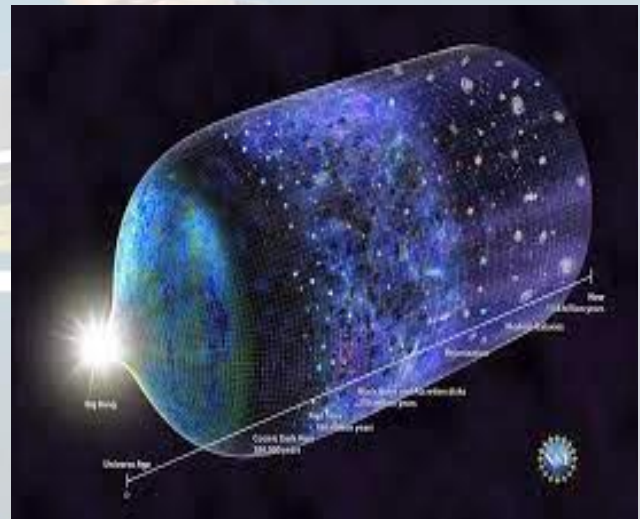
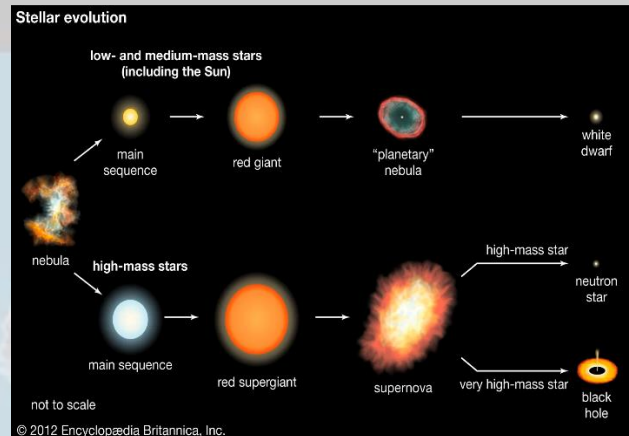


Tachykinin



- Researchers found that a neurochemical called tachykinin activated aversion behaviour in flies
- Flies that had a mutation that deprived them of neurons that could release tachykinin didn't display the threat avoidance behaviour, even if they retained other visual and motor responses
- Neurons regulating aversion behaviour are in the visual region of the fly's brain, so scientists want to understand how visual information is transmitted to elicit the fear response.
- [The Hindu](#)

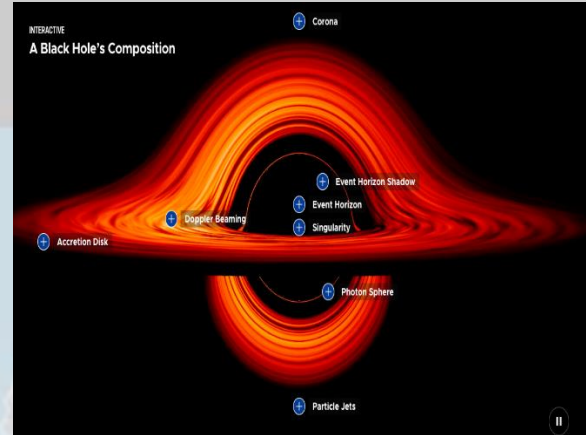
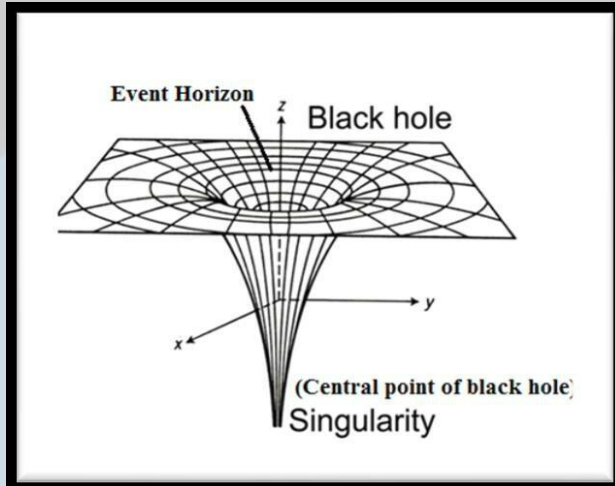
Ergosphere



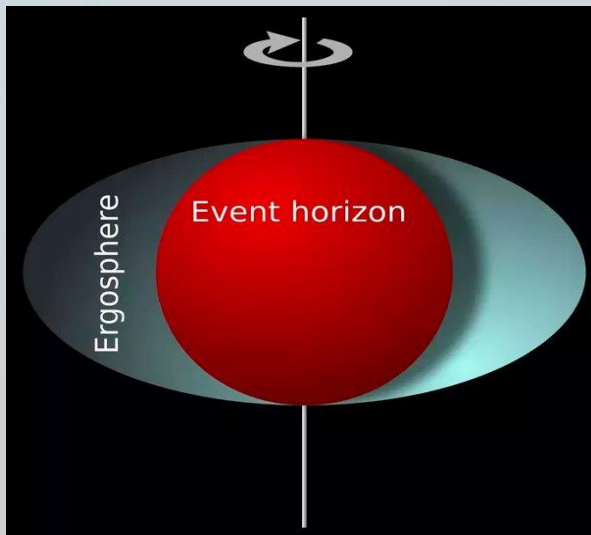
WIKIPEDIA
The Free Encyclopedia

Initial singularity

The **initial singularity** is a singularity predicted by some models of the Big Bang theory to have existed before the Big Bang and thought to have contained all the energy and spacetime of the Universe. The instant immediately following the initial singularity is part of the Planck epoch, the earliest period of time in the history of our universe.



- The event horizon is the spherical outer boundary of a black hole loosely considered to be its "surface."
- It is the point, according to NASA, that the gravitational influence of the black hole becomes so great that not even light is fast enough to escape it.



- Rotating black holes (a.k.a. Kerr black holes) have a unique feature: a region outside their outer event horizon called the ergosphere.
- A black hole is formed when a really massive star runs out of fuel to fuse, blows up, leaving its core to implode under its weight to form a black hole.
- The centre of a black hole is a gravitational singularity, a point where the general theory of relativity breaks down, i.e. where its predictions don't apply.
- A black hole's great gravitational pull emerges as if from the singularity.
- The event horizon describes a sphere around the singularity: when anything enters this sphere, it can't escape unless it travels faster than light (which is impossible).
- Just beyond this sphere, a rotating black hole will also have an ergosphere – a bigger sphere that an

Current Affairs 5th February 2024 by Saurabh Pandey

object can enter and then leave if it's moving fast enough, but still less than the speed of light.

- The label 'ergosphere' comes from 'ergon', the Greek word for 'work'.
- It is so named because it is possible to extract matter and energy from the ergosphere, but not from beyond the event horizon.

BIG SHOT



A resident flees an encroaching forest fire in Vina del Mar, Chile, on Saturday. Officials say intense forest fires burning around a densely populated area of central Chile have left several people dead and destroyed hundreds of homes. Chile's capital and other regions are also facing a heat wave, as meteorologists have warned extremely hot weather will become increasingly frequent in the country's austral summer. AP

- **Viña del Mar** meaning "Vineyard of the Sea") is a city and commune on central Chile's Pacific coast.
- Often referred to as *La Ciudad Jardín* ("The Garden City"), Viña del Mar is located within the Valparaíso Region, and it is Chile's fourth largest city with a population of 324,836 (according to the 2008 census).
- Viña del Mar is also part of the Greater Valparaíso area, the country's second largest metropolitan area (pop. 935,602,

2017 census), after the Metropolitan area of Santiago.

- **The Hindu**

Microcredentials

What are microcredentials?

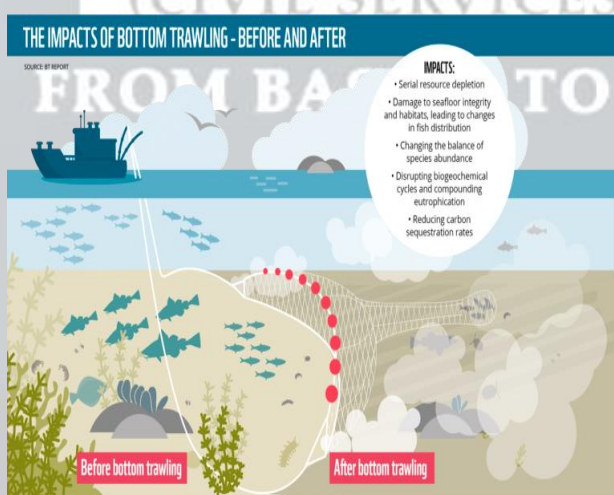
- They are short duration learning activities with proof of specific learning outcomes that are validated through a standard and reliable assessment process.
- Microcredentials are offered in online, physical, or hybrid modes at various levels, such as beginning, intermediate, or advanced. In contrast to microcredentials, students must study for several years to obtain macro credentials such as undergraduate degrees.
- In addition, microcredentials can also be designed for lifelong learners, i.e., working professionals who may not be able to attend a formal degree programme in a university. Microcredentials, as a path to lifelong learning, are still developing.
- An obvious sign of this is how assorted terminologies, such as digital badges, micro master degrees, nanodegrees, and online certificates, are being used for this short duration learning.
- **Is here enough demand for micro-credentials in India?**

Current Affairs 5th February 2024 by Saurabh Pandey

- With the focus of the National Education Policy 2020 on providing skilled education to students right from school to the higher levels, and with employers looking for young employees with adequate skills and competencies to boost productivity, learners are increasingly viewing micro credentials as a value added advantage.
- Sri Lanka is under pressure from its northern province fishermen to act against Tamil Nadu fishermen, who they accuse of resorting to destructive bottom trawling, a practice banned by the country since July 2017.
- While India promised to end bottom trawling in the Palk Bay and incentivise fishermen to take to deep sea fishing under the Blue Revolution Scheme, bottom trawlers are still active.

The Hindu

Bottom trawling



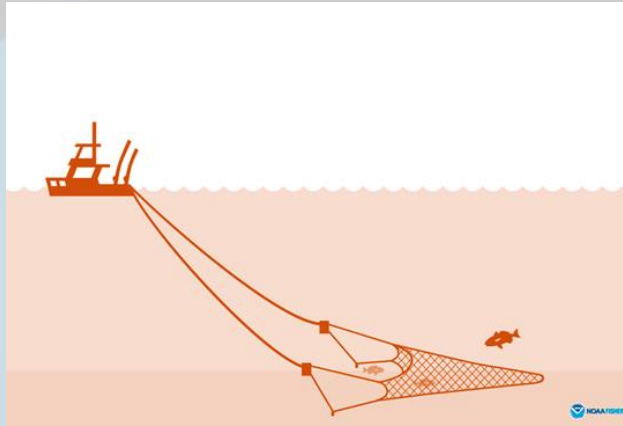
- Fishermen also face a practical problem as under the Tamil Nadu Marine Fishing Regulation Act 1983, mechanized fishing boats are permitted to fish only beyond three nautical miles from the coast.
- Since the distance between Dhanushkodi and the International Maritime Boundary Line is only nine nautical miles, breaches do occur, a point the Sri Lankan Navy should not overlook.
- As Prime Minister Narendra Modi emphasized in 2015, the tensions over fishing must be handled as a “humanitarian concern”. Unfortunately, neither side has demonstrated consistency in the handling of the issue.
- **What is bottom trawling?**
- **Bottom trawling is a fishing practice that herds and captures the target**

Download Saurabh Pandey CSE app from google playstore

[Home - Saurabh Pandey UPSC](#)

Join Telegram channel

species, like ground fish or crabs, by towing a net along the ocean floor.



• The Hindu

Genocide convention

- The Genocide Convention was the first human rights treaty adopted by the General Assembly of the United Nations on 9 December 1948 and signified the international community's commitment to 'never again' after the atrocities committed during the Second World War.
- According to the Genocide Convention, genocide is a crime that can take place both in times of war as well as in times of peace.
- The definition of the crime of genocide, as set out in the Convention, has been widely adopted at both national and international levels, including in the 1998 Rome Statute of the International Criminal Court (ICC)..

- Importantly, the Convention establishes on State Parties the obligation to take measures to prevent and to punish the crime of genocide, including by enacting relevant legislation and punishing perpetrators, "whether they are constitutionally responsible rulers, public officials or private individuals" (Article IV).

- That obligation, in addition to the prohibition not to commit genocide, have been considered as norms of international customary law and therefore, binding on all States, whether or not they have ratified the Genocide Convention.

States' obligations under the Genocide Convention

- Obligation not to commit genocide (Article I as interpreted by the ICJ)
- Obligation to prevent genocide (Article I) which, according to the ICJ, has an extraterritorial scope;
- Obligation to punish genocide (Article I);
- Obligation to enact the necessary legislation to give effect to the provisions of the Convention (Article V);
- Obligation to ensure that effective penalties are provided for persons found guilty of criminal conduct according to the Convention (Article V);

Current Affairs 5th February 2024 by Saurabh Pandey

- **Obligation to try persons charged with genocide in a competent tribunal of the State in the territory of which the act was committed, or by an international penal tribunal with accepted jurisdiction (Article VI);**
- **Obligation to grant extradition when genocide charges are involved, in accordance with laws and treaties in force (Article VII).**

International Day

- Every year on 9 December, the United Nations marks the adoption of the Genocide Convention, which is also the International Day of Commemoration and Dignity of the Victims of the Crime of Genocide and of the Prevention of this Crime.

The Hindu

- **Uttarakhand uniform civil code**

What changes can be expected?

- The draft UCC is set to focus on gender equality by introducing provisions that treat men and women equally, especially in matters pertaining to inheritance.
- It will also revoke practices governing marriage and divorce such as polygamy, iddat (mandatory period of waiting to be observed by women following the dissolution of a Muslim marriage) and triple talaq.

- The Code is also likely to extend an equal property share to Muslim women against the existing 25% share accorded under Muslim personal law.
- However, the minimum age for marriage for men and women is set to remain the same 18 years for women and 21 years for men.
- Other issues such as divorce, marriage registrations, adoption, and social security for ageing parents will also be covered under the law. T.

- **What has the Supreme Court said?**

- Over the years, the Supreme Court has deliberated upon the UCC in several judgments, but refused to issue any directive to the government since lawmaking falls within the exclusive domain of Parliament.
- In its 1985 judgment in the Shah Bano Begum case, the Court observed that “it is a matter of regret that Article 44 has remained a dead letter” and called for its implementation.
- Reviving the push for a UCC, six petitions were filed in the Supreme Court between 2021-2022 seeking uniformity in divorce, maintenance, and alimony laws on the ground that they discriminated against women, thereby violating Article 14 (right to

Current Affairs 5th February 2024 by Saurabh Pandey

equality) and Article 15 (right against discrimination based on religion and gender) of the Constitution.

- In January last year, the Court dismissed a petition challenging the Uttarakhand government's move to set up an expert committee on the UCC by highlighting that Article 162 permits the exercise of such powers. "Article 162 of the Constitution indicates that the executive power of a State extends to matters with respect to which the Legislature of the State has power to make laws. .
- In view of the provisions of Entry 5 of the Concurrent List of the Seventh Schedule, the constitution of a Committee per se cannot be challenged as ultra vires," the order read.
- Entry 5 of the Concurrent List deals with "marriage and divorce; infants and minors; adoption; wills, intestacy, and succession; joint family and partition; all matters in respect of which parties in judicial proceedings were immediately before the commencement of this Constitution subject to their law."

What Law Commission has to say??

- 21st Law Commission headed by former Supreme Court Judge Justice Balbir Singh Chauhan submitted a 185-page consultation

paper on "Reforms of family law" wherein it observed that the "formulation of a Uniform Civil Code is neither necessary nor desirable at this stage".

- The report stated that a unified nation did not necessarily need "uniformity," adding that secularism could not contradict the plurality prevalent in the country.
- It, however, recommended that discriminatory practices and stereotypes within existing personal laws should be amended.

The Hindu

- **Personally Identifiable Information (PII)**

What is Personally Identifiable Information?

- Personally Identifiable Information (PII) is any data or information maintained by an organization or agency that can potentially be used to identify a specific individual.
- This could include information such as Aadhaar, PAN, voter identity, passport, date of birth, contact number, communication address, and biometric information.
- The constituents of PII vary depending on an individual's home country. However, non PII in tandem with additional information

Current Affairs 5th February 2024 by Saurabh Pandey

can be used to identify an individual.

- Non-PII information includes photographic images (especially of the face or other identifying characteristics), place of birth, religion, geographic indicators, employment information, educational qualifications, and medical records.
- All this information can be used to identify individuals accurately.
- And while access to one set of PII may be enough to compromise online security, access to multiple databases can be used to identify and target individuals.

What is the difference between sensitive and no sensitive PII?

- Non-sensitive PII is publicly available information and can be stored and transmitted unencrypted.
- This includes information such as zip code, race, gender, and religion.
- They cannot be used to accurately identify an individual.
- Sensitive PII, when exposed, can be used to identify individuals and potentially cause harm.
- Some of the most important components that constitute sensitive PII are stored by employers,

government organizations, banks, and other digital accounts used by individuals.

The Hindu

Detailed Course on Current Affairs

2 YRS COVERAGE

ALL SUBJECTS !!

- -POLITY
- -ECONOMY
- -GEOGRAPHY AND ENVIRONMENT
- SCIENCE AND TECH
- INTERNATIONAL RELATION ETC

Download Saurabh Pandey CSE app from google playstore

[Home - Saurabh Pandey UPSC](#)

Join Telegram channel