

Theories of Technological Change and the Internet

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The Internet, and the expansion of communication networks which goes along with it, would seem to be the technology affecting the world more than any other at this moment. It is thus worth examining in light of theories of change that suggest technology changes society, rather than *vice versa*.

Despite the speed with which the Internet has become part of many people's daily lives, it will be some time before we can its most profound effects are noticeable. William F. Ogburn describes this as "cultural lag," the idea that culture takes time to adjust to material conditions.¹ When one part of culture changes (in this case, the "material culture"), other parts require readjustment, a process which could take years, during which time there is a "maladjustment." We can see this delay after the development of the car. By 1910 Henry Ford was mass-producing them, and yet, as Frances Cairncross points out in *The Death of Distance*:

none of the social consequences of its development were apparent. The physical landscape had yet to adjust: highways and out-of-town shopping centres did not exist; suburbs sprawled only around railway stations; and city centres were still lively hubs of commerce and industry. Not only have the geographic consequences of the automobile taken most of the century to unfold, so have the economic and social consequences of increased personal mobility.²

Cairncross goes on to highlight the changes the telephone, television and (to a surprisingly lesser extent) the computer have had on the world as their existence has gradually become part of normal life. Networked computers, she adds, will also "revolutionise the productivity of up to half the work force of the rich world."

This is not to imply she sees the Internet as benefiting only the rich. In fact she later claims it will benefit everyone: Both rich and developing countries will benefit as the western world's demand for services employs large numbers of remote workers; developing countries who liberalise their markets will be able to make the most of their young and willing-to-learn populations; and the poor will swiftly benefit from plummeting prices and will gain access to the new communications networks, making the new societies more inclusive than the old.

While this world of unhindered trade and instant communication will benefit all, she admits "the uneducated and the old will benefit less than the well educated and the young."³ Sohail Inayatullah and Ivana Milojevic would go much further however, listing all those who will be excluded: "non-English speaking nations, 'irrelevant' nations and peoples, national, religious and ideological minorities, poor in poor countries and poor in rich countries, the majority of women, most old and disabled, and almost all children," going on to point out that even if they "catch up with the dominating forces, it will be on their terms and it will be in their language."⁴ English is, of course, the language which the excluded will be forced to use, and Cairncross doesn't disagree with this, but couches it in rather more upbeat terms, seeing it as the common (and inevitable) standard which will enable communications technology to work efficiently. Some would argue that with a common language easing the

transmission of information, this will enable “foreign” cultures to reach a wider audience; Luc Besson defended his decision to film *The Messenger* (his story of Joan of Arc) in English with the claim that it will spread knowledge of French culture further than anything in his native language could.⁵

Assuming a common language, the greatest benefit of the global communications network will be the ease with which geographically separated people can communicate. It is possible to “talk” with friends, relatives, colleagues for next to no cost, no matter where they are in the world, and this, says Cairncross, can only be a good thing, increasing knowledge of other cultures, bringing people and businesses closer together, and bringing us a step closer to world peace. There is little doubt that this “death of distance” enables the blossoming of relationships that would not have occurred before, but in gaining this are we losing something else? Inayatullah and Milojevic would say so, insisting that “the end of distance is not the creation of nearness, of intimacy, of community ... we can create virtual communities far and away but still treat badly our neighbours, partners and children.” They paint a picture of individuals sitting at computers, knowing no one but those whose values they share, in a virtual world which excludes billions of the world’s poor.

Many believe we are already heading toward this scenario and a recent study from the Stanford Institute for the Quantitative Study of Society⁶ would seem to back this claim, stating that the more time people spend using the Internet, the less they communicate with others in person or through other means of communication. While a survey such as this is guaranteed plenty of publicity, it has also met with much criticism. Jakob Nielsen, the web usability guru, pointed out that the survey assumes contact via the Internet is qualitatively worse than any other kind and ignores the fact that there have been many other new technologies which absorbed the time we may once have been spent chatting to our neighbours.⁷ Some would go so far as to say that most technologies in the modern world have a detrimental effect on society as a whole, as Guy Debord claimed in *Society of the Spectacle*:

The economic system founded on isolation is a *circular production of isolation*. The technology is based on isolation, and the technical process isolates in turn. From the automobile to television, all the *goods selected* by the spectacular system are also its weapons for a constant reinforcement of the conditions of isolation of “lonely crowds.”⁸

The survey also claims that thanks to the Internet, more people spend time working at home. This reduces the quality of life, with people unable to escape work. This conflation of home and work can easily be seen as a benefit of new technology, however, not least by both Nielsen and Cairncross. Going out to a place of work every day is, in a broad view of history, an anomaly; before the Industrial Revolution required workers to be present in the same place to churn out mass-produced goods, it was normal to work at home, or failing that, near home. This trend towards home-working will, says Cairncross, revitalise both cities and rural areas, with fewer workers needing to commute long distances, more people living and working in urban centres, and those once isolated in remote parts of the country now able to access information and communicate with others more easily than ever before. (Incidentally, this trend would seem to run counter to progressive theories of social change which see civilisation becoming increasingly isolating and moving away from the once traditional home as a location for both work and family life.)

The third main claim of the survey, picked up on by Nielsen and echoing Cairncross's words mentioned earlier, is that there is a digital divide. We have heard this generic term used before, but the study is precise about where the division lies. While income level has a noticeable effect, the main influences on whether or not people use the Internet are education level and age. This brings us back to the matter of who will benefit most from new communications technologies.

One of the much vaunted benefits of the Internet over other media is the reduced barrier to entry; it is now possible for anyone with a telephone line and a computer to produce material for, or sell goods to, anyone in the world. We should be under no illusions that everyone has the means to achieve this, as highlighted in the Stanford report, but with barriers dropping so low surely this access to a voice is a great equaliser? Marx and Engels famously said

The class which has the means of material production at its disposal has control at the same time over the means of mental production, so that thereby, generally speaking, the ideas of those who lack the means of mental production are subject to it.⁹

So can we say there are now vastly more people with access to the means of material production and hence of mental production? Certainly, if we adjust the idea of "material production" for a world in which services are increasingly the major product, it is simple for many more people to "produce." But does it still follow that in doing so these people will have a great influence on the world's ideas?

There are indeed people who have an influence on the world who may not have done so before the Internet. Look at any number of enthusiastic programmers, such as Linus Torvalds, the creator of Linux, or Marc Andreessen, one of Netscape's founders, to see how one person's idea can have a huge impact in the networked world. However, are these examples substantially different from other people who have had huge impacts on the world before computers? There have been any number of inventors whose products and ideas have changed the world.

Perhaps, then, we should look at how easy it is for people to make their voices heard now, compared to when the only media available required large investments of capital to establish. Undoubtedly, there are cases where a lone voice has been heard which may have been lost before the Web became commonplace – Matt Drudge, the gossip columnist who broke the Monica Lewinsky scandal, for example. However, to say all people have equal access to a "voice" would assume that they are on a level with all the traditional media outlets. Will the majority of people be as open to this voice as they are to any existing brand, whether this brand is a large media company, an individual product, or a celebrity? While it's certainly easier to get your voice heard, to say that you, along with all the other freshly clamouring voices, are able to have as forceful an impact as the established voices within the system is not true. Certainly, it is easier to reach a relatively large number of people (but still a niche market in global terms), but this does not mean everyone will be on an equal footing with large companies already established. In fact, we must not overlook the fact that the nature of the networked world also makes it easier for established brands to reach new audiences.

It is, of course, impossible to pin down the effects the Internet will or won't have on society at this early stage in its development, thanks to cultural lag. On the one hand, Frances Cairncross's networked world will bring everyone closer together, revitalise and humanise

the physical environment, allow everyone to be heard and create a more free and peaceful world. On the other hand, this is yet another technology moving everything which was directly lived away into a representation (to paraphrase Guy Debord). It is creating a world of “lonely crowds,” of disenfranchised whose only hope of joining the new civilisation (“new” only in form rather than content) is to learn an alien language and customs.

¹ William F. Ogburn, *Social Change*.

² Frances Cairncross, *The Death of Distance*, Harvard Business School Press, 1997, p17.

³ *ibid*, p 253.

⁴ Sohail Inayatullah and Ivana Milojevic, ‘Exclusion and communication in the information era’, *New Renaissance Magazine*, <http://www.ru.org/82inayat.html>

⁵ Susan Hayward, ‘The Myth Element,’ *Sight and Sound*, Feb. 2000, p30.

⁶ ‘Study offers early look at how Internet is changing daily life’, http://www.stanford.edu/group/siqss/Press_Release/press_release.html

⁷ Jakob Nielsen, ‘Does the Internet Make Us Lonely?’, 20 Feb. 2000, <http://www.useit.com/alertbox/20000220.html>

⁸ Guy Debord, *Society of the Spectacle*, Black & Red, 1983, paragraph 28.

⁹ Karl Marx and Frederich Engles, *The German Ideology*, 1846.