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IS ANTHROPOLOGY SUPERFLUOUS IN FARMING SYSTEMS RESEARCH ?

by

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The role of the non-economic social sciences, particularly of sociology and anthropology, in farming system research (FSR) is being gradually and increasingly recognized. As a consequence, these disciplines are being brought into interdisciplinary agricultural research programs. The theoretical insights, methodological approaches and operational findings contributed by these disciplines are strengthening both technical research in agriculture and the actual development interventions based on farming system research.

Yet, we are still coming across instances in which the role of anthropology/sociology in farming system research is either directly ignored, confusedly mispercieved, or de facto contested. Some times such a denial is even expressed explicitly and aggressively. The present paper[2] is using the opportunity offered by a recent instance of explicit denial of the role of anthropology/sociology in FSR, in order to refute the argument that underlines it (and possibly other such positions) and to develop, in response, the positive argument for recognizing the social and cultural variables that need to be studied with adequate sociological and anthropological methodologies under the FSR approach. The paper which we challenge is a state-of-the-art review report on FSR. The World Bank commissioned Norman W. Simmonds from the Edinburgh School of Agriculture to prepare such a review, and the resulting paper[3] was

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[2] This paper is a slightly amended version of a rejoiner written by the authors to a report prepared by Norman W. Simmonds on FSR (see Footnote 3).

[3] Simmonds, Norman W. The State-of-the-Art for Farming Systems Research, Agriculture and Rural Development Department, The World Bank, Washington, D.C., January, 1984, (processed).

presented in summary at the World Bank Agricultural Symposium of January, 1984 and widely circulated within the international agricultural research network.

Norman W. Simmonds' treatment of anthropology in his state-of-the art review of farming systems research (FSR) is unfortunately ill-informed and misguiding. The reviewer seems rather unaware of the anthropological premises and components of farming systems research. When it discusses the anthropological contribution to FSR, the Simmonds review, contrary to the call of a state-of-the-art paper, does not objectively inform the reader on the considerable body of opinion that differs from the author's own (mis)judgement. And in discussing the methodological issues confronting farming systems research, it fails to grasp the interplay between the social sciences that jointly further such ongoing research.

In the limited space of this paper, we shall first substantiate the above points, and then sketch some of the reasons why anthrcpological and sociological[4] concepts and skills are indispensable to farming systems research teams.

The reviewer's flippant dismissal of anthropology appears during a discussion of the institutional role of economists and anthropologists in agricultural research programs. Arguing that farming systems research is essentially a product of farm management economics, Simmonds adds that the complexity of the economics now needed for proper analysis of small-scale farming is beyond the grasp of the agricultural scientist. Consequently, economists are indispensable members of FSR teams.

The reviewer thinks, however, that anthropology is expendable. To support his opinion, Simmonds resorts to caricature rather than to intellectual argument. He writes:

> "One recalls the not altogether unfair stereotype of an anthropologist living in a village for years and emerging at the end with the view that the villagers are all splendid chaps

[4] In this paper, and for the purpose of the issue discussed, we are using "sociology" and "anthropology" interchangeably.

> who ought to be allowed to get on with agriculture in their own way regardless of the fact that the world around them will not allow them to do so."

Caricature, and such anecdotes, do not tell the full story. Stereotyping is distorting and meaningless, even if apparently witty. Using a stereotype for want of a better argument only indicates the weakness of the reviewer's position.

Simmonds next suggests that "if there is a place for anthropology at all" it would be for "the economic anthropologist rather than the strictly social kind", who could answer certain "important questions beyond the reach of economics" (difficult to imagine though this might be for the reviewer...). In any case, even this kind of anthropologist is probably superfluous, because:

> "...there might be little to distinguish him from the economist with well developed social perceptions".

The contradiction in the reviewer's position is obvious, although his thinking seems to walk by without noticing it. If he concedes that there are in FSR "important questions *beyond the reach* of economics" — and indeed there are — than it is inconsistent to deny the need for those social sciences that do "reach beyond" and explain those admittedly "important questions". Sociology and anthropology do precisely that. They reach into the *social fabric* in which the economic activity of farms is embedded. It is therefore preposterous to assume that the tools (conceptual and investigative) of these social sciences, anthropology and sociology, can be substituted by "well developed social perceptions" of the economist. And what are these vague "social perceptions" which Simmonds doesn't bother to define? Should FSR, or any research, be left at the whim of the presence, or lack of, a researcher's subjective "perceptiveness" of "important questions" for which he has not been professionally trained? If Simmonds' displayed perceptiveness for the socio-cultural dimensions of farming offers any clue, then it definitely proves that a serious, systematic approach should never rely only on "perceptiveness" outside one's own technical discipline.

The reviewer doesn't appear, however, to be interested in these

issues and self-confidently steps over them, in a brisk walk towards his crowning final pronouncement:

> "...any generalized adoption of social anthropology would be, I believe, merely an expensive way of avoiding a few, not very costly, mistakes by OFR/FSP teams."

In other words, counsels the reviewer, researchers should forget about any general use of social anthropology in FSR, even under the penalty of making some mistakes; he generously offers his tolerance for such "not very costly" mistakes.

Another methodological error in the reviewer's reasoning is to confuse the general for the singular. We can readily admit that there have been anthropologists who would fit Simmonds caricature of the outsider who lives in a village several years, only to emerge afterwards with no more than trivia as his "findings". But what does this prove about a scientific discipline? Nothing. For each and every discipline there are enough champions of trivia, yet this is is not a reason to indict the discipline itself.

The regrettable consequences of the fact that the reviewer let himself get carried away with his caricature are that (a) the review paper remains incomplete and biased vis-a-vis the intellectual history of FSR; and (b) it offers a poor and misguided judgment, and a truncated picture, as advice for future work in this area.

Our concern is not so much with the reviewer's biased opinions — these can be left to him as a private matter — but with the damage resulting from his allowing his own bias to affect his compiling of the state of the art report; he refused to take stock of existing experiences and screened out from his report the voluminous work done specifically by sociologists and anthropologists in many international agricultural research centers of the CGIAR network, in national centers, and outside them, in universities, projects, etc. (see, for instance, the many works presented at the ARPT/CIMMYT workshop on the role of sociologists in farming systems research, Zambia, 1984, or the IRRI/UNDP workshop on "the role of anthropologists and other social scientists in interdisciplinary teams developing improved food production

technology", Los Banos, IRRI 1982; and the several annual workshops on FSR at Kansas State University — e.g. Flora, 1985 etc.) The intellectual richness of these research efforts, their integration with other disciplines, the research sinergy thus created and the resulting findings, are not captured in the state of the art paper. Therefore, the report remains deficient by not deriving some of the lessons which are essential for further guiding the development of FSR.

To assess what has already been the place of sociology and anthropology in evolving the FSR approach, one can listen to several authorized,non-anthropological voices. Many researchers who know what skills are useful in FSR from actually doing it, have said clearly that anthropology has provided important insights. John Gerhard, for example, writes that "...anthropologists add a qualitative and holistic perspective which is badly needed" (1984:13). The farming systems field manual developed by the CYMMIT Economics Program (Winkelmann and Associates) adds that "...an anthropologist might aid in understanding interactions between household members in decision making for particular crop operations or interactions between households in the cases in which a technology might require cooperation of groups of farmers" (1980: 4) — hardly a minor domain of FSR, as implied by Simmonds.[5]

Perhaps the reviewer did not realize that the OFR/FSR approach that has been developed at CIMMYT, and to which he frequently refers, has in fact been shaped and is practiced at CIMMYT *with* anthropologists present in the OFR teams, incorporating anthropological perspectives and procedures. He extensively quotes the paper of a CIMMYT staff anthropologist, Robert Tripp, without identifying him as such and apparently without realizing that Tripp *is* a social anthropologist who brings his disciplinary skills into the OFR/FSP at CIMMYT.

In another center, the international potato research center (CIP,

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[5] Elsewhere in the state of the art paper, mentions are made of the "human factors" including "farmer attitudes", "community relationships" or of some social characteristics of the small farmers; these only underscore how unsubstantiated the pronouncement about anthropology is in the context of a review that remains contradictory.

Peru), agro-technical and economic researchers who have spent many years working on potato post-harvest technologies, potato processing and other FSR-related aspects, have significantly modified their recommendations precisely because of the research contributions of professional anthropologists and sociologists on CIP staff (Rhoades, 1983; Rhoades and Booth, 1982). CIAT has similarly found anthropologists useful in its bean and cassava programs, where they work closely with agronomic and biological researchers.

The second contribution of anthropology to FSR flows naturally from the first. To a growing extent, as farming system research incorporates off-station experiments, sociologists have become increasingly involved in experimental design. Jacqueline Ashby, for example, has worked extensively to develop models and methods to include variable amounts of small farmer participation in technology assessment and adaptive research. Experiments carried out with these methodologies have produced results significant for agronomic research (Ashby 1984, Ashby and Leon 1983). Agronomic researchers using these techniques benefit not only from accurate baseline information and dynamic, continuing evaluation of agricultural technology when farmers are included in crop trial design, but they also benefit from much more carefully attended and protected experiments when farmers also have a direct interest in studying the experimental outcomes. That these benefits are appreciated by farming system researchers is evident in their enthusiasm for participatory techniques (Woolley 1984; Wooley and Pachico, 1983).

In turn, Michael Collinson's seminal articles on farming systems research cited by the reviewer took pains to underscore various commonalities between anthropological fieldwork and the proposed FSR methodology, noting, for example, that the crucial "exploratory survey" adopts "...almost an anthropological approach to understanding the local farming system" (1980:441). Collinson, the leading economist researcher in the area of FSR in Africa, is certainly well placed and fully backed by his entire work to draw attention to the similarities between farming systems research and anthropological analysis (Collinson, 1985).

In fact, understanding farming from the farmer's point of view, especially in non-Western cultures, has been a central preoccupation of anthropology practically since the founding of the discipline. A quick look at Malinowski's *Coral Gardens and Their Magic* (1935), Firth's *Primitive Polynesian Economy* (1938), Redfield's *Chan Kom* (1934) or Richard's *Land, Labor, and Diet in Northern Rhodesia* (1939) will show both this long developed scientific tradition and its current validity.

What, then, can social anthropology or the sociology of agriculture specifically contribute to farming systems research? This is the crux of the matter.

We contend that this contribution is substantial for understanding many of the issues and variables now being addressed by farming systems researchers, as for instance: farm decision making patterns; non-economic factors in farmers' economic behavior; the relationship between landholding and social structure; alternative economic activities; the developmental cycle of the farm family; the social organization of family labor resources; family authority systems and their impact on sex and age division of work; family values and objectives; causes and consequences of cognitive and behavioral changes; short and long term farm strategies and so on.

To various degrees, these variables have been at the core of sociological and anthropological investigation for a substantial time. However, what is even more significant, these variables have been brought to the forefront of the research agenda in the sociology of agricultural development and in development anthropology particularly during the last ten years (Cernea, 1985; Sutherland, 1984). A convincing argument has been made that the strong emergence of such a research agenda among rural sociologists signifies the development of a "sociology of agriculture" which is not co-terminus with the traditional rural sociology; it represents a new approach, theoretically more fruitful, substantively innovative, holistic, critical and directly relevant to the problems facing rural societies (Newby 1982, 1983). Such new developments in sociology, which ought to be signaled as symptomatic of the current "state of the art," make the inter-disciplinary exchange in FSR studies even more promising. The progress of the sociology of

agriculture justifies, therefore, a stronger plea for channeling its contributions also into the conceptual framework and practical organization of farming systems research.

Being of a social or cultural nature, these variables do not fully fall under the realm of economic or agricultural/biological sciences, which have not been concerned with developing the conceptual or methodological apparatus to study and interpret them. But these variables have been and are studied by disciplines like sociology and anthropology, which have worked out conceptual instruments and observation procedures tailored for such variables and have accumulated a substantial body of relevant information on them. (Cernea, 1985; Flora, 1985) Farming Systems Research differs from many prior approaches, such as farm management studies, (Flora, 1983) or cropping systems studies, inter alia precisely because it recognizes the relevance of the sociological/cultural variables and more holistically integrates their study with the study of economic and agro-technical dimensions.

The recognition of these variables becomes particularly relevant, as Chambers and Shildyal (1985) have convincingly demonstrated, when agricultural research is geared towards fitting the needs and opportunities of resource-poor farm families.

It is hardly possible for us to summarize the entire anthropological/sociological body of relevant research that was left out despite the review's one hundred pages. The literature dealing with the type of sociological variables listed above is vast, and it is essential. Additionally, we shall merely point to several other specific areas where current anthropological/sociological work has proved, and shall prove itself further, useful for farming systems researchers.

The first lies at the level of method. Dealing with small-scale farmers poses difficulties that are of a different nature from those normally encountered by researchers more familiar with statistical aggregates or archival sources. Very often, for example, large scale formal sample surveys are either inappropriate or impossible. With a long tradition of fieldwork in small communities, anthropology and rural sociology have developed procedures of participant observation, informal survey, in depth case studies, use of key informants etc. which routinely

combine direct and indirect research techniques to gather and interpret reliable field data.

Second, understanding how productive (including labor) resources are culturally organized and deployed is another traditional sociological/ anthropological domain currently of primary *technical* interest to farming systems research. It is not always clear exactly what comprises the family farm, how it changes over time, what are the goals of production, how the farm fits into larger social units such as the kin system, the village or region, and so on. The reason why a knowledge of these features is quintessential is not just to avoid "a few, not very costly mistakes"—although even this statement by Simmonds is deceptive and insensitive to the major human and economic costs of programs that failed because of their incompatibility with the cultural context. More than that, the whole point of farming systems research is to investigate what makes farming systems work, why small-scale farming systems differ in both potential and performance, what rationale governs their operations.

While a great many reasons for variation in farm productivity are due to strictly technical factors — differential soil fertility, irrigation techniques, and so on — other are social and cultural: e.g., the sex and age division of labor, patterns of informal cooperation, channels of information diffusion, authority systems and decision making rights, and the like.

These factors are important to understand not only the causes of variation in farm productivity. They are also essential to understand the consequences of development interventions. Briscoe, for example, has carefully documented the impact of the replacement of long-stemmed rice varieties by dwarf strains on energy costs in a Bangladesh village. Although Briscoe is not an anthropologist, he concludes that the most important variable for understanding why the change in cropping systems affected farm and farmers the way they did is local social structure — and that conventional economic methods of evaluating problems of this type in rural areas cannot adequately assess the dynamics of agricultural change in relation to energy use (1979: 636). In a similar vein, farming systems researchers are increasingly concerned

about the impact of new technologies on disadvantaged groups — and how this knowledge can be used to set research priorities. Again, the anthropologists preoccupation with the economists' "externalities" — social class, ethnicity, politics, family, etc. — would seem to be of growing relevance to farming system research programs.

Third, sociology's and anthropology's well-known concern with social organization promises to be of growing use, especially in development strategies that seek to build upon local organizational arrangements. Again, knowing something about patterns of leadership, organizational flexibility, functional links with other organizations and so on are *technical* questions of interest to farming system researchers. The CIAT cassava program, for example, is currently using an anthropologist to analyze the possibilities for expanding cassava production in the north coast of Colombia, as well as to assess the ability of Colombia's organizational infrastructure to handle the increased demands projected for it by the development of new production and storage technology.

Anthropologists' normal familiarity with local culture should not be downplayed in the exclusive search for theoretical contributions to farming systems research. Knowing *why* people run farms the way they do is as important as knowing *what* their farm practices are. The qualitative side of farming systems research is all too frequently overlooked in the search for quantitative measures, yet that qualitative knowledge is critical to interpret the distributions produced through surveys and other similar quantifiable procedures.

Finally, related to the last point is that anthropology, like farming systems research, tries to look at "the native's point of view", not just as the only effective approach, but as part of an overall effort to produce as complete a picture as possible of how local systems work. There are two aspects to this theme. First, indigenous technical knowledge is an important resource too easily ignored. The fact that the Hanunoo in the Philippines recognize and use more than two thousand varieties of plants is of interest not only to ethnobotanists, but also to planners or economists trying to induce the Hanunoo to adopt mixed cropping farming. In the same vein the familiarity of the Balinese with complex,

self-built decentralized irrigation systems, and the understanding of their structure, for which Clifford Geertz (1967) has offered such an extraordinary anthropological description and analysis, is proving crucial right now in recent small scale irrigation development projects in Indonesia and elsewhere. Second, and perhaps more importantly, is that knowing what local producers want and need is the *sine qua non* for designing programs that will be successfully adopted by small farmers.

Both methodologically and conceptually, anthropology and sociology are better equipped than other social or technical sciences for discovering and presenting this information, and they continue to refine their tools for such research. The sociological/anthropological study of peoples' organization, motivations, value systems, and behavioral patterns, should be regarded as a substantial and irreplaceable contribution needed by farming systems research. The task ahead is to explore and make full use of the potential available along these lines.

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