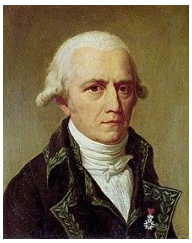
General Information:



- **Jean-Baptiste Lamarck** (1 August 1744 – 18 December 1829)
- **Major work: Philosophie Zoologique** ("Zoological Philosophy, or Exposition with Regard to the Natural History of Animals") is an 1809 book, in which he outlines his pre-Darwinian theory of evolution, part of which is now known as Lamarckism. **In the book, Lamarck named two supposed laws that would enable animal species to acquire characteristics under the influence of the environment. The first law stated that use or disuse would cause body structures to grow or shrink over the generations. The second law asserted that such changes would be inherited. Those conditions together imply that species continuously change by adaptation to their environments, forming a branching series of evolutionary paths.**
- **Lamarckism** is the hypothesis that an organism can pass on characteristics that it has acquired through use or disuse during its lifetime to its offspring. It is also known as the inheritance of acquired characteristics or soft inheritance. It is inaccurately named after the French biologist Jean-Baptiste Lamarck (1744–1829), who incorporated the action of soft inheritance into his evolutionary.
- **William Donald Hamilton** (1 August 1936 – 7 March 2000) was an English evolutionary biologist, widely recognised as one of the most significant evolutionary theorists of the 20th century.
- **Altruism:** In biology, altruism refers to behaviour by an individual that increases the fitness of another individual while decreasing the fitness of the actor. Altruism in this sense is different from the philosophical concept of altruism, in which an action would only be called "altruistic", if it was done with the conscious intention of helping another. In the behavioural sense, there is no such requirement. As such, it is not evaluated in moral terms—it is the consequences of an action for reproductive fitness that determine whether the action is considered altruistic, not the intentions, if any, with which the action is performed.
- **The Selfish Gene** is a 1976 book on evolution by Richard Dawkins. Dawkins uses the term "selfish gene" as a way of expressing the gene-centred view of evolution as opposed to the views focused on the organism and the group. From the gene-centred view, it follows that the more two individuals are genetically related, the more sense (at the level of the genes) it makes for them to behave selflessly with each other.

  A lineage is expected to evolve to maximise its inclusive fitness – the number of copies of its genes passed on globally (rather than by a particular individual). As a result, populations will tend towards an evolutionarily stable strategy.

  In July 2017, The Selfish Gene was listed as the most influential science book of all time in a poll to celebrate the 30th anniversary of the Royal Society science book prize.
- **George Orwell, 1984**, is a dystopian novel published in June 1949. The novel is set in the year 1984 when most of the world population have become victims of perpetual war, omnipresent government surveillance and propaganda.

  In the novel, Great Britain has become a province of a superstate named Oceania. Oceania is ruled by the "Party", who employ the "Thought Police" to persecute individualism and independent thinking. The Party's leader is Big Brother, who enjoys an intense cult of personality but may not even exist. The protagonist of the novel, Winston Smith, is a rank-and-file Party member. Smith is an outwardly diligent and skillful worker, but he secretly hates the Party and dreams of rebellion against Big Brother. Smith rebels by entering a forbidden relationship with fellow employee Julia.

Tasks:

1. Translate the text printed in bold: *"In the book……evolutionary paths".*
2. What does data describe when analyzed?
3. What is the constantly evolving representation of who we are called in the video?
4. What is according to Hamilton the driving force behind evolution?
5. What is the ultimate criterion which determines whether a gene will spread?
6. What is in Hamilton's model the individual organism?
7. What should/could we think of ourselves according to the ledger?
8. What is google's supposed role?
9. What happens if the idea of a goal driven ledger becomes more palatable (schmackhat/angenehm) and the ledger is missing a key source of data?
10. What capability does user data have?
11. What will become possible for emerging users by thinking of user data as multi-generational?
12. What could mass multigenerational examination of actions and results introduce?
13. What will happen if patterns will emerge in the behavioral sequences?
14. What does targeted mean in that context?
15. What could be benefits of future generations?