

# Technics, Capital and Society: The Material Bases of Technological Development

## 3.1 Investigating the Technological Practice from Its Social Content

As we have seen, the current period of development of capitalist production, characterized by a finance-dominated accumulation regime (Chesnais 1996, 1998, 2005), can be read as an extremely tight interdependence of the financial markets, which spread and establish their logic of accumulation in other spheres and sectors of the global economy.

In one way, going beyond the wide range of political, social and economic measures that have allowed for the establishment of this logic since the neo-liberal offensive in the 1970s and 1980s, and have only established themselves even more firmly ever since, this dynamic is made viable, from a logistical perspective, thanks to the massive advances in the area of computer technology, that have, through automation, considerably expanded the capacity of fictitious capital to condition the manner in which the global economy operates.

This form of regulation of capitalist accumulation, managed twenty-four hours per day in internationally connected financial markets, operating in “real-time”,<sup>1</sup> allows for million-dollar transactions to take place in a matter of thousandths of a second. The deregulation of the financial markets and the liberalization of international transactions, allied with the creation of a technological infrastructure, that uses advanced telecommunications, interactive information systems and powerful computers, capable of high speed processing of the models necessary to handle the complexity of the transactions, allows capital (as well as savings and investments, interconnected throughout the world by means of banks, financial institutions and stock exchanges) to be

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1 In relation to operations on the capitals market, the term “real time” should always be used with caution, since it is just a rhetorical/explanatory abstraction used to identify the meeting of intention, interaction and perception of a given event in time. In practice, however, there are always temporal differences between these dimensions and this is especially important in the reality of the capitals market, since, as we will see, it is in precisely this exploitation of milliseconds that technically defines these differences, that an important frontier for the exploration of financial gain through arbitration with commercial papers is to be found.

transported from one side of the world to the other, crossing different economies, in very short periods of time. As such, the flows of finance observe impressive growth in terms of volume, speed, complexity and connectivity, increasing technological empowerment and the prominence of the fictitious economy, to the detriment of the real economy, at the same time as it has raised the interdependency between the markets submitted to this way of operating. This phenomenon produces drastic consequences in the configurations of the national states and their institutions, private companies and the manufacturing sectors, as well as of civil society, establishing a series of new political and social dilemmas and complexities.

It therefore seems important to us, based upon this diagnosis, to think about the role that the technological phenomenon plays in the structural changes which the economies and society have undergone during our times. Far from diving into the celebration of technology that characterizes many contemporary approaches, maintaining, at their root, a greater or lesser degree of analytical determinism, we believe the technological dimension to be an important interpretative key, amongst many others, to an understanding of the processes of structural transformation of the capitalist economy.

This is because the capitalist economy was born and is increasingly legitimized as a technical economy (as if it were possible to talk of an economy as being “non-technical”) of domination of nature by man, through work and, as a consequence, of man by man (Marcuse 1979), based upon the distinct forms of social organization of this work. Supporting itself in the fetish of interminable, rational-instrumental, neutral and autonomous progress, the form of organization of social life created by capitalism, is legitimized, along this path, as being inexorable, as an automatic result of the human need to transform nature, in a desire to reproduce human existence as comfortably and securely as possible. Countless critics working in the western tradition, have turned their thoughts toward analyses of this phenomenon and its various consequences. Far from attempting to summarize this enormous debate, or provide a superficial opinion on it, we intend here to present a review that aims to show the reader the following objectives of this work: an investigation into the various relations between technology and capital and, more specifically, between the development of the Information and Communication Technologies (ICT) and the process of financialization of the capitalist economy in our time.

One of the biggest challenges to our research on technology, from this point of view, is to avoid the temptation of technological determinism, or in other words: the understanding that, ultimately, technology is autonomous and determines the direction of social dynamics. Put this way, the idea seems extremely rudimentary. However, it is important that we make it clear that it is