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Date of publication – 4th December 2023

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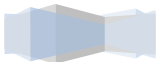
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Q1. Even though India has made significant strides in lowering maternal and infant mortality, there is still more work to be done in the area of maternity and neonatal healthcare. Analyse critically.

- **Paper & Topic: GS II → Government Policies and Interventions**
- **Model Answer:**
- **Introduction:**
 - Maternal and newborn health in India today is a complicated problem with both obstacles and advancements. The reduction of the Maternal Mortality Rate (MMR) in India during the past 20 years has been a success. India had a very high MMR in 1990, with 600 women dying during childbirth for every 100,000 live births. However, between 2018 and 2020, the MMR decreased to 97 fatalities per 100,000 live births. Similar improvements have been made in the infant mortality rate (IMR), which decreased from 35.2 deaths per 100,000 live births in 2019–2021 to 26.6 in 2023.
 - **Maternal mortality in India has drastically decreased as a result of government measures like these:**
 - Under the Reproductive, Maternal, Newborn, Child, and Adolescent Health Plus Nutrition (RMNCAH+N) plan, coordinated efforts have been conducted. As a result, India has successfully reached the significant milestone of lowering the Maternal Mortality Ratio (MMR) to under 100 per lakh live births by 2020, as stipulated in the National Health Policy 2017.
 - The Pradhan Mantri Surakshit Matritva Abhiyan has contributed to an improvement in the scope and calibre of diagnostic and counselling services in addition to offering free, comprehensive, and high-quality antenatal care.
 - The government's flagship effort to enhance nutritional outcomes, POSHAN Abhiyaan, has pregnant women as one of its primary target populations.
 - In order to provide complete RMNCAH+N services, more than 25,000 "Delivery Points" throughout the nation have been improved in terms of infrastructure, tools, and trained personnel. As a result, institutional deliveries in India grew significantly from 79% in 2015–16 to 89% in 2019–20.
 - The Pradhan Mantri Matru Vandana Yojana (PMMVY), a direct benefit transfer (DBT)



programme under which monetary payments are immediately delivered to pregnant women in their bank accounts to satisfy increased nutritional demands, was established by the government to ensure a pregnancy free from financial worries.

- To reduce anaemia prevalence from both nutritional and non-nutritional causes using a lifetime approach, the Anaemia Mukht Bharat plan was introduced. According to estimates, the policy will benefit 450 million people, including 30 million expectant mothers.

- **The following activities have improved newborn healthcare:**

- For the care of unwell and small babies, First Referral Units (FRUs)/Community Health Centres (CHCs) have created New-born Stabilisation Units (NBSUs) and unwell Newborn Care Units (SNCUs) at the District Hospital and Medical College levels, respectively.

- In order to protect children from serious illnesses like tuberculosis, diphtheria, pertussis, polio, tetanus, hepatitis B, measles, rubella, pneumonia, and meningitis, the Universal Immunisation Programme (UIP) is being implemented.

- For the treatment and management of children with severe acute malnutrition (SAM), nutrition rehabilitation centres (NRCs) are established at public health facilities.

- To increase mother and child survival rates and health outcomes, several health care provider capacity-building initiatives are implemented.

- **However, despite significant progress, a number of issues still exist, including:**

- Access to healthcare: Basic healthcare facilities are sometimes lacking in rural and isolated locations, and even when they are present, they may not be manned by licenced medical professionals. In addition, social and cultural barriers may make it difficult for women and children to get healthcare.

- Socio-economic variables: These variables are crucial for the outcomes of maternal and neonatal health. Women who hail from rural areas, low-income households, or marginalized populations are more at risk due to limited access to healthcare and financial resources.

- Regional variations: The availability of healthcare services varies significantly between the areas. As a result, maternal and neonatal care varies throughout states. For instance, Kerala has the lowest MMR of 19 per lakh live births, while Assam has the highest MMR of 195.



- **Service calibre:** There is a dearth of qualified healthcare professionals, proper infrastructure, and basic medical supplies in many areas of the nation, especially isolated ones.
- The health of the mother and child is further impacted by high levels of poverty, illiteracy, early marriage, and frequent pregnancies.
- **Moving ahead:**
 - Ensuring universal access to a range of life-saving therapies, such as vaccination, contemporary family planning techniques, and the attendance of a trained professional at every birth. This will assist in bridging the gaps between the wealthy and the poor, as well as between ethnic groups and socioeconomic class.
 - To assess the effectiveness of healthcare initiatives, in-depth analyses and surveys are also urgently needed.
 - All healthcare facilities (including those in the public, nonprofit, for-profit, and corporate sectors) must conform to minimum quality standards that should be established as basic guidelines.
 - To ensure high-quality neonatal care and follow safety requirements, healthcare workers must get regular training and continuing medical education.
 - SDG 3 targets to lower neonatal death to 12 per 1,000 live births and the global maternal mortality ratio to less than 70 per 100,000 live births by 2030. A multisectoral strategy that includes governance, public awareness, policymaking, and strengthening the health sector at all levels of the public and private health delivery systems is required now more than ever to meet these goals.

Q 2. What do you mean when you say "bacteriophages"? Talk about the benefits and drawbacks of utilising bacteriophage to treat bacterial illnesses.

- **Paper & Topic:** GS II → Biotechnology related issues

- **Model Answer:**

- **Introduction:**

- Bacteriophages are also referred to as phages or beneficial viruses.

They hunt down



bacteria, adhere on the surface of the bacterial cell, and then inject viral DNA inside the cell to complete their work. The bacterial DNA replication machinery may occasionally be used to help the viral DNA reproduce inside the bacterium. When the bacterial cell has produced enough fresh viruses, it explodes and releases the fresh viral particles.

- **Benefits of treating bacterial infections with bacteriophages include:**

- **Combating antibiotic resistance:** The emergence of bacterial strains that are resistant to antibiotics is one of the biggest medical problems facing the world today. Since bacteriophages are effective against bacteria that have developed antibiotic resistance, this has raised interest in them.

- **Minimal disturbance of the microbiome:** Phages have little effect on the regular flora bacteria that safeguard our health because of their host specificity. Contrarily, a lot of chemical antibiotics, which usually have a wider range of activity, are prone to causing superinfections.

- **Low toxicity:** Phages are naturally harmless because they are mostly made of nucleic acids and proteins. Additionally, they are not harmful to the environment, plants, or animals.

- **Phages are adaptable in nature and can be used in a variety of formulations,** including the combination with certain antibiotics. They are suitable for the majority of administration routes and have a variety of application forms, including liquids, creams, impregnated solids, etc.

- **Potential for a single dose:** During treatment, phages multiply and grow in quantity on their own; as a result, just one dose may be required. By lowering the phage doses necessary to achieve efficacy, this might lower treatment costs.

- **Phages are natural products;** hence, the public's resistance to genetically modified organisms (GMOs) or pharmaceuticals made in a lab shouldn't also apply to naturally occurring phage products.

- **Phages are regarded as a 'intelligent' substance.** At the infection site, they grow until there are no longer any bacteria. They then expel them.

- **Using bacteriophages to treat bacterial infections has certain drawbacks:**

- **There should be no standardisation in treatment;** phage therapy needs to be specifically tailored to the microorganisms that infect patients. But the lack of therapeutic standardization is a major issue.



- Data are scarce and occasionally contradictory or unfavourable about the use of bacteriophages to treat bacterial illness in humans.
- Administering phages is more challenging than administering antibiotics. To administer and utilise phages appropriately, a doctor needs particular training.
- Not all phages are useful as medicines; it may be challenging to locate the precise phage required to treat an infection. Additionally, there might not be sufficient variety among phages to treat all bacterial diseases.
- Emergence of bacterial resistance against bacteriophages is a risk that could materialize since bacteria already have or have the capacity to develop a number of defence mechanisms against viral infections.
- Immune system reaction worries: When injected into the bloodstream, phages are recognised by the human immune system. Some of them are immediately expelled, and the body eventually starts to generate antibodies to the phages. This suggests that a particular kind of phage can only be utilised intravenously once.
- Numerous characteristics of bacteriophages as antibacterial agents make them attractive substitutes for pharmaceutical antibiotics. By choosing the right phage, creating an effective formulation, and increasing clinician knowledge and comfort with product delivery, concern about phage therapy can be resolved.

Q 3. What are the primary objectives of the ISRO Aditya L1 mission? throw some light on the significance of the mission.

- **Paper & Topic: GS III → Science and Technology**
- **Model Answer:**
- **Introduction:**
- Aditya L1 is the first space-based Indian mission to study the Sun. At the Sun-Earth system's Lagrange point 1 (L1), 1.5 million miles from Earth, the spacecraft will be placed in a halo orbit. The ability to continuously view the Sun free from eclipses and occultation is the primary advantage of having a satellite in the halo orbit around the L1 point. In an attempt to discover more about the Sun's magnetic field and atmosphere, the mission will study it up close.



- **The primary objectives of ISRO's Aditya L1 mission are as follows:**

- Finding out more about our nearest star and how its radiation, heat, particle movement, and magnetic fields affect us is the main objective of the project.
- The highest atmospheric regions of the Sun, the chromosphere and corona, will be studied by the mission's payloads.
- The mission will also study flares, the physics of partly ionised plasma, coronal and chromospheric heating, and the origin of coronal mass ejections.
- The mission will monitor the in-situ particle and plasma environment to collect data for the study of particle dynamics from the Sun.

- **Measurements of the coronal and coronal loop plasma's temperature, velocity, and density:**

- The project aims to delineate the sequence of events that culminate in solar eruptive events at different solar levels.

- **Measurements of the solar corona magnetic field and the structure of the magnetic field:**

- The mission will also look at the origins, composition, and behaviour of solar wind as well as other space weather-related factors.

- **The importance of the Aditya L1 mission can be seen as:**

- Knowing the nearest star: The Sun is much closer to us than other stars, allowing us a much closer look at it. Comprehending the Sun's surroundings and atmosphere can also help us learn more about the evolution of the solar system's components and other stars.
- New information about the sun: Using electromagnetic and particle field detectors, four of the mission's seven payloads—the photosphere and chromosphere—will investigate the Sun's outermost layers. The most crucial information for comprehending pre-flare, flare activity, coronal mass ejection, and coronal heating, as well as their characteristics, is expected to be carried by the Aditya-L1 payloads.

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- Some outstanding issues in solar physics: One of the most important issues in solar physics research is the discrepancy between the Sun's high atmosphere, which is 1,000,000 K hot, and its lower atmosphere, which is only 6,000 K hot. The Aditya-L1 mission will address some of the outstanding problems in solar



physics and provide a complete understanding of the dynamical functions of the Sun.

- The precise way in which the Sun's radiation affects the short- and long-term dynamics of Earth's atmosphere is unknown. Furthermore, the Sun displays a variety of explosive occurrences in addition to supporting all life on Earth. These might interfere with our satellite systems and communications. By observing the Sun, early warnings for such events could be given.
- Raising India's profile in space exploration: Following the recent successful landing of Chandrayaan-3's Vikram lander on the moon's south pole, the entire world was in awe of ISRO's achievements. With the successful completion of the Aditya L1 mission, India's standing in space exploration will rise, providing greater confidence for next missions.
- The largest payload on board the Aditya L1 is the Visible Line Emission Coronagraph (VELC), and its presence is important. The ability to observe the solar corona thus near to the solar disc is unique to VELC, the only solar coronagraph in space. It can also perform imaging, spectroscopy, and polarimetry all at once, in addition to capturing very high resolution observations. There's a chance that this ability may revolutionise solar astronomy.
- All of the planets, asteroids, and cosmic dust are drawn into the gravitational field of the Sun. The properties of the sun and its erratic gaseous eruptions have long captivated astronomers. In this sense, the data acquired by the Aditya L1 mission spacecraft will aid in our comprehension of the variables affecting space weather and could significantly change our conception of the dynamics of the Sun and space weather.

Q 4. Due to the intimate connection between agriculture and climate change, agroforestry may provide a solution to the problem of carbon emissions and the resulting climatic crisis. Examine.

- **Paper & Topic: GS III → Indian Agriculture**

- **Model Answer:**

- **Introduction:**

- Agroforestry refers to any of a broad range of land-use practises where crops or grazing are mixed with trees and shrubs. Agriculture accounts for around 30% of global greenhouse gas (GHG) emissions and is the primary cause





of 80% of deforestation in tropical regions.

Through the agricultural discipline of agroforestry, which maintains natural ecosystems, these unsettling trends may be reversed. Agroforestry has several benefits, including increased carbon sequestration, better soil structure and health, increased biodiversity, and increased yields from staple food crops.

- **The role of agroforestry in tackling the climate problem and reducing carbon emissions:**

- **Carbon storage:** One essential ecosystem service is the storage of carbon. Agroforestry practises can increase carbon storage in the soil and woody biomass. Similar to new forests, trees in agroforestry systems can replenish some of the carbon lost via the clearing of old forests.
- **Climate change adaptation:** Deforestation, tillage, and excessive fertiliser use are examples of unviable agricultural practises that have a negative influence on the ecosystem. Agroforestry has advantages for adaptability, but it can also significantly lessen the effects of climate change. For example, a study conducted in Kenya found that the use of agroforestry by small-scale farmers increased carbon storage and simultaneously improved livelihoods.
- **Improves air quality:** The agroforestry system is a sustainable agricultural practise since it uses zero-burning principles. Air pollution is one of the environmental problems brought on by the removal of forests to make way for monoculture systems. Agroforestry systems utilize zero-burning practises to improve air quality, such as turning animal and plant waste into organic fertilisers.
- **preserves soil health by using groundcover plants,** such as naturally existing grasses in agroforestry systems, to prevent erosion of deficient soil. Additionally, by blocking these processes with the help of tree roots and stems, it helps to reduce surface runoff, nutrient leaching, and soil erosion.
- **Enhanced biodiversity:** Compared to traditional agricultural systems, agroforestry systems frequently exhibit higher levels of biodiversity. It provides a more varied ecosystem than a standard agricultural system, with the tree component creating biological niches for a range of species both above and below ground.
- **Deforestation and forest degradation are thought to be responsible for around 12% of global greenhouse gas emissions,** according to estimates from the International Union for Conservation of Nature (IUCN). As a result, expanding the forest cover is crucial. Consequently, agroforestry can help reduce the existing pressure on wild forests while increasing the amount of trees and forest cover.



- As such, agroforestry systems play a significant role in the field by providing a multitude of ecosystem services that support sustainable agriculture practises. As per the Food and Agriculture Organization's (FAO) 2020 report, The State of the World's Forests, adopting agroforestry and sustainable production practises can help boost healthier diets, reduce food loss and waste, and restore the productivity of degraded agricultural lands.
- In 2014, India became the first country to implement a national agroforestry strategy. Agroforestry adoption among farmers has also been aided by actions taken to provide them with capacity building, financial support, and training. Adopting agroforestry techniques is necessary to reach India's lofty target of 33% tree cover and address the carbon emission issue.

Q 5. Under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, describe how unrestricted digital media could be a social, economic, and security risk to the country and how the rules might be beneficial in this case.

GS II

Government Policies and Interventions

- It is imperative to regulate digital media in light of recent events, such as the deplatforming of former US President Donald Trump following an altercation on Capitol Hill in the US and the more recent conflict between the IT ministry and Twitter over the removal of certain accounts related to the farm protests.
- **The 2021 Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules aim to achieve the following goals:**
 - to create a grievance redressal procedure in order to quickly resolve grievances.
 - to encourage openness and responsibility with regard to digital and social media platforms.
 - to ensure a certain level of uniformity in the rules governing media channels, including print, television, and online.



- **Addressing a possible danger to the social, economic, and security of the country:**

- It becomes susceptible to threats as a result. Under the terms of the interim grievance redressal system, the complaint may be acknowledged within 24 hours of receipt and handled within 15 days.

- **Resulting in the following ten categories of content that cannot be hosted:**

- "Endangers India's unity, integrity, defence, security, or sovereignty; harms friendly relations with other States; disrupts public order; incites the commission of any crime that is punishable by law; obstructs the investigation of any crime; or is offensive to any other foreign state";

- is defamatory, obscene, pornographic, paedophilic, racially or ethnically insulting, libellous, or invading upon another person's privacy, including bodily privacy;

- Concerning, endorsing, or motivating gaming, or behaving in a manner that defies or contravenes Indian legislation, etc.

- The content has to be taken down within 36 hours if it is declared illegal by a judge or the relevant government body.

- Chief compliance officer: an Indian national in charge of overseeing adherence to regulations.

- A monthly compliance report that details the complaints that are received, the measures taken in response to the complaints, and the content that was removed by a major social media intermediary on a proactive basis.

- The IT Act's existing penalties are among those imposed for violating these guidelines.

- Preserving Privacy: If intermediaries violate privacy, they would face the same penalties as other parties.

- OTT service censorship: Depending on the age suitability of the content, the government has made content creators self-classify into five categories. These categories include YouTube, Netflix, and other OTT service providers. These are U, U/A 7+, U/A 13+, U/A 16+, and A. Reputable age verification methods and parental controls for content rated "A" or above (U/A 13+) would need to be installed by platforms, along with parental controls for content classified "U."



- **Rebukes and Difficulties:**

- Instant messaging systems that rely on end-to-end encryption to safeguard the privacy of our communications would essentially lose their traceability as a result. This is problematic because the government can now require that every message received through WhatsApp or any other app that works similarly be associated with the user's identity.

- **Censorship:** In the absence of definite legislative backing, a system for content monitoring is being developed, which will progressively execute functions similar to those executed by the Ministry of Information and Broadcasting for television control. For example, this now includes the ability to ban content and censorship tools like apology scrolls, as per Rule 13(4).

- Everything about this is based only on an executive order; there is no legislative backing.

- Regulating social media could be a useful strategy for government control over protest.

- **In summary:**

- This could have detrimental effects considering how helpful these sites' anonymity feature is. While it's true that different opinions can be expressed on social media sites, Big Tech still needs to answer for its actions. Since the devil is frequently in the details, a careful balance must be struck in this regard. In this case, the regulations are compliant with the fiduciary duty recommendations made by the BN Srikrishna Committee.

Q 6. After summarizing the key findings of the fifteenth BRICS Summit, discuss the significance of the BRICS expansion for India.

GS II



- Approximately 16% of global trade, 24% of global GDP, and 41% of the world's population are accounted for by the BRICS alliance, which consists of the five largest rising economies in the world. The three pillars of economic and financial, cultural and people-to-people contacts, and political and security have brought the BRICS countries together over time to discuss important issues.
- **The 15th BRICS Summit held in South Africa has just concluded. The primary findings drawn from the Johannesburg II declaration are as follows:**
 - BRICS membership expansion: Six more countries—Argentina, Egypt, Ethiopia, Iran, Saudi Arabia, and the United Arab Emirates (UAE)—will be invited to become full members starting on January 1, 2024.
 - The declaration made a significant push for UN reforms, expressing BRICS countries' support for a wide-ranging reform of the UN that would also impact the Security Council for the first time in recent memory. They aim to increase democracy, representation, efficacy, and efficiency in addition to increasing the share of poor countries in the Council.
 - The members of the BRICS advocated for BRICS space cooperation, especially when it came to exchanging and utilizing satellite data for remote sensing. For the successful launch of Chandrayaan-3, India received praise from all five of the BRICS countries.
 - Systems of payment were discussed. The leaders are attempting to boost intra-BRICS payments done in national currencies as opposed to the US dollar, but not naming a BRICS currency.
 - Two of the Bretton Woods financial institutions, the World Bank and the IMF, are also urged to undergo change in the proclamation. This proposal also calls for developing countries and emerging markets to play a bigger role in these institutions, particularly in leadership roles.
 - Collaboration on other global issues: The wealthier countries of the BRICS agreed that they should enhance the ways in which climate change is implemented, particularly through increasing capacity, transferring technology for climate projects, and ensuring a sufficient and timely flow of affordable climate money.
- **Importance of the BRICS growth for India:**
- **The benefits of expansion:**



- In creating membership guidelines and establishing strategic alliances with new members, India was a pivotal player. With the backing of the new members, India will be able to expand its coalition and strengthen its position in the geopolitical arena.
- The BRICS expansion signifies a higher level of convergence between geopolitical and economic goals. Prominent global oil producers are situated near important trade routes, such as the Suez Canal, the Strait of Hormuz, and the Bab-al Mandab Strait.
- The inclusion of new members bolsters the group's impact as a voice for the Global South and emerging nations. At the moment, the BRICS make up over 40% of the world's population and more than 25% of the global GDP. After the additions, it will represent almost 50% of the world's population.
- **Concerns about the BRICS's expansion from India:**
- The BRICS grouping's swift expansion as a membership could jeopardize its fundamental objectives, especially if China is seen as taking center stage.
- India is concerned that BRICS may turn into an anti-Western bloc because of its tight ties to the US and other Western countries, particularly in the strategic sphere.
- Despite the fact that India has welcomed Iran's membership, given that both Russia and Iran have exited the SWIFT system, the sanctions Iran is subject to may make it more difficult for intra-BRICS trade to grow.
- The BRICS could become more challenging to govern as a result of Middle Eastern tensions, especially if rifts deepen between Saudi Arabia and the United Arab Emirates or Iran.
- Expanding the BRICS was China's initiative, supported by Russia and South Africa. While India has solid relations with all six of the new members, China is the group's most important member and has the largest GDP. How China will be able to shape the agenda and future direction of the BRICS group is a worrying possibility.
- The development of the BRICS+ format and the adoption of guiding principles, standards, and processes for it might make the BRICS an even more attractive organization for establishing agreements and discussions in the developing world. It is imperative for India to stop China from exerting influence over the BRICS alliance and to preserve the alliance's intrinsic value as a forum for emerging markets.



Q 7. In the Right to Privacy ruling, the Supreme Court declared that any restrictions on privacy could only be put in place after passing a reasonableness test. Does society benefit from broad facial recognition surveillance? Consider its application in light of the risks it presents and internal security considerations.

GS II

Government Policies and Interventions

- During 2017, K.S. Puttaswamy v. Union of India, the Supreme Court recognized that the right to privacy is an essential part of the fundamental right to life in Puttaswamy v. Union of India, sometimes known as the "right to privacy case." It might be limited, though, if the public interest outweighs a person's right to privacy.
- It incorporated the reasonableness criteria from the reasonable limits of Article 19 in order to restrict this privilege. It is a Triple Test, and it needs to fulfill the subsequent prerequisites:
 - It ought to have the standing of a law and be backed by a statute.
 - It must be a legitimate state interest.
 - Test of proportionality: The interests of society must substantially outweigh the right to privacy.
 - We must evaluate the facial recognition system's viability by weighing its benefits against the dangers it presents using the Triple Test of Reasonability.
 - Two benefits of using facial recognition technology for widespread monitoring in society are increased security and labor automation.
- **Increased safety:**
 - It helps with policing by making it easier to locate any criminals, burglars, or other trespassers, etc.
 - Preserving internal security: Facial recognition technology can identify terrorists and other criminals with just a face scan.
 - More secure technology is unhackable because, unlike passwords, for example, there is nothing to steal or change.



- Devices with facial recognition technology and personal security cameras may be locked.
- **Faster processing:** It takes less than a second to recognize a face. It makes quick and efficient person verification possible. The difficulty of tricking this technology is another advantage.
- **Simple integration:** It may be completed without any issues. There is no extra charge for integration because most facial recognition software is compatible with most security products.
- **Automation of identification:**
 - minimizes human error: security staff had to manually identify people, which was timeconsuming and inaccurate. The development of 3D facial recognition technology and the use of infrared cameras considerably raised the level of precision in facial identification and made it very difficult to trick.
 - More financially feasible: Employing individuals, no matter the position, is always costly.
 - The identification procedure only takes a few seconds, yet it is extremely precise.
- **Dangers posed by widely employed facial recognition technology for mass surveillance:**
 - Invasion of privacy: If CCTV cameras are connected, the operator will always know exactly where you are. This is similar to stalking someone online. The system's automated nature is against the Principle of Consent.
 - Civil-political abuse: China's example, which keeps tabs on its citizens' whereabouts, illustrates the potential perils of this kind of system.
 - It might jeopardize civil and democratic rights.
 - One could use it to trespass people's privacy.
 - Vulnerability in recognition: Since no program is flawless, even little changes to the camera's angle or appearance could lead to errors.
- **This brings up two points:**



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- **Problem with False Negatives:** This system is not a perfect proof. It cannot be used as a replacement for information collection because it is known to fail more often than not.
 - **False Positive Problem:** This type of technology could inadvertently identify a case, resulting in the arbitrary incarceration of an individual who has no criminal record.
 - **Data security:** Data that has already been stored may be misused or stolen. This raises additional concerns about data security.
 - If facial recognition technology is used for mass surveillance, it can violate our civil, democratic, and political rights as well as breach our privacy, which is clearly dangerous for our individual liberties.
 - **On the other hand, we can address these concerns by utilizing:**
 - enhanced rules
 - effective data security infrastructure and
 - enhanced organizational structure and legal foundation guaranteeing responsibility.
 - **In summary:**
 - Given the advantages that these technologies provide in terms of security and economy, if these solutions can resolve the problems, they will surely pass the triple test of reasonableness. With the current state of technology, it would be difficult to outright prohibit its use. It is therefore in the best interests of society to control its inevitable acceptance through a system of rules and organizational structure.

