Introduction

This paper explores the implications of and possibilities for research and practice in developing community information systems when it is approached as human inquiry. The term human inquiry is used to embrace all those approaches to research which have at their heart a commitment to learning that is undertaken with and for people. To fulfil this commitment requires that research is conducted through the active involvement of participants for mutually beneficial practical purposes. The practical purposes of concern in this paper are those of community groups and networks as well as more formally constituted voluntary organisations and policy making groups. Of particular interest is the contribution information systems development can make towards the achievement of human purposes in this context.

The paper begins by providing a brief introduction to the nature and aims of human inquiry. This is followed by an outline of developments within the discipline of information systems (IS), leading to an explanation of the particular interests in community information systems shared by the small group of academics who comprise the Community Information Systems Centre at the University of the West of England in Bristol, UK. From here, the paper explores ways in which, as academics and practitioners, we engage with developers and users of community IS. Practical examples of the implications of approaching practice as human inquiry are offered, drawing upon issues that have arisen in our own work with local voluntary and community organisations. The work drawn upon has been primarily with the United Kingdom Third Sector to date. In the concluding section some observations of similarities and potential differences in relation to Third Sector initiatives elsewhere are offered for discussion.

Aims and scope of human inquiry

A number of distinct approaches to the practice of human inquiry have been articulated; associated with these are some key values, issues and commitments which characterise this work and distinguish it from other established research traditions. Throughout this paper I use the term "human inquiry" to embrace all those approaches to development, learning and in many cases explicitly to research which
have at their heart a commitment to learning that is with and for people. Human inquiry is practiced through the active involvement of participants for mutually beneficial practical purposes rather than directed by a single researcher for their own purposes. Through cycles of action and reflection participants create knowledge that is grounded in their individual and collective experience rather than understood in relation to some separate 'body of knowledge'.

Approaches to human inquiry can be seen as part of an emerging worldview which departs significantly from the positivist worldview within which the Western world's most highly valued knowledge has been acquired. The emerging worldview is more holistic, more egalitarian and essentially participative. Within it humans participate in co-creating their reality through their experience, their imagination and intuition, their thinking and their action (Heron, 1992).

The conduct of human inquiries within this worldview is emancipatory in intent a broad political sense in that inquiry supports people in learning through experience, in creating and owning their own knowledge such that they can act more effectively in directing their own lives. In an epistemological sense, human inquiry also helps people move away from restrictive frameworks for understanding themselves and their possible actions in the world towards a more grounded understanding of themselves in relation to the human communities in which they participate (Moggridge and Reason, 1996).

Approaches to Human Inquiry

A number of approaches to initiating and facilitating human inquiries in line with the emerging worldview have been well articulated in theory and exemplified in practice. In many cases they have been developed in different contexts and hence emphasise different aspects of the process of inquiring with others. Reason (1994a) suggests a possible integration of three different approaches to human inquiry; the contribution each of these makes to our evolving framework for practice is discussed briefly below.

Firstly, whether our current actions focus on working with students, members of voluntary sector organizations or community groups, we seek to approach our work as reflective practice. Our understanding of how to do this draws upon approaches such as action science and action inquiry which are concerned with developing effective practitioners who are capable of inquiring and reflecting in the midst of action. Action science is most strongly associated with the work of Argyris and Schön (Argyris and Schön 1974; Schön 1983; Argyris et al, 1985). Its focus is on the exploration of practitioners cognitive models and the aim is to make these more explicit so that they can be challenged and developed and reflected in actual verbal actions. Torbert's action inquiry is a form of inquiry developed from Argyris and Schön's early work and aims specifically to liberate individuals and communities from habitual patterns of action which constrain rather than help realize human potential. Torbert is concerned with the ways in which appropriate action may contribute to the transformation of organisations and communities towards greater effectiveness and greater justice (Torbert, 1991).
A second influential approach is that of co-operative inquiry. Co-operative inquiry was first proposed by John Heron (Heron, 1971; see also Heron, 1981a and 1981b; Reason, 1988; Reason & Heron, 1995). As the name suggests, co-operative inquiry focuses on people working together in a manner which departs from orthodox research methods in which the responsibility for research design and management lies solely with the initiating researcher. In co-operative inquiry all those involved in the research contribute to the generating of ideas about what is to be researched, in designing and participating in action to further the research and in reflecting upon and drawing conclusions from the experience. So although an individual ‘researcher’ may initiate a particular inquiry, for the research to progress in a manner which honours the contribution that each person can make to the learning process, it is necessary for the distinction between ‘researcher’ and ‘subject’ to give way to the point where all involved are both co-researchers and also co-subjects as they participate in the action which is being researched.

This does not mean that the quality or frequency of each individual's commitment and contribution need or will be identical, nor is it implied that establishing and maintaining authentic co-operation is an easy task. Co-operative inquiry groups have to struggle with the same issues as any other human group and the extent to which potential differences in power are successfully addressed within the group can have a significant effect on the quality of the group's work.

The third approach which we are finding increasingly significant for our work is that of Participative Action Research (PAR). PAR is probably the most widely practiced research approach, although until relatively recently its use has been largely concentrated in the southern hemisphere. The name encompasses a broad range of approaches including those which exemplify emancipatory practice in its most grounded yet also its most explicitly political forms. The main concern of the PAR tradition is to emphasise the political aspects of knowledge production, definition and employment which in most societies is seen as the preserve of an educated (and otherwise privileged) elite. Unsurprisingly the knowledge created by the privileged readily serves the needs of the dominant culture but this is often to the disadvantage of other communities (Fals-Borda and Rahman, 1991).

PAR practitioners aim to empower oppressed groups and communities at two levels. Firstly, through research, adult education and other forms of socio-political action, the aim is to produce knowledge which is meaningful in and for future action for a particular group of people. Secondly, the aim is to empower people to see through the dominant system of knowledge construction and preservation so that it no longer constrains and devalues their own processes for creating, sharing and using knowledge. A key concept here is that of "conscientization", a term attributed to Freire (1970) and used to describe the process of raising people's consciousness through collective inquiry and reflection in a manner which is grounded in democratic values and honours their individual and collective wisdom. The emphasis is on establishing dialogue between formal and local knowledge to produce a more profound understanding which can empower the community in current and future action. Further accounts of PAR projects can be found in Fernandes & Tandon (1981); Park et al. (1993); Reason (1994b).
I have considered briefly a range of approaches to human inquiry, each in their own way seeking to empower people so that they can understand more deeply and act more effectively to shape their worlds. Before considering in more detail how human inquiry approaches guide our work, I now introduce the discipline of information systems and our particular interest in Community Information Systems practice.

Information Systems Perspectives

Information Systems (IS) is a relatively new discipline broadly concerned with information handling activities in human organisations including ways in which information is collected, analysed, organised, stored, and communicated by people, with or without the use of information and communication technologies (ICTs). Hence our focus is not on the technology per se but concerns its actual and potential use in the range of contexts in which people engage in (more or less) organised activity (Lynch, 1998). One reason for this shift in focus away from the technology itself has been the growing recognition that organisational, social and political factors are often much more significant than purely technical factors in explaining why so many IS have failed to deliver the expected benefits.

Initial interest and work in IS was based on unitary, functional views of organisations within which computer based information systems offered solutions to well-structured and agreed problems, typically to do with making more efficient use of organisational resources. In time as people puzzled over the failure of many of these systems to deliver the expected benefits, there was a shift towards softer more interpretive approaches which assumed multiple perspectives of problems and saw exploring these as offering the most promising way forward in identifying IS developments and other changes that could improve the effectiveness of people’s work in organisations (Checkland, 1981; Boland, 1985).

More recently there has been a further shift within the discipline towards a more critical stance which begins to question the ends as well as the means of much work in IS and is explicitly political. In particular it is argued that IS development should be emancipatory in intent, requiring the breaking down of barriers that limit the participation of the less powerful (Lyytinen and Klein, 1985). The adoption of a critical perspective has been advocated in many disciplines in recent years, including those concerned with organisational change and IS. (Flood and Jackson, 1991; Bloomfield et al., 1997). In community IS practice, our commitment to notions of community in general and to the practice of community development in particular alerts us to the many political (and other) inequalities in our society and motivates us to work with community groups, rather than profit-making organisations. It also requires that we adopt a critical stance in relation to our own expertise and practice, letting go of our knowledge, rather than using it to maintain status and distance.

Before considering the practical implications of community IS practice as human inquiry, it is worth noting that there has been a lively exploration of the relationships between critical perspectives and human inquiry in recent years. Levin (1994) provides a useful overview of the broader issues and Flood’s (1998) editorial
introducing the first issue of the renamed journal Systemic Practice and Action Research suggests why such a link is both desirable and necessary.

**Community Information Systems**

Our perspective in Community IS includes an interest in the use of information (and information technology) as it supports and fits with the purposes, interests and working practices of communities of users in all their diversity. Our aim is to extend the scope of IS in ways which empower and enfranchise people who are presently excluded or marginalised in our society. In many organisations ICTs have mainly been deployed to date to increase efficiency and control rather than to empower or liberate people. However, we believe that more creative and enabling applications of the technology are desirable and possible (and increasingly available). We are committed to using collaborative and participative modes of research and practice in IS and seek to contribute to learning that is grounded in experience (Lynch, 1998).

Our perspective leads us to approach a wide range of work as human inquirers and we take this to include the following ingredients.

- An interest, originally articulated by Donald Schön, in reflection in and for, rather than after or separate from, action (Schön, 1983);
- An interest in research which is undertaken with and for, rather than on, others; this implies that, as academics and practitioners, we engage with users of community IS, rather than intervene as outside experts;
- A view that the knowledge and experience that others bring to such engagements is at least as valuable as our own;
- A belief that the tangible (and less tangible) practical benefits that arise from our engagements with people in community IS are at least as important as the more detached theoretical propositional knowledge which may be tested in or derived from the experience (Heron, 1996);
- A concern for sustainability, achieved through the progressive transfer of skills, understanding and ownership of developments to communities in which they are to be embedded such that they are able to act or make decisions about IS and IT more effectively and autonomously in future (Plant, 1997);
- A view of ‘professional’ practice as engaged practice which is ethically and socially responsible (as well as technically competent) practice, rather than practice which is necessarily aligned with an established, formally constituted professional body;
- A commitment to reflect upon and improve our practice as educators of future professional practitioners by supporting and developing reflective practice in our students.

We believe that many of the issues which need to be addressed by aspiring human inquirers are shared across many areas of practice. Engagement with and regular
feedback from others is necessary. In the next section I discuss learnings drawn from a wide range of projects that I and my colleagues in the Community Information Systems Centre (CISC) have been involved in. The work presented here is undertaken within the overall framework of human inquiry and reflects a commitment on behalf of the participants to improve practice and hence service to others.

**Human Inquiry: collaborating in education and service provision.**

The discussion and examples presented in this section relate to a component of the Final Year of an undergraduate degree in Systems Analysis in which teams of three or four students undertake group projects acting as Information Systems consultants for local community organisations. The work is managed and assessed by a team of tutors who in turn have particular responsibility for supervising a number of student teams whilst the projects are underway. The tutor team has responsibility for all aspects of this endeavour which aims to provide students with an opportunity to learn from direct experience and at the same time provide the local community with appropriate advice and assistance. Operation of and issues associated with the course are discussed in Moggridge (1994); recent developments are described more fully in Williams et al. (2000).

Any form of inquiry into professional practice that involves educating or advising others is inevitably multi-layered. On the one hand it demands immediate attention to the interaction between the provider of such a service and the students or clients; on the other it requires that such practice is itself informed by an understanding of the broader contexts in which the participants are themselves engaged. In recent years that we have sought more explicitly to improve the outcomes of this work for both students and clients through developing a deeper understanding of the context in which the student teams work and equally importantly through developing understanding of our own role(s) in setting up, supervising and assessing student work in community organisations. We have sought to deepen our understanding of the contexts within which people in communities and voluntary sector organizations use and might use IS through direct engagement with people in a range of community IS projects locally, regionally and nationally and reflected on our own practice in these contexts. Focussing on our work with students has helped us, as academics, to develop awareness of our role as IS educators, engaged in a web of relationships that are intended to be mutually educational; our purpose is not simply to impart knowledge to others.

As each year's projects get underway, direct collaboration is between student teams and members of the community organisation in which their project is based and the tutor's role becomes that of advisor and occasional facilitator as teams plan and reflect upon their interventions. Although the contexts are different the students framework for reflective practice has already been developed in supported group project work in earlier years (Kamm et al., 2000).

Before discussing some particular insights that have been gained and issues that have arisen within CIS practice, I will first make some observations about the more 'obvious' power differences that are inherent in this particular form of educational venture.
Firstly, as with any form of education that is formally assessed, there is a limit to the extent that students and tutors can collaborate as equals since tutors are the final judges of the merits or otherwise of the students’ work. Secondly, the relationship between student groups and members of client organisations carries with it a dynamic of dependency in each direction which has the potential to be exploited by either party to further their own ends. Clients may hold so tightly to their preconceptions about particular technical 'solutions' to their problems that students feel constrained to undertake work of a form or in a manner which they do not consider appropriate. Equally students may be so keen to get on and do some technical work that client participation is limited to accepting the students’ technical expertise. Hence the extent to which the collaboration is mutually beneficial turns on the extent to which each party exercises their knowledge and authority as power over the other party or power to be shared with the other party (Heron 1981: 35). Our work in community IS suggests that attending to the following processes will be important in approaching such collaborations.

- Negotiating a basis for collaboration – requires open, exploratory dialogue such that each party is clear about the priorities, preferences and constraints of the other;
- Shared agenda setting and inquiry design – may commence with brain-storming and the production of wish-lists, includes debate to agree priorities and trade-offs in terms of what can be done, must include agreement of how work will be done;
- Acknowledging and working with different perspectives – respecting others values and preferences, exploring and working with different perceptions of how matters might be improved;
- Being sensitive to and seeking to redress political inequalities – being alert to e.g. management agendas set without reference to members, internal and inter-agency factions, changes that might further disadvantage particular communities or groups of people;
- Demystifying each others’ language, capabilities and ways of working – some words have different meanings in different contexts e.g. networking, some words have no relevant meaning in particular contexts e.g. methodological transparency, some words carry more meaning in particular contexts e.g. confidentiality;
- Managing expectations – it is too easy for IT to be seen to offer a set of ready made solutions, sustainable IS development takes time and organisational resources and cannot happen overnight; student teams must take care to avoid over-commitment, however well-motivated;
- Facilitating the process of dialogue – employing different techniques to assist dialogue: within teams (possibly tutor facilitated); within client organisations and between teams and their clients, e.g. joint ‘map making’ using Checkland’s rich pictures;
Checking and challenging assumptions – surfacing and challenging assumptions built around stereotypes of people, organisations and ways of working;

Negotiating outcomes of mutual and sustainable benefit – needs to happen within, as well as at the start of, the project to reflect new understandings and changed local circumstances;

Evaluating process and outcomes – evaluation should be built into project process and both process and outcomes should be reviewed at the end of the project.

Moving beyond the narrower, time-framed contexts in which groups of students might work with particular clients, we are also concerned with ways in which our and others learnings can be shared more widely. To this end we also believe that responsible professional practice should also include:

Disseminating evaluation and more tangible outcomes to the local community, stakeholders and policy makers in the local voluntary sector, regional bodies as well as the academic community;

Facilitating identification and dissemination of established and emerging good practice by exploring process and outcomes across organisations and projects.

It follows therefore that the kind of structures which support dialogue between different perspectives must frame rather than necessarily seek to resolve the differences and provide a means for participants to communicate through action as well as reflection. It has been argued that human inquiry approaches offer structures within which such dialogues can take place effectively.

Discussion and Conclusions

In this paper I have introduced some key ideas from the field of Human Inquiry which I believe are relevant to the debate about how community IS research and work might be conducted to better serve the needs and purposes of Third Sector organisations and community groups. Approaches to human inquiry differ from more established forms of research and consultancy where what will count as improvement is clear in the minds of the main actors at the outset. I have argued that mutual learning will best be developed and demonstrated through experience and action rather than by being articulated as a new (and by implication superior) framework. In addition it must be motivated by a vision of a more egalitarian and more participatory future yet remain grounded in the lived experience of the participants. This places considerable demands on the initiators of human inquiries. It has been suggested that these include: well developed skills as a facilitator, awareness of group process and a commitment to attend to method whilst at the same time not clinging too tightly to method as prescription. In addition, participants must develop an understanding of the personal, social and political forms of oppression and denial which are barriers to emancipation.
As we join the emerging “information society” and the debates surrounding both its viability and desirability, we need to extend the kinds of understandings and practices discussed above to encompass the broader political structures within the UK and beyond. Nationally we need to look critically at structures for consultation, participation, project design and evaluation. Internationally we need to see what can be learnt across projects when the starting cultures, structures, people and places are different. Perhaps the questions we need to ask are the same? Who speaks for whom (and with what authority)? Who does what for whom (and with what authority)? What are the barriers to be overcome? These are issues for us all.

References


