IGU Commission on Industrial Systems

Reports and Announcements


This symposium — organized by Dr. Gyula Bora of the Karl Marx University of Economics, Budapest, with the assistance of Z. Tatai, S. Frisnyak, D. Kulcsar and M. Trautmann — was held at the Besseye Gyergy Teacher’s Training College; 35 participants from 15 countries took part. The scientific programme was drawn up under the guidance of Professor G. J. Karaska, Vice-Chairman of the Commission.

Programme

The scientific programme of papers and discussions was divided into 9 sessions over 5 days:

- The first session outlined the Hungarian context for the symposium, specifying the changing macro and micro-level measures by which the Hungarian government regulated industrial development and restructuring (Dr. Bora), outlining the progress and problems of rural industrialization in the country (Dr. Barta) and discussing state and public attitudes to developing backward regions like the Nyíregyhár (Dr. Tatai).

- The second session aimed at generating discussion to carry forward and to deepen lines of research formulated in the 1980 Fujiyoshida discussions. Dr. Hamilton suggested the use of an ecodynamics framework for organizing further research into industrial systems. Professor Linge indicated that at the international level, major documents such as the Brandt Report North-South, had failed to take account of the interactions between Industrial systems and the family/household systems and that the latter provided a focus for narrowing down the Commission’s research to manageable levels over the next three years. In examining organizational responses to Third World industrialization, Dr. McKay suggested the need for better integration in research between rapid, short-term organizational change and slower, long-term adjustments to impacts at various spatial scales, as well as a greater awareness of the dangers of oversimplifications of space into ‘core’ and ‘periphery’.

- Two sessions focussed on the varied facets of governmental and institutional interrelationships with industrial systems. These examined the management of innovation diffusion and the role of Universities (Professor Hottes), industrial location principles in Polish planning (Dr. Ciechocinska), policy constraints in Polish industrialization (Dr. Kortus) and industrialization of underdeveloped eastern Poland (Dr. Mształ). Dr. Inotai examined the problems of industrial cooperation among CMEA countries, while Dr. Balkay discussed aspects of integration in the fields of energy and raw materials between Hungary and the other CMEA countries. Dr. Bandman and Academician Aganbegyan outlined theoretical and practical problems in the study of TPCs as integrated systems. Dr. Taylor and Mr. Smith presented empirical data to show that ownership has been a major variable in plant closures in the UK foundry industry. Dr. Mikus and Professor Stafford respectively examined impacts of West German and United States government legislation on industrial location, while Dr. Onyemelukwe argued the case for metallurgical industrial development in Nigeria.

- The fifth and sixth sessions were devoted to an examination of processes and problems in the emergence of the new spatial division of labour. Professor Savey discussed the changing spatial structure of French industry and Dr. Bradbury the nickel industry in terms of multinational firms’ strategies leading to increased differentiation in the spatial pattern of functions, labour markets and social impacts. Similarly, Professor Roberge analyzed the evolution of Brazilian industrial strategies and Drs. Ota and Yamamoto, Japanese change with reference to interactions of state, entrepreneurial and labour objectives and behaviour.

- The seventh and eighth sessions concentrated on the character and implications of technological and employment change. Dr. Thwaites examined the role of technological innovations in regional development, Dr. Heinemann the influences of such innovations on industrial location, while Dr. Komorowski elaborated relationships between technological organizational, economic and political forces in making for a new international economic order. Finally Dr. van der Knaap discussed the interactions between regional and employment policies in the EEC and Dr. Brunner outlined problems of identifying regional industrial complexes.

- In the last session, delegates debated the general results of the Symposium with a view to formulating specific directions for the Commission’s work between 1981 and 1984: The main conclusions of this debate were that the Commission should:
  a) continue the progress made so far in furthering international understanding of an ‘industrial system’ as comprising both non-production functions (management, R & D, finance etc.) and production and their interrelationships though intra- and inter-organization interaction;
  b) place greater emphasis upon the human aspects of the industrial system, notably the interrelationships between industrial systems on the one hand and labour markets, households and working conditions on the other;
  c) deepen research into the process producing the dynamics of industrial systems, combining empirical data with the modernization theory and innovation of concepts and hypotheses appropriate to world reality and to approaches in social science in the 1980s; and
  d) intensify studies of the interrelationships between organizational (functional) space and geographic space; and inherent problems of managing rapid organizational changes and the slower process of community, urban, regional, national and international adjustment to such changes.


This meeting was attended by 17 industrial specialists. A wide range of themes was discussed, including regional structural problems and disparities, the impacts of technological change, industrial systems in developing countries and the rising importance of sports- and tourist-oriented industries.
The latter problem was taken up under the chairmanship of Professor K. Hottes in a joint session with the IGU Commission on the Geography of Leisure and Tourism at which it was decided to initiate studies of sports- and tourist-oriented industrial production systems since these are often dispersed in more peripheral areas both within national and global industrial systems.


The group established small working groups to prepare papers on spatial aspects of technological change, structural change in major metropolitan areas, and regional labour market studies — among others. A link was made with New Zealand industrial geographers studying the impact of closer economic relations between the countries. Godfrey Linge and John McKay stood down as office bearers and Peter Wilde (Tasmania) was elected Chairman and David Rich (Macquarie) Secretary.

The monograph "Structural Change in Australia: Some Spatial and Organizational Perspectives", edited by G.J.R. Linge and J. McKay, with publications from the group has now been published by the Department of Human Geography, Australian National University, and a "Bibliography for Australian Industrial Geography" by David Wadley and David Rich will be published shortly in the Occasional Paper series of the Department of Geography, University of Tasmania.

The group also produces a newsletter and anyone who would like to receive copies or is interested in the activities of the group should write to Dr. David Rich, School of Earth Sciences, Macquarie University, North Ryde, NSW 2113.

4. Symposium on Division of Labour, Specialization, and Technical Development, Linköping, Sweden, 7–11 June 1982

This Symposium was organized by the IGU Commission on Industrial Systems in conjunction with the generous support of the Swedish Expert Group on Regional Policy (ERU), the National Swedish Council for Building Research, the Swedish Work Environment Fund, and the Swedish Agency for Research Cooperation with Developing Countries.

The Symposium was opened by Dr. Hans Meijer, Chancellor of the University of Linköping, who warmly welcomed the participants. In all some 120 persons attended and were drawn from 23 countries. The meeting comprised 3 parts: an opening plenary session; working group sessions; concluding plenary session.

First Plenary Session

The purpose of the opening plenary session was to set the scene for the discussions of the whole Symposium. The Chairman of the IGU Commission on Industrial Systems, Dr. F.E. Ian Hamilton, emphasized the appropriateness of the location of a Symposium in the Nordic scientific environment and at Linköping for the analysis of the division of labour specialization and technical development in production systems.

Professor GunnarTorqvist (Lund) pointed to the need to integrate (a) the systems-analytic and individual approaches to production systems and work organization and (b) processes operating at various scales of arenas (shop floor, local, regional, national, global).

Professor Walter Stöhr (Vienna) examined the relevance of various quantitative and qualitative indicators to the understanding of the salient features of peripheral areas and reviewed their common characteristics at national, continental and global levels.

Dr. Rod Coombs (Manchester) outlined the real problems and opportunities for local government organizations to encourage producers in their areas to adopt new technologies and for workers to innovate collective management methods of social control over production.

And finally, Dr. Richard Edwards (Amherst, Mass.) discussed the spatial implications of systems of work control and contemporary changes in work organization, specifically differentiating between the simple, technical and bureaucratic systems.

Working Groups

Two days of the Symposium were devoted to intensive working group sessions. Three working groups were organized:

Group 1 discussed the division of labour, specialization and technical development at the international and global scales. Special attention was paid to the possibilities for the modernization of trade theory for understanding trends in these fields (C. Alvstam, Göteborg; international division of labour under capitalism and socialism [F.E.I. Hamilton, London]; economic diversification strategies in the OPEC and their implications [P.R. Odell, Rotterdam]).

Much emphasis was placed on the problems of labour relations and conditions resulting from the penetrating of foreign capital into developing countries. Dr. T. Mkindawire (Senegal) warned that much of Africa could be bypassed by the industrialization processes that have recently partially been captured by SE Asian countries. And yet the problems and disadvantages resulting in some of the more recently industrializing countries like Sri Lanka, particularly in their export-processing zones, seem to more than outweigh the benefits. Such a conclusion was reached in papers by both Dr. K. Rupashinghe and Dr. N. Shangaratan (Sri Lanka) but it was also considered to be more widely associated with jobs in export-oriented industries throughout Asia (Dr. E. Lee, Bangkok; Dr. J. Oehmoff, Dr. Chi Seok Choo; Malaysia), although positive multiplier effects varied in scale and intensity from place to place.

The rapporteur for Group 1, Dr. S. Laestadius (Stockholm), drew out five major issues for further discussion in the concluding plenary session:

1. the extent and character of convergence between the capitalist and socialist forms of division of labour, specialization and technical development;
2. the structural changes in the production system that contribute to the creation of the new spatial division of labour;
3. the relationship between new regional structures in sub-national level and the emergence of newly industrializing areas and semi-peripheries;