

# From Linguistic Determinism to Technological Determinism

**Russell H Kaschula**

*Rhodes University, South Africa*

**Andre M Mostert**

*University of East London, UK*

*Technology has become autonomous. It has fashioned an omnivorous world which obeys its own laws (Ellul, 1964, p. 14).*

*Technology remains a relatively under-theorised category within the critical realist literature (Lawson, 2004, p 1).*

*Our technologies are racing ahead but many of our skills and organizations are lagging behind (Brynjolfsson & McAfee, 2011, p, 171).*

## INTRODUCTION

This article seeks to analyse the link between linguistic determinism, the notion that language determines our thought and the way we perceive our reality, as espoused by the Sapir-Whorf hypothesis, and contemporary technological determinism. Arguably this link takes place within a global context where equal access to technology is not yet guaranteed. Ellul (1964) and Lawson's (2004) observations create an interesting metaphor in terms of the technological beast staring down human society. The overwhelming response if we accept Lawson's observation is complacency at best or downright naivety at worst regarding the impact of technology on our thinking.

Lawson made his observation in the pre-Facebook era and subsequent literature is now much more focused on all aspects of technology within our contemporary milieu. Technology is now totally ubiquitous in the developed world and becoming more so in developing countries, albeit with a much stronger mobile bias for early technology adopters. That technology is rushing ahead of many individuals and institutions is almost

an aphorism with many lagging in its wake. This lag as recognised by Brynjolfsson and McAfee (2011) has wide social and economic implications for all members of society, in the case of business those that do not keep up go under. A further pertinent question revolves around how individuals who start from low technological literacy levels or do not keep pace with technological developments are impacted. Dlutu (2013) assesses for example the impact of social network sites on the isiXhosa language and culture in both a rural and urban area of South Africa. Furthermore one may then ask how this technological milieu impacts on the general aspects of the day to day lives and thinking of all members of a society.

This gives rise to the concept of technological determinism which in its simplest form states 'that technology has important effects on our lives' (Adler, 2008, p. 537). This is far too simplistic when the contemporaneous technological developments are assessed. Adler (2008, p. 537) goes further and recognizes 'that technology itself is socially determined...and social structures co-evolve in a non-deterministic, emergent process...the effects of any given technology depend mainly on how it is implemented which in turn is socially determined' (Adler, 2008, p. 537). Engaging this socially determined application of technology can be advanced when the relationship with language and language determinism is considered. Moreover, it is the interplay between technology and language that gives rise to the emerging concept of a language singularity which is brought about by a form of technological determinism.

This article seeks to explore the possible effects of rapid technological development on human interaction, language and culture in a 'globalized' world which has unequal access to literacy and technology. Furthermore,

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the article explores the link between language, culture, thought and technology and the type of linguistic and technological determinism that we can anticipate.

## BACKGROUND

Sociolinguistic theory recognizes a continuum between language and thought, 'mould theories' and 'cloak theories'. Mould theories characterize language as '...a mould in terms of which thought categories are cast' (Bruner et al., 1956, p. 11), while cloak theories offer the role of language as '...a cloak conforming to the customary categories of thought of its speakers' (Bruner et al., 1956, p. 11). This distinction is further developed when addressing the 'Sapir-Whorf hypothesis', which is associated with the two principles of linguistic determinism and linguistic relativity, where in the case of the former, our thought patterns are determined by our language, while in the case of the latter, speakers of different languages perceive and interact with the world differently (Chandler, 1995, p. 89; Anthonissen & Kaschula, 1995, p. 17).

According to Kaschula and Anthonissen (1995, p. 17) the Whorfian hypothesis '...is named after the American linguists Edward Sapir (1884-1939) and Benjamin Lee Whorf (1897-1941), a former pupil of Sapir.' It really infers that a person's view of the world may largely be conditioned by their native language and that a person's mother tongue provides '...a series of categories which form a framework', used to perceive reality or the world around us.

Whether the Whorfian perspective is accepted in its strongest form, which holds that 'language determines thought and often behavior', (Slobin, 1971, p. 122) or if other less extreme forms are explored, there is sufficient consensus within the debate that some degree of Whorfian perspectives are in operation. However, an alternative view holds that 'linguistic skill depends very, very heavily upon a pre-existing perceptual capacity' (Premack & Woodruff, 1978, p. 606). This area is well researched, and debates abound. It is clear that language plays an integral role in the interface between all cultures and their communing with wider reality and as a consequence with technology. The separateness that is implied by the Sapir-Whorf debates addresses language as deterministic or relative, implicitly separate in nature.

Obviously, the concept of technological relativity offers scope for much debate as well, at its simplest level all technology is the same. However, in the context of this article the term will be used to define the relative ability of the user in terms of mobilizing technology for their personal and professional development, as this is essential in terms of the dialectic. However, initially the interface between language determinism and technological determinism needs to be explored, in order to garner any lessons that the comprehensive debate around this language determinism has generated over the years. This is by nature a very wide area and the goal of this article is to lay a suitable base for further investigation and evaluation, in order to create a framework for assessing the wider social impact of technology on the human condition.

Developing a suitable framework for how technological determinism may be developed, Sapir's observations offer an ideal starting point for the balance of the article. Human beings do not live in the objective world alone. Furthermore, they do not live alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society. It is an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact is that the 'real world' is to a large extent unconsciously built upon the language habits of the group. Consequently, as no two languages are ever sufficiently similar to be considered as representing the same social reality for the speakers of these languages. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached. We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation (Sapir, 1958, p. 69).

The application of extreme Sapir-Whorfian theory is not widely accepted and consequently does not require any rigorous engagement. However, the characteristics of *Moderate Whorfianism* are relevant. Chandler (1994) identifies these as<sup>1</sup>:

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