ISSN-0185-0636

Nueva Antropología 60

REVISTA DE CIENCIAS SOCIALES

REDES TECNOLÓGICAS Y DESARROLLO CIENTÍFICO

SOLANGE CORDER, MARIA CONCEIÇÃO DA COSTA, ERASMO GOMES Y PAULO EDUARDO VELHO, Mercosur: cooperación en ciencia y tecnología. * **RYSZARD RÓZGA LUTER**, Hacia una geografía de la innovación en México. * **ANTONIO ARELLANO HERNÁNDEZ Y CLAUDIA ORTEGA PONCE**, Caracterización de la investigación biotecnológica del maíz en México: un enfoque etnográfico. * **MARÍA TERESA MÁRQUEZ**, Estilo tecnológico: construyendo puentes entre tecnología y cultura. * **REBECA DE GORTARI RABIELA**, Impacto de la demanda empresarial en los centros de investigación y desarrollo * **LUIS REYGADAS**, Producción simbólica y producción material: metáforas y conceptos en torno a la cultura del trabajo. * **RESEÑAS BIBLIOGRÁFICAS**

CONACULTA • INAH

Universidad de la Ciudad de México

Abstracts

'Mercosur': Cooperation in Science & Technology

Solange Corder, Maria Conceição da Costa, Erasmo Gomes
and Paulo Eduardo Velho

Considering as a basis the Southern Common Market Agreement *(Mercosur)*, this paper attempts to identify the prevailing present situation –in terms of science and technology cooperation– between institutions of the member countries: Brazil, Argentina, Paraguay and Uruguay. It makes reference to the role played by the different governmental instances to prompt research and development in a globalization context and, particularly, in the conformation of regional economic blocs. It also tries to explain the dynamism of technological and scientific cooperation and the differences in collaboration indexes between the areas of knowledge in these countries through the study of the articulation between private enterprises, research institutions and government.

It explains the need to optimize the financial and material resources, weather due to demands of increasingly more expensive and complex equipments, or due to new financial patterns through more.

Finally, intensive collaboration it suggests some policy strategies destined to broaden the already existing initiatives and to give incentive to the establishment of new cooperative relations in science and technology areas to reinforce the potentialities of this economic bloc.

Key words: *Mercosur*, scientific collaboration, knowledge areas, research, institutions, international associations.
Text received on August 30th, 2000, approved on March 18th, 2001.

Towards a Geography of Innovation in Mexico

Ryszard Rózga Luter

Few human activities have acquired so much importance on the twentieth century as innovation an invention have. It is considered, today, that scientific and technological inventions are very important factors for socioeconomic change. Societies, which are more and more dense in terms of information and knowledge, become more dependent of scientific discoveries, that result in economic growth, distribution

and development. On the other hand, none of the human activities have been so unpredictable and uncertain as invention or innovation.

While many authors show the stability of inventions and innovation trends, very little is known about the geographical character of inventive tendencies in the sub-national areas and regions. In this paper the author is concerned with the territorial-geographical problems of innovation and invention processes analysis or what we could call: innovation geography. It is a question of developing some theoretical aspects as well as giving examples of how invention and innovation processes are reflected in the national territory.

Key words: region, innovating, inventing, technological development, research.
Text received on July 14th, 2000, approved on February 10th, 2001.

The Characterization of Biotechnological Research of Corn in Mexico: An Ethnographic Approach

Antonio Arellano Hernández and Claudia Ortega Ponce

This article shows the biotechnological research processes and its implications in the reconstruction of nature and society. Under this scope it analyzes specifically the research related to corn improvement in Mexico. It approaches the net of social, material and symbolic relations, which springs up from scientists' efforts to improve the knowledge, technical characteristics and performance of corn genetics. The article illustrates the general characteristics of the Biotechnological Corn Research *(IBtMaíz)* and of some social, institutional and scientific-technical modifications, that were found in the ethnographical observations made in the six laboratories where this kind of research is carried out.

To characterize *IBtMaíz* in Mexico this article shows, the importance of studying corn in Mexico and its genetic intervention is presented; it expounds the general characteristics of corn biotechnology in Mexico and worldwide the socio-technical characteristics and the present state of the social construction of *IBtMaíz* in Mexico, and finally, it offers a reflection about the study method and its results.

Key words: corn, biotechnology, research, technology, genetics, impact, and society.
Text received on May 23th, 2000, approved on January 12th, 2001.

Technological Style: Building Bridges between Culture and Technology

María Teresa Márquez

The article identifies the need to construct a theoretical and conceptual image to link the world of meaning to that of technical artifacts. It proposes a reformulation of the *technological style* concept used by technology's history and archeology amongst other disciplines.

This *technological style* is considered as a relation through which a particular technological artifact, process or system evokes another one in general. Such a definition permits to abound in the depiction of the technical objects' materiality and from there it proceeds to the reconstruction of the socio-cultural context. In this way, the author attempts to overcome the problem of: leaving aside the most notorious characteristics of technical artifacts, their material nature or to assign technology a scarcely relevant role in the reconstruction of its own context.

Finally the analytical possibilities of the *technological style* are put to the test in an example of analysis about graphic interfaces extracted from a case-study about a university's development center of software and CD-ROM's editing.
Key words: Technology, anthropology, culture, meaning, articulation, and technological style, CD-ROM.
Text received on June the 9th, 2000, approved on February 25th, 2001.

The Impact of Entrepreneurial Demands in the Transformation of Development and Research Centers

Rebeca de Gortari Rabiela

This paper has two fundamental purposes that reckon from the premise that, private enterprises as well as research and development centers (I&D) are presently confronted with an environment of great dynamism in terms of technological change and an increase in global markets competitiveness. Its first purpose is to show the transformations that must be launched by the I&D Centers —using as an example the Research and Technical Assistance Center in Queretaro (Ciateq)— in order to adapt to new market's demands in an opening economy and an industrial restructuring framework, which implies organizational innovations and a new strategies' practice. Its second purpose is to document some of the dimensions of this process, such as the change from a *technology push* scheme to *a market pull* one, the organizational restructuring and the new personnel profile's construction as well as the efforts for human resources' reproduction in order to satisfy the new demands.

Finally, it attempts to show that this organizational innovation processes make

sense and can have positive results when they involve the whole organization and are changed into benefits.

Key words: research, development, innovation, adaptation, transformation, market, industry, economic openness.
Text received on September 20th, 2000, approved on April 17th, 2001.

Material and Symbolic Production:
Concepts and Metaphors Concerning Labor Culture

Luis Reygadas

This paper analyzes the intersections between the material and cultural dimensions in the labor processes. This topic has been approached by industrial anthropology as well as by labor sociology and which has fundamental importance *vis-à-vis* the modifications experimented by labor cultures in the current globalization context. It has the purpose of constructing a labor culture concept, in congruence with a semiotic-historic focus of culture. In this text three processes, constitutive of labor culture, are discussed. In the first place, the incidences that labor characteristics have over ideas, representations, values, norms and habits of the productive agents and of society as a whole. In second place, the inverse process is studied, the one that goes from the symbolic towards the productive, which makes reference to the sometimes explicit and others concealed ways in which the culture of a company, a social group or a nation influence over labor's performance. Lastly, the interaction between individuals in a labor process is analyzed, outlining the negotiations generated by power relations that produce and reproduce meaningful structures in the labor context.

Key words: intersection, dualism, material, symbolic, reality, culture, labor, globalization.
Text received on October 22th, 2000, approved on April 4th, 2001.