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Knowledge and Development: alternative perspectives and strategies

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Introduction

The present form of globalization, which promotes the extended circulation of information while aggravating socioeconomic inequalities, spreads and intensifies radical changes in the forms of material production. As socioeconomic reorganization penetrates the mode of knowledge production, the latter is flexibilized and rearticulated in multiple directions and dimensions, internally as well as in its exchanges with the social environment in which it develops.¹ And as knowledge becomes more and more relevant to the production of wealth, the production/distribution of knowledge and the reduction of social inequalities become reciprocally indispensable if we are to envisage the construction of social and economic democracy.

Thus knowledge is a strategic factor not only for economic accumulation but also for social development, and our objective must be to understand the mode of articulation of economic and intellectual factors of development in each social formation, that is: the specific social configurations of the mode of articulation. The tension between concentration and distribution (of knowledge, as of wealth) is crucial to this understanding.

Innovation - in its wider meaning, encompassing technological, economic and social innovation - thus becomes a key object of social science and of development strategies. The capacity for technological and social innovation - presupposing the production and distribution of knowledge (a critique of the fallacy inherent to the idea of a generalized "knowledge society" is inevitable here) - is configured by social conditions existing in the cultural and institutional environment, more than by the availability of material resources. The immaterial changes which occur in the production of intangibles as well as in material production generate social change - thence the possibility of development.

Most research and theoretical work on innovation and development does not yet satisfy our need for analysis and comprehension of the necessary social conditions, processes and effects of innovation. Radical socioeconomic transformations demand radical changes in perspectives and in strategies. It thus becomes necessary to develop and employ new analytical strategies, but without forgetting our more fertile theoretical traditions. While not presuming to cover all the issues involved, I propose to sketch a panorama of the main conceptual/methodological problems observed and to suggest some strategies for facing the rising challenges to social science today. The next section will attempt to critically summarize current interpretations of this process and suggest alternative strategies; section 3 will focus on what seems to be the core of the matter: the connection between democracy and knowledge; the fourth will discuss a weberian concept of the rationality of capitalist development as one possible inspiration for alternative analytical perspectives of development and the fifth attempts exploratory considerations on the emergence of alternative strategies of social organization of production observed in Europe and in Latin America.

2. Concepts and Models

In their efforts to understand contemporary transformations, specialists in many parts of the world have formulated various concepts and models, which have in common a focus on the articulation between knowledge, production and development. Nonetheless, and despite some brilliant formulations, we still consider that our analytical capacity remains limited and that a considerable part of empirical studies based on these models is unsatisfactory and, as such, frustrating.

Why is this?

I propose, as a tentative answer, an ensemble of three intimately related factors which seem to be restricting

our interpretative and explicative capacity, accompanied by strategic counterpoints which may point the way to a richer, more fertile path towards increasing the potential of studies in the field of social innovation and development.

2.1 Disciplinary Isolation

As has already been suggested in the introduction, it can be observed that most of the work being done about innovation and development is done by economists. If, on the one hand, their contribution has been extremely relevant from the point of view of the analysis of macroeconomic policies and environments as well as of industrial microenvironments, on the other it rarely integrates the perception that these processes vary widely according to diverse socio-cultural and political-institutional contexts. In order that economic facts and processes be explained not in and of themselves (as if they were self-evident), but on the basis of the cultural environment that contextualizes them, the economic focus must be associated with a sociological perception of the nature and characteristics of the networks of symbolic and social relations reflected in wide-ranging political and institutional arrangements.

The insufficiency of these approaches has stimulated the incorporation or adoption by some currents of economic thought of concepts such as "embeddedness" and "social capital". This does not solve the problem when the analyses continue to consider social structures and relations as "externalities" or to insist on studying "the market" without taking "markets" into consideration. After all, "the market" as a universal mechanism of coordination is an abstraction. To understand the possibilities of innovation, it is necessary to understand "markets" (plural) as social structures built throughout history by social relations in specific institutional contexts. It is important to keep in mind that this is also true for development strategies and policies. When these abstract "the market" or "the economy" from social reality, they are inevitably destined to be unsuccessful.

Here, possibly more than in any other field of study of social processes, interdisciplinarity becomes indispensable. Socioeconomic development demands socioeconomic conceptualization and policy strategies. The fact that most of the classics did not separate the economy from society probably explains the sheer power of their theoretical elaborations as well as the very fact that they became classics. Marx, centering his analysis on "the social relations of production" as the dynamic element of other social relations; Weber insisting on the theme of rationalization of everyday life and its relation to the development of capitalism; Alfred Marshall (1986) defining markets as interactions in which some wish to obtain goods which others can offer, within a methodological framework of five dimensions: space, time, formal regulation, informal regulation and familiarity; Karl Polanyi (1975 [1944]) pointing to the historical and political construction of market mechanisms as a principle of organization along with reciprocity and redistribution; to cite only a few, have all left an important legacy for contemporary studies, and an example to be followed.

2.2 Isolation of the object

This problem is practically inseparable from the first, but it has its own specific characteristics and also serves to better explain what was said above. The narrow limits of a focus on firm productivity, on industrial policy, on unemployment, on technological innovation pure and simple, or on competitiveness, for example, restricts our possibilities for the comprehension of social change and reduces the competence for the elaboration of development strategies. Changes in material production and in the production of knowledge have established and developed complex multi-articulated relations between the two processes. The notion of a system of innovation, for example, is a response to the observation of evidence that there is a need for coordinated action on the part of the complex tissue of social actors and forces involved in the process of promoting development, and as such has been an important contribution to our field of study. However, we should not restrict the study of innovation (or its systems) as if it were an end in itself, but rather as one of the expressions of social change - and development, which is in fact what we are aiming at.

In this sense, more comprehensive than "system" is the idea of environment, which seeks to embrace the complex combination of conditions (limits, obstacles, possibilities, stimuli) of innovation in any given social formation circumscribed in time and in space. Innovation Environment thus refers to a specific combination of political, economic, social and cultural factors, which stimulates or restrains innovation processes and

includes the system as defined above. This approach permits us to identify the social factors of the capacity for innovation, in which:

social factors refers to the relations between the state and civil society, in their institutions, their history and their culture;

capacity refers to the organization of civil society, to social capital, to accumulated tacit and codified knowledge and the processes of its diffusion and derives from the specific composition of the social factors in each society, that is, to the mode of articulation between economic and intellectual resources; and

innovation is not considered as a strictly technological process, but rather as a social, political and economic one insofar as it is the innovation of the social factors themselves.

The advantage of understanding such complexity is that our explicative power increases as far as the focus is widened and the scope of analytical instruments is extended. The idea of complexity proposed by Edgar Morin (1982) as a methodological principle can also be an adequate instrument for the study of these multifaceted objects. According to Morin, an undefined and unpredictable world presents itself to the observer as obscurity, uncertainty, ambiguity, paradox, contradiction; from all sides emerges the need for an explicative principle richer than that which privileged that which is material, definable, measurable. This is not to propose a mere measure of complication, but rather a methodological principle by which objects depend on other objects, relations depend on other relations. The idea, then, is to think in terms of processes more than results, relationships more than things. Or, in a weberian sense, privileging comprehension over explanation.

2.3 Theoretical Isolation

Much of the conceptual work done in the recent past in the field of innovation and development has concentrated on elaborating new analytical models, some of them extremely precise, often modeled on mathematical equations. The attractive logic of these schematic models often distracts our attention from the fact that they do not explain reality (which is anything but precise and mathematical). Even where concepts are more far reaching and allow for the irrational and subjective aspects of any social process, there seems to be a constant preoccupation with formulating a "new" concept or model, frequently throwing into some "recycle bin" the knowledge accumulated throughout a long history of theoretical elaboration.

The classic founders of Sociology (and this is certainly true for other disciplines as well) have left us a rich heritage of the building blocks we need to deal with the comprehension of complexity. It is not possible, within the limits of this paper, to go into (unnecessary) detail on theories that are well known and well read, such as those already mentioned in Section 2.1. As an example, I would remind the reader of the weberian concept of "elective affinity" which, postulating a special type of association and causal relationship among the several social spheres, or dimensions, allows us to perceive - in innovation processes, for example - the cultural-historical diversity of social solutions for problems related to economic development. A retrieval of classical theory may be the most fertile new strategy for an innovative analysis of contemporary processes of social change. We will come back to the weberian example later on.

3. Knowledge and Democracy

If, as has already been said, development depends on innovation in the productive system and if innovation, in its turn, depends on the circulation of information and the distribution of knowledge, it follows that innovative socioeconomic development depends on and implies the democratization of knowledge. In this sense, we can propose another definition of innovation, where it is the development of new forms of producing, applying and distributing knowledge. Robert Merton, in a classic text written in 1942, showed that knowledge cannot develop in an authoritarian context. Knowledge needs democracy. My argument here is that knowledge also breeds democracy. It seems to be less important to focus on new knowledge, than to examine the social relations of production and appropriation of scientific and technological knowledge. Of course, once more the need for an interdisciplinary approach becomes evident.

Classically, it has always been considered that concentration of wealth meant concentration of power and that the ownership or control of capital guarantees the exercise of political - and social - power. The theories on social classes and most work on the correlation of forces within the State were based on the premise that

political power is directly or indirectly produced/reproduced by those who detain economic power. Consequently, most formulations related to issues of social justice and democracy contained at some point - as a moral and intellectual element - the distribution of wealth, with a variety (according to the school of thought or political preference) of processes suggested to achieve it. At the same time, the idea that "knowledge is power" is new to no one - but this does not contradict what was said before since, historically, access to knowledge has been the privilege of the most favored classes, with money, education and the sufficient free time indispensable for the development of thought.

In our contemporary world, as science and technology gain more and more importance as productive forces, we must rethink the sources and the limits of power.

We should keep in mind that the intended objectives of technological progress express historically constructed and socially diversified needs. Thus, the nature and the amounts of governmental investment vary from State to State according to how they are differentiated as to the exercise of power. This is true for the needs and objectives they express as well as for the intensity of the expression. (Figueiredo, 1989) The power of the various social segments is differentiated, and decisions do not depend on the individual capitalist (or schumpeterian entrepreneur), but on the social environment in which he functions. The capacity of individuals and groups for organizing and exerting pressure aiming at social progress and a (re)distribution of power depends, in great measure, on their degree of education and capacity to process information (*latu sensu*), that is, on the accumulation and distribution of knowledge.

Let us not forget the other side of the coin. If, on the one hand, the increasing availability of information - and, up to a point, of knowledge - creates opportunities for those who did not have access to it in the past, on the other it is also true that all social processes of massification (of education or information) in history have been accompanied by a corresponding elitization (concentration) of knowledge. For example, the expansion of basic education was accompanied by an increase in universities, and these by an increase in graduate courses, in doctoral degrees, then in post-doctoral degrees, and so on. The fallacy of the concept of "knowledge society" lies in that it presupposes, or suggests, a homogeneous socio-economic distribution of the benefits of the new paradigm.

Of course, this idea has several theoretical and methodological implications (which do not fit within the limits of this paper) regarding, for example, theories of work, distribution of power in terms of social classes and, eventually, the idea of a social class detaining a greater potential for organization and social action - then, power - as a result of its stock of knowledge and not of material wealth. Methodologically, it is not difficult to imagine the construction of indicators not only of the total knowledge accumulated and circulating in a given society, but also of its distribution. Thus we return to the issue of theoretical strategies for the study of social mechanisms and processes of accumulation and distribution, which determine the capacity for innovation.

In point of fact, if we are speaking of accumulation and distribution, we cannot forget the issue of concentration - internationally and nationally, affecting countries and regions as well as social classes. Which leads us to the case of developing countries and a return to our weberian example.

4. Rationalities of Development

The specific characteristics of the mode of articulation of economic and intellectual factors in any given society derive from a differentiated and complex combination of political-institutional arrangements and cultural environments. The diversity of recent histories of innovative modernization in 'traditional' societies (e.g. Japan, Italy) inspired a return to the weberian discussion of "elective affinities", with the objective of understanding the "environments" of a new "spirit of capitalism" and, eventually, of contributing to an evaluation of the possibilities and limits for developing countries.

The particular characteristics of a cultural configuration define the (material and immaterial) resources available for innovation and indicate the forms of its social appropriation. In a general sense, it is the social heritage of attitudes, behaviours, values and norms incorporated into the collective unconscious along the centuries. This heritage includes the explicit and implicit political culture and the technical culture, which, on a more specific level, contribute to explain national success stories. This was, with other words and in another language, the work brilliantly done by Weber in *The Protestant Ethic and the Spirit of Capitalism*.

Weber in fact argued - in *The Protestant Ethic...* and in his writings in the *Sociology of Religion* - that

catholic cultures and the oriental religions would not be propitious to capitalist development. But the fantastic development of Japan or Italy and other success stories do not contradict Weber. On the contrary. Contemporary capitalism is, obviously, not the same as that studied by Weber. In these two decades of transformation, we see that societies that are successful in the process of techno-economic and social innovation are not the same ones as at the beginning of the XX century. There are now multiple variations of success, defined by the national and local cultures where it occurs. As I have indicated before, the weberian inspiration can be an example of temporarily relevant classical theories in that it helps to identify affinities between cultural configurations and modes of development. The suggestion is that the transformations we have been observing in contemporary capitalism may find certain affinities with other "ethics" and rationalities, possibly more than in the cultures originating from ascetic protestantism. This hypothesis has clear implications for developing countries.

The idea that the anglo-saxon protestant countries are "by nature" more efficient at attaining the aims of rational capitalist development is pervasive in many regions of the world, producing a sort of "inferiority complex" and, worse, a frustrated resignation - as it were - in face of the realities of underdevelopment, of international economic relations, and of the difficulties in changing those realities. But the criteria of "performance" have been changing along with the changes in the organization of production. The "repression of affective and sentimental elements of the personality in the name of success" of the lucrative firm (Souza, 1999) is not necessarily a factor of performance in contemporary capitalism. The importance of face-to-face interaction and personal relationships, and values such as trust and loyalty are now repeatedly being considered fundamental in the new paradigm; the relational society seems to be more attuned to the times, the spaces and the articulations of social and productive systems in transformation; and comunitarianism seems to be a positive factor in participative democracy, as we can observe in the "Third Italy" (Putnam, 1993; Maciel, 1996). In many cases (e.g. Brazil), abilities which have developed through history in order to cope with extraordinary difficulties result in a capacity for flexibility and agile response to challenges, which are considered "competitive advantages" in the contemporary economy.

5. Final Explorations

In contemporary capitalism, the relational society - where trust, loyalty, interaction, cooperation and collaboration are valued characteristics - seems to be an especially favourable environment for the development of local systems of innovation, which thrive on these characteristics. This opens up new perspectives (new windows of opportunity?) for developing countries.

In fact, the new contexts of capitalism, and the social movements associated with them, suggest that it may now be possible to observe the emergence of new forms of social organization of production that can stimulate development in so-called peripheral economies, where they may find particular 'affinities'.

Considering specifically the case of Latin America, long-held values and norms, habits and institutions previously considered prejudicial to the development of rational, impersonal and instrumental capitalism², may be propitious to the development of what is being called "social economy" or "solidary economy".

This is a rapidly developing field, about which research is only beginning³ and, as such, defies definition. In fact, definitions tend to vary according to countries and organisms, and are constantly changing as new forms of organization emerge, which further complicates the task.

Generally speaking, we are referring to collective socioeconomic initiatives (private or public/private) for the creation of enterprises or productive organizations "whose distinguishing feature is a capacity to find innovative, dynamic solutions to the problems of unemployment and social exclusion and to contribute to the type of economic development that enhances social cohesion, which is one of the facets of sustainable development." (OECD, 1999)

In further attempting to circumscribe the object of our attention, it may be useful to determine what it is not. Thus we can put aside terms such as social enterprise, voluntary welfare, third sector, non-profit, and not-for-profit.⁴ Neither is the idea behind these initiatives associated with charity, philanthropy, or assistentialism of any kind. On the other hand, the emphasis on "economic enterprise with a social content, rather than social enterprise with an economic content", as aptly put by the Cooperative Initiative Project - CIP, India, seems to be conducive to successful economic and social innovation.

Many of these organizations are cooperatives (or cooperative-like enterprises with other denominations), but based on attitudes and principles which differentiate them from "traditional" ones. Some interesting stories of success can be seen in older European cases where creative arrangements have transformed traditional cooperatives into local systems of innovation, as the expansion of collaborative interaction creates and/or absorbs other productive activities and services, research institutes, technical schools and universities. Probably the best example of this is Mondragon in the Basque country⁵.

The principles that guide these experiences are: democratic member control; member economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and concern for community. A small but growing body of work indicates that that the multiplication of this new type of enterprise may result in the development of an alternative entrepreneurial culture, in institutional and organizational creativity and diversity and in a plural economy.

Throughout a long history of economic crises, droughts, political instabilities and shortages of all sorts, Brazilian people have developed a tremendous creativity in finding and developing innovative solutions and strategies for survival, besides building webs of solidarity and mutual support. In the 1990s, under the impact of neo-liberal policies which resulted in the closing down of many firms and an increase in unemployment, with diminishing government support mechanisms, new forms of workers' organizations for productive employment began to emerge, as autonomous and selfmanaged enterprises, starting in the south of the country. Today these experiences are many and varied, most of them grouped under the term "solidary economy".

The main objectives of these experiences are broadly coincident with the terms of the ILO Recommendation adopted in June 2002, which defines 'co-operative' in general as 'an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise'. Income and employment are in fact the first and foremost motivations at the start, but what calls our attention is that these experiences seem to constitute positive signals towards extraordinary gains obtained from relational forms based on the credibility of the agents involved (relation specific skills and procedures) and which derive specifically from cooperative relations (Tauile, 2001).

Preliminary data on incipient experiences in Brazil indicate that these alternative forms of social organization of production can reduce social exclusion and economic polarization while at the same time contributing to local development. Innovative ways of organizing cooperatives and incubators of cooperatives in close interaction with public universities, for example⁶, have helped in reducing unemployment and increasing income in some localities. The same effects have been seen in local development programs initiated by a collaboration among labour unions, universities and NGOs⁷. But probably most important, in terms of long-term sustainable development, are the effects on the capacity for social innovation and "learning-by-interacting" (Johnson and Lundvall, 2002) which tend to increase distribution of knowledge, autonomy, local identity and self-esteem, and collaboration among social actors (individual and institutional) towards common goals of social and economic democracy.

There seems to be here a clear affinity between these experiences and the idea of local productive systems or local systems of innovation: in that they stimulate local innovative development, generated by strong interaction and synergies among local actors, promote the visibility of social capital, and contribute to a greater participative democracy at the local/regional level.

Given the embryony state of the experiences themselves as well as of studies being done about them, I don't have conclusions. I have questions which I hope will contribute to and inspire a research agenda capable of congregating many interested colleagues within the spirit of PEKEA:

what are the specific ways in which social change can promote development in the cases studied;

what is the dimension and the extent of social change in these cases; and

what are the possibilities of social (and political) coexistence of different modes of production or, at least, of a diversity of alternative economic logics?

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- 1 These rearticulations are well described in Gibbons et al. (1994); also in Knorr-Cetina's "transepistemic arenas", among others. 2 This refers to the distinction made by Weber between action which is rational according to ends and rational according to values. 3 Some work is being done in Europe () and in Latin America (). See also OECD (1999). 4 Many of these emerging forms are being criticised as "privatization of welfare" and transferral to civil society of what should be State obligations, but this will not be discussed here. 5 Also Noncello in northern Italy and Terre in Belgium, among others. 6 Rede Unitrabalho - explicar 7 Agência de Desenvolvimento Solidário é uma organização criada e coordenada pela Central Única dos Trabalhadores em parceria com a Unitrabalho, o Dieese e a Fase

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