

Technology in Sombart's sociology

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Abstract

This paper outlines Sombart's thought in respect to technology. After describing the cultural context, the paper presents Chapter XXIX, entitled "The Spirit of Technology", of his most important work *Modern Capitalism* (Sombart 1902/1972), but mostly we will look at an in-depth study done on the essay "Technology and Culture" of 1911, which Sombart presented to the German Sociology Society at its first congress. The conclusions will emphasize how useful a reflection on technology can be, so as to propose once again original excerpts drawn from the thought of a great nineteenth-century European intellectual.

Keywords : Technology, Modernity, Capitalism, Culture, Sombart

1. Introduction

This essay delineates Sombart's thought in regard to technology. After having defined the cultural context within which scientific production regarding the topic on technology is assembled, the essay presents Sombart's thought, utilizing chapter XXIX entitled: "The Spirit of Technology", of his most important work *Modern Capitalism* (Sombart 1902/1972). Moreover we shall be going more in depth on the essay "Technology and Culture" of 1911, which Sombart presented at the first congress of the German Sociological Society. In concluding, we will show how useful a reflection on technology can be, by re-proposing unedited excerpts from the thought of a great nineteenth-century German intellectual.

2. Technology and Modernity: the context of the debate in Sombart's time

One of the arguments around which German intellectual reflection is organized, between the nineteenth and twentieth centuries, concerns the character of technology, which increasingly takes on the form of domination regarding the nature and the life of man. It is an element that is represented in emblematic manner in Goethe's *Faust*, where a scientist makes a pact with the devil to be able to build a huge dam capable of stopping the might of the sea. Thus, modernity appears, alongside working characteristics, audacity, and rational organization of technology, capable of dominating forces of nature, of imprinting a characteristic on associative life and of

building individual sensibility, which, at the same time, is subject to the lure of the power of technology and the crushing of personal lives. This suspension of German Culture, between the appeal of technical and industrial modernization and the repulsion of a cold life, one without emotion and sentiment, will turn out to be one of the characterizing traits of reflection of German intellectuals.

Reflection on technology on the part of Sombart, is inserted in a context which made its own the distinction of conservative thought between *Kultur* and *Zivilisation*, as has been pointed out by Maldonado (1979). It was a German intellectual of British origins, Chamberlain H.S., to introduce this dichotomy on his work *ie Grundlagen des 19. Jahrhunderts* of 1898. In that essay, Chamberlain stated that «the European world, besides a great growth in its civilization, has seen a progressive deterioration of culture, to the point of arriving at sheer bestiality» (cit. in Maldonado, op.cit., p. 17), concluding its writing with an apology of the 'arian' culture which came before Nazi totalitarian ideology. Such a distinction was taken up at the turn of the century by Spengler in his *The decline of the West* (Spengler 1918/1922), in which he compared the spiritual and creative aspect of life and of a society, that is, its *kultur*, to the forms of material and istituzionalized life, coldly calculating, founded upon consumerism and deprived of values, meaning and *Zivilisation*. The degeneration of Western society was all grafted in the hypertrophic development of civilization, to the detriment of culture. Technological development can, therefore, according to this approach, be synonymous with decadence, since it threatens the growth of the forces of the spirit.

In the area of these comparisons, there are however articulated positions. For some, technical innovation and mechanization represents an epochal passage to a new world, as we see in the writings of Walter Rathenau, when one does not indeed retain technology as a carrier of a new reign of the spirit, as in the writings on esthetics by Bauhaus back in the twenties.

No one better than Robert Musil, engineer and author of '*The Man Without Qualities*' (1962), an emblematic portrait of modern man, could draw the situation of German culture as it exited the Second World War. Due to the distinction between *Kultur* and *Zivilisation*, without false use of tactics in a pamphlet of 1922, Musil forcefully rejects the conformism of the "small Goethan souls," who despise the modern scientific spirit, which had de facto historically imposed themselves. He spoke out against German irrationalization: «It isn't that we have too much intellect or too little soul, but rather little intellect on the question of soul» (cit. in Maldonado op. cit., p. 16). This is a citation that comes to our day through authors of the School of Frankfurt, Max Horkheimer and Theodor Adorno, who, commenting on the period, as the object of our attention, sustained that it is not technological progress as such that threatens cultural development, but social relationships to orient its use and the advantages of technical progress. From this point of view if *Kultur* has always promised freedom from servitude and the emancipation of humanity, in question of fact, it will be *Zivilisation* to bring it about in as much as «evil does not come from the rationalization of our world, but from the irrationality with which that realization is acted upon» (Horkheimer and Adorno 1966, p. 108).

3. The spirit of Technology

In his most important work, *Modern Capitalism* (Sombart, 1902/1972), Sombart, in Chapter XXIX deals with (The spirit of Technology, in which he ironizes with those who understand the Renaissance centuries, and those of the Reform or the Baroque, only for the contributions they gave in the area of the human spirit, while they retain useless all that concerns inventions and discoveries of a technical nature, and, as he himself cites between parenthesis, “notwithstanding Leonardo da Vinci.”

It isn't only an independent chapter, but all of technology is one of the pillars of modern capitalism. In fact, the main intellectual interest Sombart had concerns economic life in general and the socio-economic conditions of the ascension of Capitalism and Socialism. The main work came on the scene in 1902, *Der moderne Kapitalismus*, an economic history of Europe of systematic character, with which he poses the objective of exposing the economic life of all of Europe, from its beginnings up to our contemporary time of the Capitalistic system. In this work, Sombart conceives Capitalism as a unique historical formation: in doing so, he resembles Marx in as much as he retains Capitalism to be a recent phenomenon in human history and not as immutable or eternal. For Sombart, every economic system represents a unique combination of three elements: of economic mentality (spirit), of organizational and regulative norms (form) and of adopted technology. Therefore, Sombart inserts technology as a foundation of the main phenomenon of modernity. Each factor is analyzed through twelve variable, each of which presents dichotomic modalities. Therefore, because of such complexity, every economic system represents a unique combination of the three above-mentioned elements. The evolution of economic systems follows the trajectory of the phase of formation, of maturity and of decadence. For this reason, during the same historical period, various economic systems can coexist, one arising and the other dissolving, contemporaneous to the one at the apex, etc. The main merit of this work concerns the ability to show the structural relationships between economy and society, without censure, and it allows one to see, behind classic economic variables, the social forces and the individuals, their attitudes, mentality, values and behaviours. The concept of economic spirit allows, for example, to make intelligible the differences between the various types of workers in succeeding historical epochs. Sombart, in fact, uses it to explain the attitudes of a Medieval artisan, or of a contemporaneous farmer, or someone belonging to the Bourgeoisie (Cavalli 1967, p. 33).

Thus, the so called “spirit of technology,” is central for Sombart as regards the will to invent, to bring about the unity between theory and practice, and to express the desire to subject the world to the rational dominion of man, exploiting the knowledge of nature. For Sombart, such an approach has informed European culture since the Renaissance.

Sombart recalls the sad fate of famous inventors among whom the Benedictine monk Berthold der Schwarze, inventor of the first steam engine, who lived between the fourteenth and the fifteenth centuries. Such an invention did not take foot because of a refusal on the part of his peers. Sombart, however, understood

the strong currents of inventive nature that traversed the pre-Capitalistic period. To show this, Sombart compares the differences between technology during the period of early Capitalism and technology of the pre-Capitalist period.

The technology of the pre-Capitalist period lacks a scientific base. Sure, he says, you can't be deceived by the Leonardo da Vinci phenomenon, who is a modern researcher and inventor, an exception in respect to the characteristics of the science and technology of his time:

Modern in the sense that he wants to "speculate," meaning to observe and understand, research empirically and follow the causes, seek the particular and see within it the universal. Modern also in the sense that he aims already at the quantification of human knowledge... The category of causality is for Leonardo, the most rigid of commandments ... But Leonardo is modern also as a technologist and inventor, as he wishes to found on natural science all technical ideas (Sombart, op. cit., pp. 186-187).

But the ways of science and technology, which criss-crossed in Leonardo, separate anew in the centuries that followed. In the men of science and among the inventors of technology of the seventeenth century, the idea of animation of nature still survived:

«The world of technology, of inventors, was still the old multicolored world, gay and horrid, in which men had been living before the scientists set out to destroy it. One's spirit and imagination were still instilled in nature, and the skies and the earth were animated by the eyes of the observer.... From the world of the middle ages they inherited the admiration for mystery, that sacred fear for all that was of a technical nature, sentiments which we observed to be typical of artisanship» (Ivi, pp. 188-189).

Well then, the art of inventing, a prerogative of an elect few, was full of timorous mystery; this conviction induced the greater part to retain that, the art of the inventor could not be learned, nor that technical innovations could be the result of scientific studies, but rather, that inventing was a mysterious process, one that was acquired through a "Heavenly gift" (Ivi, p. 190).

The typical inventor of the Baroque period occupied himself with everything, and in every field, without any theoretical foundation:

«We could easily imagine how these inventions came about: fundamentally with the help of the imagination, without any system, without foundation... But evidently, that which lacked in those men, both in training and scientific formation, was compensated for by a vivid imagination of which the creative force we could never imagine nowadays... If the way in which these pioneers of technology expressed their nature was still deeply pervaded by Medieval mysticism, it is this decisive will for technical progress which renders spirits, especially in the Baroque period, typically "modern" and which ties them to our times, while their way of thinking makes them akin to the Middle Ages» (Ivi, pp. 195-197).

Sombart also shows what were the internal motivations of Medieval traditionalism which permitted, already in that period, considerable technical

innovation, before any economic interest and income, typical of Capitalism, could overwhelm it. Sombart lists three sources from which the inventive will could, and had, to flow from.

The first consisted in knowing the world and the desire for new forms of social and political life:

«One source is the general push of time, for at least the end of the XV, the XVI and the XVII centuries ... This tendency brought some to the heights of speculation, others, to the depth of experimentation and diabolical arts. Here lived the inventor and the discoverer, mainly when to that obscure impulse to know was added the vague desire for the new, for new forms of life, for new worlds, that desire which finds its expression both in research expeditions at that time, as in the longing for new forms of being» (Ivi, pp. 197-198).

The second and third source had their roots in two centres of interest; in possessing wealth and in the development of military arts:

«From the desire for gold, alchemy was born, which in turn became the mother of numerous inventions and discoveries; from the same research flowed important reforms in the field of mineral and mining technology; the same desire for gold urged men to cross oceans and brought with it, of necessity, progress in the area of navigation. Similarly the development of military arms systematically favored technical progress. In this field of human endeavor the tendency to innovate and to bettering, had become a necessity, as was perseverance for other fields of culture in principles of tradition» (Ibid., p. 198).

The essence of technology, between the XVI and the XVIII centuries, was for Sombart empirical and organic, while it changes in the periods of early Capitalism and then in modern times:

«... Technology is still in the first place empirical, and in second place, organic... If, however, technology kept its foundation in an empirical basis, in as much as it still lacked a foundation in natural sciences, it was no longer all traditional. Rather, technology started to become decisively rational right during the period we are now visiting we could conclude by saying that Medieval technology was empirical-traditionalist, that of the early Capitalism was empirical-rationalistic, while modern technology is scientific-rationalistic» (Ivi, p. 199).

But what is most interesting is showing, on the part of Sombart, a causal relationship between technology and the socio-economic structure:

«... Important novelties came from this tendency in the field of technology during the half millennium from the middle of the XIII until mid XVIII centuries... technical innovations rose rapidly from the beginning of the Renaissance period and then during the XVII and the XVIII centuries; some of these innovations are of

fundamental importance so as to open up wider vistas to the development of Capitalism since its beginnings, and the appearance of others yet seems to be tied indeed to the birth of Capitalistic economy... Rational technology is more easily tied to agriculture. From the mid XVIII until mid XIX centuries, a form of “rational agriculture” prevailed, in which turn is inserted between traditional agriculture and scientific agriculture. Technology as a whole developed in a similar way» (Ivi, pp. 199-200).

In a mature Capitalism we can register an ulterior passage characterized by an overabundance of inventions which Sombart attributes to objective and subjective causes. The objective variables concern all those activities of promotion and formation of a context that is favorable to inventing. These are three and concern institutional activity, such as: a) the creation of technical institutes; b) the institution of departments of research in large enterprises; c) stimulation of inventive activity through contests, buying patents, etc.

The subjective variables concern the type of inventor and his peculiar motivations tied to the dimension of: a) joy of inventing; b) seeking success, intended as the common good, love towards one’s neighbour, progress, etc.; c) desire for income, which is the most important spur of modern Capitalism (Ivi, p. 588).

4. Technology and Culture

A more in-depth look on the topic of development and the importance of technology is the revisitation of the talk given by Sombart in 1910 at Frankfurt, at the first congress of the German Sociological Society (Sombart 2012). In this writing as well, Sombart speaks of technology as a point of view on reality which transmits to us the “spirit” of a period in time. In this sense, to speak of technology is not an end in itself, but it expresses the absence of a historical period, telling us of its culture, of the vision of the world in the past, transmitting to us the way of understanding and of relating of human person with the world, nature, and people: «the particular “spirit” of that technology, meaning, for example, the main principles on which technology is founded: such as the one that in our days technology is a technical rationale differing from the empirical technology of the past» (Ivi, p. 141). Sombart recalls the cultural style of a period that is, at the same time, objective and subjective culture, the quintessence of all the cultural phenomena which take on a character of particular significance.

From this point of view, Sombart’s thesis shows that all cultural manifestations are penetrated by technology in as much as culture cannot prescind from a certain quantity of material goods:

«It is objective because it materializes in some object, in so far as it can have even just a symbolic value, like a flag or a statue of a king... all the material culture depends directly from the quantity and the quality of objective goods of which we dispose. But also institutional and spiritual culture, such as a personal one, continues

to depend on that patrimony of goods, be it only in the sense the people carrying it, need material goods in order to feed their bodies and satisfy their necessities... Books must be written and printed, churches must be built, festive wear must be woven and embroidered. Even the saint needs a column on which to perch, as the hermit needs the bell that recalls him to matins» (Ivi, pp. 143-152).

Technology is the privileged observatory of a period in time because it embraces at once a collection of knowledge and of faculty: knowledge intended as process of production be it relative to natural processes of transformation of natural reality; instead, faculties concern the ability to use technology, to bring them into our daily lives or for ones' own reasons, the knowledge that certain matter, certain forms, and certain natural processes can be utilized in view of production of material goods; and the faculty, or rather, the ability to effectively serve oneself with these forces, in practice, and these processes which lend themselves to be used on the part of the human person (Ivi, p. 141).

Sombart distinguishes between technology in a "wide sense" and in a "strict sense." In the latter version, technology is meant as an instrument, meaning it aims to reach specific goals by using instruments, and, therefore, as he underlines himself, is synonymous with productive technology: «I define technical productivity as economic technology. This is because, in it, the technical phenomena interweave, so to speak, with the economical ones» (Ivi, p. 140). Sombart explains to us that the primary technology is productive technology, as the ends of this latter concern the production of material goods, while the rest are secondary technologies.

With this Sombart does not wish to adhere to any technological conception of history and so as to clear the field from any possible misunderstanding, he sends a systematic criticism to Marx and to technological determinism. In the first place he states that any factor or social variable is independent, but each is interacting with others and each presupposes the existence of other variables. Secondly, from the historical and empirical point of view, we can't show that a technology, for the mere fact of being available, is used by a people. Furthermore, it is not a given that the use of a technology has always and of necessity the same economic effects. It is clear then, from this perspective, that an economic regime is not a function of technology. In third place, Sombart refuses the nexus between economy and cultural expressions. Therefore, if technology is not the foundation of economy, then, the latter is not the base of society or of culture (Ivi, pp. 150-1).

A last notation must be made on the distinction Sombart makes between subjective and objective technology, which differentiates the novelty by Sombart in regards to the debate around technology by his peers. Personal culture concerns a cultural act (Ivi, p. 142), meaning, the use of cultural goods on the part of an individual. Subjective or objective culture are deeply interrelated, but each can also be separate from the other or, yet again, can be reflected on the other in a totally original manner (Ivi, p. 143). Sombart, then, takes up the Simmelian distinction between subjective and objective culture (although pruned from the necessarily conflictual dimension), while he rejects the separation of the conservative thought

between Kultur/Zivilisation. The cultural style, the “spirit” of a period in time is the synthesis between these two interrelated dimensions.

5. Conclusions

In a period such as the current one, marked by nanotechnologies, by biotechnology and, in particular, by the Internet, in which the flow of communications constitute a social space in itself, a place of production, consumerism, of identity building, of power, all at the one time, Sombart offers us interpretative coordinates to conceive a role of technology in relationship to culture and to society and reflects also on the incidence of inventors in the social transformations. Sombart’s great merit, therefore, is that of offering us interpretative tools which allow us to make a comparative analysis between economic systems, shaped by technology, and the creators of inventions. Sombart, in fact, allows us to look in the various historical epochs and to identify them, on the one hand, along the foundations of various technologies, and, on the other, through the identification of the actors who have characterized it.

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