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Technology and Social Complexity, analyzing the step before

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INTRODUCTION:

I will use the word "technoscience". This term was once coined by Virilio. He claimed that science and technology were closely linked and that it was necessary to recognize this relationship.

Nowadays, technoscience produces new and more complex products.

These devices enable us to cope with complexity, but also they create complexities.

First, it is necessary to understand that not everyone can use new technology. Namely old people and those who do not have access to education or who don't have economic means. Neither can enjoy its benefits.

It is also very important to remember what Neil Postman said: when new technology appears into a social group, it is not something that is added to the culture of this group, but rather it changes this culture; everithings becomes different.

Science, Technology and Society studies, Social Construction of Technology (SCOT) researches, start once innovations are introduced into society. Undoubtedly, is very interesting and also very important to analyze how social groups modify their behaviour when including new devices into their lives, how they cope with their current reality using technology. But (there is always a but) the question is: why new devices appear?

I suggest discussing this issue analyzing the step before products are introduced into society.

ONE STEP BEFORE:

In the analysis of the interrelationships between technology devices and society it is important to discuss some questions:

- Whose ideas create innovation?
- What innovations are thought for?
- Which are their aims?
- Can we consider all new devices as technoscientific innovation equally important?

SOME ANSWERS AND SOME EVIDENCES:

1.- "Culture can't be left to Google" (La Nación January 17th 2007). This news article presents an interview to a French historian Jean-Noel Jeanneney (President of the National Library of France). Google is planning to digitize 15 million books and editors and authors are

worried. Jeanneney agrees with the idea of put in internet the books, but he disagrees with the way that this site will offer the results of the searches. He is talking about an ideology problem: "I made researches in Google searching books about Victor Hugo. I found 20 books in English and 1 in German ..." said Jeanneney.

2.- "Man will merge with technology" (La Nación December 31st 2006). In this article Ray Kurzweil, a guru in artificial intelligence, says that he believes there is not reason to be afraid of technology fast development. He predicts we will face a better future where diseases will be defeated.

He also argues that if we want to stop the development of technology, the threat from technology will increase because this development will become illegal and underground. Stating this Kurzweil recognizes an important fact: technology poses a threat, and he adds that only scientists' responsibility can protect society from that threat.

It is clear that innovations are thought outside society, by only a few.

3.- "War over digital TV" (La Nación, December 24th 2006)

There are 3 different possibilities and my country must decide which one it will adopt. The new digital TV will add services and will produce a better image quality: this is a millionaire business.

Thus, technology is involved in politics. Lobbies make promises to government: to open factories, to invest, to increase the workforce, and the like.

There is not doubt the matter is business ... and a big one.

4.- In Maribor Conference (2005) I introduced the difference between "necessary innovation" and "unnecessary innovation". Simulating a mathematical model I showed how the introduction of unnecessary innovation produces economic problems in countries with low development. Also I presented as evidence that in the European Union - in its measurements - all innovations are considered equally important. The E.U. considers for example how many people are working in the Research and Development department of all industries without any differentiation, or how many Euros were invested in research and development in enterprices of each country and compares this data to rank all community countries. But E.U. doesn't take into account the type of products, the importance of these products for social lives: it is not the same to produce a vaccine than to produce a coat with a cell phone in the sleeve and the receiver on the lapel. The E.U. doesn't distinguish between necessary and unnecessary devices, everything adds money, and everything is business.

TO SUM UP:

As analyzed, technology modifies behaviours modifying the culture of a social group, changing the social culture, but only of those who have access to these new devices, excluding others from this social group or conforming new smaller groups that share the new technology. This is another kind of exclusion: the wish exclusion, the exclusion as a status symbol.

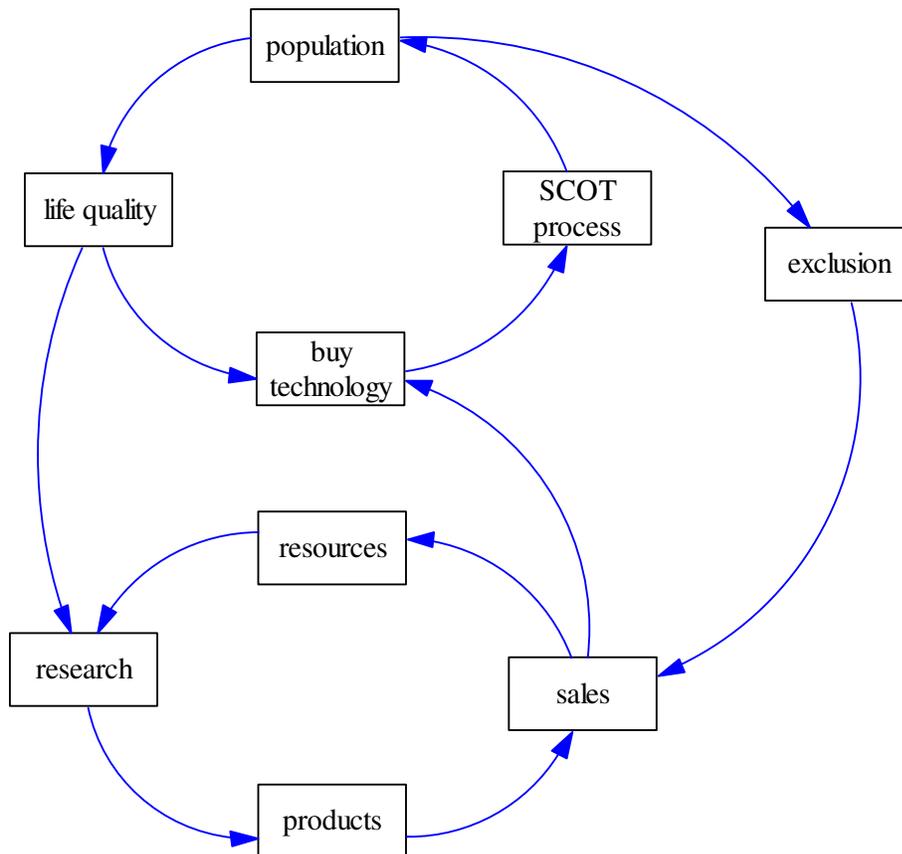
New technology has its starting point outside society, it is thought by only few people, usually because of economic reason and also, sometimes due to control and domination reasons.

So, complexities are human creations. The aim of these is to put into the market the devices that enable people to cope with these created complexities. Undoubtedly, complexities create exclusion for those who can't use innovation or can't access to the benefits of these new devices (for example, in medicine, to use diagnostic advanced technology is very expensive).

Thus Ralf Dahrendorf's concept can be seen clearly when he claimed that "possibilities" increase while "titularities" decrease (there are more innovations but less people who can use it or who access to its benefits).

This behaviour is possible because the economic freedom proposed by this economic system and globalization produce an unequal society and increasing concentration of economic power.

EXPLAINING THE IDEA USING DYNAMIC SYSTEM TOOLS:



Causal-effect graph. Fig.1

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