



ARTIFICIAL INTELLIGENCE AND GENDER EQUALITY

Algorithmic discrimination in Europe: Legal
framework, risks and opportunities



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EU gender equality law seminar I ERA seminar for members of the judiciary I Trier, 14 juin 2022
Dr. Raphaële Xenidis, Marie Curie Fellow, iCourts & lecturer in EU Law, Edinburgh Law School

OUTLINE

- 1 Risks of algorithmic discriminations: examples and definitions
- 2 Gaps in the EU anti-discrimination law framework
- 3 Algorithms and equality: solutions and ways forward

1. Risks



Usages of algorithms in Europe



Public sector

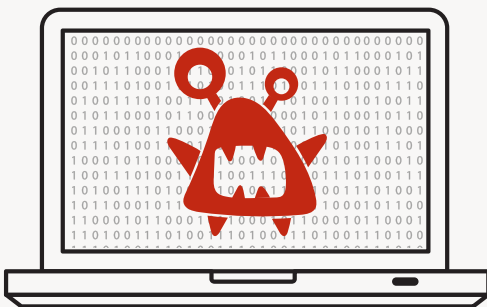
- Labour market policy
- Social welfare
- Education
- Policing and fraud detection
- Administration of justice



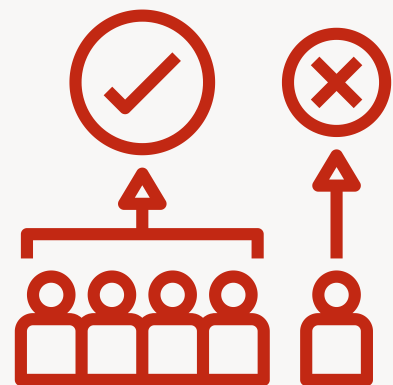
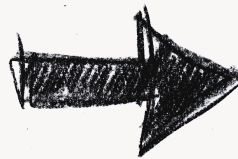
Private sector

- Employment and platform work
- Banking and insurance
- Targeted advertising
- Price-setting and retail

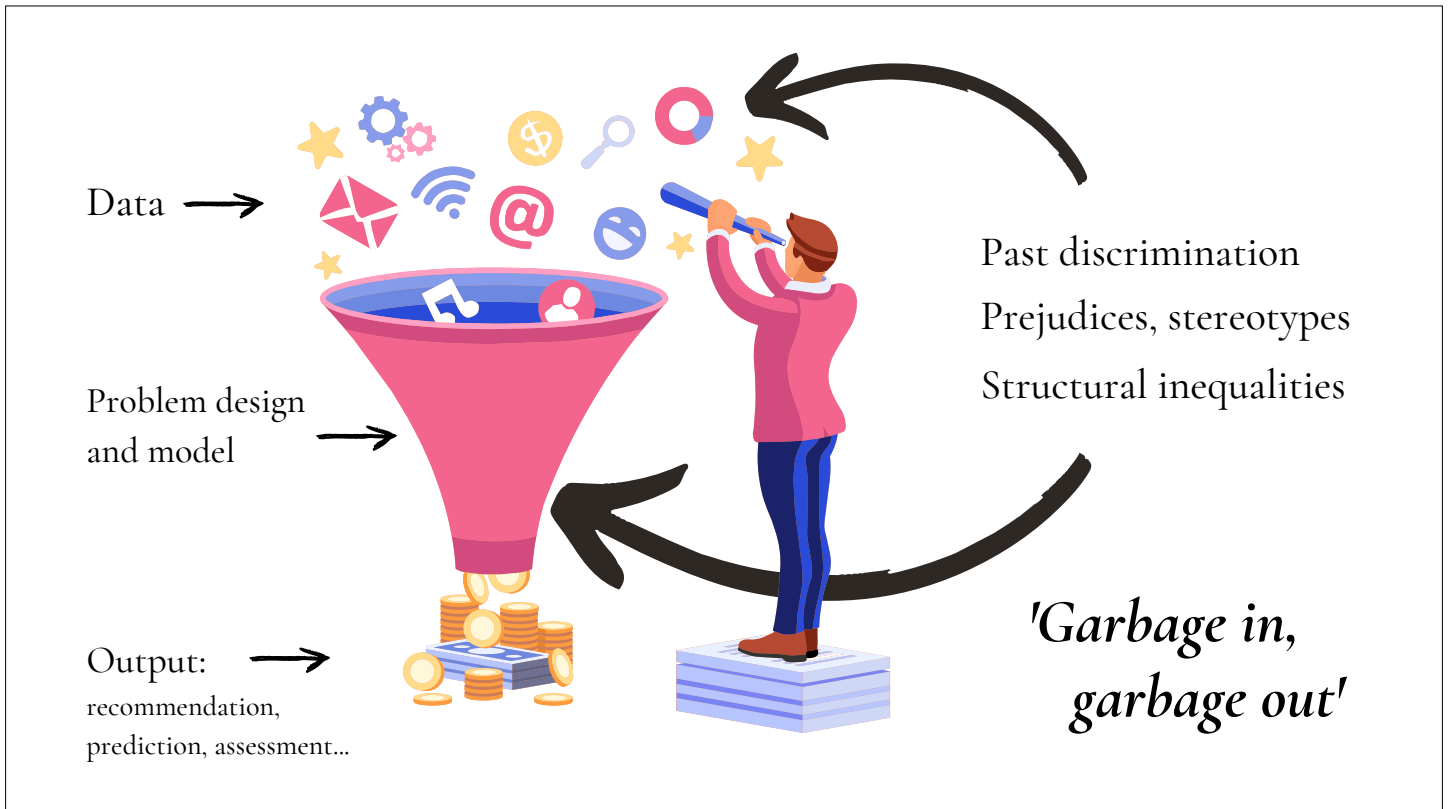
Sources of algorithmic discrimination



Bias



Discrimination



The legal framework: EU anti-discrimination law

- **Art 19 TFEU:** sex, race or ethnic origin, religion or beliefs, disability, age, sexual orientation
- **Art 157 TFEU:** equality between men and women at work and in pay
- **Art 21 Charter of Fundamental Rights:** non-exhaustive list of protected criteria including
- **Art 23 Charter:** equality between men and women

Minimum requirements

- **Directive 2000/43:** race or ethnic origin (employment, goods and services, education)
- **Directive 2000/78:** age, religion or belief, disability, sexual orientation (employment)
- **Directive 2004/113:** sex (goods and services)
- **Directive 2006/54:** sex (employment)



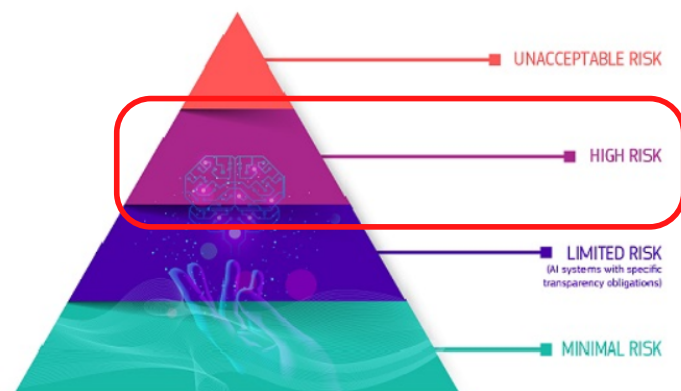
Other elements of regulation

GDPR:

- Recital 10 : 'special categories of personal data' or 'sensitive data'
- Recital 71 : prevent 'discriminatory effects on natural persons on the basis of racial or ethnic origin, political opinion, religion or beliefs, trade union membership, genetic or health status or sexual orientation'
- Article 9(1) + 9(2) exceptions
- But: sex, age, disability ?

Proposal for a Regulation laying down harmonised rules on artificial intelligence (EU AI Act)

- Risk-based approach
- Model: product liability



Source: <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>

2. Gaps in the legal framework

Conceptual frictions



Machine learning: a distorting mirror

Conceptual frictions (cont.)

- Difference is the basis for risk preemption: technological determinism
- The "individual": a concept unknown to algorithmic rationality

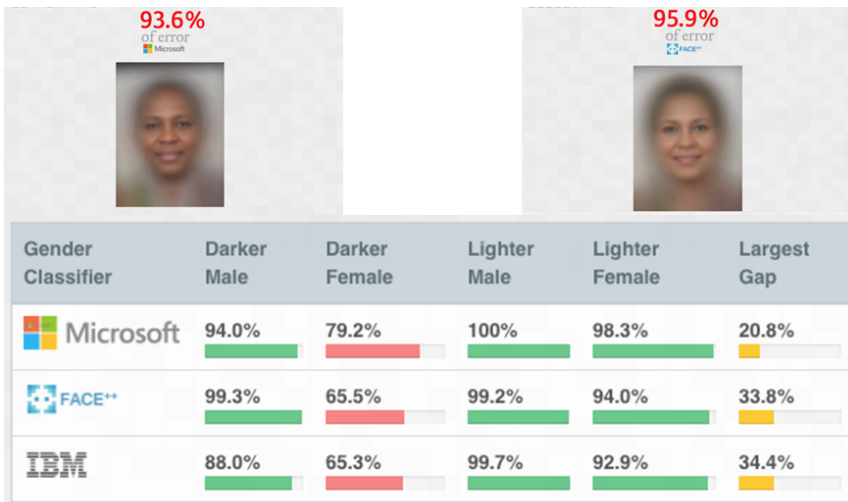


Gaps in legal scope



- Hierarchy of protection :
 - Goods and services
 - Online platforms
- Exceptions :
 - media
 - advertising
 - education

Intersectional discrimination



Source: Joy Buolamwini & Timnit Gebru, 'Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification' Proceedings of Machine Learning Research 81:1-15, 2018

- Feedback loops:
 - exclusion
 - invisibility
- Algorithmic classification
 - Data mining
 - Granular profiling

But

- 'Single-axis' protected grounds
- C-443/15 *Parris*: there is [...] no new category of discrimination resulting from the combination of more than one of those grounds...!

Algorithmic proxy discrimination

- Discrimination: direct or indirect?
 - 'on grounds of'
 - vs correlations inferred based on proxy attributes
- Link to protected ground:
 - C-177/88 *Dekker*: 'inseparable link'
 - vs C-668/15 *Jyske Finans*: no 'direct or inextricable link'

Photo by Scott Webb on Unsplash



Photo by Charles Delvino on Unsplash



Photo by Jonathan Borba on Unsplash

Emergent patterns of discrimination?



- Article 19 TFEU: exhaustive list
- Article 21 Charter: open-ended
- C-354/13 FOA: no extension by analogy

- New forms of social sorting
- Function and boundaries of non-discrimination law?

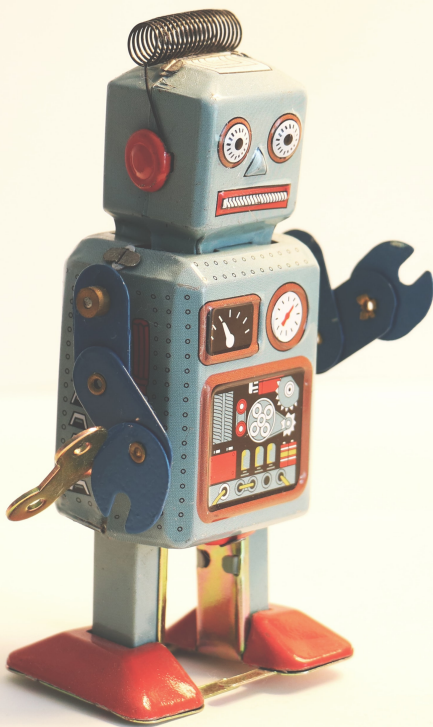


'Seeing' and remedying algorithmic discrimination

- Trapped inside own online reality: personalisation
- 'Black box' algorithms (Pasquale 2015): no transparency, no explainability, opacity of proprietary algorithms
- Responsibility in human-machine interactions; automation biases?
- Liability: providers, users?



3. What solutions ?



EU anti-discrimination law in light of the principle of technology neutrality

- Effectiveness
- Legal resilience : which concepts can be purposively revisited?
- Positive action
- Strategic litigation

AI and opportunities for combatting discrimination

Gendered language and employment Web sites: How search algorithms can cause allocative harm

Karin van Es
Utrecht University

Daniel Everts
Utrecht University

Iris Muis
Utrecht Data School

Source: <https://firstmonday.org/ojs/index.php/fm/article/view/11717>

- Bias detection
- Debiasing and bias mitigation
- Increased replicability and accuracy
- Training, diversity, inclusion
- Monitoring and impact assessment



Thank you!

✉ raphaele.xenidis@jur.ku.dk

🐦 @raphaelexenidis

Special report on algorithmic discrimination in Europe

Janneke Gerards and Raphaële Xenidis (2021)

Available at:

[https://op.europa.eu/en/publication-
detail/-/publication/082fdbc-821d-11eb-9ac9-01aa75ed71a1](https://op.europa.eu/en/publication-detail/-/publication/082fdbc-821d-11eb-9ac9-01aa75ed71a1)

