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Interdisciplinary Research
and
Area Studies

by

Shinichi ICHIMURA

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The Center for Southeast Asian Studies

Kyoto University

Kyoto, Japan

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INTERDISCIPLINARY RESEARCH AND AREA STUDIES

1. Institutional and Methodological Problems in Interdisciplinary Research in Area Studies

Particularly in the studies of developing countries, the need for interdisciplinary research is often emphasized. Although there are many problems in development research that can be adequately analyzed along the lines of traditional single disciplinary research, these studies frequently reach the boundaries of each discipline and require some way of combining the knowledge of neighboring sciences to further the analysis. This combination of knowledge may be encyclopaedic only in the sense that the various inquiries into the same or related problems by various disciplines are simultaneously attempted and their conclusions are arranged in parallel or cumulative fashion so as to facilitate a synthetic understanding of the different aspects of the development process. Such a type of research may be called multidisciplinary. The so-called interdisciplinary research implies, however, more interactive cooperation of several disciplines for the purpose of obtaining more synthetic or deeper understanding of common problems. It sometimes means a new inquiry into the "zwischengebiet"(in-between area), a development of new conceptions or a reintegration of different informations in various disciplines. In actual development research, however, the distinction between multidisciplinary and interdisciplinary research works is not necessarily very clear-cut. Normally, the most appropriate way of dealing with a complex of problems in

developing countries is a combination of these two types of research efforts. The word interdisciplinary research will be used in the sense of this combination hereafter.

The basic reasons for the need of interdisciplinary research are: (1) insufficient specialization of primitive societies, and (2) inadequate division of sciences and conceptional frameworks of modern sciences in the West in order to study the problems in developing countries. A few concrete examples may explain the argument more clearly. The first case is a simple-minded application of modern economic analysis to the development problems in Asia. Many blunders committed by famous economists in presenting a too optimistic prognostication for the future of South and Southeast Asian economies are in most cases due to the separation of demography from an economic analysis of development and the neglect of the socio-political process of nation-building connected with economic development in these new states. The second example is a study of the spread of a "high-yielding variety" of rice in Southeast Asia. The Green Revolution is usually studied by agronomists and agricultural economists. But unless the study is supplemented by the related research works of agricultural engineers on the environmental conditions for the spread, the accompanying social process is analyzed by anthropologists and even its political implications are clarified by political scientists, the whole implication of the green revolution can never be adequately understood. As a result, overly optimistic policy suggestions and judgements have misled agricultural policies.

For these reasons there are definite advantages, at least at the present stage of our scientific inquiries, for research institutions to be organized as multidisciplinary rather than as monodisciplinary research institutions. Since, however, there are a variety of ways of organizing multidisciplinary research institutions, and past experiences in academic circles are almost exclusively monodisciplinary, very careful consideration must be given to the institutional problems of such new organizations. There would seem to be two important aspects in this consideration. One is the administrative problem, and the other is the methodological problem. Although our experience in interdisciplinary research is still very limited, this paper purports to review the postwar experiences in managerial and research experimentation of interdisciplinary institutions and thereby gain knowledge for better institutional and methodological ways of promoting area studies or even suggesting a new methodology to other scientific fields.

2. Five Types of New Institutions and Their Administrations

The new institutional arrangements established for interdisciplinary research may be classified as the following five types:

- A: Governmental or Semi-Governmental Research Institute,
- B: University Research Institute,
- C: Private or Business Research Institute,
- D: Intramural Research Program,
- E: Research Project.

The first three are the three ways of organizing new research institutions for interdisciplinary research, and the last two are two ways of supporting interdisciplinary research in established institutions. Hence, the last two are not necessarily inconsistent with the first three institutions.

A: Needless to say, many governmental ministries have their research sections or some research institutes attached to the ministries. Their research works are usually limited to the activities assigned to the ministries, so that they have no reason to be interdisciplinary. Since, however, the policy problems are properly solved only by synthesizing various considerations, the need for interdisciplinary research for important government decisions hardly needs explanation. The difficulty of recruiting specialists and establishing good contacts with academic circles often necessitates the establishment of semi-governmental research institutes. The examples are RAND corporation in the U.S. and the Institute of Developing Economies in Japan. They are all interdisciplinary research institutes.

B: Many universities in Europe, the U.S. and Japan have independent research institutes apart from the departments or colleges, mainly to carry out research not directly connected with education. Some of them can be established as interdisciplinary. The Institute of World Political Economy in Moscow, the South Asia Institute of Heidelberg University, the Institute for Advanced Studies at Princeton, and the Center for Southeast Asian Studies of Kyoto University are some of the interdisciplinary research institutes

established as academic institutions.

C: Governmental or university institutes do not necessarily meet the practical demand for quick answers to the questions of private businesses. Consequently, many private institutes and consulting companies are established sometimes as interdisciplinary institutions. The Stanford Institution in the U.S., the Nomura Research Institute, and the Mitsubishi Research Institute in Japan are of this type. There seem to be two ways of administering these private institutes. One is to run it as a consulting company or its like. It must have its own staffs and information system to carry out the research within itself. Another is to make it an organizer of interdisciplinary research projects. It must have only the minimum number of core personnel, a fair number of assisting staffs and secretaries in addition to good contacts with universities and government offices as well as with private businesses. In either case, this type of institute is much more liberal than the first two types in the salary scale of individual specialists and allocation of research funds or choice of research projects. The director's leadership role can be more easily performed at these institutes than in the governmental and university institutes.

D: Intramural research programs have been the typical way of organizing interdisciplinary research activities in area studies of American universities. Recruiting scholars from various departments, such programs as the Southeast Asia Program at Yale University and the same at Cornell University organize interdisciplinary research activities as well as graduate education. The same method has been

adopted by some Australian and Japanese universities. The serious shortcoming of this method is that the scholars recruited for area research programs can not get full credit in their own department for their works. For the departments are naturally discipline-oriented, and area studies are often subsidiary to professional training and credit. Besides, the uncertainty of the program being dissolved makes the scholars' commitment to the research temporary and superficial. For these reasons it has always been very difficult to recruit outstanding scholars in area studies or development research. Joint appointment can not fully overcome the difficulty. This method is inappropriate particularly to attract young scholars to the new research fields, which require adventurous spirits and long-term field works. Despite the difficulties listed here, this is a very effective way of experimenting in new research fields. The final decision on institutional arrangements can be made at the later stage.

E: Giving grants to interdisciplinary research projects is obviously a way of promoting this type of research, adopted by many foundations, university grant committees, and government agencies. Flexibility in allocating research funds is an advantage of this method, but the short-term support and uncertainty are the disadvantages inherent in this method.

Now the question is how to evaluate the advantages and disadvantages of these five types of organizations for interdisciplinary research.

3. Administrative Efficiency and the Reward System for Scholars

The criteria for evaluating these institutions must be established from two points of view. The first is whether they are administered efficiently or not; and the second is whether its organization system can attract high quality scholars and achieve outstanding scholarly research works. Regarding the first aspect of administrative efficiency, there are at least three points to consider: (i) allocation of funds for research and personnel expenses, or financial administration, (ii) recruitment of capable research workers and their further training, or personnel administration, (iii) choice of appropriate research problems and successful execution of the research works, or research administration.

The second point is concerned with substance, whereas the first is with formality. Ragner Frisch once said that good research institutes are the ones with good research workers. In this sense, the most important question in evaluating research institutes is which institution attracts more outstanding scholars. This question is very deeply interconnected with the research administration mentioned above, because outstanding scholars are very much concerned with the question of whether or not and in what way good research is promoted and bad research is discouraged and in what way new, essential inquiries are stimulated. It may be difficult to exhaust all the incentives that attract capable scholars to institutions or research programs and projects. But it must be particularly emphasized that pecuniary remunerations play only a small part as an incentive in the reward system for research institutes.

The following list of factors is offered as a frame of reference to analyze the reward systems of interdisciplinary research institutions:

1. official salaries,
2. opportunities permitted to earn extra incomes,
3. research expenses guaranteed or easily obtainable,
4. free time beyond obligatory works,
5. chances of promotion in salary and position,
6. social prestige accompanying the position,
7. stability of position,
8. freedom or flexibility in selecting research subjects,
9. fair and prompt recognition of research achievements,
10. accessibility to social honor.

Many of these incentives are mutually related and depend not only on the reward system of one institution but also on the social environment in which the institution is placed. Hence, it is impossible to make any general statement, comparing five organizations with the three points of administrative efficiency and the ten criterions mentioned above as a frame of reference. Nevertheless, it would be of some interest to offer some personal observations based on my experiences in Japan and discussions with many directors of interdisciplinary research institutes all over the world.*

* In the autumn of 1970, I had a chance to visit most of the interdisciplinary research institutes in the U.S. and Europe, including Czecho-Slovakia, Poland and the USSR. Most of them were specialized in area studies. Nevertheless, the views expressed here are primarily based on my personal experiences and observations as the director of an interdisciplinary research institute at Kyoto University, Japan. Hence, the opinions of the paper may be biased in favor of university institutes. A friend of mine who holds a responsible position in a governmental institute holds that university professors are usually very poor administrators. Since, however, the necessary number of capable administrators is very small, it should be possible to find exceptionally capable administrators with a sufficient knowledge of the scholarly world. Hence, the opinions of this friend of mine cannot be held against the advantage of university research institutes whose directors are elected among university professors.

Table I: Administrative Efficiency and an Evaluation of the Reward System of Five Types of Organizations

	Gov. Inst.	Univ. Inst.	Bus. Inst.	Intr. Prog.	Proj.
i. financial ad.	B	C	A	B	B+
ii. personnel ad.	B	B	A	A	A
iii. research ad.	C	B	B	A	A
1. salaries	B-	B	A		
2. extra income	B	A	B-		
3. research exp.	B	A-	B+	A	B
4. free time	B	A	C	B	B
5. promotion	C	B	B+	C	C
6. prestige	B	A	C	C	C
7. stability	B	A	B-		
8. freedom	C+	A	C	A	A+
9. recognition	C	B-	B	A	A
10. honor	B	A	C	B+	B

The symbols, A, B and C stand for good, fair and poor. + and - signs are used in the same way as in school records.

This table does not require much explanation. Caution would, however, be desirable against a straight-forward interpretation, because there are many varieties of each type of institution and different ways and degrees for each criterion. Moreover, the judgement of performance records may certainly differ from one person to another. Needless to say, so much depends on the actual way of running each organization, which is determined not only by its institutional arrangement but also by its history, personnel and accidental conditions. Of particular importance is the appointment of the director or the program leader and key senior scholars who

can truly guide the interdisciplinary research works. The above mentioned table shows a general indication of the effects of institutional frameworks on each criterion.

As for financial administration, university institutes seem to be the poorest. The reason is that in leading Japanese governmental universities the budgets are always determined annually according to the number of personnel in each institute or department, and significant amounts are not allocated to interdepartmental research groups. Private business institutes seem to have the largest degree of freedom in allocating funds for the budget under the leadership of responsible directors.

Given a certain group of specialists, private business institutes seem to have the best personnel administration. They also have freedom in temporarily recruiting suitable specialists from other types of research organizations. It is another question, however, whether they can staff appropriate experts for interdisciplinary research works or not.

In research administration there does not seem to be any significant difference among the three institutions, but government institutions are more strictly restricted by inappropriate regulations. Since such regulations and institutional bondage do not restrict intramural research programs and research projects, the last two types of arrangements seem to enjoy the high degree of freedom in the three administrative aspects. The only difficulty in this case is that the crucial figure who utilizes this freedom, the director or program leader, can hardly be persuaded to stay for a

considerable period of time.

The pecuniary remuneration as an incentive must be considered not only in terms of an official salary but also as an opportunity to earn an extra income. Taken together, university institutes seem to have the best arrangement, because university professors are given maximum freedom to do anything to earn extra incomes. Often extra incomes rather than official salaries are allocated according to the ability of research workers and thereby increase the efficiency of research. This holds true, however, only for the fields which are in demand or are socially recognized. But it is unlikely that private business institutes would have research workers in impractical fields, so that even there, university institutes seem to have a comparative advantage. Interdisciplinary research usually includes in its ideal form some research workers whose research results are hardly in demand by profit-making institutions.

The difference in research expenses does not seem to be very large at any rate, but free time provided to each individual researcher differs greatly from one type of organization to another as the table shows. Promotions according to the performance of individual researchers seems to be made more fairly and promptly in private institutions rather than in governmental institutes where the seniority principle prevails. University institutes are placed between the two.

Social prestige and stability of position is still very high for university professors, though there are many exceptions, and such an advantage holds only for reputable universities.

Recognition of research achievements comes from two sources. One is from within the institution; another is from academic and intellectual circles. The latter source is very directly connected with accessibility to social honor. Fewer opportunities to gain recognition in publications, to associate with the well-established scholarly world, to make personal contact with outstanding scholars by attending national and international conferences or to join in international research teams make private business institutes and government institutes less attractive to prestigious scholars, though the situation is changing rapidly in this respect.

The more spiritual satisfaction derived from achievement in research itself, the less important pecuniary and other material incentives become in determining the placement of scholars in these institutions. Concerning the forms of interdisciplinary research institutes to be established, the great advantage of old, prestigious and large universities cannot be denied, because there are many specialists ready to cooperate with each other in interdisciplinary research, and any research results are most readily recognized in academic circles. For these reasons the interdisciplinary institutes located within or affiliated with the best universities are very attractive for young capable scholars who are about to climb up the ladder of an academic career and yet know that the so-called area studies or interdisciplinary research are not firmly established as yet.

Admittedly, this same environment makes many university professors self-centered or leads them to self-satisfaction, making

many universities remain mere ivory towers. Thus they often deviate unduly from practical, significant or policy-oriented research. For this reason it is highly desirable, on the one hand, to devise a certain reward system for recognizing practical or policy-oriented research and, on the other hand, to open the way for interchanging personnel among the three types of organizations. The two methods of intramural research programs and research projects must be used to supplement research works at the three institutions by their own staffs.

4. Methodological Problems of Interdisciplinary Research and Their Solution

A definite advantage of establishing an independent research institute designed for interdisciplinary research rather than having an intramural research program within some university is that many kinds of scholars in different fields can have close contact with each other and thereby learn formally and informally different ways of thinking, research methods, and established knowledge in neighboring sciences at all times. The advantage is particularly great when discussions are stirred up on questions of common interests from the viewpoint of different disciplines. Such discussions would never be possible unless many scientists, as it were, lived together in the same institute and talked with each other all the time and felt responsible for the research results of the institute as a whole. The importance of friendly but careful informal discussions can hardly be exaggerated. The kind of

information and preliminary discussions obtainable during informal talks among colleagues at various occasions cannot be learned so easily by reading published documents, which are often too partial and formalized. In fields like area studies where many problems still remain unsettled or even unformulated, the raw materials of information, experiences or even casual observations in field works and of course the front knowledge of related sciences are very essential to picking up some topics for research.

Such tentative discussion with colleagues in the same or related fields will make it easier to evaluate the relative importance of topics and examine the possibility of formulating research problems out of them. Experiences show that the most successful interdisciplinary research can be carried out if some specific problem is formulated as a central theme, which is of common interest to scholars in different disciplines. This way of identifying problems and collaborating efforts in formulating the problem is really a key to the success of interdisciplinary research. This is one of the advantages of independent interdisciplinary institutes.

Inconsistency of speech and action is particularly noticeable in interdisciplinary research. The deed-to-talk ratio must be very low indeed. The above mentioned advantage shows at least one way of overcoming the methodological difficulty of interdisciplinary research, which can most easily be realized at independent research institutes but can be applied to other institutes with some adaptations.

This advantage is summarized below, along with the two additional advantages of independent institutes, which will be discussed later:

- (1) Easier selection and formulation of research problems common to multiple disciplines,
- (2) Closer collaboration between senior and junior research workers,
- (3) Ready cooperation with matching research programs in other institutions at home and abroad.

If these points are successfully implemented, the most difficult problems of interdisciplinary research will be solved, especially with regard to area studies or development research.

Two concrete research works are worth quoting here as successful examples of interdisciplinary research. The first is T. Watabe, "The Formation of Glutinous Rice Zone in Thailand," Anthropology, 1970; the second is H. Fukui, "Environmental Determinants Affecting the Potential Dissemination of High-Yielding Varieties of Rice," The Southeast Asian Studies, December, 1971.

Watabe, professor of agronomy at Kyoto University, succeeded in clarifying the historical changes which brought about the spread of glutinous rice varieties in Thailand, by distinguishing the various kinds of rice hulls contained in primitive bricks discovered in old temple buildings at different places in Thailand. The discovery of such bricks was accidental. One of his colleagues, Takaya, associate professor of geomorphologist at Kyoto University, casually talked about this discovery while both of them were doing field work in northern Thailand. Subsequent working seminars with

agronomists, Thai historian, rice taxonomist, and geographer suggested a more careful sampling of bricks, and as a result, his unique, pioneering piece of work was produced, shedding light on an undocumented part of old Thai history.

Fukui's article is in effect a joint project by a group of scholars participating in a joint seminar at the Center for Southeast Asian Studies, Kyoto University. The discussion started informally at luncheon meetings by casting serious doubt concerning the popular optimism about the spread of the IRRI variety of rice in the Chao Phraya basin in Thailand. A presentation of this cautious view to an international conference on the Green Revolution sparked a series of working seminars attended by quite a variety of scientists who had common interests in the Green Revolution in Southeast Asia. They included geographer, agronomist, soil scientists, irrigation engineer, economist, and agricultural economist. After a very careful exchange of views and a joint effort to analyze the same problem from various points of view in these work shops, this unusually interdisciplinary paper was successfully written and proved itself right in warning against too much optimism on the Green Revolution in Southeast Asia. These two examples show how interdisciplinary research can be successfully carried out.

The importance of collaboration between senior scholars with sufficient experience in area studies and junior postdoctoral researchers is not adequately recognized by many scholars as well as administrators of research institutes and grant-giving foundations. Junior scholars or graduate students are often sent to remote

villages or bustling urban areas without any effective research guidance for area studies. Without appropriate advice at crucial moments, junior researchers often waste time and energy and end up with a minimum of work in thesis writing. The essential problem here is how to guide the research of junior scholars in the field. This may be achieved if close collaboration is previously arranged between senior and junior researchers before the latter departs for his field works. The former should always be reachable either at the local centers or at the home center.

Another reason for the importance of senior and junior cooperation is also sometimes missed. It is due to the longer period required to train capable interdisciplinary-oriented specialists for area studies. Firstly, there are additional language requirements. It is not exceptional that successful field works require the mastery of two foreign languages. Secondly, they must familiarize themselves with people and societies that are radically different from those at home. To economize the time required for such training, constant association with senior scholars with long years of experience and frequent association with visitors from the native countries is very desirable. This is made easy if junior scholars are affiliated with multidisciplinary research centers where such opportunities are amply provided.

In order to carry out interdisciplinary research of area studies, the research workers must always be ready to contact researchers in related institutes or universities at home and abroad. It goes without saying that the best way of executing area studies

is to work together with native scholars more or less in the same fields. This arrangement can be more easily made by being able to respond to the demand for research programs designed by native scholars on their own initiative. Since different kinds of problems are likely to be proposed, and they are made by the same, limited number of leading scholars in developing countries, response to the demands is easier if there are only a few contact points in developed countries that are multidisciplinary and can answer many questions as they are requested. This aspect is increasingly important to ensure the needed and welcomed field works carried out by junior researchers and to be saved from the charge of intellectual or political neo-colonialism. This type of international cooperation is also extremely effective for the training of junior scholars in developing countries as well as in developed countries. The young Ph.D.'s who have just come home to developing countries usually need more training and research experience in order to analyze the problems of their home countries. The above mentioned international cooperation offers an excellent opportunity for their further education and promotion of interdisciplinary research in area studies for development research.

Thus an ideal interdisciplinary research institute must be established with a core group of multidisciplinary research workers and a large number of affiliated researchers in many fields. It must be administered so as to guarantee the maximum degree of contact with each other in formal seminars and informal occasions. These three points are crucial considerations to be kept in mind.

5. The Size of an Interdisciplinary Institute and its Administration

All the considerations presented above seem to imply that the size of such an institute must be fairly large. The larger the size, the more difficult the task of administration. The leadership of the director is especially important for administering an interdisciplinary institute, because the difficult problem of coordinating different disciplines in scholarly research is often ultimately solved by the director's judgement. Most of the experienced directors seem to hold the view that the number of senior scholars should not exceed about 20. The primary reason for limiting the size of the institute is the enormous burden on the director. The ideal director must combine a wide and balanced knowledge of different disciplines with excellent managerial skills. It is very difficult to find such a director. If one is found, he can not remain excellent for very long unless he is given sufficient time to keep learning while assuming the role of director. This is certainly not very easy, because scientific knowledge depreciates quickly and the duties of a director require an unlimited amount of time. One way of overcoming this difficulty would be to have plural deputy directors who can alternate directorships every two or three years, so that any one of them can continue his scholarly activity while doing administrative work.

Needless to say, twenty senior scholars are not enough to carry out a variety of interdisciplinary researches. Hence, the institute must have a large number of affiliated researchers within

and outside the university or just outside the institute. This means that it must organize intramural research programs and/or research projects to supplement the research activities of its own staffs. This arrangement can be made most ideally if an interdisciplinary research institute is established as part of a large university with many departments of different disciplines. If there are scholars of many disciplines on the same campus, the opportunities of informal association can still be easily arranged. Thus, one conclusion that can be derived from the considerations in this paper is that the institutes outside large universities will have more difficulties working under an interdisciplinary form and thus will tend to be more or less monodisciplinary.