

# Summary of the law of accelerating returns

Technology, Information Technology



Summary of the Law of Accelerating Returns INTRODUCTION Technological change is an exponential aspect, which can be contradictory to the 'intuitive linear' view that symbolizes that the influence of future technology is highly misjudged. This is because in the present scenario, 20,000 years of technological advancement has been experienced rather than just 100 years of technological advancement. Therefore, 'machine intelligence' will outshine 'human intelligence' in the coming years, which will ultimately result to the concept 'The Singularity' for drastic advancement of technology as compared to human intelligence (Kurzweil, "The Law of Accelerating Returns").

#### THESIS STATEMENT

The essay intends to provide a brief summary of the article "The Law of Accelerating Returns" written by Ray Kurzweil.

#### DISCUSSION

According to the article, 'Law of Accelerating Returns' evolution relates to constructive feedbacks relating to a phase of evolutionary progress is used to form the next phase. Therefore, the rate of advancement in an evolutionary process escalates exponentially over a period, which highly influences the 'Law of Accelerating Returns' that involves rapidity, cost-effectiveness and complete "power" of a procedure. The second phase of exponential development occurs when higher resources are organized in the direction of further advancement. 'Biological and technological evolution' can be referred as evolutionary processes. For an instance, transistors are incorporated within a circuit to create powerful computers, which in turn provides a prospect for exponential growth until the computers become

powerful. This induces a paradigm shift, which ensures that the process of exponential growth keeps persisting at a rate, which doubles in each decade (Kurzweil, “ The Law of Accelerating Returns”).

The Singularity is the technical revolution, which is so prompt as well as intense that the rate of exponential growth has become infinite and technology seems to be mounting at limitless speed. Therefore, it can be considered that the Singularity will transmute different facets of our lives socially, sensually and economically. Advanced technologies in the present day context, has been subjected to law of accelerating returns. ‘ Moores Law of Integrated Circuits’ came into existence, which was highly recognized in the public as a paradigm for exponential progression in computers. The overall speed of computers has doubled each year, which has given rise to flat chips used in computers. Moores Law has extended to such a level in terms of computational power due to which exponential progression has not been viable. Thus, ‘ Moores Law’ can be considered as S curve. In agreement with the ‘ law of accelerating returns’, paradigm shift, which can also be referred to as innovation, turns the S curve of this paradigm into an on-going exponential (Kurzweil, “ The Law of Accelerating Returns”).

Law of Accelerating Returns is applied to each and every kind of technologies and is evaluated with the extraordinary accuracy of ‘ information based technologies’. This particular concept provides certain specimens of exponential growth such as ‘ DNA sequencing’, swiftness of communication and different types of electronics along with quickly reducing magnitude of technology. Exponential growth signifies that the advancement in the field of technology has been identified to be explosive in nature in the

present 21st century and this progress might continue with time (Kurzweil, “The Law of Accelerating Returns”).

#### CONCLUSION

Human brains are subjected to reverse engineering, which might induce the capability of creating machines that are more intellectual. Therefore, ‘human and machine intelligence’ cannot be differentiated from each other in the coming years. This is because ‘biological brains’ are extended through disseminated ‘nanobot-based implants’ and ‘non-biological brains’, might be subjected to extension as replicas of human brains. Eventually, ‘non-biological intelligence’ will surpass ‘biological intelligence’ due to amplifying rate of exponential growth (Kurzweil, “The Law of Accelerating Returns”).

#### Work Cited

Kurzweil, Ray. “The Law of Accelerating Returns.” *Technology and Culture* (2014): 261-301. Print.