Artificial Intelligence & EU citizens/consumers

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AI and the Internet: convergent evolutions

• Artificial intelligence reaches maturity
  • From human-made representations of knowledge and logical inference, to data-driven machine learning from examples and correlations
  • A unified paradigm: logic merges with statistics and neuro-science

• The Internet reaches maturity:
  • From an infrastructure for human communication to a global interconnected data infrastructure,
  • From access to passive information to active algorithmic intermediation
AI and the Internet: convergent successes

• AI: From toy examples to a host of real applications:
  • speech and image recognition, question-answering, recommendation, translation, planning, autonomous mobile robots, etc.

• The Internet: From message exchanges to the universal medium for any private and public services
  • shopping, banking, pay taxes, get benefits, information seeking, access to knowledge, social networking, etc.
What AI does and wants

• What AI does
  • apply learning methods to vast sets of examples to discover correlations
  • make classifications and predictions based on correlations and data
  • learn from past successes and failures in classifying and predicting

• What AI wants
  • the largest sets of examples
  • Including as much data as possible to discover new correlations
What the Internet does and want

• What the Internet does
  • enable human interaction
  • link billions of connected devices
  • collect all kind of data from physical and virtual environments

• What the Internet wants
  • services, providing intelligent and individualised solutions
  • the ability to extract useful knowledge from data
The great convergence

• The Internet provides AI with data
• AI enables the Internet to exploit the data
Data-hungry AI meets data-abundant Internet

- Pervasive data collection
- Learning from big data
- Ubiquitous algorithmic intelligence

Admiral to price car insurance based on Facebook posts

Insurer’s algorithm analyzes social media usage to identify safe drivers in unprecedented use of customer data

Acxiom: A Single View powered by AbiliTec
The Internet & AI: the promise

• overcome the information overload
• world-wide generation and distribution of knowledge and solutions
• economic efficiency, wealth creation
• cost-effective, individualised private and public services
• environmental-friendly management of utilities, traffic, logistics
• support for transparency, overcome bias and discrimination
• Etc.
The Internet + AI infrastructure: The catch

- Data collection/analysis/surveillance
- We cannot get out of the infrastructure
- We cannot effectively resist/contest influence and manipulation
Ethics and law violations by AI + Big Data

By 2018, 50% of violations of business ethics will be performed by algorithms

Gartner 2016
What drivers for AI

AI is in principle innocent, it only pursue the goals it is assigned

• By profit-making actors
  • Efficiency, cost reduction, better services
  • Anticipate/control/direct behaviour (to sell goods and services)
  • Two sided markets: capture user, to send them advertising, suggestions, and services, get revenue from advertisers-persuaders

• By governmental actors
  • Efficiency, costs reduction, better services
  • Anticipate/control/direct behaviour (for security and other purposes)
But impacts on individual and society are not always good!
A value-based approach to regulating AI

A disrupting flow of innovations, generates multiple and diverse legal/social issues

How to proceed:

• Start from first principles

• Promote valuable socio-technical practices through tailored regulations and technologies

• Adapt existing legal frameworks, multi-layered regulation
What answers?

• Regulation
  • Smart regulation to direct the use of AI by private and public organisations
    • https://artsy.eui.eu/

• Empowerment
  • Make the power of AI available to citizen and civil society
    • https://claudette.eui.eu/
The legal-ethical framework: rights and social values

• Human/fundamental rights:
  • privacy, data protection, dignity, autonomy, freedom of expression, non-discrimination, equality, participation

• Social/economic goals:
  • welfare, competition, efficiency, science, art and culture, cooperation, civic dialogue, democracy
The legal framework: Multiple sectorial legal regimes and principles

• Data protection law
  • Principles: lawfulness, fairness and transparency; purpose limitation; data minimisation, accuracy; integrity and confidentiality; accountability; legitimate interest, data subject rights, etc.

• Consumer protection law
  • Principles: Protection of the weaker party, Regulated autonomy, Non-discrimination, etc.

• Competition law
  • Principles: fair competition, consumer welfare, etc.
Synergy and tensions: EDPS (Opinion 8/18)

- **Consumer** and **data protection law** share common goals of redressing imbalances of informational and market power
- Together with **competition law**, data protection and consumer protection need to work to ensure that people are treated fairly.

An issue: are personal data a tradable property?
- Can a consumer pay with his or her data? What about revocable consent under GDPR? What about privacy as a fundamental right?
What interests/rights are at stake

• Privacy-data protection
  • to lawful and proportionate processing of personal data, to control processing

• Fair algorithmic treatment
  • not to be subject to unfair differentiated treatment

• Algorithmic transparency
  • to know why a certain algorithmic response or decision has been given

• Interest in fair algorithmic interaction
  • not to be misled or manipulated

• Interest in fair algorithmic (cognitive) competition
  • Interest in accessing data sources and algorithms that are available to big players
Focus on risks for consumers

• Unfair algorithmic decisions
• Unfair, excessive data processing/profiling
• Limitations on consumers’ autonomy
• Discriminatory/unfair/ aggressive/exploitative advertising
• Filter bubbles/echo chambers
• Information asymmetry; arbitrary power
• Exploitation of vulnerabilities
• Opacity, inability to contest
• Risk of erroneous diagnoses, suggestions
Issue: Price discrimination

• AI enables sellers to figure out the highest price a client can pay.

• Should there be price discrimination in consumer retail markets? For what good/service, on what grounds?
  • cost structures, risks
  • spending capacity, needs, interests, vulnerabilities

• Normative standards:
  • Consumer protection law: is it unfair/discriminatory?
  • GDPR: is it an automated decision, is there a legitimate interest?
  • Competition law: does this affect competition?
Issue: Discrimination in algorithmic offers

• What if different people are offered different opportunities
  • Men getting better loans, women better insurance
  • People of certain ethnicity being more often refused opportunities

• What if the AI system has “innocently” learned to apply differential treatment
  • based on previous practice
  • to achieve a business purpose

• What legal solution
  • Data protection law: legitimate purpose, sensitive data, consent?
  • Consumer protection law/discrimination law: unacceptable discrimination?
Issue. Targeted advertising/malicious nudging

• AI can deliver each consumer the ads that most trigger purchasing, depending on:
  • how well they match consumer’s needs and interest
  • how well they exploit consumer’s vulnerabilities (e.g., predatory loans to people in difficulties, gambling offers to gambling addicts, drugs to depressed people)

• What legal solution?
  • When is it permissible? When a prevailing “legitimate interest”?
  • When does it “materially distort the economic behaviour of consumers”
Issue: Aggressive personalised advertising

• What if personalized advertising, to maximize clicks and revenues, exploit individual vulnerabilities (economic hardship, propensity to gambling, etc.)
  • This may be non-intentional, as the system may aim to use any factors correlated to clicks and purchases, regardless of the impact on consumer’s interests

• Data protection law: Is exploiting vulnerabilities acceptable?

• Consumer protection law: does it count as “aggressive advertising”
Issue: Discrimination in Ad delivery

- Systems meant to address Ads and offers to those who are most probably interested in them may reproduce biases and discrimination
  - Offers for top jobs to male people
  - Offers for houses to those who match current ethnic ownership

- Maybe no data protection issue
- But is there a discrimination issue?
Issue: “Turn off” personalization?

• Personalised treatment of consumer can provide the with advantages, but also disadvantages
• Should the consumers know that they profiled, for what specific purposes?
• Should consumers be offered the option to trade and purchase anonymously?

• The GDPR allows consumer to withdraw consent and object to profiling. Is there a right to trade anonymously?
Issue. Rights to information/transparency

• Have (should have) consumers a right to know that they are offered personalised prices? Calculated in what way?

• Have (should have) consumers a right to know that their treatment is dependant on the tracking of their behaviour, and on consequent classifications/profiling? With what impacts?

• Data protection law: information obligations on data controllers
• Consumer protection law: information obligations on suppliers
• What about platforms?
Other issues to be addressed

• Right to procedural regularity
• Right to substantive legality
• Right to explanation/justification
• Right to have a human answer
• Right to be protected from abusive manipulation
• Liabilities for mistaken decisions/advice
Empowering civil society?

• Remedy the imbalance for AI-powered platforms and suppliers through citizen and consumer-empowering AI
  • Protection against unwanted monitoring
  • Support in detecting unfair/unlawful use of AI
  • Control over fairness of commercial practices

• Some examples:
  • Spam filters
  • Ad-blocking tools
  • Anti-tracking tools
  • Price comparison platforms
  • Detection of, and response to, violations of law and ethics

• Should consumer-empowering initiatives be supported and incentivised?
Detect, and respond to, violations of law and ethics

• AI can contribute to address online violations:
  • Unlawful and unethical behaviour on line is often unnoticed, rarely acted upon.
  • AI can facilitate cost-effective prevention/detection/reaction

• The AI-empowerment should be available to those who most need it:
  • Commercial actors, and resourceful individuals already use AI to apply the law
  • This opportunity should be open to citizens and civil society!
What about privacy policies and terms of service?

• Most online terms of service and privacy policies contain unlawful/unfair clauses, or miss relevant information:
  • Consumers agree but don’t read
  • NGOs (consumer organisations) lack resources

• AI can contribute:
  • AI support to citizens and civil society to detect and react
  • An example: An automatic detector of unfair clauses in online contracts and privacy policies: https://claudette.eui.eu/
Thanks for your attention

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