

Zeitschrift: IABSE reports of the working commissions = Rapports des commissions de travail AIPC = IVBH Berichte der Arbeitskommissionen

Band: 26 (1977)

Artikel: Technology and planning in developing countries

Autor: De Sivo, Benito

DOI: <https://doi.org/10.5169/seals-21518>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 04.04.2026

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>



Technology and Planning in Developing Countries

Technologie et urbanisme dans les pays en voie de développement

Technologie und Urbanistik in den Entwicklungsländern

BENITO DE SIVO

Professor in the Building Dpt.

University of Naples

Naples, Italy

SUMMARY

The demographic explosion and the rapid evolution of developing countries imposes a reestimating of industrialized country past experiences and a critical analysis of objectives to be reached. The planning fortune depends on the choice of new settlement forms, the compact type, that a different urbanistic analysis together with the most advanced technologies makes possible. Urban future settlements will have to be organized according to a distributive "scattered concentration" pattern which contemplates minimal building areas, creates necessary communion for a natural social evolution and makes an industrialized building system cheaper and more feasible.

RESUME

L'explosion démographique et l'évolution rapide des régions en développement imposent une réflexion sur l'expérience des pays industrialisés et une analyse critique des buts à atteindre. Le succès de la planification dépend du choix de nouvelles formes d'agglomération. L'habitat de l'avenir sera organisé selon le critère distributif de la "concentration dispersée" qui réduit les surfaces à bâtir, crée la communication utile à l'évolution sociale et rend plus économique et réalisable un système de construction industrialisée.

ZUSAMMENFASSUNG

Die Bevölkerungsexplosion in den Ländern der Dritten Welt sowie deren rasch fortschreitende Entwicklung erfordert von den Industrieländern eine Überprüfung der Erfahrungen und eine kritische Analyse der zu erreichenden Ziele. Der Erfolg der Planung hängt von der Wahl neuer städtischer Siedlungsformen ab. Die städtischen Siedlungsformen der Zukunft sollten gemäss dem Verteilungskriterium der „dispersiven Konzentration“ organisiert werden, wobei die zu überbauenden Flächen auf ein Minimum reduziert, die notwendigen Kommunikationsmöglichkeiten für eine soziale Evolution geschaffen und das System der industrialisierten Bauwerke mit billigeren Mitteln durchführbar gemacht werden.



Variations of development observed these last years in third world countries show a different growth from the demographic revolution occurred in industrialized countries. It is in fact possible to see that in the latter the economic growth has been accompanied by a proportional social and cultural adjustment, while in developing countries even if this growth was faster it was conditioned by external help that contributed to the improvement of the demographic and economic conditions, in a different measure from the cultural ones.

In industrialized countries the slower and more gradual development gave rise both to a progressive endogenous adjustment and to an unconscious cultural adaptation which has often hampered a timely critical attitude. On the other side, if the faster evolution (depending on external factors) of developing countries can on one hand provoke problems, it allows, on the other, a reestimating of past experiences and the taking up of a critical position towards the real objectives to be reached.

The great demand for investments, for buildings, for know-how, determined by the political and economic independence of many new states, must be firstly satisfied in cultural terms, filtered through the critical analysis of industrialized countries development. The "qualitative leap" has to be carried out as soon as possible, before these developing countries absorb the deteriorating aspects of the industrialized society way of life. It is in fact serious that the trend to urbanization is progressively increasing in third world cities and town rates of growth are sometimes double or even triple against the european ones. And before thinking of the technological type to convey in order to satisfy the housing needs, it is necessary to decide whether it is right, for example, that by 1985 Bandung population will pass from the actual 1,2 to 4,5 millions, Lagos population from 1,4 to 4 millions and Sao Paulo population will reach 17 million inhabitants.

The problem does not consist in substituting the bidonvilles, grown up at the edges of freshly born metropolitan centers, with stabler buildings, efficiently equipped and built according to an up-to-date technology, but in analyzing the local data, making sure that the development takes place in such a way as to respect the actual environment possibilities and the social and religious traditions, resolving the problems provoked by degradation and cultural poverty.

The problem has more of a social and urbanistic nature rather than a technological and building aspect; it is necessary to go back to the causes of the abnormal increase of urban centres and not to attempt to solve its negative outcomes by carrying out the specific improvement of a parasitic residence that will, in this way, keep on working wrongly and choking the old part of the named urban centres.

New houses and equipment have too often been thought of as a remedy for urban problems while, on the contrary, a functional territorial planning would help. into account social and religious habits and to act with respect for the environment does not mean to guarantee a practice that has often provoked ignorance and misery by stopping any kind of development, but it means to orient human progress by retaining only positive values which are generally those connected with biological processes and natural phenomena.

Cooperation with local people and building societies must not aim to impose a different way of life, but must lead to a cultural merging in which advanced technologies can be applied while the true and natural values characterizing the people to whom they are addressed are respected.

The experience of cities in industrialized countries must be considered in a critical way, in order to avoid the repetition of mistakes we can see today in our urban organization.



Our towns are characterised by a conspicuous number of cohesisting functions which have often been caused by a series of conditionings that different cultural conditions have been stratifying for centuries; the very way of this stratification makes it even difficult to understand, nowadays, which are really necessary to human life and which provoke only damages and sacrifices and could therefore be got rid of, with general advantage. So complicated are interrelations among the different parts of our towns that it is hard to discriminate between the needs and the means able to satisfy them: id est the analysis of town inhabitants' real needs.

The very way how our cities are built makes cars indispensable since public means of transportation do not always cover the whole urban network and do not, therefore, fulfil the real demand. Cars are nowadays regarded as one of social worst evils and are by now overflowing our towns, blocking all the ways of communication in such a way that traffic organization and regulation is becoming more and more difficult, and sometimes impossible. We are presently trying to save our towns by any means, without altering their values, but no attention is paid in avoiding the repetition of "fortuitous disorganization" effects in new building centres and in the new building neighbourhoods of those existing.

A successful planning depends on the choice of new settlement ways and on the possibilities we have in their realization. It seems now obvious that we cannot refer to our western organization patterns, which are to be redimensioned, in industrialized countries too; but, to speak in realistic terms, we should come, through the most advanced technologies, to a reduction in needs and consumptions.

Correspondance between a new urban structure and human needs implies an anthropological recovery of social and cultural values which will be able to give, when rightly interpreted, useful hints as for research on a new settling system.

The new urban planning pattern will, if bound to precise technological trends, offer the concrete possibility for a polifunctional high-concentrated establishment, to be considered as a global system inside which an alternative to our contemporary habitats is to be found.

Under this aspect the developing countries are in a better position, because it is easier for a man who not yet came in touch with the western misleading idea of wealth, to accept a new compact structure, based upon "reduction" systems, and closer to the surrounding nature, than the man spoiled by various consumistic misunderstandings gathered through centuries.

Human natural trend to live in towns must lead to a territorial development pattern aiming at people's urbanization: towns will have to be organized according to a "scattered concentration" distributive pattern, able to make the new building areas as small as possible, to create the necessary communion for the natural evolution of social capacities, and to make the industrial building system cheaper and more feasible.

The technology of large bridges and scientific progress in the field of spatial structures, together with the conception of functional specialization, make it possible, nowadays, to build compact polifunctional residential and productive centres, to resolve a wide range of problems: from those concerning power consumption reduction to those concerning a cheaper administration.

A compact residential and productive settling down also means, from the building point of view, the possibility to organize the town like a functional integrated structure where inner means of transportation are collective ownership and allow



the reaching of any of the parts of the settlement by profitable standards in regard to time and cost, and where building unities are different but composed with identic basic elements.

The operative range of such a structure allows both the installations of productive erecting yards which local skilled workes can easily have access to and economic advantages coming from the smaller incidence of production times and transportation expenses. A compact settling down means, in conclusion, a real pliability of the structure, a possible continuous inner adaptation granted by the permanence, among existing productive sectors, of industry which produces the component elements of the town itself.

Designing and planning wide compact building systems will certainly bring about a closer cooperation with the technicians and the social forces of developing countries. The repetition of the mistakes of industrialized civilizations will in this way, be avoided by using technology to resolve housing problems that must, however, be considered critically under their cultural aspects, in a general urbanistic and technological framework.

BIBLIOGRAPHY

- ABDULEK, S., PINON, P.; "Maison en Pays Islamiques", L'Architecture d'Aujourd'hui, 5-6/1973.
- BAHRDT, H.P.; "Una città più umana", De Donato, Bari, 1969.
- BENEVOLO, L.; "Le Avventure della Città", Laterza, Bari, 1973.
- BIJL, J.; "Habiter, Analyse des Activités", Planification, Habitat, Information, 10/1974.
- CARRIER, H., LAURENT, P.; "Le Phénomène Urbain", Aubier-Montaigne, Paris, 1965.
- CIRIBINI, C., CRESPI R., GUARNIERO, G.; "Politica, Habitat, Nuova Tecnologia", Ente Fiere di Bologna, 1970.
- COMBLIN, J.; "Théologie de la Ville", Editions Universitaires, Paris, 1968.
- Commission Economique pour l'Afrique - Addis Abeba; Etude des Conditions Economiques en Afrique, 1971, Nations Unies, New York, 1972.
- Conférence Mondiale de la Population; "L'Evolution Démographique et le Développement Economique et Social", Nations Unies, Bucarest 8/1974, E/Conf. 60/4.
- Conférence Mondiale de la Population; "Perspective de la Population Active, Mondiale et Régionale jusqu'en l'An 2000", Nations Unies, Bucarest, 8/1974, E/Conf. 60/CBP, 31.
- COPANS, J., TORNAY, S., GODELIER, M., BACKES-CLEMENT, C.; "Antropologia Culturale", Sansoni, Firenze, 1973.
- DAHINDEN, J; "Structures Urbaines de Demain", Chêne, Paris, 1972.
- DE MEO, P., SCALVINI, M.L.; "Destino della Città", ESI, Napoli, 1965
- DE SIVO, B., PETRONCELLI, E.; "Verso Nuovi Insediamenti Umani", Dedalo, Bari, 1976.
- Food and Agriculture Organization of the United Nations; Production Yearbook, Vol. 28-1, Roma, 1974.
- FUCCELLA, R.; "Forma e Struttura della Città Moderna", Collana di Studi di Urbanistica, Università di Napoli, Facoltà di Ingegneria, Istituto di Architettura e Urbanistica, Giannini, Napoli, 1973.
- GEORGE, P.; "L'Organizzazione Sociale ed Economica degli Spazi Terrestri", Franco Angeli, Milano, 1972.
- GOLOMB, B., EDEN, H.M.; "Landormes Made by Man", Landscape XIV, n.1, Fall, 1964, pp. 4-7.
- MEIER, R.L.; "Teoria della Comunicazione e Struttura Urbana", Il Saggiatore, Milano, 1969.
- MESAROVIC, M., PESTEL, L.; "L'umanità a una Svoltà: Strategie per Sopravvivere", Edizioni Scientifiche e Tecniche, Mondadori, Milano, 1974.
- MUMFORD, L.; "La Città nella Storia", Comunità, Milano, 1964.