Spain: BOSCO case



electric social bonus: the BOSCO algorithm
Central contentious-administrative court number 8, ordinary procedure 18/2019

Facts and claim:

- Algorithm decides beneficiaries benefit "social electricity bonus"
- Civio Association requests access to source code to know its operation and causes of the application result

Council for Transparency and Good Governance of Spain:

- a) the motivation of the decisions does not change due to the interposition of algorithms
- b) the algorithm only consists of verifying who meets the requirements
- c) intellectual property rights
 - obligation to provide the technical specification of the application and the results of the tests carried out to verify that it complies with the functional specification

Administration allegations:

- the legality of the act is not based on the infallibility of the algorithm, but on its adaptation to the legal system
- It is a decision motivation problem.
- art. 96 LPI: covered by intellectual property
- STSJ of the Basque Country of February 18, 2019

National Cryptologic Center and General Subdirectorate of Information and Communication Technologies:
attacks and exposure of sensitive databases

Central Court of Contentious-Administrative dismisses lawsuit

fail: the release of the code violates intellectual property rights and could affect both public safety and national defense

CIVIO

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MORE INFORMATION AT:

