The Pervasiveness of Technological Determinism

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Abstract:

In this essay I hope to define and explain the concept of technological determinism briefly and to draw out the key points in the theory, followed by illustration of how these key points are just a level of abstraction higher than the typical thinking in modern society on technology and its impacts and that the ideas discussed are well founded in the opinions of most people you would typically meet. Thus illustrating how pervasive the theory really is without involving the more tangible impacts technology has on industry.

The Theory: Technological Determinism

Technological determinism is a theory, which states that technology is the driving force upon societal change and progression.

Determinism is the key word above and I will further explain its significance in a following paragraph.

This theory spans two types of subscribers, with varying views as to the severity of the role technological determinism in describing how we interact is society.

The strong determinists

The strong determinists would be of the opinion that the development of technology is separate from the current social climate and its concerns. Furthermore the development of advancing technology imposes a ruling force and mindset upon the people who use or interact with it. This extremist view resolves to the opinion that we mould our lives to interact with the current prevailing technology and cannot change the outcome or influence the further development of this technology.

The weak determinists
The weak determinists hold the more mainstream opinion that technology has a huge impact on societal change, just the mention of the wheel, the internal combustion engine, the television and probably to greatest recognition to my generation the internet, will have the person your conversing with nodding in acknowledgement of the great impacts of technology.

Where the two opinions differ is that weak determinists believe that a society’s people have the ability to express opinion and change the outlook and progress of technology to further meet their needs, not the other way around. However they still acknowledge that the current technology impacts on the future generation’s world view and mind set, so the technology still does the ‘shaping’.

Technological determinism can be observed from two standpoints, one heavily focused on industrial evidence and the context of inventions and growth, the other is a more empirical down to earth approach which analyses behaviour and the acts we perform within our current situation technically.

Determinism

When you explore determinism in general you find that its definition differs from what is commonly perceived in society and thus it is vitally important we fully understand the word and its purpose in the theory of technological determinism.

When looking for the definition I found what I perceived to be a strong link with fatalism, a concept that means human beings can have no influence on present and future events. But determinism is similar in that it is perceived that our control over the future has been limited, but it makes allowances for past and present events. That is our control over our future is dependent on what has gone before. This is analogous to playing chess, the decisions we can make now are dependent on our current position and on the moves we have previously made.

Misconceptions

So when we discuss technological determinism we must not fall into the immediate sinkhole that all roads lead to nowhere and technology has control, this is obvious from the standpoint that one day we created the microchip and that followed from many decisions into which profession we wanted to explore etc and the microchip was the outcome. We could have decided otherwise if we so wished.

If I continue the microchip analogy we can see that its invention may have been offset in time until someone else choose to follow a career in scientific discovery in computing, but you see the pattern emerging that freewill is the precursor to inevitable technological advancement. I am going to use that idea as the basis for the concepts outlined in this paper.
If we consider an object which opinions are well formed upon we can make an educated
guess as to how its achievements can be interpreted in a technologically deterministic
standpoint.
The mobile phone is prolific in modern society in that almost everyone above the age of 12 in
the western world owns one. This has a huge societal impact. The device by nature can be
used anywhere there is signal, which again can be assumed to be almost everywhere.

Origin: The mobile phone arose from a want from people to be able to communicate along far
distances quickly and easily.
It is not the solution. It is a solution.

Development: it began like as a consumer product approximately the size of a standard brick.
This size was unacceptable by public opinion. This lead to further advancement to scale
down the phone. Technological development was driven by societal pressure.

The development stage leads me to discount the ideas of Hard Technological determinism as
incorrect, on the basis that their ideals are absolute and by virtue unable to negotiate
examples in context.

Mass Acceptance: By now the mobile phone has been revised and changed to a stage where it
is so desirable that everyone wants one because it satisfies enough needs that any current
issues are inconsequent when considering buying one.

This is where the deterministic aspect comes into play, the device now plays a major role in
deciding how people communicate. The developments of trends in behaviour are refined at
this stage at a rate similar to the actual development of the phone.

The key point to take away is that in any society a tool whose refinement gets to a stage
where it considered sufficient by its users will then dictate behaviours to a large scale in any
subsequent users.

What this means in context to the mobile phone is that if we take the senior generation of
today. Perhaps the age group from Fifty to Sixty-Five , we see ownership of mobile phones is
high , beyond 95%. But the behaviour of people within that grouping is not heavily
influenced by the ownership of the phone.
In contrast with the younger age group of people between Ten and Twenty-Five where phone
ownership is of a similar scale where patterns of behaviour are pronounced in most
individuals with regard to compulsive texting or even relationship building via that medium.
When looked at from this standpoint the pervasiveness of technological determinism within modern society is very pronounced. The mobile phone is a good example as it emphasises rapid product evolution yielding social behaviours and norms of etiquette very quickly once a device reaches its plateau of development. Other examples although slower but equally valid would be the television, the refrigerator or even something simple like the ball-point pen all follow the same cycle.

If these examples were to be listed and explored it would be easy to relate each to behavioural patterns which vilify this deterministic concept.

To further illustrate this pervasiveness I gave the above listed examples and asked people to name patterns of behaviour associated with each one and to put a rough estimate on how much time each activity consumed within their day.

The Pen: Recorded behaviours.

Borrowing from classmates, one genial student says does it every day as a conversation starter with classmates of the opposite sex. Readily losing/forgetting pens, all three responded that pens are cheap so it doesn’t matter. Writing in various colours: all three confessed to ruling in a different colour than they write with or numbering answers in a different colour etc.

The Phone:

Ringing people as a joke: two of the questioned said they often performed prank phone calls or excessive ringing to impress or to make their classmates laugh. Maintaining relationships by text: All questioned confessed to sending 50+ texts a day to their partner or at least members of the opposite sex to maintain or to create active relationships. Compulsive checking: All confessed to checking their phone on average every 15-20 minutes without thinking.

The Refrigerator:

Sorting: All confessed to having a particular order in which they place their food. Persistent checking: Again all confessed to checking and re-checking the fridge for food when hungry, even though the contents haven’t changed.

Although it could be said that these various behavioural patterns would have arose regardless
of the technology. Such a statement only goes further to illustrate how widespread these patterns are. It must be said though they would have been slightly different but regardless it is the object that determines how a pattern manifests itself in a society, but that is a discussion for a different essay.

It must be said now, although the above examples support behavioural changes caused by various technologies they do little to explain how these things manifest on the societal scale. The ethos of our western views towards war, capitalistic gain and equality have been laid down in our minds via mass technology like the radio and TV as a medium and before that the newsreels etc. Without these mediums all our countries would have become is a series of Tribes. With sharing of trends done in person or via some form of postal service, if taken to that point, where you imagine a time without key technologies you can see the effect their absences have is quite pronounced on our society. One example isn’t really enough. That is it would be best to analyse various societies at various stages of social progression and to examine how the extraction of their key technologies at the dawn of change would have impacted upon their growth and would have decimated any change that change would occur. Just make note of that when considering the smaller picture of personal experience in relation to key technologies to remember that these effects have huge knock on impacts in how a society’s people interact on the whole.

If I had the time to take a more formal approach to this topic then I would say the pervasiveness of this theory could be supported by periods of great economic growth and prosperity and the follow up changes to the societal norms that would follow such a time. But since my own personal behaviours and my interactions with my own subset of society are so governed by the devices I use every day I felt it more apt to write in this style. So to better support my empirical findings and personal observations here are some statistics which support some of what I have said above.

As of 2003 88% of people aged between 15-34 have a mobile phone.
As of 2003 70% of people aged between 55-65 have a mobile phone.
A survey indicates the mobile phone is becoming the dominant technology in a teenager’s life. With 50% preferring television privileges be taken away rather than their mobile phone.

In summary I think it can be said that the case for this theory being widespread in effect throughout our society and also in consensus in that deep within our minds we accept the role technology as in our lives and therefore further adopt the basic idea of the deterministic nature of the technology we use on a day-to-day basis.
If one can appreciate the impact technology has on their own lives then they can clearly see how the big picture and the consequences of technological determinism have lead up to this point in our society and can appreciate that technological change is a driving force in social interaction and social development and psychological development of ourselves within the current social climate.

Although maybe not key to illustrating how pervasive the theory is I think it’s important to
ponder where does this theory place our society in the future. Will all technological changes be to the betterment of the society in which they exist or will some have their impacts having an overall negative effect on that societies people even after the technology has reached mass acceptance? Things like that lead me to question what would happen then. Would a phase of reduction occur where people emotionally reject most technologies and revert to a Mormon like sub-society? Or would the changes that “bad” technology be taken on board and just simply accepted without any will to rebuke their effects?

Those are two extreme results but I wonder where in between would we end up? Examples like the handgun and CCTV have had their acceptance largely determined by the opinions of the members of their societies. Handguns are deemed dangerous but a necessary evil in America, but here in Ireland we couldn’t imagine carrying a weapon of death on our person. The same style of distaste will govern the end result for these types of technologies. Whether or not they will lose favour and be forgotten is yet to be seen But I would just like to point out, without the behaviours predicted by Technological Determinism their mass acceptance couldn’t have occurred. So if you are still unsure of how pervasive its effects are, perform a little experiment like my own on the pen and see for yourself the impacts the technology you chose has had. I think you will find this theory applies to us and our world a lot more than at first sight.

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