

Human Revolution and Technology

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Abstract: The paper aims to chart out the affiliations between e-technology and our biological selves and of how hypertext and evolution are similar in their setup. The study of literary Darwinism will form the background of the discussion including the physical, social, psychological and then the literary evolution and adaptation of man. Darwinian literary studies explore the mental evolution of man through the form of literature and analyses how literature served as a tool for our survival and adaptation. It examines the gap between a slow and gradual physical evolution of man and the sudden revolution in the human culture in terms of technological revolution. This has further led to the engagement with vast animated culture in the form of electronics giving rise to certain terminologies such as hypertext which assimilates colloquially with the biological process of evolution.

Keywords: Cognition, Evolution, Hypertext, Literary Darwinism, Technology.

Humans have evolved over a period of time and the adaptation to the altering environments has resulted in improved cognitions and intelligence in context of the development in technological advances. The scientific innovation is one of the products of human mind, thereby rendering man as a hi-tech animal. The highly debatable issue regarding the overarching role of machines to that of man cannot be addressed by neglecting the mental evolution among humans. The one such area of study that investigates the same is literary Darwinism. Through this theory the concerned subject of human revolution and technology will be investigated.

Hypertext relates to insertion of electronic links within a text likewise biological evolution includes evolution of species extending a span of time though with a very slow pace generating from one common form to producing different varieties. As James Gall avers that hypertext is similar to representation of human memory which reflects “social constructions of knowledge”, likewise “data would likely be organised and linked according to hierarchical beliefs about the nature of knowledge” (225-6). Similarly physiological evolution follows a certain pattern and the adaptation of certain species forms a hierarchy over weaker ones in the quest of survival. Moreover, there has to be an identifiable common understanding in hypertext which is similar to the study of literary Darwinism which underscores the universal attributes of human nature and its representation in the form of literature. It proposes the role of pre-historical innate universal structures that determine human behaviour and imagination and also relates orality to the modern form of print culture.

Literature is the product of human revolution which took place in a short time period, filling the gap between physiological and cognitive evolution of man. Within the chinks of vast process of evolution there emerged human culture which distinguished us from other lower species. The present era of technology has not only revolutionised our way of thinking but has affected our identity too in context of assimilation to machines. For instance when one drives a vehicle the machine is transfused into one’s being and hence the movement on the road which requires the cooperation of our neural system with the technical setup of the object.

In this age of transition, the medium of literature may have changed owing to technology but the framework remains the same as one still finds respite in reading whether one reads a printed book or an e-text on Kindle. The digital media has transformed the nuances of accessibility to reading in terms of storage capacity, handy usage, portability and negligible

occupancy as compared to a piled section of books commanding certain capacitive space and most importantly it has made us more informative and perceptive. Likewise a cognitive psychologist Steven Pinker, argues that it is information which has made us more intelligent and that intelligence or cognition per say, derives from identifiable applications performed upon agencies of information and is not the outcome of “any force beyond the present knowledge of science and modern digital information technologies” (Dougherty, 182).

The fast emerging trend of digital media technology can be analysed in context of Darwinian natural selection theory. The recent evolution of new media has helped us survive and adapt better to the changing social, political, ecological and other scenarios in the world. Through social media, it has virtually connected us to the larger stretch of people and one has more access to express political notions, affiliations to policies or critique the same through digital media and also one is more aware about the ecological concerns through various forms of news feed. Joseph Carroll, the propounder of Darwinian literary studies acknowledges the advent of technology and refers to this phase as “human revolution” wherein we have inculcated flexible response to rapid transformation of exterior world. He further says that though the technology is pacing with alacrity, humans are coping up with their enhanced and adaptive “motivational and cognitive structures” (Carroll, 35-39). In the book *Technics and Time*, Bernard Stiegler observes that Karl Marx was foremost in suggesting a distinct theory for technical evolution from that of biological one. He also points out that there is a major gap between cultural and technical evolution as technics evolve faster than culture. While the evolutionary psychologists hypothesise the brain structure of modern man in context of Pleistocene age terming it as “massive modularity hypothesis” wherein module specific response would be generated by the brain acting as stimulus to certain situation. In other words they aver that “our modern skulls house a stone-age mind” (Kramnick, 322). Whereas the literary Darwinists concede to the limitation of this approach and relate to the fact that prehistoric humans were not adapted to dwell in “global digital communities” (Carroll, 39).

The evolution of literature in particular and arts in general took place as a result of human adaptive capacity in terms of intelligence wherein narratives emerged in the form of storytelling proceeded by print economy. Therefore the oral version acquired structure through the written form and further the invention of computers in addition to the new generation technology transformed the written into virtual form and the role of author took a backseat giving license to the readers or audience. For instance in the social media such as facebook or whatsapp there is more freedom of expression and our sociability becomes more plastic owing to the digital media wherein David Berry aptly views that digital forms relate to “a new way of working with representation and mediation...called the digital ‘folding’ of reality” (Berry,1-4). The study of cognitive psychology depicts the notion that our mental processes are now shaped into technological computations and that the modularity of mind in terms of its cognitive architecture is a Darwinian adaptation (Dougherty, footnoted³). Therefore, to conclude that our mind is now a digital computer as evident in the Artificial Intelligence (AI) study is perhaps not a farfetched idea. In order to study the impact of digital world on literature and its role as new media one needs to first study the evolution of mind followed by the emergence of fiction.

Darwinism studied the physical evolution of man from lower species which further led to the studies about social, psychological and cognitive evolution of human mind. Literary Darwinists deal with the bio-cultural study of man and hence analyse the role of biology and culture in shaping the human behaviour. They maintain that evolution can help explain the compulsive drives ranging from reproduction to violence including culture and freedom (Boyd 3). However the origin of human intelligence cannot be traced exactly pertaining to gradual human evolution and sudden revolution in a short span of time. But one may analyse the process of this transmission through the emergence of culture and of how it made us socially cohesive which is precursor to the invention of social media. As culture works by certain ideology and that ideology then effects our actions and dispositions thereby, along with the physical growth, man learnt to survive in groups developing sociality, through competition, altruism, kinship and other elements defining humanness. So, all factors were the product and part of a culture, the culture of humans, the society at large and the universal bond connecting us all as humans (Carroll, 38- 45).

Few researchers observe that increased cooperativeness amongst humans has enhanced the growth of human intelligence as human is a social animal, thereby one tends to share information, intentions and emotions with others and that helps one understand other’s perspective, and this has resulted in the evolution of language in one respect (Boyd, 180). The mode of transmission in culture later changed with onset of technology and from the ‘selfish gene’ or gene centred

evolution wherein the people sharing same genes would act selflessly towards each other, it shifted towards the idea of 'memes' which is "an idea, behaviour, or style that spreads from person to person within a culture...acts as a unit for carrying cultural ideas, symbols...transmitted from one mind to other through writing, speech, gestures..." (Dawkins 192). This concept was coined by Richard Dawkins in 1976 to explain the process through which the cultural information spreads in a generation. He first emphasised the importance of genes and subsequently supplemented it with the significance of ideas and how it spreads through imitation amongst the population.

Matt Ridley in the book *Nature via Nurture* denotes that language is a recent invention in the human world and the anthropologists estimate its origin to about 70,000 years ago. He further says "...language is not the same thing as speech; syntax, grammar, recursion and inflection [which] may be ancient, but [that] they may have been done with hands, not voice" (Ibid. 219). Thereby gesture is preliminary to voice for instance, while conversing with somebody or while lecturing one tends to move hands more emphatically as a means of expression and in order to express better along with words. In a way gesture shapes our thoughts and creates an impression over the audience as against an ordinary verbal speech sans gesture that appears monotonous. Likewise in the present scenario there are mobile touch screen handsets which are operated via hand gestures and do not require any speech or type command, therefore in a way we are coming back to where we started initially marking the circularity of digital media.

In the book *Cultural Software*, J.M. Balkin offers a new ideology having affiliations with software analogy governing the questions about traditions, desires, beliefs and practices. He postulates that computer software is similar to thinking tools in culture that the technical software works like "living embodiments of information" passed over amongst humans therefore; he maintains that humans are akin to computers and vice versa (Ibid. 89). Furthermore in order to ascertain the adaptation of art in general Brian Boyd, another literary Darwinist corresponds to the notion of gaining attention and hence status via art. As humans are capable of imitation, this is also one of the ways to represent events. Although imitation is widespread among primates, humans have formed a more flexible and efficient way to represent events and that is through the means of language. One may now dwell over the significance of fiction and its adaptation henceforth. Boyd further views that as fiction resembles a cognitive play pattern, likewise it increases the range of our behavioural options and experience. Play offers many strategic engagements in order to enhance efficiency; likewise fiction provides ample opportunities and emotional resources to deal with unexpected setbacks without actual risk and also "acts as a super stimulus by focusing on intense experience and concentrated change. These not only hook attention but rouse emotion, which in turn amplifies memory" (Boyd193). In fiction there are invented characters and situations which are selected to shape emotions and hence they appeal to our memory through examples in real life. It designs events which we may not encounter in real life but evokes our emotional and ethical sensibilities to provide a thinking basis (Ibid.).

The question posed is whether prevalent cultural systems today can be programmed or has the technical system itself become unstable? It further points towards the notion of ethnic in terms of existent technical forms. It is to be observed that the evolution from one system to another occurs when the limit of that system is reached. For instance, the industrial revolution which brought along technical and economic developments putting in question whether the results were positive. It is highly debatable and critically represented in literature as is depicted in Charles Dickens' *The Hard Times*, where the characters bear the result of machination around them and as a consequence undergo mental and emotional debilitation.

Moreover our contemporary times are different wherein there is constant innovation and progress and one needs to cope up with the same in order to avoid being technically challenged. Thereby, one has to dwell on the parameters of biological evolution and the present process of technical evolution which unlike the former is very fast and beyond comprehension and that does not rule out the paradox that present technology is on one hand the product of human mind but on the other hand it also possesses the power to destroy humanity itself. Our evolving technological selves are adapted to the present advanced age of machines and have more likely eased our working styles at the cost of adversely effecting the biological set ups and social affiliations. As though the virtual media has shortened our distances, the real gaps are being formed in our mutual relationships. The 'thing in itself' has been transformed to being for oneself, pointing out the lacunae in human lives. In Heidegger's words, the thinginess of the thing is not dependent on our perceptions but is existent in itself sans the meaning making human culture.

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