Computing

# Lesson 7: Ethics

**Impact of Technology**

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# Task 1 - Ethical questions (1 of 2)

Read the four ethical dilemmas and write what other **questions** these ethical dilemmas bring up for you.

| Ethical questions | What other questions does this bring up? |
|---|---|
| **Example**<br>Should people be kept artificially alive permanently if they are in a coma, have no prospect of 'waking up', and no 'quality of life'? | • Who decides what constitutes 'quality of life'?<br>• Who should have responsibility for other people's lives?<br>• What else could be done with the resources that are keeping this person alive?<br>• Should the family be involved in the decision? |
| A coach offers an elite athlete 'supplements' that cannot be detected in drug tests and can enhance performance. Is it fair to take them? | |

# Task 1 - Ethical questions (2 of 2)

Read the four ethical dilemmas and write what other **questions** these ethical dilemmas bring up for you.

| Ethical questions | What other questions does this bring up? |
| --- | --- |
| Should people be able to select the sex of their child in advance? | |
| How should we decide who receives organ transplants? | |

Read the passage and answer the questions based upon what you have read.

Algorithms are becoming more involved in **making decisions for society**, and the ethical questions raised are to do with power and control over content and the results of the algorithm's decisions. Some of these decisions can have **long-term** effects on society and culture.

Algorithms are sets of rules, but someone must write those rules, and this gives them power over the results.

Algorithms control the content that we see online, on social media, or when searching with Google. In the case of Google, the algorithms that they write control **the way that many of us find information**, so there is an ethical question about how much control they have. Content online is assumed to come from an algorithm, but this may not always be the case, and the content that we see can greatly affect our mood.

# Task 2 - Ethics and algorithms (2 of 5)

In 2012, Facebook was found to have conducted social experiments in which news feeds were filled with **large amounts of positive or negative content** and the users' behaviour was tracked. When we go to our news feed, we trust that the content is not being tampered with, but this wasn't the case with Facebook.

The decisions that algorithms make can affect people in the long term. If an algorithm follows a set of rules and mistakenly labels someone as a terrorist, for example, that can be very damaging.

This can lead to long-term mental health or well-being issues for the person involved. Algorithms can seem to be unbiased, as they are just following set rules, but it is important to consider the biases of the humans who wrote the algorithms or the data they work with. The Met Police Gangs Violence Matrix (GVM) was accused of being racist by **Amnesty International**; the system stored the information of around 300 people who were all thought to be involved in **gang-related crimes**, but 72% of these people were non-white.

# Task 2 - Ethics and algorithms (3 of 5)

After an investigation, this was found to be caused by the fact that police reports about **non-white individuals** were a lot more likely to be marked as gang-related. Algorithms can inherit biases from their rules or from the data that they use to make their decisions.

Using algorithms to make decisions places **power** in the hands of the algorithms' creators to control the content that we see, or to influence the decisions that the algorithm makes.

The decisions made can have long-term effects on people's **health and well-being**.

# Task 2 - Ethics and algorithms (4 of 5)

| Questions | | Answer |
|---|---|---|
| 1 | What are algorithms becoming involved in? | |
| 2 | What type of effects can the decisions influenced by AI have on society? | |
| 3 | What is the main thing that Google's algorithms control? | |
| 4 | What social experiment did Google conduct in 2012? | |
| 5 | Which organisation accused the Met Police Gangs Violence Matrix (an algorithm-led system) of being racist? | |

# Task 2 - Ethics and algorithms (5 of 5)

| | Questions | Answer |
|---|---|---|
| 6 | What type of crime were the people in the Met Police matrix suspected of being involved in? | |
| 7 | Which individuals' crimes were more likely to be marked as gang-related? | |
| 8 | Where can algorithms inherit bias from? | |
| 9 | What does the use of algorithms to make decisions give to the creators? | |
| 10 | What can this have long-term effects on? | |