

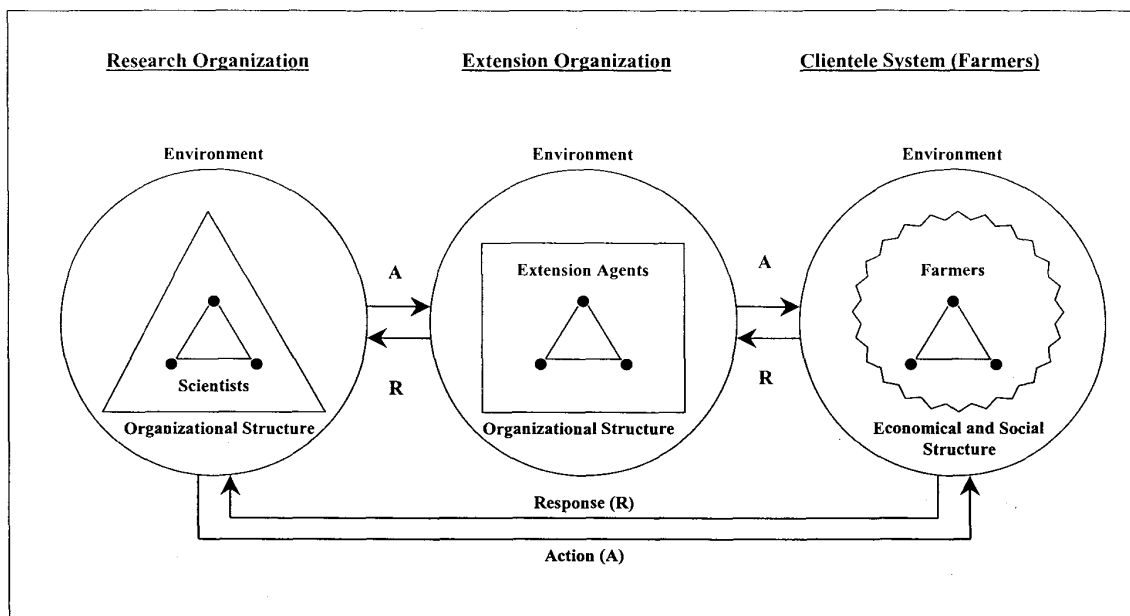
Institutional Barriers to Information Transfer between Research and Extension Organizations: Exemplified on the FS-Approach and the T & V-System

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Problem-Setting

(0) The **generation of information and knowledge and their utilization** are performed primarily by various actors in modern societies. Those generators and users are incorporated in diverse organizations, which act in various societal environments. The **transfer of information and knowledge** is often made by specialized organizations with their own cultural, social and economic environment. This pattern is especially valid in the case of agricultural research organizations which generate information and knowledge. That is then transferred through specialized extension organizations and disseminated as innovations to farmers as the users (see Figure). The transfer of information and knowledge and the special problems between research and extension organizations will be analysed in this article (see also AGBAMU, 2000).

Fig. : Intersystem Model (based on CHIN)



(1) The **Farming Systems Research Approach (FSR+D)** was created beside the traditional station research as a 'modern' style of agricultural research. In the different forms of the FSR+D approach, the potential utilizers of new technologies are involved in the research and development process of these innovations. Thus, it is guaranteed that appropriate technologies will be developed (SHANER/PHILIPP/SCHMEHL, 1982).

(2) Although the participation of the later utilizers in the research and development process already determines a considerable propagation of the innovations, the organized transfer of modern technologies to the mass of farmers can only be effected through special extension institutions and other development organizations. In developing countries, the **T & V System** may well be the extension approach which predominates at present in agriculture (BENOR/HARRISON/BAXTER, 1984).

(3) But how is the **systematical transfer of information** from the research organizations utilizing the FSR+D approach to the agricultural extension systems applying the T & V approach effected? Here, interactions, cooperation and transfer of knowledge between the two systems should be analysed. For this, the **contingency approach of the organization theory** will serve as a basis, and the constitutive elements of organizations will be examined with reference to the transfer of information and to feedback (HAGE/FINSTERBUSCH, 1987).

Results of the Analysis

(4) In principle, the staff members of both research and extension organizations have the same **official ultimate goal**, namely, to improve the living situation of the bulk of farmers and, moreover, to contribute to society's welfare (CERNEA/COULTER/RUSSEL, 1985). However, considerable problems exist in institutionalized cooperation towards development and in the transfer of adequate innovations as a result of

- different types of organization
- different goal orientation and interests of members and
- the development approaches of the two systems.

(5) The organizations of information and knowledge generation (FSR+D) and knowledge transfer (T & V) have a completely different **structure**. FSR+D organizations are small, and the members cultivate an informal working style that involves direct communication with regard to the contents and methods of research. The decision-making structures are bound to technical competence and persuasive power. These organizations have all the characteristics of **organic-professional models** with regard to complex technologies (research contents) and a small market (appropriate technologies).

The Training and Visit organizations are **mechanical-bureaucratic types** which have a hierarchical structure and a central decision-making pattern with a top-down control. The division of labour among the members is fixed. The contents of the advisory work are more or less centrally determined, and the agricultural extension workers only carry out these directives. The working procedures are standardized and extremely market by routine. The contents of extension work are simplified and uniform.

The **different types of organizations** make communication between members difficult or hinder it, thus impeding the necessary information transfer.

W. Manig: Institutional Barriers to Information Transfer between Research and Extension Organizations.

(6) **Organization members** pursue official goals as well as their own interests in their activities. They even have their own norms and differing orientations due to differentiated prerequisites for access. The delimitations hinder and prevent communication. The staff members of FSR+D organizations have an academic education and hold themselves to belong to the social elite, since they carry out qualified and socially acknowledged work.

The members of extension organizations are, except the main decision-makers, very often poorly trained. As their pay is insufficient, they are aware of the fact that their work is considered as being of inferior quality.

(7) Both organizations try, with different **development understandings** and different **development strategies**, different understandings of nature and priorities, to achieve the same ultimate goal of improving the welfare.

The approach of the FSR+D organizations is based on a **complex systems** understanding according to which the development of new technologies is substantiated by the entire decision-making and behavioral conditions of farmers.

In the T & V extension organizations, in contrast, the approach which is followed is **reductionistic**. That is, the contents of extension work specific to the commodities, which are, in turn, still further reduced to specific elements, are imparted to the farmers. The immediate target of extension is to increase agricultural productivity without considering the farmers' behavioral conditions.

Policy Implications

(8) From a **functional perspective**, a close institutionalized cooperation between research and extension organizations is important, since both are committed to the ultimate goal mentioned. From the **organizational viewpoint**, as briefly analysed, considerable **communication barriers** exist. What are the possibilities of effecting changes? It must be assumed that each of the two systems of research and extension has its own rationale and its justified existence in development strategy. Thus, a transformation resulting from a one-sided adjustment of an organizational structure to the requirements of the other organization is probably excluded.

(9) A **partial integration** of the two systems could, for example, consider the local or regional conditions (recommendation domains) in the extension activities, whereby the specific contents of advisory work are prepared by the FSR+E organizations. This policy surely has good prospects of being accepted in the regions where farming systems are relatively homogeneous (e.g., rice cultivation in irrigated areas).

(10) Other proposals for improving the communication and cooperation are rather of an incomplete nature:

- Integration of subject matter specialists in FSR teams, that is, in research and development work already
- Establishment of a special liaison officer for translating the results of research into recommendations for extension
- Development of informal contact between academic researchers and extension workers through workshops, etc.

W. Manig: Institutional Barriers to Information Transfer between Research and Extension Organizations.

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