**INTRODUCTION: NGOS AND THE 'AGE OF INFORMATION'**

The growth and development of non-governmental organizations (NGOs) of various kinds over the last decade has been well documented (Clark 1991; Edwards and Hulme 1992). Not only have NGOs grown in size and influence, but they have also changed substantially, moving away from an exclusive focus on small-scale projects bounded in space and time, towards an increasing involvement in the broader processes of development - a focus on people rather than things, and therefore a concern for training and capacity-building, awareness and organization, ideas and policy change. At the same time (and partly in response to increasing external pressures for more accountability), NGOs are trying to increase their impact, effectiveness and professionalism.

These changes are leading NGOs into what John Clark (1991) has called the 'age of information', an age in which access to and use of information will be every bit as important as concrete actions 'on the ground' in fulfilling organizational objectives. Information **about the work on the ground** is crucial to ensure accountability, learn from experience and develop and disseminate good practice. Information **about the impact of wider forces** (such as macro-economic policy) is vital if NGOs are going to advocate for change at national and international levels. Information **linking inputs and outputs** is essential if the most effective use is to be made of human, financial and material resources. And **new information** (from other agencies, from research, or from listening to people on the ground) is necessary if the NGO wants to keep itself alive to innovation and challenge. It should be noted at the outset that information in this context does not mean the written word; information in NGOs comes in a wide range of forms, including verbal messages, human memory, audio-visual material and electronic data, as well as reports and other written materials. Most information is stored inside people's heads rather than inside computers or libraries, and this presents some special constraints and opportunities which are explored below.

The implications of the 'age of information' carry particular weight for NGOs which support the initiatives of others rather than undertaking work themselves directly at the grassroots, since for them the functions of public education, advocacy, networking and so on form the core of their activities. It is these agencies, and particularly those based in the industrialized countries of the North, which form the focus of this article. This is a very limited subset of the NGO movement as a whole, but helps also to avoid the dangers of over-generalization.

The central question to be considered in this article is: **is there anything distinctive about NGOs and their approach which allows them to link information, knowledge and action in a more coherent, accurate, effective and relevant way, when compared to other organizations or institutions?** At first sight, NGOs do possess a significant 'distinctive competence' in this area, for at least three reasons:

a) NGOs, at least those who think analytically about their work, are embedded simultaneously in the worlds of action and understanding. Their practical work feeds their learning, research and evaluation activities, and in turn these activities are used to improve the quality of fieldwork. As I have argued elsewhere, this synthesis of action and understanding is the key both to effective development work and relevant development research (Edwards 1989a 1993a). Unlike academics, NGOs have a continuous, sustained and direct contact with people at the grassroots. Ideas can be tried out, evaluated and revised quickly and with the active participation of those involved. At the same time (and especially as NGOs have become more analytic in

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their approach over the last five years), lessons learned can be shared more widely and used to influence others, inform the debate, and raise awareness, with the confidence that they have emerged from real experience rather than theory. Therefore, NGOs should be able to increase the quality of inputs going into the information system, process information and utilize the outputs of the system more rapidly, and do all this in ways which are more relevant and participatory in terms of staff and partners.

b) NGOs, at least those which have representatives in both South and North, are present simultaneously at different levels of the global system. Information can flow quickly between the grassroots, national offices, NGO Headquarters in the North, and centres of lobbying activity in Washington, New York and Brussels. Ideas and experience can be moved between different programmes and across national frontiers in ways which are impossible for agencies which only have a presence at one level alone. In this respect NGOs enjoy a significant advantage over official aid agencies whose presence at the grassroots is usually weak and transient, and over grassroots organizations with limited access to decision-makers at the national and international levels. These characteristics should give NGOs a distinct advantage in linking micro-level experience with macro-level policy. In addition, NGOs have demonstrated their capacity to connect and collaborate with each other through specialized networks (for example the recent study of official aid coordinated by NGOs in 20 countries and published by Action Aid, EUROSTEP and ICVA 1993), and to disseminate through these contacts and networks the fruits of their experience. Robert Chambers (1992) has used the example of PRA methods to show how effective NGOs have been in spreading and improving innovations.

c) NGOs, at least in theory, operate on a value base which promotes non-hierarchical communication, openness to learning, and the sharing of information rather than secrecy. NGOs have a commitment to relevance and empowerment which should encourage them to use information to the benefit of those with less of a voice in society. They tend to involve their staff and partners in the field in the creation and use of their own information more effectively, and to be faster on their feet than government bureaucracies or leviathans like the World Bank. The traditional independence and freedom to operate enjoyed by NGOs enables them to be flexible in responding to changing circumstances, to innovate, and to be open to new ideas from their own staff or from the outside. Highly-developed listening skills enable information to be filtered and assimilated quickly. These characteristics should mean that information use within NGOs is less subject to the distortions and blockages created by power relations, inertia, distance, and other factors in all bureaucracies (Chambers 1994).

Are these distinctive competencies borne out in practice? This question is addressed in the remainder of the article, as are some of the weaknesses - the 'comparative disadvantages' of NGOs - in relation to the use of information. At this point, however, it is worth reminding ourselves that in a messy, unpredictable and diverse world it would be foolish to expect any linear or clearcut relationships between information, knowledge and action, even if the distinctive competencies of NGOs were to be realized perfectly. The abandonment of the 'control-orientation' approach to development, as Porter et al. (1991) put it, in favour of approaches which recognize that resources, events and information cannot be manipulated in some mechanical way to produce a set of desired outcomes, has been a fundamental step forward in development thinking over the past decade (Uphoff 1992). 'Knowledge is only useful if the listener needs the knowledge, understands it, wants to use it, can use it, and is not prevented by any circumstance from using it. It is also useful only when the knowledge is relevant to the problem in question' (Edwards 1989a). It is important to bear this fact in mind as context for the discussion that follows.

2 INFORMATION FOR WHAT?
There are four main purposes for which NGOs convert information into knowledge, and knowledge into action: for management and planning, learning and discovery, advocacy, and accountability. Section 2 presents a brief review of each of these functions as background to the discussion of barriers and solutions in Sections 3 and 4.

2.1 Management and planning
The most obvious linkages between information, knowledge and action in NGOs take place in management systems, in which information about inputs (financial resources, personnel etc), throughputs (projects and programmes) and outputs (services provided, benefits gained) are related through an
ordered process of decision-making. The goal of this process is to maximize the effectiveness with which scarce resources are utilized, but of course in most NGOs it is rather less than 'ordered.' This is partly because of an anti-management bias which is common among charities, but mainly because of the characteristics of NGOs and of development work. For one thing, it is extremely difficult to measure 'impact' and 'effectiveness', especially where there are so many other influences in the frame. This is one of the reasons why throughputs are often confused with outputs, and programmes become an end in themselves. Budgeting and financial reporting is much more difficult where cost centres are dispersed across the world and both income and expenditure fluctuate markedly during the year (for example in a sudden emergency). Large distances between partners, field offices and the NGO's Headquarters cause delays, and there are bound to be pressures to misreport or report selectively if people fear that funding will be withdrawn if mistakes or failures are admitted. If the NGO receives funding from other donor agencies there will be a complex web of reporting requirements laid one on top of the other, since no two agencies have the same.

2.2 Learning and discovery

'Institutional learning', the process by which an organization identifies key lessons of experience and uses them to improve the quality of its work, has become something of a 'holy grail' among NGOs (Edwards 1989b). We are all searching for it, but no one has yet found out how to do it, at least to a level which is considered satisfactory by the NGO concerned. This is hardly surprising, for the processes by which individuals and organizations learn are extremely complex. Yet a failure to learn from experience is one of the most common criticisms made about NGOs, and is a critical weakness when it comes to any sort of strategic planning - sensible choices about resource-allocation cannot be made unless we have some idea (bearing in mind the specifics of each context) what works best in different circumstances.

The learning process can be likened to an iceberg, with a huge underwater mass representing all the informal learning that goes on in the field, and a small tip emerging above the surface representing the formalization of lessons learned in policy statements, publications, resource centres, databases, reports and so on. A careful balance must be struck between formal and informal learning. If the balance tips too far towards the formal, local initiative may be stifled and the process can become overly-academic: people learn best from their own experience, in their own milieu, with their immediate colleagues. If the balance tips too far towards the informal, wheels may be re-invented, mistakes repeated and opportunities for wider learning lost because the constituent parts of the NGO are not learning from each-other, only from their own, limited experience. In most NGOs the balance in institutional learning is still too heavily weighted towards informal activity.

Formal measures include sabbaticals and contract extensions for field staff to reflect on and write up their experiences; publications; more systematic procedures for project appraisal, monitoring, reporting and evaluation; improved induction; computerized information systems which make internal project-related documentation accessible on database; and formal research. More important, however, is the encouragement of informal learning and a 'learning culture' through staff development, exchange programmes and other measures (see Section 4).

However, to be effective learning cannot be restricted to the experience of the NGO itself. It must also include learning from others, be they development agencies, academics or partners, and many NGOs have made real strides in this area over the last few years. There has been a steady build-up of operational research capacity which enables NGOs to discover more about the impact of their work, and the wider forces which shape people's lives. For example, Action Aid is currently undertaking participatory research into the impact of economic change, environmental degradation and population growth on rural people in Nepal, using the allocation of children's time to different tasks as one key indicator. There has also been a marked increase in collaborative ventures between NGOs and academics. SCF, for example, has mounted joint research programmes with IDS (on food security and famine early warning), the London School of Economics (on sovereignty and humanitarian intervention) and Manchester University (on NGO impact and accountability).

2.3 Advocacy

Most NGOs accept the fact that only limited results can be expected from development work which does not address the wider forces in society which can crush or undermine grassroots efforts (Edwards and
Hulme 1992). As part of their efforts to influence some of these forces (such as government and donor policy), NGOs have begun to make much more systematic use of information from grassroots level in their advocacy work. The aim here is to channel information and experience from the field to decision-makers at sub-national, national and international levels, in the hope that ideas, attitudes, policies and resource flows can be altered over time in ways which will facilitate development at the grassroots - for example, the removal of restrictions on access to common property resources in rural areas, or the modification of World Bank/IMF structural adjustment packages to take more account of social impact.

There have been some successes in this field during the last decade, though overall the impact of NGO advocacy (especially at the international level) has been limited (Clark 1992, Edwards 1993b). As Section Three makes clear, the use of information in this way is replete with difficulties, most notably in the tendency to distort messages (to convey what the NGO wants its audience to hear), and in claiming a legitimacy and representativeness that is false. Nevertheless, the use of information from the field to influence changes in the wider environment is becoming an increasingly important aspect of NGO work, particularly among international NGOs with their considerable access to the centres of power in the North. NGO distinctive competence in bridging the micro-macro divide is of crucial importance here.

2.4 Accountability
In the past, NGOs have been notoriously bad at evaluating the impact of their work and accounting for their performance in a systematic way to their various stakeholders. This situation is improving, partly in response to external pressures, and partly as an internal response to greater professionalism. NGOs are becoming much better at setting clear objectives for their work within a more-or-less rationally-derived strategy at country level, and in collecting and analysing information over time on progress and impact. Dissemination of monitoring and evaluation data is very patchy, however, and NGOs still tend to keep this information to themselves. This is not surprising - evaluating impact and effectiveness is a difficult and messy business, especially when there are so many forces at work which are outside the control of the NGO. NGOs usually have multiple accountabilities which are difficult to satisfy simultaneously - to their donors, supporters, trustees, partners, host governments and people at the grassroots.

Downward accountability (to supporters in the North and people in the South) tends to be weaker than upward accountability (to institutional donors), so that information flows away from the field instead of in both directions. However, the best NGOs are making strenuous efforts to improve monitoring and evaluation in ways which do empower the subjects of their work, using participatory methodologies such as PRA.

3 BARRIERS TO INFORMATION USE IN NGOS

3.1 Internal obstacles: culture, structure, growth and power
Traditionally, NGO cultures have been strongly activist, some might say excessively so. Research, learning, documentation and monitoring are seen as luxuries, particularly in emergencies or situations of extreme poverty. The value of information (to improve the quality of programme work, influence others and account for performance) is not recognized, or is relegated to a subordinate position below 'practical action.' This often means that it is lost sight of completely. Information may be seen by field staff as an activity separate from the 'real work' rather than an integral component of effective development activities. In addition, international NGOs encompass a wide range of people and backgrounds. Differences in learning styles, analytical aptitudes, languages and media preferences are an inevitable feature of a large, dispersed, multi-cultural and multi-disciplinary staff. NGO information strategies must set out to recognize and manage these realities.

Secondly, there are aspects of NGO structure (shared of course with other international organizations) which are not conducive to the free flow of information, nor to the linking of information with knowledge and action. For one thing, staff may be dispersed over many countries and hundreds of sub- offices, and communication between them may be poor. Large NGOs have many of the characteristics of other bureaucracies, with a complex and multilayered structure of departments and sections all with a stake in the information process. Although ideally the same piece of information from the field can be used by these stakeholders for their different purposes, in practice information tends to lodged in particular parts of the organization (or particular individuals) and may be jealously guarded for its value to them. Information use must be prioritized, but different parts of the agency may have conflicting priorities.
As the organization grows, information systems (which are usually fairly primitive) fall further and further behind the demands of the NGO, and the familiar symptoms of information overload present themselves - there is more and more information about, but less and less of it is actually read, used and passed on. It becomes impossible to ensure that the right people receive the information they need at the right time. In NGOs like SCF which have doubled in size in a matter of a few years, this is a particular issue.

Thirdly, there is no law which exempts NGOs from the distortions, manipulations and blockages to information use caused by power relations in bureaucracies (Chambers 1994). While values of openness and learning may form a potential distinctive competence, in practice NGOs are also susceptible to inertia, defensiveness, complacency and territoriality. All institutions, including NGOs, have their ‘sacred cows’, those elements of policy and practice which have stood the test of time and become institutionalized in the fabric and culture of the organization. If information arrives which challenges or contradicts these assumptions then it is likely to be buried, shelved, ignored or resisted. The closer one gets to deeply-held convictions and beliefs about what works in development and what doesn’t, the more difficult it is to link information, knowledge and action in an objective way. Yet it is obvious that in a diverse and rapidly-changing world the ‘right approach’ will vary with time, place and objectives. Accurate and timely information about context, impact and effectiveness provides the raw material which allows these decisions to be made on the right foundation; but the decisions themselves depend on how the information is perceived in the light of personal beliefs and institutional agendas.

3.2 Legitimacy and representativity
NGOs use information from situations on the ground for different purposes. In some cases (participatory evaluation, for example), the information is used directly at source and is analysed by the people from whom it was collected. In other cases (international advocacy, for example), the information is taken from the field and used by the organization at other levels. In this latter case, special problems of legitimacy and representativity arise. For one thing, it is necessary to choose ‘whose reality counts’, as Robert Chambers puts it in this Bulletin - who has the right to impose their interpretation of a piece of information over the interpretations of others? This is particularly important where judgements are being made about effectiveness (as in evaluation), or where information is being used to influence others on the basis of a particular stand or message (as in advocacy, fundraising and public education). There are bound to be different interpretations of the same ‘reality’ but for practical purposes the agency has to choose, and the temptation is to impose the views of the centre. Hence, what appears to be a positive experience to people at the grassroots (coping with drought in Ethiopia, for example), may be transposed into a negative image to raise funds in the UK (‘people are starving’); what originates as information specific to a particular context (for example, the impact of user fees on access to a hospital) may be transposed into a general statement for lobbying the World Bank (‘user fees are bad’); and what has clearly been a failure at project level is transposed into a ‘learning experience’ when accounting to donors. Furthermore, NGOs sometimes claim to represent the ‘voice of the poor’ when in fact they are speaking on behalf of a very small number of partners (who may or may not support what is being said, and may or may not be representative of opinion and experience more generally). There are ways of dealing with these difficulties, revolving around transparency (being honest about where information and opinions come from) and empowerment (supporting partners to speak for themselves), but they do imply a shift in power relations so that NGOs promote information use by others and not only by themselves (Edwards 1993b, Pearce 1993).

3.3 Linking the ‘micro’ with the ‘macro’
In order to be acted on, raw data and information from the field have to be transformed into knowledge ie synthesized, systematized, analysed and interpreted (Davies 1994). The problem of imposing an analysis from the centre has already been mentioned, but a more basic problem in NGOs lies in their weak capacity to convert information into knowledge in this way. It takes a great deal of time and well-developed analytical skills to systematize large amounts of information, in order to arrive rigorously at a sensible set of options for action. For example, when preparing country strategy papers it is necessary to move from a detailed situation analysis of needs at the national level to a set of specific and achievable objectives and strategies for action by the agency concerned. This is a tall order for many NGO staff. Moving in the opposite direction (micro to macro) is equally problematic, for grassroots experiences cannot simply be aggregated to produce
lessons of experience, good practice guidelines, policy statements or evidence for advocacy. Each situation is unique, and generalizing from the particular in a diverse and complex world is a dangerous activity. Nevertheless, NGOs have to generalize in order to communicate in a manageable way, and the key is to find ways of doing this which do not distort the accuracy or credibility of the information at hand.

4 POSSIBLE SOLUTIONS

4.1 Decentralization

How, then, have NGOs addressed these barriers to information and knowledge? A key step has been to decentralize information activities so as to reduce the distance which exists between originator and user. This eliminates many of the filters (people, institutions, agendas etc) which distort the message or prevent action being taken. In SCF, for example, an increasing amount of energy and resources are going into information activities at the country and regional-office levels; in many offices there are now full-time Information Officers with a brief to collect, analyse, make accessible and disseminate information internally and externally. The focus is moving from channelling information away from the field to be consumed by the Headquarters, towards local involvement and control (ideally down to grassroots level). Although these are early days, there is already evidence that field staff and partners react more favourably to information and knowledge generated locally than to initiatives which are controlled from London, particularly when it comes to research and institutional learning. At the same time, a balance has to be maintained between decentralization and centralization if an overview of lessons learned is to be developed and resources allocated efficiently across the Overseas Programme as a whole. After a period of large-scale investment in formalized research programmes run from the Headquarters, SCF is now embarking on a new strategy in which head office staff provide support for research initiatives in the field, encourage networking, and ensure that findings and methodologies are cross-fertilized. The key in all this is ‘subsidiarity’ - identify what information is most needed and best provided at different levels of the organization, and make sure that only those functions which need to be performed at higher levels of the bureaucracy are shifted upwards. In most cases, decentralization will pay dividends.

4.2 Integration

Experience shows that people are less likely to use or value information the more they see information as someone else’s responsibility. Clearly, a balance has to be struck between integration of functions and specialization, since not everyone can or should be an ‘Information Officer’ (see below). However, by integrating basic information and learning skills into a wider range of management, support and advisory posts, the hope is that many of the barriers which prevent people from using information generated or communicated to them by others will disappear. Hence, it is everyone’s responsibility in the organization to learn from experience and act as advocates in their own area of expertise or location. These functions are not hived off into separate jobs or units, either in the field or in Headquarters. This de-mystifies information functions and makes it more likely that staff will feel comfortable with them. An information strategy which is owned across the organization has a much greater chance of success, because it will produce information and knowledge which is more relevant and accurate. Of course, this does have implications for the management of the NGO: if people are to integrate learning and communication into their roles, then they need time, space and support to do so. They must be protected from the ever-present demands of day-to-day action and have enough time for reflection and analysis. This may prove difficult to do in NGOs because of their activist tradition, but the underlying aim of becoming a ‘learning organization’ has been institutionalized in many NGO strategic plans.

4.3 Relevance

Clearly, people are not going to use information which they consider to be irrelevant to their needs, whether by virtue of language, jargon, accessibility, length, format, or timeliness. NGOs tend to be dependent on the (often badly) written word to communicate information from one part of the organization to another, but many field staff learn and communicate more effectively in other ways (face-to-face, role play, audio-visual material etc). Converting information into knowledge and knowledge into action in a multi-cultural and multi-disciplinary environment requires a deliberate attempt to communicate in ways which are relevant to different groups in different situations. In Vietnam, for example, SCF staff are experimenting with the use of video and experiential learning to develop skills in appraisal, monitoring and evaluation. Promoting information use requires NGOs to think through in advance what sorts of
information are needed by whom and at what time, and to develop a proper strategy to provide it. This is the only way to prioritize different forms of information and avoid information overload. A framework of this sort can help people to anticipate barriers to information and knowledge and put in place a strategy to deal with them. The strategy must ensure that the information people receive is relevant to their needs (i.e. that by using it they will be able to improve the quality of their work and increase the benefits enjoyed by the subjects of the work in question). In the final analysis, this is the only way to convince people that information and knowledge are valuable components of the development process.

4.4 Specialization

Although considerable stress was placed in earlier sections on the need to integrate information functions into mainstream jobs, it is important to recognize that NGOs do not possess a distinctive competence in all aspects of information work. Organizations can damage the prospects of information being used if they take on functions which others can do more effectively, since the information and knowledge produced is likely to be of lower quality and less relevance. For example, SCF has recognized that there is no point in competing with academic institutions in formal research. Even large NGOs lack the infrastructure (libraries and research capacity), skills base and expertise to do this. A better strategy is to develop alliances with academic institutions where formal research, teaching, literature reviews and so on are required, but to concentrate internal resources in areas where NGOs have an advantage over academics, such as operational research in the field, institutional learning and advocacy. Internally, integration is the key, but externally, specialization may be more productive, especially where a degree of ‘academic respectability’ is required to promote the credibility of NGO information. A major, recent study of ‘NGOs and rural poverty alleviation’ (Robinson and Riddell 1992) discovered little that the NGOs didn’t already know, but has proved more convincing to donors and academics precisely because it was not produced by the NGO community.

4.5 Electronic communication

Most agencies are now investing heavily in electronic communications systems, in the belief that Information Technology will be crucial in underpinning the work of NGOs in the future. Clearly, computers and modems carry with them immense power to store information and move it from one place to another at speeds and capacities unknown until today. The potential for this sort of technology to strengthen management information systems, institutional memory, international advocacy and even accountability is considerable. While electronic communication will never be the answer to development problems (particularly at grassroots level), it is inconceivable that NGOs will be able to move successfully into the ‘age of information’ without taking advantage of the opportunities provided by this technology.

5 CONCLUSIONS

In summary, does the evidence and argument presented in this article confirm the distinctive competencies described at the outset? Is there anything special about NGOs and their approach which points the way to a more effective linkage between information, knowledge and action? Given the limited sample employed, the answer to this question must be circumspect, but there is at least some evidence to suggest that the structure, value base and mode of operation of NGOs enables information to be used in more relevant and empowering ways. NGOs have been good at developing and disseminating new ideas and techniques (such as PRA), and at linking micro-level experience with macro-level change (in their advocacy work). Their record in learning from experience, and accounting for their performance, has been less impressive. When compared with larger and more formalized bureaucracies (such as the United Nations), NGOs do seem able to link information more effectively to action. When compared to private businesses (where profit margins impose a tighter discipline on the costs of ignoring information), their record is less impressive. Increasing pressures for more accountability (from donors and ‘clients’) will probably encourage NGOs to use information even more effectively in future. In all cases, NGOs have performed best when they have recognized and utilized their distinctive competencies in this field, and least impressively when they have ignored these strengths, taken on roles which others can play more effectively, and allowed the barriers which exist in all bureaucracies to overrule their traditional values of openness, learning, flexibility and closeness to the poor. It is these values which hold the key to a more effective linkage between information, knowledge and action in the future.
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