

Thoughts on Technological Determinism and Cultural Materialism

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Since the beginning of the civilizations and before, culture and technology are effecting each other. This cause and effect generates new technological advances and society changes. Technological determinism and cultural materialism terms, tries to explain this process of intertwining.

Technological determinism is a term first coined by Thorstein Veblen in 1920's. It considers technology as an independent entity and treated as if autonomous. This viewpoint holds that a successful innovation will generate a new type of society. We can see this change throughout the Industrial Revolution as the world's population and income per capita saw a sustained increase first time in history. This led to production efficiency with machine-based manufacturing in areas of textile and mining industry and eventually in transportation with the dawn of steam-powered ships. When first factories were built the foundations of the modern city was established as workers were moving to cities for job opportunities. This is still an effect on high-population cities nowadays as people are moving to big cities to work, like in Istanbul where the population reached nearly to 20 millions.

I am in an optimistic approach to technological advances as it's in every aspect of our lives now and it opens many doors to our experiences of life. Information age - the age we are considered to be living right now, is characterized by the ability of individuals to transfer information freely and reach the information they want that would have been difficult or even impossible previously. But we can't approach the invention of internet with an technological determinist look as it offers a one-sided perspective on the relation between technology and culture.

Cultural materialism emphasizes social need and political intention as significant factors involved in technological development. Internet's invention was a need for a communication network between points. It dates back to telegraph as point-to-point communication was being used for like a century before the commercial widespread use of the internet. J. C. R. Licklider articulated the ideas of a global network in 1960's and his ideas were used to interconnect the United States Department of Defense's main computers at Cheyenne Mountain, the Pentagon, and SAC HQ. Then Robert Taylor successfully established a 4-node computer network called ARPANET which became the first computer network in history.

We can say the social need of easing communication launched the internet to our lives but Stephen Hill says: "Technological change is not, by itself, productive of social change. Instead, the direction of change is a product of the particular alignment between the technological possibilities and the society and culture that exists." I agree with Hill's idea in every way because the society that needs an improved way of communication wouldn't invent a global network system unless the computers were invented in the first place. So the relationship between technology and society is 'intertwining'.

During The Space Race between U.S.S.R and U.S.A, they raced each other for supremacy in space exploration. This supremacy was seen as necessary for national security and symbolic of technological and ideological superiority. The Space Race involved launching artificial satellites, human space-flight around the world and voyages to the Moon. These accomplishments wouldn't be possible if the technological situation of the two sides made that achievable. The Space Race sparked unprecedented increases in spending on education and pure research, which accelerated scientific advancements and led to beneficial spin-off technologies. Cultural Materialistic approach accepts this statement as military research has contributed lots of new technological devices to civilian society but it is a process and it is an intertwining one. Technological advances made during The Space Race, especially the Moon program, pushed scientists around the world to question the whole Solar System and launched a series of exploration telescopes and satellites. This intertwined process of technology and cultural aspects is now starting open new possibilities of understanding the universe we live in. We can see the effect of technology to the society and social needs that effects the technological advances, in literature and cinema too.

The Matrix directed by Wachowski Brothers, is a revolutionary science fiction made in 1999. The movie depicts a post-apocalyptic future where humans live in an underground city to survive against a race of machines, which were created by humans themselves. In an alternate future, humans created machines to do their biddings. We can say they needed labor force in their social lives but that can simply be their arrogance: The wish to become Gods. Paul Virilio explains the love for technology of men by that sentence. They think they are Gods. Another aspect of the movie that concerns us is that the humans can go in to a virtual world called The Matrix, which created by machines as an energy source with using human bio-electric energy men create by living in that virtual world, and experience a virtual reality totally different from the world they live in. They are wired to their interfaces. This simulation bares similarities from our time as we now experience things through simulations like news or computer programs. Now the simulations are hi-jacking reality itself.

Technology and culture will continue to effect each other. New possibilities and technological devices will continue to shape the culture, while cultural forces and circumstances will choose what technologies to be developed. This process eventually effects art will continue to effect.