

# CONTEMPORARY SOCIAL RESEARCH METHODOLOGY. SOME REMARKS FROM THE STANDPOINT OF LATIN AMERICA.

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Science is one of the most spectacular cultural achievements of humankind and nowadays an entirely dynamic enterprise. From a sociological point of view, one of the most astonishing facts about science is its remarkably rapid growth over the course of several centuries (Hoyningen-Huene, 2010, 52).

From its very beginning, the world of science has been based on the strict dissociation of scientific knowledge from the various aspects of practical or everyday knowledge (Hirsch, 2008, 19), the traditions and common sense of ordinary people. By now, reductionism and specialization has been the price one has to pay for systematic, in-depth knowledge.

*Reductionism* is characterized as an approach to understand the entirety of something by examining its individual parts. This approach has been very successful and accounts for much of the progress registered by Western science and technology during the last few centuries. Reductionism is deeply rooted in the way we perceive the world and organize our knowledge and educational systems. It is however at the same time the way to fragmentation and specialization in a fashion in which the picture of the real world with its problems can no longer be put together easily. (Karlqvist, 1999, 379).

Disciplinary *specialization*, however, has disadvantages; not the least of these being an increase in fragmented knowledge and those kinds of knowledge which inform realistic problems only with great difficulty (Brewer, 1999, 327). Specialization is an effect of systematically pursuing questions that present themselves in

the course of research. At the same time specialization causes communication problems, not only between different disciplines and sub-disciplines in the same field, but between science and policy making and, even worse, between science and the public.

It is for this reason that Jon Elster (2010, 353) stresses that one effect of the recent evolution of disciplinary boundaries is the multiplication of subdisciplines and [a growing] hyperspecialization. In this sense reductionism and specialization give rise to a variety of circumstances. It is, for instance, difficult for the public to understand what is going on in science or why science funding is important. At the same time, policy makers have difficulties making use of scientific information to set priorities when confronting real world problems (Hoyningen-Huene, 2010, 55). It has been pointed out (Brewer, 1995, p. 4), that much essential knowledge is not even capable of guiding the development of policy, heightening public awareness, or informing and enlightening political debate.

Experience has shown that it is not easy to fill the gap between ordinary understanding and specialized knowledge. As science moves closer to applications, decision- and policymaking, problems occur that cannot be confined to narrow disciplines or kept within the borders of specific disciplinary compartments. Despite that, we know that many confrontations in our societies are driven by the need to deal with a major social, environmental or health problem that cannot be solved using the expertise,

methodology and knowledge of only one discipline (Metcalfe, 2006, p. 26).

Science can have a very important (and often essential) place in the process of policy-making, but it rarely directly influences the daily problems of ordinary people. Science doesn't produce policy imperatives or policy prescriptions by itself. That is the reason why scientists now recognize the importance of issues additional to or outside of science which must be taken into consideration (Brzustowski, p. 388).

Ethics and politics are, for instance, two reassessed aspects. Their consideration in a scientific project doesn't contradict the idea of objectivity anymore, but only puts topics of human priority on the scientific research agenda; and that brings me to the central point of my paper, namely: that the main goal of building up an integrative scientific culture – including exact, natural, economic and social sciences – requires socially useful and culturally relevant research, other ways the general population will not perceive scientific knowledge as something valuable to build a better future (Science for the twenty-first century: A new vision and a framework for action, p.14).

Taking it for granted that one of the major challenges in Latin America and the Caribbean is the problem of the social control of science and technology and population's restricted access to scientific knowledge to satisfy basic human needs, I will rather focus here on the role of an integrative methodology in the support of non-competitive research, research committed to resolve environmental and cross-border problems and others matters of public usefulness.

To overcome the skepticism of ordinary people about the use of science and technology, we can start asserting that most of our problems are not given, "they are constructed by other human beings in their attempts to make sense of complex troubling situations" (Brewer, 329).

Problem solving remains until today one of the main motivators to drive interdisciplinary research. It starts from the premise that real world problems do not exist independently of their socio-cultural, political, economic, or even psychological context. The need for multiple disciplines and integrative perspectives to illuminate human being's being condition could not be more evident, challenging as it has proven to be in ordinary life.

Scientific methodology, accordingly, not only has to meet the challenge to discover new ways of organizing and conducting research, but also has to fulfill the historical demand to provide knowledge which can serve the common good. Apart from that there is the question of training future scholars and professionals to think in ways beyond the confines of their basic disciplines in order to attain the broadest perspectives so urgently needed for humanitarian, environmental and economical crises. In this particular point, it is an incentive to see, that many of the most successful methodologies of the last few years are characterized by and benefitting from involving end users in the research projects to ensure greater ownership of the final outcome, service or product.

At the beginning of the 1990s Funtowicz and Ravetz pointed out (1993, chapter 23), that the paradigm and methodology of classical science was "inadequate to ensure the validity of knowledge" about issues such as the "management of high uncertainty" and decision making in real contexts. They were persuaded that in such cases science must engage in dialogue with all those who have a stake in the solution of problems. "Through scientists entering into dialogue and mutual learning with societal stakeholders", it has been pointed out (Hirsh Hadorn, 2008, 25), "science become part of societal processes, contributing explicit and negotiable values and norms in society and science, and attributing meaning to knowledge for social problem-solving". If, at the beginning of 20th century, scientists defined the problems and

their solution in their projects by themselves, today's transdisciplinary approach and the paradigm of complexity suggest that the affected population's participation should be supported in the research process. "Experience shows today, that without participation, the resulting measures and outcomes are likely to be rejected or ignored by the local population" (*Ibidem*, 26).

To resume, what I suggest here should not be understood as the condemnation of conventional academic disciplines, which have obviously served well to build knowledge in fundamental science. I'm actually concerned to argue for something more: in this case "more" not only means a new international endeavor for a more humanitarian ethic in the use of science in order to cover the basic human needs, but above all the search for new problem-oriented and integrative methodologies. The former aspect is the task of politics, the latter, however, of epistemology.

In my point of view, one of the most urgent current challenges in Latin America is how to drive today's national development towards a knowledge-based economy and society. Science and technology alone cannot provide nations with a way out of poverty and dependence. Methodology here has a lot of things to do. With a view to the difficult and bleak future of world economy, a new combination of efforts to complement what is being done in science at a national level is still needed in our region. This implies reducing isolated scientific and technological efforts and focusing resources on those activities and projects which are likely to generate a critical mass and have a greater potential for solving priority problems, especially those concerning social and environmental conditions and the competitiveness of productive enterprises.

Of course, at the beginning of a new world crisis, marked by drug wars in Mexico, hate crimes in Norway or riots roused by the lack of perspective in Chile, Spain and the UK, there is no time for utopia. I only want to suggest that we now need

to undertake drastic measures to promote broader cross-disciplinary, integrative and collaborative teaching and research [methods]. The challenge is, at least in our region, to open up potentials to enhance the democratization of knowledge construction processes in society.

I'm convinced that a new integrative methodology will have a central function in such a task, before human being dehumanizes himself and destroys nature. A new integrative and more ethics oriented methodology will probably be the answer we are looking for in order to counter the old critical saying that "the world has problems, but universities have departments".

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