

ENSAYO

Acta Cient. Venezolana 29: 16-19, 1978.

THE PRACTICE OF SCIENCE IN LATIN AMERICA IS IT FAVOURABLE TO HUMAN DEVELOPMENT? *

J. LEITE LOPES

Centre de Recherches Nucléaires
67037 - Strasbourg - Cedex
France

LA PRACTICA DE LA CIENCIA EN LATINOAMERICA
¿ES FAVORABLE PARA SU DESARROLLO HUMANO?

RESUMEN

El autor muestra que la situación actual de la ciencia y de la tecnología en América Latina es consecuencia del hecho de que las naciones de este continente han sido colonias durante más de tres siglos. Como tales, su función era exportar productos primarios, oro, plata y productos agrícolas y así contribuir a la industrialización de Inglaterra y a su desarrollo tecnológico correspondiente.

La Independencia formal de los países de América Latina no eliminó el carácter de dependencia de sus economías y sobre esta dependencia las clases dominantes formularon su ideología y basaron su poder. La ciencia y la cultura no existían en las colonias.

Con la industrialización de las naciones de nuestro continente basada en la sustitución de importaciones, la dependencia económica continuó bajo otras formas. Las máquinas eran y son importadas para producción de bienes de consumo según patentes provenientes de los países avanzados y este hecho impidió el desarrollo local de la tecnología y la ciencia se quedó así socialmente divorciada de la política económica de esos países. La dependencia tecnológica de América Latina continuó y tornase más profunda en la medida en que su economía es dominada por las sociedades multinacionales, que poseen laboratorios propios de investigación en sus países de origen y que, por lo tanto, no necesitan de nuestros hombres de ciencia, de nuestros institutos científicos y tecnológicos, de nuestras universidades, y las empresas del estado, en una tal economía, adoptan los procesos y métodos de las multinacionales y así no pueden contribuir a la ciencia y la tecnología en nuestros países.

El autor proclama que los programas y estrategias formulados por tecnócratas y expertos del desarrollo no tienen sentido si no se examinan esos aspectos del problema y si no proponen un cambio radical de la situación de dependencia.

¿Qué tipo de sociedad deseamos nosotros?

Deseamos imitar a Europa y Estados Unidos bajo inextricables mecanismos de dependencia.

El desarrollo que los gobiernos proclaman ¿será para el beneficio de quién? ¿De pocos o de todos? ¿Y la ciencia debe ser desarrollada en nuestros países en beneficio de nuestros pueblos o, en el extranjero, en beneficio de una élite?

I am not going to speak on the history of science development in Latin America. I would not be able to do it as I do not know the specific evolution of each one of the countries of our continent.

* Presented at the inaugural session of Annual Reunion of the Venezuelan Association for the Advancement of Science (AsOVAC), Valencia, 6 November 1977.

I am not a historian. But I dare say that the study of this evolution under new viewpoints, a more precise analysis of the history of our countries based on real facts connected with our peoples and not on myths invented by and for privileged minorities, are basic for the search for new paths which should lead to the accomplishment of the aspirations of all the men and women who live and work in our countries.

Such studies are a continuous and pressing challenge not only to our scholars but also to our scientists.

What I would like to discuss here is rather whether science, as practiced in Latin America, has been favourable to human development. This is not an easy task. On the one hand there are the beautiful achievements accomplished by many of our scientists most often carried out under difficult conditions of work. These are definite proofs that science in Latin America can contribute to science in the world. But what we must also ask ourselves is about the social significance of scientific research in our countries. This is not an easy task, I repeat.

We are all subjected to the influence of an ever greater number of publications produced by experts and by officials, by personalities belonging to State institutions and certain supranational organizations, which might confuse us in our inquiry. One of the first difficulties we have to face is the easiness with which these experts invent words and make them sound as if they were solutions to problems.

After the well-known classification of the world into rich, *advanced* nations and poor, *backward* countries, the experts in phraseology coined new expressions in the 1950's: the rich countries were now to be called *developed* and the poor ones *underdeveloped* since the word "backward" might sound offensive to sensitive, diplomatic ears. Then the experts decided that the word "underdeveloped" was also pejorative and proposed to use "*developing* nations" instead. Then finally it was decided that the latter should rather be called *less developed countries*. This is the last classification which I have heard of, most often in a sophisticated, abbreviated form, the D.C.'s and the L.D.C.'s. As you see, the rate of imaginative power in this domain seems to be somehow proportional to the length of the growing gap between the rich and the poor nations. It is, therefore, not unlikely that new terminologies have been invented which I am not aware of.

This is perhaps, as it should be, after all: we, mathematicians and physicists, chemists and biologists as well as all other scientists, we have our own language and how many times do we not hide our ignorance in inventing new names?

In a recent paper published in *Interciencia*³ a distinguished engineer and social scientist proposes, in order to formulate a development strategy which will take the scientific and technological activities into account, that the countries of the world be regarded as belonging to two categories: the countries with an *endogenous* scientific and technological patrimony—corresponding to the developed countries—and those with an *exogenous* scientific and technological patrimony. A solution of our problems would then be "the endogenization of the scientific and technological revolution in underdeveloped countries". It is stated: "Desde este punto de vista sólo se podrá lograr un desarrollo autónomo en la medida en que se adquiera