cerre TOWARDS HUMAN-CENTRIC AI

5 DECEMBER 2023 SPARKS, BRUSSELS

A PUBLIC DISCUSSION & REPORT LAUNCH







CERRE Team



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Bruno Dumas is Professor at the computer science faculty of the University of Namur, and the current co-president of the Namur Digital Institute (NADI). He and his team are working on human-computer interaction, multimodal interfaces, augmented/mixed reality and explainable AI.



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PANEL DISCUSSION



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ACADEMIC PRESENTATION







EU regulations seek to impose "explainability"

Al Act

""fully understand the capacities and limitations", "correctly interpret output" "clear and meaningful explanation "

GDPR

"meaningful information about the logic involved"

DSA

"main parameters"
"meaningful explanations
of the logic used"
"easily comprehensible"

P₂B

"main parameters"

"reasons for the relative importance"

"sufficient to enable ...users to obtain an adequate understanding

CJEU La Ligue des Droits Humains

No machine learning "predetermined criteria"; "able to understand how those criteria and those programs work"

Platform Workers Directive

"main parameters and the relative importance of those main parameters"

Online Terrorist Content

"meaningful explanation of the functioning"

Consumer Rights Directive

"main parameters determining ranking...and relative importance"







Explainability (XAI) is about the user

Different Audiences

Different goals



Human overseer

Data science/quality control teams

Regulators, auditors

Persons affected

Effective human oversight and trust in the technology

Detect biases, improve performance and security

Verifying compliance, finding biases, causes of errors, trust

Free choice/autonomy
Trust vs, misrepresentation
Know that you're dealing
with AI (GenAI!)
Contesting decisions

Regulation most needed here

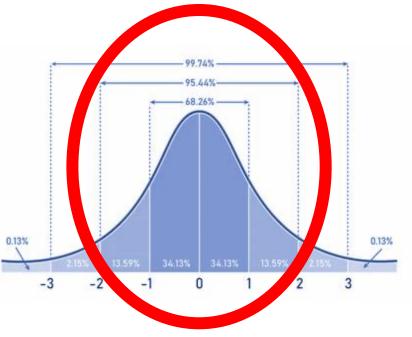






Can we design and measure an effective (or "meaningful") explanation?

- HCI methodology seeks to achieve measurable effectiveness
 - HCI is based on best available solutions that are effective for the most users.
 - Solutions are best efforts and dynamic, evolving as feedback is received
 - "Risk based" approach so not all users happy.



- → Our idea: HCI can be good proxy for "meaningful" explanations
 - Not currently recognised by most regulators
- → Proposed regulatory solution: guidelines encouraging sound HCI methodology as a proxy for measuring "meaningful" XAI





Explaining AI is all about trade-offs

- No free lunch on explainability
- Explainability vs. performance: choice of more understandable model even if some cost in predictive accuracy
- Explainability vs. human cognitive
 biases: some explanations can make
 users worse off
- Explainability for majority vs.
 explainability for populations at either
 end of the bell curve
- Explainability vs. trade secrets, data security, adversarial attacks







Conclusions:

First:

1. Identify which user group(s) and which goal(s)

1. HCI approach "best effort"- effective for most, but not all, users

1. Trade-offs: identify, discuss with stakeholders, and document

Only then:

Go design your XAIs!







Link to the report



Title: Meaningful XAI based on User-Centric Design Methodology



Authors: Winston Maxwell, Bruno Dumas



Now moving to the panel...

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Speakers on the panel









Katarzyna Szymielewicz
President of Panoptykon
Foundation

Alberto Pena Fernandez

Head of Unit, European

Centre for Algorithmic

Transparency (ECAT),

European Commission

Karen Melchior

Member of the
European Parliament,
Renew Europe,
Denmark

Jeremy Rollison
Senior Director, EU Policy,
Microsoft



Final word - upcoming events

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DIGITAL PLATFORMS SUMMIT

17 JANUARY 2024

10:30-18:00 CET

FONDATION UNIVERSITAIRE, RUE D'EGMONT 11, BRUSSELS







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