Computerization and Employment

A Short of Survey

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Linking computerization and employment cannot seriously be done, unless we say that both have a common origin: the leading (mechanistic and taylorist) paradigm, including the conservative myth of the "one best way". If we want to solve the dilemma "how not to be luddist?". We show -using the case of bank workers- that we need a radical change of organisational and cultural paradigms; and first a new definition of work, workers, jobs and production.

Finally the article analyses the importance of mastering data/models and stresses the necessity to be aware of their meaning and the importance to promote the function of "data (information) administration" (datawaring and industrial democracy versus semiocracy). It then explains (from two french examples) what kind of educational effort is necessary to face new technologies and new working processes; a fascinating challenge to meet indeed!

I - THE QUESTION TO ANSWER

In business as well as in the whole society, the use of computers is steadily increasing; so are the unemployment rates. One should seek a possible relation between "computerization and unemployment", analyse the possible consequences of computerization on the employment market. We will restrict our study to Western Europe, so as to avoid blurring our analysis with structurally different situations. Moreover, the crucial problem of qualification change will only be slightly dealt with, despite its essential importance.

II - CAN WE REALLY LINK COMPUTERIZATION AND UNEMPLOYMENT?

Many difficulties arise:

1) Can one argue that computerization increases unemployment without comparing with a non-computerized world? Where do we find a world where computerization has yet to induce a measurable change, but where other conditions are close enough for a valid comparison?

2) Can the same type of analyses be used for robotics, bureautics, development of decision-making techniques and telematics?
3) Of course the development of E.D.P. (electronic data processing) is not an isolated phenomenon; it is closely interrelated with development of modern technologies. Furthermore, notice that it cannot even be separated from the deep modifications of society, its procedures for decision-making, leadership and manufacturing, though these modifications are far slower than usually described, as they are described by sociologists whose interest steer them toward the extreme cases. Clearly the process is just beginning and cannot be separated from the very nature of goods and services produced or to be produced to meet real challenges and "social needs". (cf 1)

4) It is becoming increasingly clear that computerization is mainly an organizational technique; it therefore cannot be studied apart from the science and practice of management; it is even deeply rooted in the whole development of our culture, our practices and our industriality, the kind of needs we value and privilege. (cf 2)

5) Yet another more serious difficulty for linking: the simultaneous increase of E.D.P. and unemployment in no way proves a causal relationship between the two evolutions. Saying so would be a serious methodological mistake, as well as a radical mean of denying an economical crisis. Though we do believe they are fundamentally related by the schemes and paradigms of which they are both issued, the crisis does not appear as a direct consequence of the computerization development. We have shown that our "western civilization" - in fact a reading through Plato of the first chapter of Genesis - is based on the primacy of physical paradigms considered as the strongest weapon for mastering nature (if not ourselves) and for becoming masters of our own freedom and makers of history; the scientists of the last century were all aware of this concept, and Karl Marx himself relies heavily on it. The very foundation of our industry is mechanics (cf 3); what cannot be translated into mechanical concepts (eg space, time and mass) is not to be taken into account, the excuse being that such concepts are difficult to quantify and enter as data in the memory banks of a computer. (Notice the term "computer" used in the anglo-saxon world.) Thus the climax of our society is mechanical science: industrial and classical managerial sciences, data processing, computers and organizational sciences appear as the essential tools needed to insure the "splendor" of our industrial age. Similarly, Weber (cf 4) showed long ago the importance of "protestantism" (a pessimistic view of life, emphasizing sin and damnation); Bjorn-Anderson and Weisenbaum (cf 5), myself and many others spoke in terms of rationalities.

This age clearly relies upon material industry and heavy manufacturing, combined with the idea that "work" (cf 6) must be enclosed in special places called "factories" and cannot be performed anywhere else (cf 7). These two pillars of the 19th century - industrial mechanism and imprisonment of work inside the factory - are threatened by telematics; this is probably the real reason why automation and especially telework develop at far slower rate than the literature would make us believe.

6) Thus appears an intimate relation between computerization, organizational theory and practice on one hand, and cultures on the other; cultures differing from one type of organization to another, from country to country, continent to continent. Culture thus has an essential importance; this calls for a more intricate and enriching analysis and tends to explain why authors like Gotlieb (cf 28), U. Briefs (cf 8) and Lorenzi-Pastré-Missika (cf 9) differ so widely in their conclusions, despite a rather coherent set of initial data. Our restriction to the case of Europe is also partly recommended by this particular problem.