

Poverty alleviation as intervention in complex and dynamic social fields

Dieter Neubert

Introduction

Poverty alleviation is an old goal of development policy. However, it is new as an overall objective for agricultural research. The results of poverty alleviation models offered by international agricultural research are as disappointing as the usual social and economic development programmes.

We face two sets of problems. First, it is not yet clear how poverty alleviation and science and technically oriented research activities can be linked meaningfully.

The second set of problems is connected with the understanding of poverty itself. Usually, poverty is seen as a lack of income. Most poverty alleviation programmes focus on the creation of additional income or new income. The typical projects are well known: the promotion of more efficient agricultural techniques or of new crops and/or better commercialisation of agricultural products combined with small credit facilities. This concept of poverty is insufficient.

To make poverty alleviation more effective, we must not look at poverty as mere deficiency but should try to understand how poor people survive. We must understand the existing strategies of survival as the rural poor follow a different logic than commercial farmers. Survival is based on a combination of on- and off-farm activities and the use of social networks integrated in a local moral economy. The actions of poor people are embedded in complex and dynamic social fields which have to be understood from a micro-perspective.

My point is that a more differentiated understanding of poverty will help to link better science and technically oriented research activities with poverty alleviation.

I will develop my argument in five steps:

1. Poverty alleviation in agricultural research: the role of social science
2. Survival by using complex and dynamic social fields
3. Problems of intervention into complex and dynamic social fields
4. Conclusions for an improved strategy in agricultural research: endorsing a “realistic approach“

Mostly, my analysis is based on experiences in Sub-Saharan Africa (here shortly, Africa). However, there is evidence that the problems and solutions discussed here are relevant for other continents too.¹

1 This paper is based on an actor-oriented perspective (Bierschenk/Elwert, 1993; Long, 1989; Olivier de Sardan, 1995). I attempt to present some results from the current debate in German social sciences (sociology and social anthropology) which might offer interesting arguments for international agricultural research. The title of the paper is borrowed from an article by Elwert/Bierschenk (1988). - I want to thank Gertrud Schrieder for her fruitful comments.

1. Poverty alleviation in agricultural research: the role of social science

Poverty alleviation as an objective in agricultural research brings up new research questions. We must not only ask whether agricultural innovations are technically sound and economically efficient, but also whether agricultural innovations are actually used and if so by whom and to whose profit. These questions lead to a change in research focus.

First, researchers must give more attention to marginal low-potential regions. A big part of the poor live in these regions, that have long been neglected in agricultural research. If we want to reach these people we must study their conditions of life and the conditions of production. Second, researchers must pay more attention to smallholders and subsistence production. The target group are farmers poor in resources and with problems on how to make use of innovations based on long-time investments due to missing capital and missing economies of scale. Even in high-potential areas, poor farmers are afflicted by land scarcity and subsequent overuse of resources. One immediate consequence of this change in research focus lies in the need for more locally oriented and site-specific solutions with regard to technical, ecological, social and economic opportunities at the local level (Scoones/Thompson, 1994).

Especially in marginal regions or under conditions of land scarcity, low-input agriculture must be adapted to the local ecology and make use of natural resources in a sustainable way. According to the local situation prevailing, the bottlenecks farmers face vary extremely and can be connected either with land, water, uncertain rainfall or labour, to name but a few. (The only problem all poor farmers have in common is lack of capital.) One typical asset smallholders can rely on is family labour. However, the possibility to use this asset depends, for instance, on the family structure and size, the gender division of labour, cultural practices, local customs, or the opportunities for off-farm income. Especially, the growing opportunities in off-farm income limit the control over family labour.

The local situation also influences the commercialisation of poor farmers' products. Mostly, they rely on local markets. An important part of their products is consumed locally or regionally and cash crops for the national or world market are commercialised through middle-man and traders acting at the local market level.

Thus it is clear that poverty alleviation cannot be based on general solutions to be transferred to wide areas. The green revolution approach which created a standardised production environment for high yielding varieties using agricultural inputs must and did fail to address localised problems of resource-poor farmers and those producing in marginal areas.

Accepting this as a starting point for a re-orientation of international agricultural research, we need a new type of innovations. They must be adapted to the specific needs of resource-poor farmers and to the varying local situations. This leads to a more localised focus of agricultural science, in general. Localisation goes hand in hand with interdisciplinary research. The whole range of disciplines in agricultural sciences must be integrated at the local level. Additionally, if we want to address resource-poor farmers we must consider the specific socio-cultural conditions. Therefore, the

ongoing re-orientation of interdisciplinary agricultural research must include social sciences, too.

However, the integration of social sciences (sociology of development and social anthropology) in an interdisciplinary approach is not easy, because their micro-level studies are mostly based on qualitative methodology. Up to now, this kind of social science with local expertise can be criticised for typical short-comings.

Social science with local expertise

- does not produce general findings on cause-effect relationships,
- has only a limited ability of making prognoses,
- and does not give clear instructions for action.

The reason for these shortcomings which hinder co-operation between natural and (qualitative) social scientists is the difference between their methodologies (nomological reductionist approach versus interpretative hermeneutic approach). From the (qualitative) social scientist's point of view, the choice of an interpretative approach is based on the subject of research itself. The local specific situation is a complex dynamic social field, constituted by a set of locally defined actors who decide how to act under specific circumstances. Some of these actors are corporative or institutional actors (such as big enterprises, administrative units), some are individuals in institutionalised positions (local mayor, village headmen, leader of a farmers' association), others are non-formal groups (market women) and many are more or less influential individuals. Their decisions are based on a mixture of structural constraints, rational choices, habits, individual inclination and spontaneous emotions or moods. These decisions are neither completely predictable nor completely arbitrary.

If we want to analyse a specific local situation, we need a comprehensive description of the internal dynamic of the local system, its actors, their strategies as well as of social and political processes. This is exactly what qualitative research does. Generalisation in the reductionist sense needs a limited number of influencing factors and a large number of similar cases. Because of the extremely high number of influencing factors and the peculiarities of each local case, generalisation will not lead to valid results (Mayntz, 1985 p. 71).

When generalisation and prediction are not possible, what can social science with local expertise contribute to a co-operation with natural science? First and foremost, it does not create a false feeling of security. Additionally, it offers:

- knowledge on problem constellations,
- identification of conflicts of objectives,
- identification of relevant local actors and structures.

Applied to poverty alleviation this means we must understand the existing strategies for survival and the different logics behind the strategies of the rural poor compared to commercial middle farmers.

It is risky to limit research to specific case studies which only apply to one locality or site at a certain time. To escape the trap of restricted case knowledge, we must develop concepts, typologies and reconstructed typical views of actors to help us

compare different cases and mark the best starting point for research of a special case if necessary.

This does not mean generalisation in the reductionist sense. It means the knowledge of typical problem constellations, typical conflicts of aims and typical relevant local actors and structures which may be relevant in a specific case and absent in another. The concepts, typologies, typical views of actors and possible local structures are like different types of building material which can be used and complemented by new elements to create a specific new combination in every analysis. This paper will present some core elements of this building material and will give some suggestions for its use at the end.

Before I start my description, I would like to make a last remark concerning the concepts we use in our analysis. An actor-oriented approach must deal with the actor's point of view. That means using their terms and concepts, understanding their arguments and strategies. We need more general terms and concepts if we want to compare and analyse different cases at the same time. For this more general level, we usually rely on terms and concepts such as household or family. However, we must bear in mind that our understanding of these terms and concepts may differ greatly from the local meaning.

According to Carola Lentz (1992) the Dagara in Northern Ghana usually use the word "yir" as a translation for "household". However, depending on the situation and intention, "yir" can describe very different social units: a compound, an extended family (with a couple of compounds), a family subgroup constituting a farming unit which cultivates a plot jointly, or a cooking group which is usually only part of a farming unit. Additionally, at the time of Carola Lentz's field research, the membership to a certain household was a political question. Family duties, mutual support between household members and access to common assets were at stake and highly controversial.

When African interviewees speak of their "brothers", they can be talking about second cousins from the mother's side while excluding relatives from the father's side at the same time. If "family" is used for "lineage", the expression may exclude the wife or husband depending on the speaker (Elwert/Luig/Neubert, 1995).

The consequence is that before we can analyse a local situation, we must have basic knowledge on the socio-cultural system or systems of the people living in that locality. It is especially important to know the local meaning of such apparently general terms and concepts as family or household.

2. Survival by using complex and dynamic social fields

For resource-poor smallholders, agriculture is part of a complex way of life directed towards securing survival. The core is the "safety first principle" (Scott, 1976), a logic of security maximisation and avoidance of risk. Smallholders give the security of survival preference over the maximisation of profit. This logic also underlies the smallholder's attitude towards innovations and change.

Analytically, we may differentiate between two components of securing survival (Elwert/Luig/Neubert, 1995; Elwert/Evers/Wilkens, 1983): a) securing survival by productive activities, and b) safety-networks which arrange and regulate duties of mutual support and social balancing (see also: Sottas, 1995; Lachenmann, 1994).

Securing survival by productive activities

Securing survival by productive activities is based on a combination of different economic options. Subsistence production, cash crop production for local, regional, and international markets, activities in small business (commerce, handicrafts, services) and wage labour may be combined by an economic unit or even by one individual person.

Today, there is almost no region in the world, where we can find exclusive subsistence production. All smallholders everywhere need cash income for basic consumer goods (such as clothing or soap), for medical treatment (modern or traditional), for the education of their children and mostly for buying additional food during periods of food shortage. Nearly all smallholders sell some of their products on local markets. Since the development of the farming systems approach, we know that off-farm income may be an important element of a household's budget. Important sources are small business and remittances from migrant family members. Especially in Africa, the combination of rural and urban income is an important strategy of risk diversification. Low yields can be compensated by urban income and urban unemployment or unprofitable business can be compensated by agricultural income. - In these cases where rural agricultural and urban incomes are mixed, the simple differentiation between rural and urban population is no longer valid. - Especially in small business one can observe a relatively quick change of activities (e.g. one after the other from carpenter to tailor to hairdresser to shoe-cleaner or petty trader). Smallholders decide each season what crops or varieties to grow according to their assessment of the future yields and the future market (Richards 1993).²

Safety networks

Safety networks include the extended family, marriage alliances, locality (neighbourhood), generation- and age-sets³, traditional warrior associations and secret societies. Although these structures can have long traditions, their intensive use as safety networks is often a new phenomenon.

Additionally, we find new types of associations and networks that are also used as safety networks. These are all kinds of voluntary associations on a professional, religious, ethnic or regional base mostly including the obligation of mutual help. Another form applies to special mutual aid societies which use fixed membership contributions for members in need for example in cases of burial or medical treatment.

2 These productive activities are well described in the farming-systems approach and numerous studies on the so-called "informal sector".

3 In some ethnic groups, those who are circumcised and/or pass specific initiation ceremonies into adulthood or seniority together constitute a generation- or age-set.

Rotating saving groups (ROSCAS or *tontines*) may also offer special benefits for needy members.⁴ Self-help groups and development projects, especially those providing social infrastructure or credit, may also contribute to the survival of poor people. In many cases, self-help groups do not mobilise local resources but distribute development aid at a local level. However, the poor are not entitled to the benefits transferred via self-groups or development projects so that access is like a lottery win. That is to say, these benefits can contribute to the income of the poor but they do not contribute to security (Neubert, 1986b, 1997a).

A widespread strategy to make government transfers or services more secure is the use of patron-client-relationships. Clients and patrons exchange political loyalty for government goods and services. In some African countries, this has led to a complex pyramidal structure of patron-client-relationships (for instance, Kenya). Where strong patron-client structures exist, we can see strong linkages between the poor population and the elite of the country.⁵

In Africa, formal social security structures are mostly limited to the employees of the formal sector and benefits are restricted. The mass of rural and urban poor do not have access to these systems.⁶

Basic principles of securing of survival

An overview of elements for securing survival can draw a false picture of a well-structured and well-tuned system. This is not true. The elements for securing survival are extremely weak and the benefits offered by productive activities or safety networks are limited. Especially in cases of local crisis (low yields, food shortage), most members of safety networks are all affected at the same time and cannot help one another. However, people are surviving using these elements.

Securing survival is possible through a combination of four basic principles: 1) variety, 2) overlap and redundancy, 3) flexibility and 4) (mainly in safety networks) reciprocity (Elwert/Luig/Neubert, 1995).

Variety increases the number options for productive activities and help or support in case of need. The more options exist the better are chances that one of the options may be used in a special case. At the same time, the elements of security are not differentiated according to special problems or causes of problems. In the case of need, for instance low yield or costs for medical treatment of a family member, all possibilities of productive income generation can be tried. When productive means do not work, several safety networks can be approached at the same time. All forms of securing survival overlap and create redundancy. If one element fails, there are others

4 Usually, members contribute a fixed amount of money each week and the whole sum is given to each member one after the other in a rotating system. In the case of real need, a member might gain access to the funds earlier than planned. (For rotating saving associations see: Ardener/Burman, 1995.)

5 Mostly, patron-client relationships are analysed as a political phenomenon (Bayart 1993); Eisenstadt/Lemarchand, 1981; Neubert, 1999a; 1999b; Roniger/Günes-Ayata, 1992; Weber Pazmino, 1991) but one effect of the exchange in patron-client relationships is securing survival for clients.

6 Ahmad et al. (1991); Getubig/Schmidt (1994); Sooth (1992); for Kenya: Neubert (1986a).

which may work. In many cases, an appeal for help to members of a network will not lead to effective support. However, some help may be given by one network and some more by another. The flexible combination of different income opportunities and safety networks increases the probability to solve emergency situations to react to emergency situations in a satisfying manner.

Safety networks are institutions of exchange where economic exchange is socially regulated according to normative rules. They are embedded in a “moral economy” (Scott, 1976). The use of safety networks is based on the principle of reciprocity. Because every member of the safety network can face similar problems at any time. He or she is obliged to help as otherwise he or she will not receive support when in a similar needy position.

Within safety networks, we differentiate between strong networks with a higher degree of obligation for mutual help and weaker, mostly more socially or geographically distant, networks. Even weaker networks can be an important resource because the members may not all be affected by the same problems at the same time and may have different resource bases.

The art of survival is to keep the number of options high and diversified and to make flexible and sensible use of these. In the case of safety networks keeping options high means helping others with own resources to increase own chances for help when needed. In the case of productive securing of survival, this means also keeping economic options high for flexible response.

These strategies of survival are not compatible to the typical characteristics of a successful entrepreneur such as single-mindedness, concentration on promising productive activities and consequent investment in most profitable enterprises are extremely risky. Small entrepreneurs and small-holders cannot afford to act consequently like a Western type capitalist. In commerce or business, following an entrepreneurial strategy will limit possible options and cut off important linkages to safety networks. Successful businessmen face a typical “trader’s dilemma” (Evers/Schrader, 1993): If they react to requests for help via safety networks, they cannot accumulate capital for business success. If they consequently follow the objective of profit maximisation, they provoke conflicts with other social groups and lose security. The difference between the trader coming from a moral economy and the capitalistic businessman lies in their objective. Capitalistic profit maximisation is a single-dimension goal: profit. (Even the decision is between short and long-term profit, is a question of profit). In moral economies and under the questions of survival the goals have at least in two dimensions, profit and social or political obligations.⁷

We can identify a similar discrepancy between capitalistic agriculture and African small-holder agriculture that is embedded in its social environment. In a strictly market oriented capitalistic agriculture, the allocation of resources is mostly the result of an autonomously regulated economy. Land and labour are commercialised assets that are freely exchangeable in the market. Successful agricultural entrepreneurs invest in land,

⁷ Even in capitalistic economies the business networks are important (Granovetter 1985; Granovetter and Swedberg (1992). But still the objective of networking is profit.

labour and agricultural inputs to make profit. African small-holder agriculture is differently organised (according to the analysis of Berry 1993). Neither labour nor land are a commodity in the strict sense of the term. There is a labour market and agricultural labourers are hired on a long term or daily base. However, most of the small-holders do not have the capital to rely completely on hired labour. They need family labour and cheap labour support mobilised through social networks based on reciprocity and part of a web of obligations and counter obligations. Also access to land is mostly linked to the membership of a community. Pre-colonial land use rights were extremely flexible and short-termed due to the needs of shifting cultivation or pastoralism in a situation of sufficient or abundant land. During colonialism, the flexible land-rights were codified and fixed into a newly constructed system of “customary law”. However, customary law is not a closed system. There are numerous customary laws and their interpretation is still at stake. Additionally, modern registered land rights interfere with the customary system (legal pluralism). Even formally registered land rights may be disputed referring to “customary” claims. Therefore, land rights are secured by the mobilisation of local political support in case of conflict⁸.

As long as the mobilisation of labour and the access to land are dependent of networks and supporters local economic strategies take social and political relationships into account. Agricultural assets are an integral part of local politics and social networks. A simple economic accumulation is counterbalanced by political and social obligations. Keeping land tenure and land rights flexible allows to adjust the interpretation of law to the changing local power structures.

What, from a European point of view, could look like an unstructured cluster of obligations and counter obligations or an erratic change between different activities and short-term engagement followed by disinterest, could be interpreted as a strategic diversity of options and their flexible use. Nici Nelson (1977) uses the term “strategizing”. Strategies of survival and the logic of security maximisation are completely different to profit maximisation.

However, we should not overdo this analysis. First, beside the principle of security maximisation there is risk taking. Small-holders experiment with new varieties or cultivate areas where yields are high in the case of rain but low in case of drought. It depends on the smallholder’s individual decision how much risk he will take (Richards, 1993). In a situation of crisis, people may take a risk to save their assets in a kind of “it’s all or nothing” strategy. For example, Tuareg goat keepers invest their last money and grain to feed their goats after years of drought. They hoped that the next rain will not fail again. If the rain would have failed they would have lost everything (the goats and their last money). It would have been more secure for them to sell the goats and keep the money; but they took the risk to keep their goats. In this extreme situation they decided against security maximisation (Spittler, 1989; 1996). Secondly, this

8 Support may include to testify before local courts and authorities on local customs and earlier agreements between the parties. Depending on the local power relations the same person may give evidence for a different or opposite position.

analysis of survival strategies is an ideal typical rationalistic (re)construction emphasising basic logic and principles. But people do not only strategize. They also make spontaneous decisions, are rash and can even make mistakes. The struggle for survival is not only a mere materialistic questions but also a question of human dignity and simple security maximisation might be in conflict with the objective to live a dignified life (Spittler, 1989; 1996). However, if our aim is to intervene and support people in their efforts to secure survival, we must take the basic principles of creating security into account. That means we must know and support the survival strategies of the actors.

3. Problems of intervention into complex and dynamic social fields

Every development activity intervenes in complex and dynamic social fields. Our knowledge of these fields does not give a clear orientation in a special case. What we have is an incomplete overview on possible elements of social fields. In each case, the relevant elements must be identified anew. Previous knowledge can give us a preliminary idea of what might be relevant and what local modes of thinking and acting or which local strategies might exist. This facilitates research and helps the researcher to ask the right questions. The risk attached to this approach based on previous knowledge is that already well-known elements may be recognised without real solid proof and that unexpected, new elements may be underestimated or even overlooked. Therefore, we must be open for unexpected social conditions.

Our findings in a specific case are always dynamic. In contrast to the common view, local structures and local cultures are by no means traditional in the sense of static. Local structures and local cultures undergo constant changes, even before the era of colonialism (Berry, 1993). We can only differentiate between phases of rapid or slow change. Even when people refer to their traditions, this does not mean that their way of life is similar to pre-colonial or pre-capitalistic times. In many cases, tradition has been invented as a reaction to modern change. We must bear in mind that all development interventions aim at a moving target.

Participative development projects and participative research methods are a reasonable answer to the problem of local specificity (Ashby, 1993; Okali/Sumberg/Farrington, 1994; Scoones/Thompson, 1994). Because we cannot know the local actors' points of view, their needs or ways of handling problems, they must be involved in the design and implementation of development interventions and, of course, in research on new development interventions.

Participative research has been criticised because of its limited efficiency. The iterative, dynamic and self-correcting participatory approach works slowly and is expensive. Problem solutions must be adapted to local situations and have to be developed in a trial-and-error process. Even in cases of success, only a comparatively small local population will be reached (El-Swaify et al., 1999; Spendjian et al., 1998).

To be clear, participative approaches are necessary and a reasonable way to deal with the problem of local specificity of social fields. However, in current discussions, many unrealistic hopes are projected on participative methods. Some promoters see

participative methods as a kind of “promised land” and a panacea to all development problems (Sillitoe, 1998). This is unrealistic, to say the least.

Participative approaches are conceptually linked to a populist development model (Sillitoe, 1998). The main assumption is, that if the population could decide on development activities on its own, it would avoid the failures made by development planners. This overloads the participative approach. Participation can hinder obviously maladapted decisions and does increase the chance for sound solutions. However, it does not guarantee clever and correct decisions, as otherwise neither development aid nor applied development research would be necessary. And participation does not ensure that “the poor” will be reached in any way.

Participative approaches intervene in social fields which also constitute political arenas at the same time. We must see that participation is linked to differentiation and inequality. The core questions are: Who participates? What benefits do innovations have? Who benefits from these innovations?

Local socio-political structures and institutions

The first trap for a participative approach is the idea of “the poor” or “the needy”. This is linked to the assumption that a whole community has the same problem or common needs. These assumptions are often strongly supported by the local population. Communities experienced in communication with development projects know that the chances for the implementation of a project rise, when the community is able to present their priority needs. However, the presentation of these needs does not necessarily reflect reality in a true manner. A staged scenario of the play entitled “community in need willing to co-operate in a participative project” is an effective strategy to gain the attention and support of development organisations (Oppen, 1992; Neubert, 1997b).

Simplified self-representation or a similar simplified analysis of the priority needs of a community ignores social differences, different interests and different levels of power in social fields. In empirical studies it still complicated to define who the poor are. We have problems of demarcation on where to set the poverty line in general and in a specific locality. Poverty is not only defined by income but also by means for securing survival including access to productive activities and safety networks.⁹ It depends on the local situations whether subsistence production is related to poverty and insecurity or an asset that guarantees survival. The same hold true for market production¹⁰. Those with limited means of production but belonging to well-organised safety networks may be better off than somebody with good income opportunities but only weak safety networks.¹¹ We must also recognise that those below a certain

9 Sen’s entitlement approach gives a very helpful theoretical framework for the analysis of poverty that includes all types of endowments (Sen 1981; Osmani 1995). Whereas, Sen’s entitlement approach is widely accepted in empirical studies the access to safety networks is mostly ignored.

10 For an analysis based on locally specific definitions of poverty see: Ravnborg (1999).

11 This is of practical relevance: A joint project of the Vietnamese government with the German GTZ uses lists of local poor. The listing follows local criteria and includes, beside the usual, household-income factors such as better-off family relatives or the chance to receive remittances from migrated family members.

poverty line can be differentiated according to the level and different situation of poverty (sickness, lack of assets, weak safety networks). Even inside families, we find different living situations according to age or sex. Poverty alleviation must be adapted to such specific situations. Therefore, every approach will be selective. It is important to know what kind of poverty is aimed at and which group of poor should be reached with a certain measure.

Local communities are politically structured and have a specific framework of institutional arrangements including formal government structures and informal local structures. One important question before each intervention is whether these local institutions should be integrated or not. A general answer is impossible.

As already mentioned, the local poor and local elite are often linked through patron-client-relationships. In these cases, a locally adapted way of reaching the poor may involve the patrons as intermediaries. This is a simple way of reaching poor people. It uses a well-functioning local structure with local mechanisms of control and accountability.¹²

However, the hazards facing locally adapted strategies are obvious. Patron-client relationships are selective. Those not related to the patron are automatically excluded. This creates a drive to link to the patron and limits at the same time the freedom of potential clients to abstain from a relationship with the patron. Sometimes, the missing possibility to relate to a patron may be one reason for poverty. In other cases, patron-client relations include only men and exclude women. In short, we must always find out who is excluded by a particular organisational arrangement. If patrons are already powerful, they might use this power to keep the bigger part of resources for themselves and distribute only a small portion. The control over these additional resources may change the balance of power between patrons and clients even when patrons are not yet strong.

An imported “democratic” solution may also produce problems. Formal democratic principles such as majority decisions may exclude politically weak groups, even unwillingly. Minorities can hardly represent their own interests. Especially when votes and polls take place in open sessions and are not anonymous, there can be considerable social pressure to follow local habits and conventions. As a frequent consequence, the male local elite occupies important positions. With the introduction of democratic majority decisions positions such as speaker for a certain minority or speaker for the female population can be devalued by the apparently higher legitimacy of majority decision or even completely abolished (Lachenmann, 1997). Participation by formalised democratic procedures is just as ambivalent as the use of existing power structures.

¹² Patron-client-relationships are based on voluntary personal relations between a patron and a client, two partners of unequal status. They exchange goods and services according to a logic which controls the exchange of resources. (Weber Pazmino, 1991 p. 9; Roniger, 1994 p. 3). As voluntary relations, they should not be confused with slavery or serfdom.

Even in apparently egalitarian societies without formal rulers, chiefs or headmen, we find clear differences in power according to age and sex, because the rule of lineage elders excludes women and younger people from political power.

Participative projects and participative research take place in an institutional environment of governmental and non-governmental organisations. Their activities and mode of acting influence the chances for participation. One important pre-requisite for all participative approaches is a minimum of political freedom at the local level and an atmosphere of openness allowing the free expression of opinion thus rendering processes of social self-organisation possible. Authoritarian regimes with a strong control apparatus and an extension service concentrating mainly on the enforcement of formal rules will block any self-organisation and effective participation. Even when a project tries to encourage critique, it will hardly motivate farmers to express their opinion freely. Rwanda at the end of the 80s and beginning of the 90s is a good example for such a situation.

Use of innovations (preferences of users)

Main factors for the adoption of technical innovations are technical soundness, economic efficiency and local applicability. Additionally, the channels of vulgarisation are important. A common pattern is co-operation with selected model or progressive farmers but this approach has its short-comings. Because co-operating farmers are pre-selected, we may not find out what type of farmer would or would not use an innovation and why. Specific information on reasons for adoption or rejection of an innovation is extremely important for assessment of the new idea and for the promotion of vulgarisation.

The end-users' frameworks for the assessment of innovations are their strategies for securing survival. Promising are simple measures offering obvious and quick advantages. One example is the use of chicken manure in the peri-urban zone of Kumasi (Ghana). The manure is cheap and easily accessible and produces an increase in yields.

Measures calling for capital investment such as chemical fertilisers are less likely to be adopted by resource-poor farmers who usually lack the necessary capital. Even if some money exists, farmers might hesitate to invest, especially when agriculture is mainly subsistence-oriented and combined with some kind of off-farm income. In such cases, a higher yield leads at first to more consumption or must be distributed within the family and via safety networks so that it does not produce more income. The capital investment would be economically lost.

Usually, long-term oriented measures for upgrading soil fertility encounter the biggest problems. They only stand a chance where land rights are safe on a long-term basis, where long-term investment can be financed, and where new land is not accessible. Especially poor smallholders will hesitate to try out new methods before they can be sure that these will be successful.

Innovation and differentiation

Effective innovations in production trigger processes of social differentiation. Agricultural research tries to alleviate poverty through new or better productive forms of securing survival. This research is directed towards potential producers. The very old, small children and sick people are excluded. They can only profit through the safety networks which might be strengthened by improved production. But also a large part of those able to work cannot be reached by agricultural innovations. The core question is access to productive resources such as land, labour, and capital.

The access to land is determined by availability of land (land shortage, sufficient land) and rules of land tenure. Even in rural African areas where land is still available, migrants face limited rights for land use, even after a few generations.¹³ Additionally, the African problem of ongoing debates about land rights including the “customary rules” (mentioned above: Berry, 1993) underlines that the availability of land does not guarantee safe access to land.

Also, so called “low input agriculture” such as ecofarming needs considerable resources such as a minimum of land to implement all elements, the need for green fallows causing missing yields at the onset, and labour investment for intensification of production. Many poor farmers are not only short in land but also cannot invest in more labour. Labour-intensive phases such as harvest time are their only chance to earn some money as day-labourers.

Farmers with combined cash income from farm and comparatively safe off-farm sources are privileged for the adoption of innovations. They have the cash resources needed for investment and are in a position to risk failure. At the same time, these farmers may only have a limited interest in agriculture because it is only one part of their economic existence. Mostly, flexible and dynamic farmers push the adoption of innovations ahead. However, these dynamic farmers may also discover and make immediate use of off-farm opportunities so that they cease co-operation with an agricultural project at short notice. The farmers with the biggest interest in agricultural innovations are those who concentrate successfully on commercial agriculture, that is to say not the really poor.¹⁴

In many cases, effective agricultural innovations and the resulting economic success cause land concentration. Successful smallholders try to enlarge their landholdings. Competition leads to emergency situations for less successful farmers who might be forced to sell part of their land. The result of land sales is a smaller or bigger group of landless farmers.¹⁵ In the end, poverty alleviation in the case of successful farmers may cause poverty among the growing number of landless farmers.

13 In patrilineal societies, women only have indirect access to land via their husbands. A high risk of divorce (in the case of Lunda and Luvale, Beck/Dorlöcher, 1990) means only insecure access to land.

14 Promoting some better-off or “not-so-poor” farmers may create employment opportunities for the very poor (local trickle down, Tendler 1982, 11)

15 One very good example for this process is Kenya (Kitching, 1980). Land concentration does not mean that large estates will dominate. Smallholders and family farms can be very competitive (Netting, 1992).

We must keep in mind that all production-oriented measures of poverty alleviation have a potential for social differentiation. That is to say, there are no simple catch-all measures for poverty alleviation. Poverty alleviation is selective and cannot reach “the poor”, in general. The social question arising is what options can be offered for the remaining poor and how can existing safety networks be strengthened or at least not weakened by changes. The political question is how much social change and how much inequality can a community or society accept.

4. Conclusions for an improved strategy in agricultural research: endorsing a “realistic approach“

What we need is a realistic approach which considers options as well as limitations. Generally, the role of agricultural development and research must be considered in poverty alleviation. Poverty alleviation as an intervention in complex and dynamic social fields must take the actors’ strategies into account. This means accepting that securing survival is based on a combination of different activities. In general, poverty alleviation may include

- promotion and development of productive activities for securing survival,
- support of safety networks,
- and additional aid for special groups (direct aid or transfer of productive assets).

In this wider framework, agricultural development and research focuses mainly on the promotion and development of productive activities. Increased income and production may support the resources for distribution via safety networks indirectly. Agricultural research and development can only be part of a wider strategy for poverty alleviation.

Dealing more specifically with agricultural research and development, we face further limitations. Agricultural research and development that has an impact must be locally specific and take effect selectively producing benefits for one group while excluding others. It is almost impossible to develop programmes which reach “the poor“ in general. But before each activity we must ask ourselves: “Will the beneficiaries be poor?“

Taking the actors’ strategies of survival into account means accepting the basic principles of securing survival. Safety-first calls for variety with a combination of productive activities and networks, overlap and redundancy, flexibility and reciprocity. A simple search for technical innovations and their economically optimal use will not be successful. Technical solutions and economic efficiency must be embedded in the socio-cultural framework. Strategies such as keeping the number of economic options high, investing in safety networks and flexibility may be of equal or even greater importance than optimal cost-effectiveness and profit-maximisation. Ignoring the basic principles of securing survival is the reason that technically and economically optimised solutions are often not adopted by end users. The latter assess the feasibility according to their own criteria such as access to resources (capital, land, labour) and compatibility with local habits, forms of work organisation, or individual preferences. In many cases, the second or third best solutions (seen from a technical and/or

economic point of view) match much better than the apparently “best” solution. This marks a new orientation for researchers. We must learn to consider a wide range of options and possibilities and include technically and economically sub-optimal solutions because these are often much more feasible.

The development of local specific solutions considers more than site-specific aspects. “Local“ includes the agro-ecological situation and furthermore economic, political, social, and cultural factors. While economic factors have long been considered and even socio-cultural aspects are now taken into account, political factors are still underestimated. More attention should be given to politics which govern general freedom together with the freedom for self-organisation and freedom of speech while local political structures influence the actors’ strategy.

A realistic approach must use participative methods because participative case studies are one (and perhaps the only) way to consider all these factors at the same time under the constraint of limited knowledge on diverse local situations. However, a realistic approach to participative research does not mean participation instead of research as in a simplistic populist model but the involvement of end-users in the research process and the acceptance of their criteria of assessment. Participative approaches can only be developed successfully when we have a realistic assessment of the options and particularly problems linked to intervention into social fields (Neubert/Hagman, 1998).

New formulas for the relationship between participation and research do not tackle the core problem of limited transferability of local specific results. What we need are ways for a more systematic use of case studies. This requires:

- a good documentation of case studies (This must include a description of social, cultural and political settings, the description of the projects’ development process especially changes in orientation and changes in criteria for assessment as well as the different actors’ views and conflicts.),
- the development of more general categories and concepts for the description and analysis of relevant elements in specific local social fields,
- the development of meaningful ways to impact control (for instance, participative monitoring and evaluation),
- the development and documentation of useable local technical solutions (extended basket of options), including increased knowledge on second and third best technical solutions.

The intensified use of case studies will make it easier to compare and generalise but solutions must always be local. Improved background analysis will contribute to the analysis of a certain specific situation and benefit research for local problem solutions.

Finally, the development of local solutions for poverty alleviation in agricultural research can only be complemented when research and extension institutions adopt to the necessity for local orientation. Up to now, fieldwork and field studies tend to be one task among others, mainly conducted by beginners at a low level of career development. Research and extension institutions aiming at a realistic approach must

be open to participatory methods and case studies and endorse the promotion of locally specific solutions to ensure success in alleviating poverty.

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