AWARENESS CARDS

These cards are a *civic thinking and doing* tool for exploring how decisions are made by algorithms and the impact that they have on our lives.

Use the cards to start conversations and activities to inspire new ideas which can tackle the bias, racial and gender profiling and misinformation often hidden in algorithmic decisions.

Algorithms are everywhere, affecting our lives and privacy, dictating our news feeds, internet searches, who gets a job interview, who gets a bank loan, and many other things that we do. They affect us not just as individuals, but as communities and societies too.

- What are the relationships between data, rights, values and other factors in algorithmic systems?
- How do we know when, where, how and why bias, unfairness or untrustworthy decisions and outcomes are taking place?

There are no right or wrong ways to use this deck, use them in any way suits you or your group best. This leaflet suggests a few to get you going.

Critical Thinking Skills

Use the cards to help people develop critical thinking skills. They help analyse *how* and *why* decisions are made: what role algorithms and data sources play in automated systems; where and how bias, unfairness and untrustworthy occur; and what their effects might be.

What Are Algorithms?
Put simply, an algorithm is a process or list of rules to follow in order to complete a task: such as solving a problem, doing a calculation or making a decision. The cards are designed to help people develop key critical skills in analysing and interpreting how and why decision making takes place, as well as the impacts and consequences it can have.

Why is this important?
Decisions about our lives are made by systems that are increasingly being automated. The cards can help build awareness of where and how such decisions occur. They also help to develop critical thinking capacities about whether or not the decisions may be biased, and what factors might motivate any discriminatory or unfair outcomes.

Getting Started

There are eight suits of cards – you can use the whole deck or pick individual suits or combinations.

The ***Example*** cards are ideal to introduce and frame the issues of bias, trust and fairness in algorithmic systems with real world examples.

The ***Data***, ***Rights***, ***Values*** and ***Factors*** cards can be used as specific discussion topics that encompass wider themes and issues affecting society. They can also be used with the ***Process*** and ***Exercise*** cards to add depth to the discussion and to provide further stimulus and inspiration.

The ***Process*** and ***Exercise*** cards suggest a range of activities for participants to explore the issues in different ways: from the analytical to the experiential, the logical to the discursive, the solitary to the social. Participants can draw upon their own experiences, or on stories and reports they have encountered in the media. The Exercises provide oportunities for role play, improvisation, collaboration and shared experiences of bias, fairness and trust.

Topics of Investigation

Teachers and educators can use the cards for debates and activities in classes or workshops in different subjects and across the curriculum:

- What decides the stories in our news feeds?
- Why do we trust the media?
- How can we detect bias in historical sources?
- Recognising how bias affects your daily life.
- Acknowledging your own biases.
- Investigating the consequences of your own bias.
- How do you know if you have acted fairly?
- What makes us trust social media?
- How are agorithms created and used in computer science?
- Addressing bias when writing computer programmes.
- Are search engines trustworthy?
- How can we discern facts from opinions?
- How can you collect, analyse and represent data to prevent bias?
- Can you prevent bias in statistics?
- How do you identify information sources that are reliable and trustworthy?
- How does bias affect the use of data and graphs in different subjects?

Games & Play

Use the cards playfully: adapt a game you already know as a way of familiarising yourself and others with the issues and starting conversations. For instance:

HAPPY FAMILIES – Shuffle the deck and deal them out amongst the players. Players then take turns to pick a card from the player next to them. When a player has 4 cards from any of the same suits they can lay them down. The aim is to have as many suits of 4 as possible.

TRUMPS – Pick an Example Card place it face up. Select the Data, Rights, Factors and Values Cards, shuffle them and deal them out among the players. Players then take turns to add their cards on top explaining why they are relevant to the Example. The winner will have put down the most relevant cards per example.

GUESS WHO? – Use the Data, Rights, Factors, Example and Values cards. Shuffle them and deal each player a card. Players then take turns in asking each other one question to try to work out which card each player has. The correct guess wins the card, the aim being to win as many cards as possible.

A Public Civic Dialogue

UnBias has initiated a public civic dialogue on bias, fairness and trust in online and algorithmic systems. Our Fairness Toolkit is not just for critical thinking, but for *civic thinking* – supporting a collective approach to imagining our shared future. We aim to contrast with the individual atomising effect that digital technologies often cause. You can participate using other tools:

- Complete an UnBias **TrustScape** with your thoughts, feelings and hopes and share online.
- Use an UnBias **MetaMap** to respond to other people's TrustScapes (shared online), especially if you work in the IT industry.
- Use an UnBias **Value Perception** worksheet to explore and map the value and benefit to you of taking part in the public civic dialogue.

http://unbias.wp.horizon.ac.uk/fairness-toolkit

We welcome any feedback or suggestions for improvements and additions. Send your ideas, images, photos or comments to:
unbias@cs.ox.ac.uk

Example – 12 real life examples of algorithmic bias, unfairness and untrustworthiness.

Process – 8 "Be the Algorithm" cards: what are the inputs, steps and factors which influence an algorithm and the consequences of its decisions?

Exercise – 8 dynamic group activities for exploring how bias, trust, prejudice, unfairness and discrimination operate.

Data – 12 cards describing types of personal data we share across platforms and services.

Values – 10 cards with over one hundred values that typically motivate people in everyday life.

Rights – 8 cards summarising key rights upheld by United Kingdom law: *human rights*, *disability rights*, *equality rights*, *consumer rights*, *employment rights*, *data protection rights*, *health and safety*; and *patient rights*.

Factors – 4 cards describing common factors which affect decision-making – whether human or machine-automated: *bias & prejudice, discrimination, trust* and *fairness*.

Glossary – a simple explanation of what an algorithm is.

UNBIAS FAIRNESS TOOLKIT

These cards are part of a fairness toolkit created to promote awareness of bias, fairness and trust in algorithmic systems, and to stimulate a *public civic dialogue* about how algorithms shape our behaviours and society.

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Sources: Citizens Advice; Equality & Human Rights Commission; UK Information Commissioner; National Health Service; Health & Safety Executive; The Guardian; Gizmodo; Arstechnica; ProPublica; Bloomberg; IEEE; BBC Bitesize.

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