Information Systems and Nongovernmental Development Organizations: Advocacy, Organizational Learning, and Accountability

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Information Systems and Nongovernmental Development Organizations: Advocacy, Organizational Learning, and Accountability

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This article highlights a set of critical issues for information systems research that can be fruitfully explored through the study of nongovernmental organizations (NGOs) in developing countries. At the same time, the article argues that research on development NGOs needs to draw more fully on the study of information systems. A case study of the Association for Credit and Empowerment (ACE), a large NGO in Bangladesh that is currently reviewing its information management systems, forms the main part of the article. Our analysis identifies contextual factors that influence the effective of information systems and the overall management of NGOs.

Q1 **Keywords**

There has been a well-documented growth of nongovernmental organizations (NGOs) working broadly in the field of international development over the past two decades (Korten, 1990; Hulme & Edwards, 1995; Lewis & Wallace, 2000). They have begun to move away from a focus on mainly small-scale projects towards an increasing involvement in broader processes of development, including policy advocacy, and organizational and human capacity building (Edwards & Hulme, 1992). At the same time, finding themselves vulnerable to criticisms about their level of accountability to the poor, to governments, and to donors, many development NGOs are beginning to seek ways to increase their impact, effectiveness, and overall professionalism. This has led them to recognize the importance of three types of information for their operation and activities. First, there is the need for high-quality information about their work on the ground, which is crucial to ensure accountability, to learn from experience, and to develop and disseminate good practice. Second, there is a need to gain access to information about wider contextual forces such as macro-economic policy, the national and local political climate, and the ongoing work of other organizational actors. This type of contextual information is increasingly important for development NGOs if they are to campaign for policy changes at national and international levels. Third, information about organizational inputs and outputs is essential in order for NGOs to make effective use of scarce human, financial, and material resources (Edwards, 1994).

This information comes in from a wide range of formal and informal channels—for example, from international donor agencies prescribing "best practice" or "partnership" guidelines, from budgetary allocations and targets from the government, and from field officers' assessments of the situation on the ground. Information is sometimes presented formally as electronic or manual reports of targets and achievements within the NGO, memos circulated among officers and field staff, and audiovisual material capturing situations on the ground. Information is also very often communicated informally in the form of verbal messages, or held tacitly, as in human memory (Meyer, 1997). Much academic writing in the field of information systems endeavors to describe the interaction between the formal and informal information systems within an organization, although very little research has been conducted on the internal issues of organization, management, and communication within development NGOs (Lewis, 2001).

While the role of information systems in NGOs is essentially no different from that of information systems in other sectors of the economy, this article argues that features related to the context, culture, and values of the NGO sector warrant specific consideration. We take up the challenge of exploring some key concepts of information systems and relating them to the current situation

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of development NGOs. We do so by drawing on relevant literature and on field research carried out by one of the authors in Bangladesh with the Association for Credit and Advocacy (ACE), an NGO that has established its own Centre for Advocacy and Research (CAR).[1]

The case study is based on fieldwork during two 14-day visits to Bangladesh by one of the authors during the first half of 2001 to conduct a review of CAR's advocacy and research program. While the donor consortium that funds ACE funded this study, it was commissioned, directed, and coordinated by the NGO itself. The objective was to analyze critically the first 5 years of CAR's operation through a series of interviews with the staff and a range of other stakeholders such as other Bangladeshi and international NGOs, government officials, labor organizations, and the press. In total, 30 in-depth semistructured interviews were conducted, relevant documents were analyzed, and two discussion workshops were held with ACE staff.

The interview questions were designed to invite comments on the strengths and weaknesses of ACE's campaign and research work, and to build up a picture of what it was like to work within or alongside the organization. An effort was also made to contact some ex-employees of ACE in order to build a case history of the organization. The case study presented in this article also draws on a long-term relationship with ACE that has involved both formal research collaboration and an informal relationship that dates back to 1986–1987 when one of the authors conducted dissertation research in Bangladesh.

In the next two sections, we briefly introduce some key concepts from the field of information systems and relate them to the literature on NGOs. We then present a case study of ACE. The focus of this case study is on ACE's policy advocacy work rather than on its credit and service delivery activities, although there are many informational issues common to both areas. Finally, we relate the findings from the case to key concepts of our literature review in order to draw lessons for policymakers and practitioners engaged in NGO reform projects through the implementation of information systems.

KEY ISSUES IN INFORMATION SYSTEMS RESEARCH

Effective information systems are necessary for all organizations anywhere in the world if they are to function effectively, whatever their size or purpose. This is the case whether we are referring to a small one-person business, a nongovernmental organization, a governmental bureaucracy, or a multinational corporation. Information systems are not confined to the design and implementation of new technology. In fact they may not involve any information technology at all. At a fundamental level, an information system is a system of formal and informal communication within an organization. While the formal subsystem of an organization is often taken to be its rules and procedures, much of what actually happens within an organization is driven by an informal system of politics, norms, and culture influenced by wider environmental factors (Liebenau & Backhouse, 1990; Walsham, 1993, 2001).

While much of the current literature on information systems is preoccupied with the organizational environment in which information systems are implemented, it is important to acknowledge that organizations are embedded within a wider social and cultural context. Drawing upon a large number of works on information systems, Heeks (2000) presents an integrative framework diagrammatically represented in Figure 1. All information systems require people to construct and work with artifacts—pencil and paper, forms, ledgers, computers, and communication networks—within a particular organizational setting, which exists within a wider environmental context. The information system is influenced by both the organizational context in terms of its strategies, structures, politics, and culture, and by the wider political–socioeconomic, cultural, political, and technological climate within which the organization exists. The literature suggests that an organization's information system can vary enormously in the extent to which it relies on formalized, standardized, structured information-handling techniques as against informal, often ad hoc and subjective techniques (Land, 1992). In practice, designers of information systems have tended, at best, to ignore or disregard the informal system, and, at worst, have tried to replace it with the formal system.

Much of the earlier literature in the field of information systems assumed that there was a general logic that drives information systems innovation in all organizations. It was thought to be oriented toward rational decision making that sought to maximize efficiency (Winner, 1999; MacKenzie, 1999). Many influential publications have analyzed the

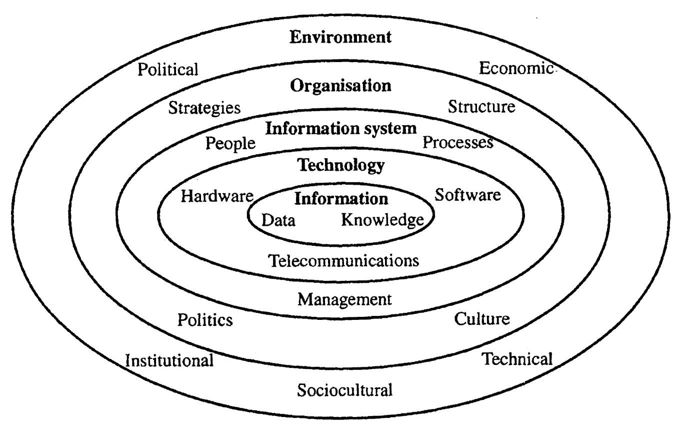

FIG. 1. Information systems as social systems. From Heeks (2000).

impact of information and communication technologies (ICTs) on the performance of organizations and the technology's potential to alter the socioeconomic position of nations and regions (Mansell & Wehn, 1998; DFID, 2002). Similarly, numerous theories have been put forward to study the relationship between the processes of innovation in organizations and the context within which the innovation is implemented (Walsham, 1993; Avgerou & Walsham, 2001). In particular, in the public and nongovernmental sectors, and in the general context of developing countries, many of the implicit assumptions about information technology being the main force driving change can be shown to be invalid (Madon, 1993; Avgerou & Walsham, 2001). For example, Madon (1993) in her study of the impact of computerized information systems on rural development in India found that national goals of efficiency and improved management practices were initially subverted by priorities of status, hierarchy, and local culture.

Such instrumental views of technology bringing about societal change have been replaced by structurational theories according to which people are skilled agents who produce, sustain, and transform social life through their actions (Giddens, 1984; Walsham & Han, 1990). This interplay between technology and human action is seen to occur in an institutional setting (Avgerou, 2002). Recognition of the importance of context in shaping processes of innovation has led to a major theoretical emphasis on the social shaping or construction of technology. It focuses on the ways in which the social context within which an information systems innovation is implemented influences its implementation (Williams, 1999). A research issue that is of great interest is the extent to which technologies are amenable to further social shaping at the implementation stage.

Social shaping of technology studies tend to focus on detailed, micro-level case studies of particular information systems innovations and the ways in which locally situated users shape the appropriation, meaning, and usage of information and communication resources. Sometimes such studies have been criticized for being too micro-level and failing to engage with the more macro-level issues related to political–economic structure (Avgerou & Madon, 2002). The need to capture multiple influences that shape an innovation process is becoming increasingly relevant in the contemporary condition of globalization as a result of the increasing flow of people, technology, capital, media, and ideologies to different parts of the world. These global and regional interconnections typically take place simultaneously with a number of lateral, local-level initiatives providing a context of tremendous transformation for many organizations around the world (Borja & Castells, 1997; Giddens, 1998). Information systems are a critical element in this mediation process since. Both externally and internally, organizations are under increasing pressure to make their systems of information management more effective in order to improve accountability to customers, funding bodies, and sponsors. What is of political relevance is the subtle mediation that takes place between actors at global, national, and local levels and the outcomes that result from this mediation.

In summary, we have tried to identify some critical issues in current information systems research. One, we need to study the context within which information systems innovation takes place within an organization. While the boundaries of an organization's formal context are clearly inscribed within procedures and rules, there is no guarantee that these rules will work if there is a clash with the organization's informal context. Two, we need to think about the context not in static but dynamic terms. Three, we need to understand the relationship between the innovation and its context in terms of the rich diversity of global, national, and local players involved in organizational change initiatives.

The study of the context within which an information systems innovation takes place has become a major theme in recent literature. However, most of this work has remained focused on business organizations in advanced industrialized countries, and we continue to lack knowledge of information systems innovations both in nonbusiness organizational settings and within non-Western environments. In one of the few existing studies on the management and organization of South Asian NGOs, the main cross-cutting themes across nine "successful" organizations were "the influence of context and culture" and "balancing formality and informality" (Smillie & Hailey, 2001).

KEY ISSUES IN THE NGO RESEARCH LITERATURE

Although there are many different definitions debated in the research literature, development NGOs can be briefly and effectively defined as "self-governing, private, not-for-profit organizations that are geared to improving the quality of life for disadvantaged people" (Vakil, 1997, p. 2060). During the past decade or so there has been a rapid growth in the numbers and profile of development NGOs. This has been the case both in the industrialized countries of the North, where NGOs are concerned with poverty reduction and social justice work at home and abroad, and in aid-recipient resource-scarce countries of the South, where NGOs have been identified as potential partners both by governments and international aid agencies (Salamon, 1994; Smillie, 1995).

NGOs are a diverse family of organizations, ranging from small local groups operating on a largely voluntary and informal basis, such as Educare Trust in Nigeria—an educational service and advocacy group based around one individual and a handful of volunteers—to large-scale formal development agencies with multi-million-dollar budgets and thousands of professional paid staff, such as the Bangladesh Rural Advancement Committee (BRAC). Up-to-date figures on global NGO numbers and resources are notoriously difficult to gauge with any accuracy, but the numbers of development NGOs registered in organization for Economic Cooperation and Development (OECD) countries is believed to have increased from 1600 in 1980 to nearly 3000 by 1993, and the expenditure of these organizations has grown in the same period from US$2.8 billion to US$5.7 billion (Hulme & Edwards, 1997). *The Economist* (1999) recently quoted a UN report that stated that there are now nearly 29,000 international NGOs.

The rise of development NGOs can be traced to three main sets of interrelated factors. First is the sense of disillusionment among donors in the 1980s at the ability of governments to tackle successfully problems of poverty, which led them to channel more international assistance to nongovernmental development actors. Development NGOs came to be seen as more administratively flexible, closer to the poor, innovative in problem solving, and more cost-effective than corresponding governing agencies (Cernea, 1988). Second, partnership with NGOs had important ideological attraction to donors and governments at a time when privatization policies were in ascendancy. There were ongoing efforts to "roll back" the state by governments in the North, and design and imposition of "structural adjustment" by the World Bank and International Monetary Fund. Also, there was new pragmatism that recognized that many large-scale problems such as environment and HIV/AIDS cannot be solved by governments acting alone. Third, there was growing interest in the concepts of "civil society" and "social capital" (Putnam, 1993). Civil society came to be seen as an institutional space between state, market, and household in which citizens could form associations, organize public action, and represent their interests and aspirations. Thus NGOs came to be increasingly seen as civil society organizations that had the capacity to not just provide more efficient services but also improve democratic processes, widen citizen participation in civic life, and strengthen social networks (Macdonald, 1994).

Although NGOs have become established organizational actors within development policy and practice, critical questions are increasingly being asked of their performance and accountability (Edwards & Hulme, 1995; Lewis & Wallace, 2000). In general, the roles and activities of NGOs have been relatively well covered in the literature, but there is far less systematic research on internal organizational processes and management (Lewis, 2001). Such research will require a clearer understanding of the theoretical basis on which different types of organization can be distinguished. Drawing upon the work of the sociologist A. Etzioni, three broad families of organizations have been identified—government agencies, for-profit businesses, and "third-sector" organizations variously termed nonprofit, voluntary, or nongovernmental (Najam, 1996). In theory, private companies are accountable for their actions to shareholders while democratic governments are accountable through political processes to their public, but there are no such basic accountability mechanisms in pace for third-sector organizations such as NGOs. Critics have observed that while many NGOs may claim accountability to the poor, unless they are actually membership organizations *of* the poor, they may find themselves as intermediaries in practice more accountable to the foreign donors who provide them with funds or to the government with which they are contracting to provide services. A further problem is that there is a tendency for some donors and governments to characterize NGO accountability narrowly in terms of the "proper" use of financial resources rather than the broader idea of accountability as the carrying out of effective, appropriate work, which stays true to the needs of clients and the values of the organization itself. The fact that there is all too often excessive accountability "upward" and too little "downward" has led Smillie (1995) to characterize the problem of accountability as the "Achilles heel" of the NGO movement.

There are two main approaches evident within the literature on NGO accountability. The first follows from Weber's analysis of bureaucratic structures. It sees accountability primarily in terms of rule-bound responses by organizations and individuals who report to recognized authorities such as government agencies or donor organizations in order to ensure that the resources they receive are used properly and that the work they undertake is carried out effectively. Accountability can be conceptualized in institutional terms as a "principal–agent" relationship in which a government agency or donor contracts an NGO in order to provide a specified service (Brett, 1993). It requires a set of checks and balances to be put in place—such as mechanisms for monitoring and evaluation—in order to ensure that incentives exist that ensure that an NGO behaves in a trustworthy manner and that a service is optimized in terms of cost-effectiveness, quality, and targeting.

The second strand of thinking is more open-ended and draws on the idea that organizations are socially constructed entities. In this view, accountability can be understood as the maintenance of organizational integrity through dialogues among and between different stakeholders—such as staff, clients, governors, and funders—which seek to enhance the effectiveness of an NGO. Rather than accountability issues being seen as issues that become important when things go wrong, accountability is instead seen as a process that can be understood as part of the daily organizational life of an NGO (Fry, 1995). This view therefore stresses the ethical dimension of organizational accountability: It is not simply a set of controls to be imposed upon an organization from the outside, but is a set of "felt responsibilities" derived from an organization's values, mission, and culture. The unbalanced accountability that is often found in NGOs may result in goal displacement, when for example an NGO drifts away from its original emphasis on education work toward credit delivery, due to the availability of donor funds for this purpose rather than any special competence. Another symptom is unplanned growth, where a "successful" small-scale development NGO evolves into a larger organization with many of the bureaucratic problems associated with traditional government agencies, such as being slow to respond to problems, losing contact with its target group, or shedding the flexibility that made it possible to learn from experience.

Organizational learning has been another preoccupation within the NGO literature, and there is a general view emerging that earlier perspectives on NGOs as learning organizations, advanced by writers such as Korten (1990), may not apply typically across the whole range of the development NGO field. Indeed, Fowler (1997) points out, "An almost universal weakness of NGDOs is found within their often-limited capacity to learn, adapt and continuously improve the quality of what they do. This is a serious concern" (p. 64). The problem is that NGOs lack effective information systems that can provide access to data about what they are doing and thereby enable them to assess what they are or are not achieving. Via this evaluative exercise, lessons can be distilled effectively into future planning and practice. There has been considerable investment over the years by NGOs such as ACE in information technology, for example, which allows the collection of large quantities of operational field data for monitoring. Computer technology has long been a feature of the head office, where it has assisted with accounting systems and processing of field data on the loan repayment performance of credit and savings associations around the country. However, many people in the organization who collect and process other forms of data remain unclear of its value and purpose, and computer access is quite tightly controlled within the hierarchical social relations which exist in the organization. Such technology has also played a strongly symbolic role within the organization, where it sends a strong message of professionalism and competence to government and funders (in contrast to many NGOs that stress informality and a grass-roots focus). Far less attention is given to the critical analysis of available data for the purposes of action and learning. As Powell (2003) writes:

> Even the best-constructed information has no value if it is not used. It is the flow and exchange of information which help to create its value. (p. 12)

The issue of NGO performance is closely linked to those of accountability and learning. It has become an area of significant controversy because after the initial "discovery" of NGOs as development actors in the 1980s, hard evidence of their effective performance has proved elusive. Critics have increasingly challenged earlier assumptions about the comparative advantages of NGOs over other kinds of organizations in poverty reduction work. Concerns have arisen because despite the existence of some remarkable NGOs around the world, there are also many others that lack basic management competencies and operate without a clear focus. NGOs may often be motivated by ambitious objectives, but may in practice be hindered by confused vision, weak systems, and domineering leadership. There are also some NGOs that exist for nondevelopmental reasons, such as the building of political patronage, acting on behalf of private-sector interests, or seeking merely to accumulate resources for leaders or staff. Finally, while there is evidence that some NGOs can achieve impact locally, some have argued that there is an urgent need to increase impact through "scaling up" NGO work (Edwards & Hulme, 1992).

Efforts to evaluate systematically the development impact of NGOs have generally produced mixed results. Some NGOs have received large amounts of resources but have been unable to demonstrate convincingly that they have "made a difference." As a result, there is little agreement on whether or not NGOs are "effective" at what they do or not. A recent evaluation of Danish NGOs in Bangladesh, Nicaragua, and Tanzania echoes similar studies undertaken over the past decade (Oakley, 1999). Results showed that while NGOs have particular strengths in maintaining a poverty focus in their work and that they can build reasonably effective partnerships with local community organizations for the provision of basic health and education services, their approach to overall monitoring and evaluation of their work is rarely adequate. The findings showed that NGOs are generally weak at analyzing the various layers of context related to the societies in which they work.

Despite their focus on participation and innovation during project implementation, many NGOs remain more concerned with micro-level issues and often lack the human resource base to be able to evaluate the overall macro-level impact of their work. The growing prominence of NGOs around the world has increasingly put them in a position where they have to deal with issues at grass-roots, national, and international levels. Much of the dilemma lies in the fact that NGOs now have multiple lines of accountability that are difficult to satisfy simultaneously, since they require different flows of performance-related information to be disseminated to different stakeholders. A process of mediation, supported by information systems, needs to be institutionalized in order to satisfy these different requirements by linking micro-level experience and learning with macro-level policy and advocacy. In the next section, we describe the experience of one NGO in Bangladesh as it seeks to establish a center within the organization especially dedicated to the task of managing this mediation process.

BANGLADESH NGO CASE STUDY

Bangladesh's nongovernmental sector has become a significant and well-documented feature of the country's social and economic life. Formed mainly in response to local and international efforts following the independence war of 1971, these organizations are considerably varied in terms of their size and scope (Lewis, 1997). Some organizations such as the Grameen Bank have specialised in micro-finance service provision, while others such as the BRAC offer in addition to credit a wide range of different services in support of education, health, and agriculture. Alongside service provision, there is increasing interest in advocacy and campaigning work among some Bangladeshi NGOs, and this case study focuses on an organization that has been seeking for the past half decade or so to institutionalize its advocacy function by establishing a special unit for that purpose.

ACE's approach has been to form groups of landless rural and urban poor in order to build economic self-reliance through the provision of credit services and raising of awareness for action on social justice issues. Unlike many NGOs in Bangladesh that have left behind their radical roots and moved toward becoming micro-finance institutions, ACE has retained an activist edge. The Centre for Advocacy and Research (CAR), established in 1994, was conceived as a response to the perceived need to balance its micro-level interventions with efforts to challenge macro-level policy constraints on poverty reduction. CAR undertakes three main types of activities. One, it develops advocacy campaigns on a range of issues such as land rights and the abuse of the banned chemical pesticides and lobbies for policy change. Some these campaigns are set out in the first column of Table 1. Two, CAR, drawing on ACE's own experience, does training work to build the capacity of the local and regional NGO sector to undertake advocacy work. Three, CAR conducts research in support of its campaigning work. In addition to commissioning research from local specialists, it has also established an in-house research capacity with a team of local researchers.

The establishment of CAR was an organizational response to a process of strategic reflection in the early 1990s on the implications of ACE's growth, learning, and experience since it began its work in the 1970s. At the heart of this discussion was a growing recognition of the need to improve information systems in support of policy advocacy, training, and research work. A new set of questions emerged as a result of ACe's growing development intervention experience and the changing political context in which it was operating. In particular, how could ACE build on its grassroots work in order to communicate its work and ideas more widely with policy makers and influence wider institutions and structures? What were the implications for ACE's work for the changing institutional landscape in Bangladesh, which in 1991 shifted from a military dictatorship to a parliamentary democracy? How could ACE make use of the new democratic institutions that may offer potential opportunities for scaling up through policy

TABLE 1
A framework for assessing campaign impacts

Activity	Immediate policy outcomes	Process policy outcomes	Organizational learning outcomes	Civil society outcomes
Campaign to remove 12 illegally imported pesticides from the market (1995)	High	Low	Medium	High
Pro-Poor National Budget Campaign to introduce wider consultation into national budgetary planning (1995–)	Medium	Medium	High	High
Forestry Campaign to change forestry policy in favour of the rights of minority forest dwellers (1995–)	High	High	Medium	Medium
ACE's participation within the USAID Job Opportunities and Business Support (JOBS) project to shift it towards a stronger poverty focus (1997–)	Low	Low	High	Low
SAPRI initiative to examine the impact of World Bank structural adjustment and thereby influence Bank policy	High	Medium	Medium	Medium

influence? Was it possible for ACE to counter in house the poor availability of relevant, critical, and high-quality research?

The 2001 review of CAR's first 5 years of operation found a wide set of impressive achievements by CAR in the campaigning and advocacy fields, especially as a pioneering effort in Bangladesh that put NGOs on the map. At the same time, the review also highlighted a number of key organizational problems that were undermining CAR's performance, some of which can be linked back to the discussion on information systems. One, there was recognition of certain weaknesses in the ways in which information from the grassroots needed to drive advocacy and research agendas was being managed. One of the criticisms that emerged from a range of stakeholders was that, despite ACE's network of more than 100,000 grass-roots groups across the country, much of the advocacy agenda was driven from the top, that is, opportunities identified by the senior Dhaka-based leadership and by the president in particular. While good personal contacts with powerful figures in the government may help influence policy, it was pointed out by some informants that an opportunity for a more participatory approach was being missed. There was a perception among field staff and group members that what CAR was doing had little direct relevance to the day-to-day struggles of ordinary people. This was seen not just as an issue of effectiveness but also of accountability. Two, the learning efforts were limited by the absence of an effective monitoring and evaluation system. CAR was thus unable to draw conclusions from its myriad activities and distill lessons that could be used to improve its programs.

Further discussions led to the development of a framework for assessing the impact of advocacy work (Table 1). Four types of impacts were identified: (1) the immediate outcomes in terms of the aim of the campaign; (2) enduring changes in the policy making process over the long haul; (3) ACE's own learning for future advocacy work; and (4) long-term strengthening of relationships among civil society actors.

CASE-STUDY ANALYSIS

The importance of viewing information systems as *social* systems (Figure 1) can be usefully elaborated in relation to the complexity of CAR's structures, systems, and people. One of the striking findings to emerge from the review was the contrast between formal and informal advocacy work undertaken. CAR has developed an advocacy team, which is designed to develop and undertake advocacy work on behalf of the organizations, but the reality tends to be that the senior ACE leadership plays the major role in shaping the advocacy campaign. The leadership staff have become prominent figures on the Dhaka "civil society scene" and have developed relationships with politicians, media persons, and bureaucrats. A strong personal dimension to policy advocacy work is as necessary for success by senior staff. Balancing this tension between individualized advocacy by senior staff and grass-roots-driven advocacy carried out and supported by teams at different levels of the organization proved to be a major problem.

At the same time, CAR faces a major problem in attracting and keeping high-quality research and advocacy staff at junior and middle levels. CAR keeps pay and perks a little lower than those found in the increasingly competitive development agency sector, which is dominated by foreign organizations such as the United Nations (UN) and international NGOs. According to Borja and Castells (1997), a complex set of negotiations arises as links with global and regional organizations bring flows of resources and ideologies into organizations in the developing world, sometimes contradicting local priorities and requirements. For example, CAR's terms and conditions are increasingly found to be unattractive to many young, well-educated Bangladeshi researchers faced with more lucrative opportunities in other areas of the development industry. However, the ACE leadership remains reluctant to pay higher salaries to CAR personnel as it feels this could cause resentment among other sections of the staff, particularly those in remote field posts. The leadership complains that the organization was a "family" whose shared values are being challenged by this more commercially minded younger generation who were on one occasion referred to as "mercenaries." It quite clearly prefers the "activists" to the "professionals." The gulf between the need to reform the system to suit younger, specialized, in-demand recruits and the prevailing vision of the older generation of founding leaders is likely to prolong the problem.

The case study also reveals the importance of local culture and context on information systems. The political environment in which NGOs such as ACE operate is quite precarious, and this leads many NGOs to take on a somewhat defensive organizational form that can impede the operation of information systems. Tensions between government and NGOs are commonplace in Bangladesh as NGOs move into roles previously occupied by the public sector, and the political nature of campaigning work challenges the position of entrenched elites such as landowners. Changes in government bring different political attitudes to sections of the NGO community. Furthermore, frequent changes of top personnel in the government's NGO Affairs Bureau generate additional instability. At the same time, relations with foreign donors who fund substantial areas of NGOs' work can also be problematic, with donor demands for closer attention to accounting and accusations from other quarters that the integrity of NGOs is compromised when they are accountable to powerful outside interests. Many NGOs that engage in work with women have also been criticized by conservative elements within the religious community, some of whom view education and empowerment programs for women as an undesirable challenge to local values and customs. All these pressures contribute to a culture of defensiveness that can be observed in NGOs such as ACE, where there is reluctance, for example, to commission research that might challenge its existing assumptions and values. It can also be observed in relation to the relatively large gap between a small group of founder leaders and managers at the top of the organization, and middle and junior management. In this way, the information and technology layers in Figure 1 are implicated through the management, strategy, structures, and culture within the organization and environment. For example, the culture of defensiveness plays itself out in smaller ways such as the low level of access to the Internet afforded to junior research staff—the head of research on one open plan floor had the only Internet-access computer, which was kept in his separated office, making it hard for researchers to initiate research ideas or access information more widely.

Other observers such as Wood (1997) have pointed to the importance of patron–client relations and hierarchical relationships, which are central to the organization of social and political life more widely. Within NGOs these relations tend to internalize and reproduce high levels of social inequality and relationships that require considerable deference be shown between senior and junior staff. The culture of defensiveness is therefore reinforced within such organizations. One of the most serious results of this culture is the NGOs' reluctance to confront less successful activities and initiatives, which has the result of reducing organizational learning. As a consequence, while the organization is under pressure to demonstrate success through an energetic program of activities, it rarely finds the time to reflect and learn.

The growing linkages between local, national, and global levels of action are apparent from the CAR experience. While advocacy work has been undertaken with some success at the local and national levels, there is growing awareness of the need to understand the global context of policy formulation and implementation. The relatively low scores given to policy process outcomes (Table 1) reflect this problem of linking information levels within the NGO. This type of thinking informs the regional advocacy training work that CAR is doing. Last year the first regional training workshop was held with participants from all over South Asia. CAR was also part of the recent initiative that set up an NGO working group to examine the World Bank's activities in Bangladesh, and another focusing on the consequences and implications of its structural adjustment policies. However, one of the negative findings of the review was that national advocacy work tended to take an elitist form—based on the personal values, interests, and contacts of senior staff—and remained somewhat disconnected from the priorities of ACE's grass-roots groups. The weakness of the pesticide campaign in terms of policy process impacts reflects the lack of attention given to grass-roots realities. While senior ACE staff proclaimed it to be a successful campaign, field staff who are familiar with local markets where banned pesticides have been seen to be reappearing have been critical of it. This has led to a growing perception among field staff that the functioning of CAR has little relevance for day-to-day struggles of people.

As a result of the CAR review, there is recognition among ACE leadership and staff that attention now needs to be paid to strengthening the information systems that support research and advocacy. This recognition goes well beyond information technology investment toward a realization that problems related to staff skills, culture, and politics are crucial for the improvement of accountability and performance. Although interrupted by the 2001 elections and subsequent change of government in Bangladesh (which has made the political environment more hostile to NGOs such as ACE), there is now a plan to reconvene as soon as possible CAR's international advisory board, which has been more or less inactive for the past 2 years, to use the review findings to develop new strategies. Within a few months of completion of the review, ACE took a decision to increase its investment in the capacity of young research staff, and accordingly five of them were sent overseas for advance studies.

CONCLUSION

This article shows how the study of information systems can further our understanding of NGO management, and that, at the same time, research on NGOs is a useful vehicle for examining how information systems are embedded in their social context. The study of the ways in which information systems function within an NGO such as ACE highlights the contextual embeddedness of such systems in the sociocultural milieu within which they are developed and used.

There are many positive changes in development policy and practice that can be associated with the increased role and profile of NGOs. They include the growth of participatory planning techniques, the integration of gender concerns into mainstream development thinking, and the continuing advocacy of human rights and environmental concerns (ODI, 1995). There is every reason to believe that NGOs of various kinds will continue to play important roles as actors in development processes. The role of nonstate actors of one form or another seems destined to grow, as the power of the state is increasingly being called into question as the pace of global economic activity intensifies (Borja & Castells, 1997; Giddens, 1998). Such global changes may make accountability pressures on NGOs grow more complex, and there may be a "trend towards more diverse and seemingly unconnected voices making requests or demands of the non-profit organization to be accountable for different things" (Fry, 1995, p. 191). At the same time, higher levels of diversity within and between NGOs are likely to bring new challenges in terms of integrating values and managing responsibilities between NGO staff, users, and funders. The review on which some of the data presented in this article are based is in itself an example of the progress being made in developing new ways of managing information to ensure improved accountability and transparency.

Central to these new challenges is the need for NGOs to develop more effective information systems. The continued relevance of NGOs depends in part on their ability to adapt to wider contextual change and to respond to the critique of their current levels of learning, performance, and accountability. A key dimension of this challenge is to link both local and global agendas and to learn from and adapt to changing demands and opportunities in their environment. The growth of communication technology is just one element that has brought about a broadening of NGO agendas into such fields as advocacy. The analysis of these technology-influenced changes, however, needs to be situated clearly within wider social and political processes. An engagement with information systems theory can be potentially fruitful because it opens doors into an improved understanding of the management and organization of NGO development work. At the same time, shifting the focus of information systems thinking to include development NGOs may offer useful insights into the relationship between agency and technology, the importance of political and cultural contextual issues (such as status and hierarchy), and the importance of informal alongside formal systems.

NOTE

1. ACE and CAR are pseudonyms that we have used in order to protect the identity of this organization and the persons associated with it. We have adopted this convention for two reasons. First, the purpose of the case study is to draw out some general lessons for NGOs and information systems and not to dwell on the specifics of a particular NGO. Second, various informants provided some of this data in confidence as part of the ongoing internal review process. Given the sensitivity of NGO politics at the present time in Bangladesh, we felt it appropriate to anonymize the case in this way.

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