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# 16+ Scholarship Examination

**Subject: Ethics Paper**

**Time: 1 hour**

**You must have:**
Lined paper

**Total Marks**

25

**Instructions**
Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name.
You are required to read the article and then answer the question in relation to it.

**Information**
- The total mark for this paper is 25.

**Advice**
- Read article carefully before you start to answer the question.
- Keep an eye on the time.
- Write your answers neatly and in good English

Read the following article, which has been edited, from www.theconversation.com

## Large-scale facial recognition is incompatible with a free society

In the US, tireless opposition to state use of facial recognition algorithms has recently won some victories.

Some progressive cities have banned some uses of the technology. Three tech companies have pulled facial recognition products from the market. Democrats have advanced a bill for a moratorium on facial recognition. The Association for Computing Machinery (ACM), a leading computer science organisation, has also come out against the technology.

Outside the US, however, the tide is heading in the other direction. China is deploying facial recognition on a vast scale in its social credit experiments, policing, and suppressing the Uighur population. It is also exporting facial recognition technology (and norms) to partner countries in the Belt and Road initiative. The UK High Court ruled its use by South Wales Police lawful last September (though the decision is being appealed).

Facial recognition has many uses.

It can verify individual identity by comparing a target image with data held on file to confirm a match – this is "one-to-one" facial recognition. It can also compare a target image with a database of subjects of interest. That's "one-to-many". The most ambitious form is "all-to-all" matching. This would mean matching every image to a comprehensive database of every person in a given polity.

Each approach can be carried out asynchronously (on demand, after images are captured) or in real time. And they can be applied to separate (disaggregated) data streams, or used to bring together massive surveillance datasets.

Facial recognition occurring at one end of each of these scales – one-to-one, asynchronous, disaggregated – has well-documented benefits. One-to-one real-time facial recognition can be convenient and relatively safe, like unlocking your phone, or proving your identity at an automated passport barrier. Asynchronous disaggregated one-to-many facial recognition can be useful for law enforcement – analysing CCTV footage to identify a suspect, for example, or finding victims and perpetrators in child abuse videos.

However, facial recognition at the other end of these scales – one-to-many or all-to-all, real-time, integrated – amounts to face surveillance, which has less obvious benefits. Several police forces in the UK have trialled real-time one-to-many facial recognition to seek persons of interest, with mixed results. The benefits of integrated real-time all-to-all face surveillance in China are yet to be seen.

And while the benefits of face surveillance are dubious, it risks fundamentally changing the kind of society we live in.

Most facial recognition algorithms are accurate with head-on, well-lit portraits, but underperform with "faces in the wild". They are also worse at identifying black faces, and especially the faces of black women.

The errors tend to be false positives – making incorrect matches, rather than missing correct ones. If face surveillance were used to dole out cash prizes, this would be fine. But a match is almost always used to target interventions (such as arrests) that harm those identified.

More false positives for minority populations means they bear the costs of face surveillance, while any benefits are likely to accrue to majority populations. So using these systems will amplify the structural injustices of the societies that produce them.

Even when it works, face surveillance is still harmful. Knowing where people are and what they are doing enables you to predict and control their behaviour.

**Offer an assessment of the benefits and disadvantages of introducing this kind of widespread surveillance technology into Kenyan society. [20 marks]**

In your answer be sure to explore the 'ethical' issues that are associated with technology of this kind; along with the practical implications of its introduction.

You will be assessed on your ability to produce a cogent argument that offers a degree of balance. You must offer a justified conclusion, in-line with the logical argument that you have presented in your response.

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