Abstract: This article elucidates criteria which might be helpful in evaluating praxis-related research. The authors explore both sides of the research and development (R & D) project. They examine different ways of understanding contributions to knowledge through research but more especially exploring ideas about contributions to changing praxis. Changing praxis necessarily involves changing not only each participant as an individual actor, but changing patterns of activity. In most praxis-related research, this is pursued by involving a widening range of participants in a setting. This poses the further problem that the ripple effects of the project are not entirely under the researcher's control. Thus, as the title suggests, praxis-related research serves two masters. Very often, R & D projects aim to make contributions to social science. Generally they also aim to make contributions to the world of human affairs. Different criteria are appropriate for judging each.
INTRODUCTION

Research can be related to development in many different ways and the relation between theory and praxis may be interpreted in various ways. There are many different kinds of research and, of course, there are many different kinds of practice. This paper explores criteria and aspects that might be helpful in evaluating praxis-related research. While there are established conventions for evaluating research in different fields (Schwandt, 2002) there is less certainty about how to evaluate changes in practice. Research and development (R & D) projects in health, social work, education and other fields, have social impacts not easily measured or assessed. This is so, especially regarding impacts on social life and the lived experience of people and groups, and social effects that reverberate through social fields over time. Moreover, many R & D projects aim to contribute to social movements for example, against injustice, for sustainable use of resources, or to build more democratic relations between groups. These kinds of intentions do not lend themselves to easy assessment. A central problem is how to identify and how to evaluate the ways research contributes to changes of praxis.

In this paper, we discuss ‘praxis’ referring to Aristotle, Marx, Freire, Bourdieu, Habermas and others regarding social change as a dialectical process where mankind changes the world and the world changes mankind. Habermas (1973) talks about praxeology as the practical utilization of knowledge:

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1 Mats Mattsson is a PhD in Social Work and Assistant Professor in Special Education in the Department of Human Development, Learning and Special Education, Stockholm Institute of Education, PO Box 34103, S-100 26 Stockholm, Sweden. Email: mats.mattsson@lhs.se homepage: http://www.lhs.se/~marmat/

Stephen Kemmis is Professor of Education, School of Education, Charles Sturt University, Locked Bag 588, Wagga Wagga, NSW 2678, Australia. Email: skemmis@csu.edu.au
“Finally, the practical utilization of knowledge, its translation into technologies and strategies, on the one hand, and into communicative praxis on the other, can also be prepared scientifically: this is the task of praxeology which still remains in its very beginnings, and to which the investigation of possible interactions between science and politics would also belong (for example, in the form of political consultation) (p. 6).”

We focus on praxis usually understood as ‘informed, committed action’ rather than ‘practice’ because we want to emphasise that praxis-related research is undertaken with a view to changing praxis for individuals and for groups. On the side of the individual, it aims to support changes in their informed, committed action in the world at particular times and in particular places. From an extra-individual perspective, it aims at changing the social fields and structures that hold practices in place as sustained and mutually-comprehensible modes of social life. Kemmis (2005) outlined a range of individual and extra-individual features of practice, aiming to show that practice, and especially changing practice, requires understanding it not only from the perspective of practitioners’ own knowledge of their practice. It also needs to be understood as discursively-, socially- and materially-constructed in human action and interaction in the world. Kemmis (2006) draws attention to such additional dimensions of practice as that it has meaning and purpose, and that it is structured, situated in time and space, unfolds in time, is frequently systemic, is reflexive and reflexively transformed, and that it involves different kinds of reasoning.

Our aim here is to elucidate criteria which might be helpful in evaluating praxis-related research. We use ‘praxis-related research’ as an umbrella-term to include action research, dialogic research, co-operative inquiry and R & D projects of a variety of kinds. We will explore both sides of the R & D juxtaposition, examining different ways of understanding contributions to knowledge through research but more especially exploring ideas about contributions to changing praxis. As we shall see, changing praxis necessarily involves changing not only each participant as an individual actor, but changing patterns of activity. In most praxis-related research, this is pursued by involving a widening range of participants in a setting. This poses the further problem that the rippling effects of the project are not entirely under the researcher’s control. How then
can an R & D project be evaluated if it must be both as the ‘product’ of the researcher and as the “outcome” of those co actors in the setting? How can it serve two masters?

**SOME CHARACTERISTICS OF PRAXIS-RELATED RESEARCH**

On the whole, praxis-related research is an approach concerned with addressing and overcoming human suffering, injustice and oppression, but it is also concerned with developing and expressing the creativity and capacity of human beings who participate in collaborative work to build a better world. It includes a wide variety of types; we will however clarify some of the characteristics we have in mind in order to clear the ground for our discussion of ways of evaluating praxis-related research.

The Greek word ‘praxis’ means action, practice, habit, cultural tradition and form of life. Referring to Aristotle, *praxis* can be understood as morally informed action aimed at achieving some ethical good. Aristotle’s theory of science includes several key concepts, among them ‘empeiria’, ‘theoria’, ‘logos’ and ‘phrónēsis’ (*Carr & Kemmis, 1986/1997; Ramírez, 1995*). Empeiria is the Greek word for experience, *theoria* means active thinking, and logos means thought, word, discourse, rational speech, explication and definition. By *phrónēsis*, Aristotle refers to practical wisdom, a kind of action-related wisdom appropriate to deciding what, in any particular situation, would constitute an appropriate expression of what is “good”. In the history of social sciences, Aristotle challenged the epistemology of Plato. In Plato’s view, ideas, concepts and theories are understood as representations of truth. Plato disregards experiential knowledge, practical and action-related knowledge. For Aristotle, the crucial point is not to gain “theoretical knowledge”; he maintains that the important task is to put “our knowledge into practice” (*Aristotle, 2004, p. 77*).

*Marx (1888)* discusses praxis as the result of a practical-critical activity in which the person is a knowing subject, as indicated in his much-quoted dictum that “philosophers have only interpreted the world in various ways; the point is to change it (p. 82).” From a classical Marxist perspective, fundamental changes to capitalist society would be brought about only by broad
participation of the working class and their allies, acting as a collective subject, with collective agency, to restructure their world in the interests of the good. For Marx, such revolutionary action would be regarded as praxis.

Kurt Lewin is often referred to as the first action researcher. In his (1946) article ‘Action Research and Minority Problems’ he discusses the relationship between research and social practice and argues that research should contribute to social change and improvements:

The research needed for social practice can best be characterized as research for social management or social engineering. It is a type of action-research, a comparative research on the conditions and effects of various forms of social action, and research leading to social action. Research that produces nothing but books will not suffice (p. 35).

Lewin’s field experiments included participation of co-researchers. The cooperation between scientists and practitioners was organized to contribute to deeper insights and to bring about social change on the principle that group decisions produced more compelling and substantial social change than decisions taken by individuals thinking and acting alone:

Socially, it does not suffice that university organizations produce new scientific insight. It will be necessary to install fact-finding procedures, social eyes and ears, right into social action bodies (p. 38).

By taking into account the knowledge production going on outside the academic world and by engaging voluntary organisations in the research process, Lewin aimed to achieve something more than scientific reports. The chief aim was to change praxis.

In many R & D projects, participants have a common interest in discovering new knowledge and new ways to improve the quality of human life. There is often a focus on a local context and the everyday experiences of those living and working in these contexts. At the same time, those involved may search for universal knowledge as represented in particular theories – often, for specialist researchers, in the form of academic theories to which they hope to contribute as a consequence of their involvement in the research. In recognition of these different kinds of
interests and the ways they may be intertwined in action research projects, Swedner (1996, p. 224) discusses the role of the action researcher as someone who is familiar with “the practical mood” as well as “the contemplative mood”.

The researcher is usually conceptualised as separate from the practitioner. However the roles of researcher and practitioner/participant may often overlap. In many R & D projects, research is combined with a variety of contributions from many actors who do not regard themselves as researchers. Praxis-related research is conducted in particular contexts and involves particular persons. The researcher will be part of networks and relations which will give him or her opportunity to gain knowledge from within. Here, research is an inter-active process. Such a research strategy may be illustrated by two intersecting fields of research and development. Research and development may belong to different provinces of meaning. Researchers and practitioners may be thought of as acting on different fields, but each may try to enter the other’s province of meaning. Where the fields overlap, there is an element of uncertainty about what is to be understood and to be done from the two different perspectives. Here opportunities arise for a mutual exchange of experiences between researchers and practitioners (Habermas, 1973; Swedner, 1996). In this communicative space, both parties face uncertainty. Kemmis (2001) writes:

I have come to see a critical action research project as more open and fluid, as a ‘self-constituting public sphere’, and to see those who participate in the same shared project of a particular programme of action research as engaged citizens committed to local action but with a wider critical and emancipatory vision for their work (p. 101).

One aspect of the role of the researcher in this context might be to serve as a teacher or facilitator, inventing and shaping research methods by which co researchers and ordinary people can come to participate in the research activity. Therefore praxis-related research is associated with certain methods for example, generative themes (Freire, 1973), forum theatre (Boal, 1979), future labs (Jungk & Müllert, 1986), search conferences (Gustavsen & Sørensen, 1995), relay interviews (Lauridsen & Nielsen, 1998) and co-operative inquiry (Heron & Reason, 2001).
Meetings, seminars, educational and cultural activities will often be integrated parts of a project, and each activity may serve several purposes. Lewin (1946) regarded

...action, research and training as a triangle that should be kept together for the sake of any of its corners. It is seldom possible to improve the action pattern without training personnel (p. 42).

A characteristic of praxis-related research is that it serves purposes beyond that of new knowledge. Praxis-related research should be understood as a cultural, social and political process that generates action as well as reflection. Therefore, this kind of research should not be evaluated using only academic criteria devised to determine the worth of scientific work. In what follows, we will propose a number of complementary and alternative aspects. As a point of departure we will refer to general requirements of an academic report.

**GENERAL REQUIREMENTS OF AN ACADEMIC REPORT**

The academic tradition introduced by Plato remains very influential especially his view that concepts and ideas are more important than human experiences of everyday life. Ideas, concepts and theories are, according to Plato, representations of truth, and he thus favours propositional knowledge. When university researchers make claims for truth, the claims are generally expressed in text. On this Platonic view, generalised or universal knowledge is regarded as more important than contextual knowledge (Russell, 1991; Toulmin, 1996). Despite their differences, university researchers in a variety of scientific fields use rather similar indicators for assessing the quality of research (Härnqvist, 1999; Australian Gvt., 2005). There is a widespread view in many fields of science that researchers’ claims for truth can be evaluated according to general criteria (see Schwandt, 2002, p. 97). The criteria themselves have developed over hundreds of years; they focus on text – particularly the text produced in reports of scientific research.

At the outset, scientists are expected to have an important research question that motivates their inquiry. On this view, important science does not explore trivial matters or questions whose answers are already known in the relevant literature. Furthermore, the researcher is expected to
be guided by an explicit perspective reflecting the theoretical framework used to answer or to interpret the research questions. Theory is essential here, because researchers are generally expected to make theoretical contributions. Sometimes the aim is to verify, falsify or deconstruct established theories. The emphasis, however, is that the scientist is expected to contribute original findings to a shared body of knowledge, said to be more or less coherently structured in the form of a theory.

Research methods are expected to be tailored to the research question, and to yield findings that can be expressed and interpreted consistent with the theoretical perspective that informs it. Every researcher is expected to respect ethics according to the guidelines published by academic authorities. It is important to ensure that data and information have been gathered in a proper and systematic way and that the empirical field (the field of phenomena and evidence) is relevant to the project. Here, questions about validity and reliability are usually raised. The researcher is expected to be able to show how an analysis was carried out to yield findings and interpretations of empirical data. It is generally regarded as essential that the autonomy of the researcher is secured and that the research is not shaped or contaminated by personal interests, and that the institutional setting supports the integrity of the researcher in the conduct of the research.

It is expected that a research project related to a particular field of professional practice will be of relevance to that field. It is also expected that the research will be of relevance in a broader sense. In one way or another, the product of research is expected to be of a general or theoretical interest.

Regarding the form of the report, researchers are expected to meet accepted academic standards. Text, references, quotations, figures and tables should be made in a proper way, according to established rules. Aristotle (2004) discusses the importance of akríbeia or “precision” (xii); later he says “… scientific knowledge is a demonstrative state.” meaning a state of mind capable of demonstrating what it knows (p. 148). The research should be reported in such a way that it is possible to examine its quality. The procedure for examination is crucial. For the research to be credible, it must be possible to interrogate the report against established academic
standards. Through the process of peer review, senior researchers should be able to examine research carried out by their peers, or by junior researchers who may aspire to become their peers. Most important, however, is the result of the research.

A research project should have as a result new knowledge. The project may make an original contribution to theory, perspective, methodology or results. Emphasis will be placed on the cognitive aspects of knowledge, as represented in text, in the form of a written report. It is expected that any social or political aspects of a research project will not be expressions of researchers’ own particular values or view points, but that the case made by the research will be sufficiently compelling that any social and political implications that may emerge from the findings can be left to others. The central idea in this view of science is that research serves the primary purpose of enlightenment in terms of cognitive and propositional knowledge, while the task of changing praxis is generally regarded as secondary (see Schwandt, 2002, p. 103).

The requirements of an academic report outlined here stems from a long tradition in which Greek philosophers play an important role. Ideals that arose later, with the development of the natural sciences and the project of modernity built upon the Platonic base, adding to it and transforming it but also securing the key notion that science should contribute to cognitive knowledge codified in theory. Moreover, the conduct of research leading to the report has become more codified in each field, research methods and procedures have become routinised, and the general form of the scientific research report has become condensed and codified almost to the point of universality in the natural and physical sciences. This view of what counts as a worthwhile scientific product – conceptualised in terms of propositional knowledge that adds to knowledge and especially to theory – still penetrates deeply into the literature of the social sciences and, to a lesser extent, into the margins of the humanities. The established requirements serve as guidelines in assessing written reports.

On the other hand, the requirements differ in different traditions. In hermeneutics for example, there is a focus on perspective, analysis, interpretation and unique knowledge. In the natural sciences, there is an emphasis on research methods and empirical findings that contribute
to theory-building. In praxis-related research, by contrast, there is a focus on context and praxis. What is and what is not good science is a matter of academic dispute especially in forums where researchers from one tradition are required to evaluate the products of researchers in other traditions (Australian Gvt., 2005). Nevertheless, all research reports may be regarded as contributions to a broad discussion about perspectives, research methods, theory of science and our perceptions of the world. It is, however, difficult to identify these contributions when they fall outside the confines of mainstream science and its products. Here, we hope to explicate what some of those contributions might be in relation to research which aims to produce changes in praxis.

**EVALUATING PRAXIS-RELATED RESEARCH**

As Lewin (1946) remarked, research that produces nothing but books will not suffice. He went on to say:

> This by no means implies that the research needed is in any respect less scientific or “lower” than what would be required for pure science in the field of social events. I am inclined to hold the opposite to be true (p. 35).

Heron and Reason (2001) have a similar view. They compare co-operative inquiry with what they characterize as “traditional research”:

> We believe that the outcome of good research is not just books and academic papers, but is also the creative action of people to address matters that are important to them (p. 179).

On this view, praxis-related research should contribute to a better understanding of social reality. But the aim should also be to offer participants opportunities to deal with reality in a better way. That is why the ambition to bring about change should be included in the procedures for evaluation. However, a major problem is to identify a change of praxis in ways that might allow judgements to be made about the quality of the change. What indicators can be used for this purpose?
Every researcher who tries to contribute to social change faces a complex and dynamic world. He or she has to deal with actors and groups pursuing different interests. The field of practice is characterized by complexity, dynamics and uncertainty (Schön, 1983/2003). Kemmis (2005) describes professional practice knowledge using words like dramaturgical, embodied, situated and practical. He emphasizes that we should recognize “knowledge in the face of uncertainty” (p. 404) and that professional practice knowledge is “discursively codified, socially organised and institutionally supported” (p. 409). A social world constructed by practices, habits, cultural traditions, power games and conflicts is hard to grasp with the instruments of “pure science”. In order to form a scientific theory of a particular praxis, many aspects of the specific and contextual elements of praxis must be excluded. It is to be expected, then, that researchers into praxis will produce simplifications, generalisations and explanations which, by nature, cannot embrace all the diversities, uncertainties and contradictions. When people act to bring about social change they do not primarily use scientific knowledge. In our understanding, academic knowledge might be one element on a menu where many other types of knowledge, talents and capacities are important. In order to understand what is happening in a particular field of practice, people use the knowledge they have themselves gained by experience. They use a kind of praxis-knowledge which may be described as authentic, complex and unique. It includes uncertainties and diverse perspectives. In order to know how to act in a particular situation, participants are dependent upon specific and contextual elements, including the contradictions and complexities of everyday life. To act wisely, prudently and judiciously participants must be familiar with the actual situation. These differences between theoretical knowledge and “praxis-knowledge” put the action researcher in a dilemma. He or she will not know in advance what kind of knowledge will come to use when people are inspired to deal with reality in a better way. The nature of any new knowledge to be discovered might emerge only during the process of a R & D project, not before it begins, as is expected in science where the research is framed to test an hypothesis which predicts an outcome already framed in terms of what is known and what should be expected on the grounds of existing knowledge and theory. By contrast, Reason (2006,
p. 187) maintains that action research is so intimately bound up in peoples’ lives and work that it is necessarily an “emergent process”.

Praxis-related research is thus necessarily bound up in the exigencies of everyday life and work, and unfolds in relation to the situation as it is lived and experienced by participants in the situation. The situation is not just, or even primarily, a ‘research situation’. On the other hand, the person involved in praxis-related research does not regard the subordination of the research to the situation as a threat to the quality of the research – it is simply the ‘rough ground’ in which people and groups live and work (Schwandt, 2003, p. 355).

In Figure 1, we propose a number of features which might be important in evaluating praxis-related research. We have used the general requirements of an academic report as a point of departure.

We will now discuss each of these aspects, they are intended as complementary to the general requirements. The two sets are juxtaposed.

INQUIRY CULTURE

A social scientist should raise important questions which might, in turn, contribute to enlightenment. Curiosity, however, is not the sole privilege of scientists. In praxis-related research, social scientists frequently work with participants to create an inquiry culture involving co-researchers and others. In assessing praxis-related research, then, evaluators should take into account the capacity of research to address and involve people inside the situation, though they are outside the academic world.

There are many ways of promoting an inquiry culture. Kalleberg (1989, p. 4) advocates “a question-driven approach”, meaning that research questions should be the driving force in action research. A similar approach is described and analysed by Mattsson (2004). The research
questions might be like snow balls, changing and taking new directions along with the process of research, depending on what answers and what new questions emerge. A snow ball is dependent on ground and climate. Similarly, a researcher should be sensitive to the social environment. He or she should be able to recognize and deal with knowledge interests demonstrated by co-researchers and ordinary people. The participants should have an impact on research questions, methods and interpretation, and on the emerging directions to be taken in the course of the inquiry.

Questions arise about this view, however. Whose curiosity, whose knowledge-constitutive interests and whose impact should be favoured? Are all participants’ interests legitimate in a research project? What happens when the interests of different people or groups differ, or if they collide or conflict?

One solution to this problem is to organize a joint project that enables different actors and participants to satisfy divergent interests. Exchange of knowledge may take place between participants who are stimulated by each other’s curiosity, even though they have different interests. The R & D project might serve as an umbrella, giving shelter to a variety of actors, activities and interests (Mattsson, 2004). Some might look for particular technical and practical solutions; others want to pursue particular political programs, and yet others might search for theoretical knowledge.

Heron and Reason (2001) make a contribution to this topic from another angle. They distinguish different types of inquiry cultures: the Apollonian and the Dionysian. They describe the Apollonian inquiry as “…a more rational, systematic, linear, controlling and explicit approach.” The Dionysian inquiry is described as “…a more imaginal, expressive, spiralling, diffuse, impromptu and tacit approach” (p. 183). They also analyse cultural distinctions in terms of informative and transformative types of inquiry, maintaining that different types of inquiry will generate different kinds of knowledge.
When Carr and Kemmis (1986/1997) analyse emancipatory action research, they too emphasise the importance of an inquiry culture. They talk about “communities of enquirers”:

… emancipatory action research … provides a means by which teachers can organize themselves as communities of enquirers, organizing their own enlightenment (p. 221).

According to Carr and Kemmis, building an inquiry culture in education is not an internal affair for professional teachers. They maintain that enquirers should promote critical reflection among professional teachers but also among people outside the educational system. There is a general obligation for teachers to address issues and audiences outside the school system: “The profession… has a special responsibility to promote critical reflection in society at large …” (p. 222).

In our view an evaluation of praxis-related research should take into account the extent to which the research creates an inquiry culture. A good project should arouse interest among people who are not themselves professional researchers, and, beyond that, should promote inquiry cultures in society at large.

CRITICAL APPROACH

In all kinds of research it is important to clarify the perspective applied. Generally, a critical approach is a mark of quality. Critique, however, can be practised in many different ways. In the academic tradition, research is associated with key concepts like distance and critique, autonomy and friction and universal knowledge. A controversial claim for truth coming from one researcher should be open to question and scrutiny by other researchers who might have to reconsider established ways of looking at things. A critical approach of this kind is supported by the academic seminar. The detached researcher will challenge views and concepts supported by peoples’ experiences of everyday life. That is why the idea of autonomy is important. Due to the frictions and conflicts between new knowledge claims and old established beliefs – a change of praxis may be proposed by the researchers, and be realised in the world beyond the research
setting. In the major academic model for knowledge production, development follows from challenging knowledge claims.

By contrast, Alvesson and Deetz (2000) talk about an approach which is critical, interpretive and empirical. Their idea is that a critical approach will stimulate reflection throughout the process of research. In their view, research provides an impulse for a change of perspective and to emancipation from dominant power structures. They use the term “transformative re-conceptualization” to describe the kind of communication that stimulates the participants to re-conceptualize their realities (p. 160). They state that the researcher can play an important role in this process.

Bradbury and Reason (2001) present yet another position. In their view, a critical approach means that the action researcher supports attempts on part of co-researchers and participants themselves to take a critical stand, seeing the role of the researcher as indirect and subsidiary to the central role of participants. The participants may say “… that was our research and it helped us to see ourselves and our context anew and act in all sorts of new ways” (p. 448). The role of the researcher is to facilitate critical work performed by others. A similar role is described by Fals-Borda & Anisur Rahman (1991) and Mattsson (2001).

Carr and Kemmis (1986/1997) take a still different position, discussing critical praxis as an integrated part of a dialectical process:

A critical social science will be one that goes beyond critique to critical praxis; that is, a form of practice in which the ‘enlightenment’ of actors comes to bear directly in their transformed social action. This requires an integration of theory and practice as reflective and practical moments in a dialectical process of reflection, enlightenment and political struggle carried out by groups for the purpose of their own emancipation (p. 144).

To sum up: a critical approach is a second mark of quality in praxis-related research, although it must be recognised that critique can be interpreted in different ways. This takes us to the issue of theory and praxis.
THEORY AND PRAXIS

Generally, researchers aim to clarify important concepts and relevant theories. Praxis-related research is rooted in critical theory which is one reason for expecting a researcher to clarify the relation between *theory and praxis*. Whose theories underpin what practices? What kinds of theory are they and how do participants express and articulate them? How does the researcher conceive that the project might contribute to changes in participants’ theories and their practices? These questions are problematic. Weiss (1977) argued that the friction between a new and challenging truth claim and a tardy reality leads to change. Grasping the contrasts between what was previously well-known and what was unknown, on the one hand, and what is now known, on the other, is expected to create enlightenment. New knowledge is provocative; that is why people react to new knowledge by changing their ways of thinking and doing things.

Polanyi (1967/1983), Schön (1983/2003) and Carr & Kemmis (1986/1997) have a different view of the relation between theory and praxis. They maintain that theory is inherent in practice. A researcher could, like Socrates, help participants in a certain context to conceptualise and articulate knowledge which is already present in the situation, in the form of their presuppositions and assumptions, and, especially, in the knowledge built up in their taken-for-granted experience. By putting practitioners’ experiences and knowledge into words, researchers and participants together create topics and themes to reflect upon. Conceptualization of tacit knowledge is a research process that follows a very different route from that anticipated in traditional research.

Yet another position is taken by Freire (1973, p. 32) who talks about *conscientização* as a way people can enter into history as responsible subjects. When people are liberated from the “culture of silence” they can bring together and forge knowledge, consciousness and willpower into a collective social force – strong enough to change praxis. This is at the heart of what he described as the “pedagogy of the oppressed”.
Gustavsen (2001) has yet another view. He talks about “a discourse on theory; a discourse on practical action; and a discourse on how to link them” (p. 19). Coming from different discourses, researchers and practitioners meet – or should meet – on common ground, that is, in the mediating discourse. The outcome of such a meeting might be quite different for the researcher compared with the practitioner. Gustavsen emphasises the development of trusting relations between persons and networks. Initiatives and ideas may grow and find social support when people meet. New relationships between theory and praxis appear in a multitude of ways, depending upon the relations between the researchers and practitioners involved and on the kinds of issues being investigated in different ways by different participants in the research process.

To sum up: the evaluation of a praxis-related research project should take into account the various ways that theory might be related to praxis.

**EMPOWERMENT**

Research methods should always be chosen and applied with great care in order to generate new knowledge. Usually a trained researcher is responsible for the methods. In praxis-related research, however, particular methods may be chosen in order to facilitate other people’s participation in the process. The choice of methods is not guided by scientific considerations in a restricted sense; indeed, the choice of methods may be a choice about the empowerment of participants – what methods they will regard as relevant, as generating authentic data that they will regard as compelling, and as likely to contribute to the process of making changes in their praxis.

In many R & D projects, it is an open question how responsibilities and work should be shared among participants. Co-researchers, ordinary people, voluntary organizations, community groups and trade unions are often involved. The epistemological idea is that both knowledge production and attempts to change praxis will be much improved by contributions from many conscientious participants. Fundamental change requires much effort and many talents. Bradbury
and Reason (2001) discuss empowerment as a mark of quality in action research along a similar epistemological line:

A mark of quality in an action research project is that people will get energized and empowered by being involved, through which they may develop newly useful, reflexive insights as a result of a growing critical consciousness (p. 448).

On this view, a good R & D project has the capacity to engage and empower people. It should contribute to self-reliance and it should call forth the participants’ ability to change praxis. If the project is successful, the people involved will come to understand more clearly how established power structures operate to shape their lives, and they may find new ways of eliminating oppression and injustice in their situation. In our view, it is a mark of quality if research inspires people to understand and to challenge established power structures in many different fields. Good research should give people the means to challenge oppressive power structures, and the prudence to do so in ways that preserve participants’ capacities to sustain the struggle against oppression.

The evaluation of a praxis-related research project should take into account the extent to which the project is dynamic and characterised by increased collective self-reliance and empowerment. Does it serve as a catalyst? Does it serve as a point of departure for important processes? Is it linked to other processes where people are trying to bring about a change? Recalling the dictum of Orlando Fals-Borda (1979) that action research aims at investigating reality in order to transform it, Zeichner and Noffke (2001) talk about the catalytic power of research in terms of “catalytic validity”. Referring to Lather (1991) they describe catalytic validity as “the degree to which the research energizes the participants to know reality so they can transform it (p. 319).”

Empowerment and catalytic validity are significant. At the same time, however, attention should be paid to the social and political function of the research methods applied. Empowerment per se is no guarantee of a good project. The research methods used may inspire and empower some groups, while others are alienated. Even if that is not the intention, a
particular R & D project may support established power structures, by increasing the power of groups who are already privileged (Mattsson, 2004). In short, empowerment is an ambiguous phenomenon, and catalytic validity does not by itself guarantee a good project.

To conclude: evaluation of praxis-related research should take into account the degree of empowerment and collective self-reliance realised through the project, recognising that empowerment, per se, is no guarantee of change in the interests of marginalised individuals and groups.

SOLIDARITY

All researchers should respect the research ethics codified in guidelines published by relevant academic authorities. People interviewed or observed should be able to give their explicit and informed consent. Similarly, people subjected to research should be treated with respect and, where they want it, guaranteed confidentiality. Furthermore, the result of a research project should not be distorted; it should not be used in an improper way. More difficult for praxis-related research is the principle of minimisation of harm. While human research ‘subjects’ in traditional research should be guaranteed that they will not be harmed in any way, when participants become researchers or co-researchers in praxis-related research, the same guarantees may not be possible. In this latter case, the key principle is that participation be voluntary, and that participants should be able to withdraw at any time without penalty. If they are voluntary participants in the conduct of the research, including framing research topics and questions, in deciding what data is to be collected, in interpreting and analysing findings, and in deciding what is to be done in the light of this knowledge, then they are implicitly – and should be explicitly – choosing to live with the consequences of their collective action, whether for better or for worse. Of course, it is still reasonable for an experienced social researcher inviting people to participate in such a study, to indicate the kinds of harm that might follow if a project is undertaken, or if certain kinds of data are collected, or if certain kinds of action are taken in different kinds of social situations in which different people’s interests might be differently affected. That is, the
experienced social researcher will have a particular responsibility to think prudently about the nature and consequences of actions that may be taken, though participants themselves must in the end determine where their interests lie and how they will be affected by their actions as participants in the project.

Research ethics, however, is not just a matter of how the researcher relates to people involved in a project or how he or she handles the findings. In praxis-related research, ethics includes a general imperative of solidarity.

Swedner (1996) argues that a researcher, as well as other professionals and citizens, has a general responsibility to contribute to the welfare of humankind. To a great extent, the social world is a result of how people have formed and shaped their reality socially, culturally, discursively, politically, materially and economically. The imperative is that researchers should contribute to welfare in a broad sense. Every member of society should, according to Swedner, be entitled to a good journey through life. This ethical imperative calls for a sense of solidarity between different groups in society. They should all have the opportunity to fare well, and they should help each other to fare well. This is the meaning of welfare (p. 33). On Swedner’s view, welfare includes solidarity and democracy.

This position is complicated in an R & D project, however. In R & D projects, different actors, participants and stakeholders are interrelated and interact in complex ways. The design of the project, the research process and the result may have very different consequences for different groups. People involved may have conflicting views of what the project is and how it affects them and their interests. To whom or to what should the researcher be loyal? Should the research project be particularly arranged to support and extend the best interests of marginalised individuals and groups? Will it in fact contribute to their welfare? Will they be invited to participate in designing the project and the research process? Will they participate in interpreting the results? And how will any results be presented? May findings be questioned by people outside as well as inside the project?
Some of these topics are discussed by Zeichner and Noffke (2001) in terms of “democratic validity”, by which they mean “… the extent to which the research is done in collaboration with all parties who have a stake in the problem under investigation, and multiple perspectives and interests are taken into account (p. 319).”

Democratic validity is important, but we note that “collaboration with all parties” is no guarantee that changes will improve conditions for marginalised groups. The point here is that the evaluation of a praxis-related research project should take into account the ethical issue of welfare, including solidarity and democracy, even though there is no guarantee for achievements.

LIFE EXPERIENCES

In order to fulfil the aims of research it is important to ensure that data and information have been gathered in a proper way and that the empirical field is relevant to the actual project. But the empirical world is not just ‘out there’. The Greek word ‘empeiria’ can be interpreted as ‘experienced’. From a scientific point of view, the empirical world is the world observed through science or, in the case of the lived realities of participants in social life, it is the world they experience; a world experienced through their interpretations and thus through the interpretive categories they use to understand the world. What counts as ‘significant’ experience, however, is more ambiguous. In praxis-related research, life experiences are the basis of the empirical field.

Claims for truth should be based on life experiences that can be characterised as authentic. However, the concept of ‘authentic experiences’ is problematic. It is interpreted differently by different authors. Focusing on actions, events, interventions and relations, the praxis-related researcher often tries to identify experiences that participants regard as significant, meaningful and important. The researcher may search for experiences that could serve as a point of departure for empowerment of participants who otherwise see their shared reality as unproblematic, as “just the way things are”. Freire (1973, p. 114) uses the concept of “generative themes” to describe the point of departure for conscientization, cultural or political topics of significant concern to participants. While the aim of praxis-related research often is to contribute
to improvements in the lives of marginalized individuals and groups, it is nevertheless problematic to decide which experiences are most relevant to this aim. It is a delicate matter to decide which experiences are points of departure for empowerment and which should be set aside.

Kvale (1997) suggests one way to deal with this problem. In discussing ‘communicative’ and ‘pragmatic validity’ (pp. 221-227), he argues that the issue of authenticity must be dealt with by the researcher in dialogue with the participants. Good communication between researchers and participants is a prerequisite for determining the authenticity of participants’ views, insights and perspectives (communicative validity). Moreover, the authenticity of new knowledge should be regarded as valid if it is confirmed by participants in their praxis (pragmatic validity). If new knowledge leads to new actions and patterns of activity, the knowledge is confirmed pragmatically by the participants in praxis. In Kvale’s usage, praxis means “action informed by reflection” (p. 224).

In the view of Habermas (1973), authenticity is a prerequisite for examining experiential knowledge in order to find what is significant:

The claim to authenticity can only be realized in interaction: in the interaction it will be shown in time, whether the other side is “in truth or honestly” participating or is only pretending to engage in communicative action and is in fact behaving strategically (p. 18).

He says that authenticity can only be examined through communicative action, that is, the kind of action that occurs when people interrupt their strategic action to explore the nature and worth of what is happening. In communicative action, participants aim to reach mutual understanding, inter-subjective agreement and unforced consensus about what to do. In Habermas’s view, mutual understanding and the construction of shared meaning is the basis of authenticity, which is both explored and expressed in communicative action. As he says: “…in a process of enlightenment there can only be participants” (p. 40).
Even so, there is still a need to clarify which knowledge interests and which groups should be given preference in a research project, for example, decisions about who should be consulted first, whose problems a project should address, and whose needs should take precedence. Will all influence what life experiences are brought into focus in a research project and thus influence what will be regarded as ‘authentic experience’? Here, Bourdieu’s (1993, 1999) discussion of scientific work and the nature and construction of ‘social fields’ is relevant. He takes a different view, undermining the established conception of authenticity. In Bourdieu’s view, social fields are characterised by conflicts and contests through which the actors involved try to pursue and realize their intentions despite resistance from other groups. A social field exists when groups of people and institutions fight about something of common interest. If there is no battle, there is no battlefield. Bourdieu understands social reality as constructed through conflicts and contests, as are our experiences and conceptions of reality. Bourdieu admits no appeal to a view of authenticity that stands beyond or above this social realm.

In this context, if we understand Bourdieu correctly, the researcher is dependent on his or her own scientific perspective. The key concepts, the research methods adopted and the theoretical position informing the research all have a great impact on the findings. In Bourdieu’s view, the researcher must take the role of an outsider if he or she is to do a proper job. He or she must approach the power game from an external position. The researcher should be involved in an R & D project only in the capacity of being a researcher, that is, with a theoretical knowledge interest. According to Bourdieu, scientific work is a construction which follows rules and methodological principles which can be scrutinized by other researchers. This does not mean that a claim for truth coming from a trained researcher is more authentic or in any way superior to claims coming from other people. The difference is that the result of research may be questioned and scrutinized in an academic field. According to Bourdieu, authentic experiences in social life as well as scientific work should be regarded as social constructions. They are, however, constructed in different fields, following different rules and principles.
In our view an evaluation of a praxis-related research project should take into account the authenticity of the life experiences involved, noting that life experiences can be interpreted in very different ways. From the viewpoint of research or a science of praxis, the interpretation depends to a great extent on the theoretical approach chosen; from the viewpoint of participants, however, we may also want to add that the authenticity of interpretations is constructed through communication (communicative validity) and will be expressed in action (pragmatic validity).

**REFLECTION**

In all kinds of research, it is important to carry out analysis, to contribute to theory and to craft the rhetoric of a research report in a proper way. In most research, logic and rationality takes preference over the ways research relates to the life experience of participants. In praxis-related research, critical reflection is crucial, and it is usually regarded as essential for research leaders to carry out analysis in cooperation with participants. Sometimes the researcher needs to withdraw to reflect in seclusion; sometimes reflection takes place as a collaborative exercise with co-researchers and other participants. A researcher should be able to move between the distant, disinterested approach and a position of engaged involvement with other participants. The idea is that the different approaches and moods, undertaken in tandem, stimulate reflection for both the outside researcher and ‘insiders’.

Some researchers argue that good research requires distance and disinterest. Others suggest that reflection and action should be integrated. Habermas advocates clear thinking that separates three functions: the extension of critical theorems, the organisation of enlightenment, and the conduct of political struggle. On this view, the process of research is regarded as a rather different function from the process of action in the field. Habermas (1973) suggests that action research runs the danger of confusing these functions:

The fashionable demand for a type of “action research”, that is to combine political enlightenment with research, overlooks that the uncontrolled modification of the field is
incompatible with the simultaneous gathering of data in that field, a condition which is also
valid for the social sciences (p. 11).

According to Habermas, science and praxis belong to different fields of activity with
different characteristics. On his view, the production of knowledge takes place in a different
environment and the outcomes of research for science and for praxis should be evaluated on
different premises. Scientists and practitioners live and act in socially constructed realities which
are different from each other. That is why a discourse on theory is different from a discourse on
practice. Criteria to evaluate scientific knowledge differ from those used to evaluate social praxis
and professional skill. Performance, actions and practical work represent another type of
knowledge.

According to Gustavsen, researchers and practitioners can meet in a mediating discourse to
reflect upon their different perspectives vis-à-vis an existing state of affairs. Since they come from
different worlds of discourse, the outcome of such a meeting might be quite different for the
researcher and the practitioner. He writes:

What emerges out of the event is an improved capacity for developing ideas, pursuing them
into action and generally creating a rich landscape of different institutions, organizations and
activities that can enter into fruitful and complementary relationships to each other (p. 22).

Heron and Reason (2001) take a different view. They argue that there should be a close
relationship between researcher and participants throughout the R & D process. They advocate
“co-operative inquiry” as a way to involve all participants in a creative and reflective process that
reduces the distance between researcher and co-researchers/participants:

Co-operative inquiry is a way of working with other people who have similar concerns and
interests to yourself, in order to: (1) understand your world, make sense of your life and develop
new and creative ways of looking at things; and (2) learn how to act to change things you may
want to change and find out how to do things better (p. 179).
Freire (1973), as stated previously, takes a similar view, regarding praxis as a synthesis of action and reflection (p. 63). In his view, action without reflection is activism and reflection without action is scholasticism. He believes that the dialogue between researcher and co-researcher should be based on mutual experiences. When people cooperate in the process of changing reality, they discover new insights into the way their lived realities are constructed. The ideal process builds on a dialogue generating consciousness among oppressed people. Zeichner and Noffke (2001) talk about “dialogic validity” as “… the degree to which the research promotes a reflective dialogue among all of participants in the research” (p. 319).

In our opinion an evaluation of praxis-related research should take into account the degree to which research stimulates a reflective dialogue among participants. This raises the issue of the autonomy and integrity of the researcher. Who is to take ultimate responsibility for the research?

INTEGRITY

All researchers should demonstrate integrity. It is important that the result of research is not biased by the illegitimate interests of particular stakeholders. Generally, the institutional setting for a research project should support the autonomy of the researcher and the research process. Research carried out in collaboration with many other actors risks getting caught in networks and alliances which can obstruct the clear-mindedness and veracity of the research process. This view of autonomy is problematic and ambiguous in relation to praxis-related research. Many action researchers take the view that a researcher should demonstrate solidarity with marginalised groups, on the one hand, while at the same time meeting the requirements of integrity and autonomy.

This ambiguity might be resolved by making an explicit division of labour between the (academic) researcher and co-researchers or participants at the beginning of a project (Mattsson, 2004). On this view, before the project commences, the different kinds of actors involved in a particular R & D project should come to an agreement about their own particular lines of accountability. For example, practitioners could be given major responsibility for initiatives and
activities aiming at developing praxis, while the researchers could be given major responsibility for conducting the research and for its contributions to theory. This division of labour might mean that a researcher would have particular responsibilities for theory, research methods, scientific rigour, maintaining a critical approach, and the production of a research report, while the practitioners have responsibility for maintaining the practical conditions that support their action, for maintaining the coherence and value of practice (judged by the historical consequences of their actions), for maintaining the coherence of the work, and for communicating emerging perspectives to others interested in and affected by their work. This come very close to what Dahlgren (1993, pp. 93-94) describes as “the competence model”: researchers and co-researchers should make contributions according to their specific and different competences. Each actor is expected to act according to their own particular kinds of competence. If conflicts of perspective arise, Dahlgren believes that it is the researcher’s responsibility to facilitate a mutual understanding of the issues at stake. In such a case, the researcher takes the role of mediator, trying to reach consensus on what should be regarded as valuable knowledge in the project.

A different view though is adopted by advocates of “Participatory Action Research (PAR)”. In PAR, the outside researcher might have the role of mentor and advisor to participants, helping out in a process of research initiated and controlled by the people involved. Anisur Rahman (1991) maintains that a trained researcher may play a catalytic and supportive role; the researcher is not in control of the process:

The basic ideology of PAR is that a self-conscious people, those who are currently poor and oppressed, will progressively transform their environment by their own praxis. In this process others may play a catalytic and supportive role but will not dominate (p. 13).

An evaluation of praxis-related research should take into account the issue of integrity and autonomy. Whatever the relationship is between researcher and co researchers, all involved should be aware of the division of labour between outside researchers and insiders, and be
explicit about the role of the researcher in shaping the conduct and outcomes of the research. Nevertheless, it is agreed, the results of the research should not be biased by illegitimate interests.

RELEVANCE

The issue of relevance can be considered from both a short term and a long term perspective. What counts as relevant may also differ depending on whether we take a contextual or an abstract perspective.

Alvesson and Deetz (2000) assert that critical research should be relevant for the participants involved. They maintain that critical research should achieve something that is experienced as relevant to the people involved. Relevance could mean that an R & D-project contributes to solving a current problem, throwing light on a current issue, or better understanding of a problem under study. In evaluating an R & D-project, context should be taken into account. To what extent are the research and its findings context-related? Is the new knowledge applicable? Will it make any difference in terms of action in this setting? To meet the requirements of relevance, the researcher has to be familiar with the particular contexts in which new knowledge is developed.

Relevance may also mean that the project contributes, in a general way, to the development of particular types of competence or capacities among participants. For example, it might contribute to the development of individuals' and groups capacities for organizational and structural change. As a consequence, the project might create conditions that enhance participants’ capacities for solving emerging problems.

Relevance may also be understood in a different sense. In evaluating an R & D-project, it may be important to take into account the degree of engagement of different groups and the extent to which they gain deeper insights into matters of significance in the setting. Participants might acquire new concepts, images or mental maps for addressing unforeseen situations and problems. While sometimes insights of this kind might not be of immediate use, they may be useful in the longer term. In this context, Bradbury and Reason (2001) discuss the value of
conceptual-theoretical contributions in action research, suggesting that an action research project might count as relevant if it develops participants’ capacities to identify and to challenge oppressive structures and ideologies. In such a case, participants might develop enhanced capacities to bring to a shared, public agenda, conflicts which were previously suppressed, thus opening them for collaborative analysis and discussion. Expanding on this theme, they suggest that relevance in the broadest sense may mean that the participants in an R & D-project develop the capacity to build a more democratic society. In their view, this is a broad aim of social research, extending beyond the particular contexts in which a particular study takes place. Similarly, they argue that it is important that social research makes contributions to the fundamental issues of our time. A researcher should be willing to focus on issues currently regarded as important in relation to the general development of society. In this sense, they argue, social researchers should do “significant work” and work that is worthwhile. A work is particularly worthwhile:

…if it moves beyond addressing simply technically-oriented questions towards engagement with emancipatory questions – in which case people’s capacity for asking questions of deeper significance is developed (p. 453).

Reason (2006) regards worthwhile purposes as a prime characteristic of action research, and suggests that research projects and programs in the social sciences should be sites for critical conversations about profound concerns like questions of democracy, race, gender, class, freedom and community.

The question of \textit{relevance} can be answered in many different ways. What counts as relevance may be understood in terms of whether those involved in a project – and those making the evaluation – take a short term or long term perspective, and whether they take a local contextual or a more general societal perspective.
Researchers are generally expected to meet certain standards about the form of academic reports, including precision of argument, quality of evidence, and proprieties about the text of the report (correct and appropriate acknowledgement of sources of ideas and quotations in references) and the like. The research work itself should be conducted in ways regarded as proper in the particular field, and should proceed according to the rules established in the literature and accepted practice of that field. In particular, a research report should be constructed in a way that permits close examination of the quality of the work done. In praxis-related research, however, a formal report of a study might need to be regarded in a broader perspective. A reader of the report should take into account the way findings are communicated, and the degree to which the report contributes to dialogue about key issues within and beyond the particular setting in which the work was done. Does the research contribute to communication about essential and significant issues?

Given the diversity of audiences within and beyond the settings in which the work is conducted, a single study might generate a range of different kinds of reports – some of which may be transient and oral, as distinct from the forms of lasting and written texts expected in most academic reports. It is thus relevant to take into account aesthetic, artistic and dramatic forms that might be used to communicate new insights to particular audiences (Fals-Borda & Anisur Rahman, 1991). Exhibitions, pictures, metaphors and music might be used to raise consciousness and provoke insights into current issues or problems. Humour and satire might be used to bring attention to issues and phenomena otherwise suppressed from public discussion or even from individuals’ consciousness and generally-accepted ways of understanding situations (Alinsky, 1971). Use of the media might also be important in some cases, where researchers, co-researchers and participants aim to bring about more widespread consciousness of issues and more widespread changes of praxis. In praxis-related research, a scientific report may be just one of many contributions to public discourse about a topic or theme of contemporary significance.
As with the question of relevance, communication can be understood from both shortterm and long term perspectives, and from the perspective of immediacy within a setting to more widespread and general contributions to debate. Scientific reports generally tend to take an abstract and universalising perspective, regarding as most worthwhile those communications which address the informed and often elite audience of the relevant scientific community, couched in the specialist discourse of the field, and as a contribution to be judged in terms of whether findings make an enduring contribution to the theoretical knowledge accumulated in the field over long histories of scholarly debate. By contrast, praxis-related researchers might make contributions that are powerful, compelling and life-changing for people and praxis both in a local situation and beyond the local setting in relation to issues confronted in a wider society. As mentioned, in such a spirit, Bradbury and Reason (2001, p. 452) maintain that “engaging in significant work” is a key quality of action research. So is “engagement with emancipatory questions”.

This view has a long history in critical social science and some forms of participatory action research (Freire, 1973; Carr and Kemmis, 1986/1997; Kemmis and McTaggart, 2005). On this view an R & D project may aim to contribute to emancipation. If guided by an emancipatory intent, local attempts to bring about a change of praxis are seen as opportunities to connect profoundly with participants’ experiences of everyday life, on the one hand, and, on the other, with fundamental social problems and issues of our time. To be communicative in these terms, the research must address significant issues, and the research process must encourage people to engage with profound social issues.

An evaluation of praxis-related research should take into account both the form and the matter of communication, and understand communication in relation to different kinds of audiences, in relation to short term and long term perspectives, and in relation to local and general forums – not just in terms of contributions to scientific communities but also in relation to wider public debates.
TRUSTWORTHINESS

There is a general expectation in science that all scientific claims for truth are open to, and indeed that they should be subjected to, rigorous critical examination. The key concepts used in evaluating the quality of evidence are “validity”, “reliability”, “replicability of results”, and sometimes “rigour” (in terms of the chains of logic linking evidence, scientific procedures and arguments that lead to truth claims). The use of these concepts in the social sciences is saturated with associations to the natural sciences and to an epistemology shaped by the intellectual traditions of empiricism and positivism, which in turn connect with technical rationality as the interest that gives point and purpose to science (what Habermas describes as a technical knowledge-constitutive interest). While questions of evidence and truth are relevant in praxis-related research, other questions also arise because social phenomena are not solely based in a material reality but are socially-, historically- and discursively-constructed and involve matters of individual and group interpretation – among the features that distinguish the social from the natural sciences. Thus, what counts as rigour and quality in praxis-related research goes beyond the conventional view of the quality of research.

In qualitative research, “transparency” may be an alternative to a concept like replicability of results. Transparency means that the reader should be able to see how the research has been carried out and on what grounds the scientific claims are made. Using qualitative research as a frame of reference, Reason (2006, p. 187) argues that action research is characteristically full of choices and that “… quality in inquiry comes from awareness of and transparency about the choices available at each stage of the inquiry.” On Reason’s view, the action researcher is required to be explicit about his or her choices. In their discussion of practitioner research, Zeichner and Noffke (2001, p. 319) offer trustworthiness as an alternative to “validity”, arguing that practitioner research is based on relationships, and, as a consequence, the research is valid and reliable if the persons involved are trustworthy.

As indicated earlier, Kvale (1997) proposed the notions of communicative validity and pragmatic validity as touchstones in social research. He argues that what is and is not to count as
valid knowledge is a matter for discussion with people involved in the research process (communicative validity), and a matter to be explored in terms of whether people change their praxis in the light of new knowledge (pragmatic validity). Neither of these forms of validity can be established in the abstract or solely by reference to external criteria about the quality of measurements or procedures for collecting evidence. The notion of pragmatic validity is based on the idea that action speaks louder than words. The Aristotelian concept of phrónēsis – meaning prudence or practical wisdom – is important in this context. What counts as new knowledge may be important, but even more important is whether the knowledge is sufficient to produce a change in praxis. The focus in praxis-related research should be on how knowledge is practiced. Whatever procedures are chosen to ensure validity, transparency, trustworthiness or pragmatic validity, it is reasonable that co researchers and participants are involved in the evaluation. The issue of validity in social research should not be the sole preserve of scientists if their assessments are completely confined by academic criteria. Today, there is a widespread uncertainty about how to understand our world and how to act in it. This uncertainty includes many ethical dilemmas which should be resolved in public and democratic dialogue between people with different knowledge interests (Habermas, 1973; von Wright, 1995; Bauman, 1998). Dahlberg, Moss and Pence (1999) go further along that line saying that

From a postmodern perspective, there is no absolute knowledge, no absolute reality waiting ‘out there’ to be discovered. There is no external position for certainty, no universal understanding that exists outside history or society that can provide foundations for truth, knowledge and ethics. Instead, the world and our knowledge of it are seen as socially constructed and all of us, as human beings, are active participants in this process… (p. 23).

In our understanding, there is an argument that conventional standards for assessment of quality in science should be set aside, or at least confined to the matters about which conventional scientific criteria are appropriate – matters which are internal to one form of science but may reasonably be regarded as external to the life experiences of participants in the research situation. Questions of validity arising in relation to life experience must be addressed using other
approaches, in particular, dialogue between the various people and groups involved about what is meaningful, and how new meanings can be constructed through collaborative processes of research and interpretation. On this basis, established understandings of validity, reliability and rigour will be replaced by searching for meaning in a deeper sense.

To sum up: an evaluation of praxis-related research should note that questions of validity, reliability and rigour are addressed in different ways in different fields of science (especially the natural versus the social sciences) and that questions of trust and meaningfulness may be at least as important to participants as are questions of validity, reliability and rigour within the communities of practice of conventional science.

A CHANGE OF PRAXIS

The aim of praxis-related research is not merely to acquire new knowledge but also to contribute to a change of praxis. This is pursued by involving not only a researcher and some co-researchers, but also a range of other participants that might be affected by praxis in a particular setting. Central to this is the idea that humankind changes the world and that the world changes humankind in a dialectical process of mutual constitution. It follows from this that praxis-related research should leave traces not only in the academic world but also in the world of practitioners. Research, generally, uses a range of recognized procedures to assess the quality of research qua research, but what indicators may be used to assess a change in the practical world of human affairs? How can a change of praxis be identified?

The issue is complex. Is it possible to determine with any degree of precision how individuals, processes and structures are changed by a particular R & D project? Zeichner and Noffke (2001) address this problem in terms of “outcome validity”, meaning “… the extent to which actions occur that lead to a resolution of the problem under study or to the completion of a research cycle that results in action (p. 319).”

As already indicated, Kvale (1997) proposed the notion of pragmatic validity for a similar purpose. His general idea is that the actions and patterns of action which follow as a result of
new knowledge give evidence of the validity of new knowledge. If praxis is action informed by
reflection, then changes in action that flow from new knowledge suggest that participants have
themselves been changed by that knowledge, and that they regard it as compelling for them.
They expect to evaluate their actions and the consequences of their action against the insights or
new perspectives they have developed through the research process. Focusing on how people
have changed their actions in the light of new knowledge allows an observer to say something
about the nature and effects of their new knowledge.

Attractive though this view may be, it may still underestimate the complexity of the situation.
It appears to assume, first, that actions are the consequence of knowledge and intentions in the
minds of actors (Hindess, 1977; Kemmis, 2005), and second, that the changes are evident in the
actions of those actors as individuals. Understanding the consequences of changes in knowledge
and the nature of changes in a practical field or situation is by no means straightforward.
Different actors may be active, making particular contributions in different fields of activity, with
reverberating effects on other actors. For example, some effects may be evident in discourses
used in the situation, others may be evident in changes in how things are done in a material sense,
and still others may be evident in changes in the ways people relate to each other. Zeichner and
Noffke's 'outcome validity' and Kvale's 'pragmatic validity' may appear straightforward, but
reading them in the real setting of an R & D project will require close communication with
individuals and groups in the setting. The judgement that a change is the result of knowledge
that has 'outcome validity' or 'pragmatic validity' for these or those particular actors will depend
upon whose perspectives are regarded as relevant, and whose views are to be regarded as pre-
eminent on a particular issue or at a particular time and place. Moreover, the judgment may vary
depending on whose theory or whose perspective on the situation is chosen to serve as a frame
of reference.

Furthermore, it is difficult in general to determine what changes of praxis follow as a result
of an R & D-project and which are the results of other circumstances. In this context, Bourdieu
(1993, 1999) refers to habitus or sedimented intentions, frames of reference that are concealed in
social fields and in peoples’ cultures and actions (Broady, 1991). Such frameworks are recurrent, and may be activated only in particular circumstances. Bourdieu’s concept of habitus (acquired patterns of dispositions to act in particular ways in particular situations) includes actions informed by reflection as well as actions which merely express inveterate habits. Local cultures composed of such sedimented intentions may predetermine peoples’ actions and their understanding of these actions, and to an indeterminate extent influence whether and how a particular R & D project affects praxis in that setting (Mattsson, 2004).

While we may regard ‘outcome validity’ and ‘pragmatic validity’ as useful concepts in the evaluation of praxis-related research, then, we may also wish to note the indeterminacy that necessarily surrounds their use, especially when we are considering R & D projects that change minds and intentions in different people and groups in different ways and to different degrees, and when we consider the reverberating social, cultural, discursive and material effects of changed knowledge in the life experiences of people and groups. Bourdieu’s notion of ‘habitus’ puts the action researcher in a dilemma. If intentions are immanent in the history of social life and culture in a particular setting, there is no direct relationship between individual aspirations and ‘outcomes’. On this perspective, we once again observe the dialectic of the individual and the social at work: people changes praxis which, in turn and often indirectly, changes people.

We conclude that even when complementary and alternative indicators are brought into the assessment of praxis-related research, there will be uncertainty about the nature and quality of the research, and about the extent to which the research was responsible for producing any observed changes in praxis, as well as about the nature and quality of the change in praxis itself. Those who set out to evaluate R & D projects must expect to confront these uncertainties and indeterminacies as inevitable and ubiquitous features of the relationship between research and development.
CONCLUSIONS

As we have demonstrated even when complementary and alternative indicators are brought into the assessment of research, there will still be room for a great deal of uncertainty. One solution to this dilemma is offered by Aristotle, who famously remarked that “one swallow does not make a summer”. He means that we must look at a complete lifetime to be able to say if a person has lived a blessed and happy life. In the footsteps of Aristotle, Kemmis and McTaggart (2005) argue for a contextual and historical approach to the issue of quality in research. They argue that participatory action research should be judged by its historical consequences, and pose a question about the wider, perhaps global, significance of local and immediate changes made by participants: “These people might not have changed the world, but they have changed their worlds. Is that not the same thing? (p. 600).”

Of course judging the outcomes of R & D projects, including those employing participatory action research approaches, in terms of longer term historical consequences also expands the scope of uncertainty and indeterminacy. As history unfolds in the setting beyond the life of any project, new influences come to bear, and the traces of old ones may be worn away or may persist and even amplify. It may not be possible to tell which of these is the case in evaluating a particular project.

We have argued that conventional criteria for evaluating research may be too constrained to capture the nature, quality and effects of an R & D project, or praxis-related research in general. Conventional criteria appeal to an abstraction about what good science is. On the other hand, we have suggested that an appeal to history as the criterion by which to judge the nature, quality and effects of a particular R & D project is, in the end, similarly inadequate. Instead, we hope to have shown that different criteria are appropriate in judging the quality of science (against the conventional criteria for science and its contributions to theoretical knowledge) and the quality of changes in praxis. Each has its own strengths and weaknesses, its own difficulties in laying claim to some singular truth that stands above the different contexts in which R & D projects are judged – the world of science as distinct from the world of human affairs.
Thus, as our title suggests, praxis-related research serves two masters: very often, R & D projects aim to make contributions to social science; generally, they also aim to make contributions to the world of human affairs. Different criteria are appropriate for judging each.

In some advocacies, social researchers propose that the conventional criteria of scientific research must be entirely abandoned in the case of social research, qualitative research and action research. We strongly favour the argument that the social and natural sciences are not the one species of science, and that different criteria are appropriate for judging scientific research in the social and natural sciences. On the other hand, we believe it is reasonable to “render unto Caesar the things that are Caesar’s, and to God the things that are God’s” (Matthew 22: 21). That is, it is reasonable to account to a scientific community for the value of research in scientific terms, and to account to participants in a social setting and to a wider public in the world of human affairs in terms appropriate to them. In Figure 1 we have attempted to clarify the different terms in which each of these accounts might be given.

Our discussion of these criteria may be of practical value and significance not only in research councils where there is sometimes confusion about how to evaluate the quality and contributions of R & D projects, including various forms of social research, qualitative research and action research. Our suggestion is that such councils should evaluate the quality of such projects in relation to both sets of criteria, to discover the extent to which a project contributes both to science and to society, to estimate the balance and significance of both kinds of contributions, and to decide whether, in the end, a project might be worth doing because it makes a significant contribution to human affairs even if its contribution to science might be less than in some other kinds of scientific work.

In addition to contributing to the determinations of research councils, however, our discussion here might also be of use in evaluating R & D projects undertaken by students in various kinds of courses, and especially in the context of courses aimed at preparing or developing people for professional practice. Examinations of students preparing for professional practice, including at advanced levels, frequently place greater value on criteria like those outlined
in our account of the general requirements of a scientific research report than on the contribution of a project to the development of professional practice, either the professional practice of the candidate (or upgrading professional) or the professional practice to be observed in the setting in which an R & D project is undertaken. Here, we believe, there is room for a much more substantial interrogation of candidates and their work in relation to the criteria we have outlined for praxis-related research, and for assessing the quality of their work in terms of these criteria in relation to their own practice and in relation to changes in professional praxis in the professional and community settings in which professional experience is developed and R & D projects are undertaken for theses and dissertations.

We believe that there may also be interest in our discussion among those whose principal interest is in conventional scientific research. Often, and to a degree that scientists themselves may not suspect, contributions to ‘science’ and to theory are not only to bodies of scientific literature but, rather, to the conduct of scientific work in communities of practice in the different fields and disciplines of science. That is, particular studies may aim to contribute not just to the findings in a field, but also to the praxis of science. If so, their contribution to scientific praxis might better be judged by reference to the aspects we have outlined for praxis-related research than by reference to the general requirements of an academic report. When it comes to changing the scientific praxis of a particular scientific community of practice, concepts like ‘inquiry culture’, ‘critical approach’, ‘theory-praxis’, ‘empowerment’, solidarity’, ‘life experiences’, ‘reflection’, ‘integrity’, ‘relevance’, ‘communication’, ‘trustworthiness’ and ‘change of praxis’ might be as important as the general criteria used for judging contributions to knowledge in the sense of ‘knowledge about’ the field. As practising scientists know, knowledge of a field includes more than knowledge about the objects of the field. Knowledge of the field includes knowledge of the craft of science. But it is also knowledge of the social field of science in a particular field, insider knowledge about the way a particular scientific community of practice operates, about its dynamics and power-plays, about alliances and conflicts, heroes and villains. The stories of science include not only accounts of diligent and conscientious scientific work eventually yielding
knowledge of great value, but of people who ‘made it’ despite the odds, of cartels that favour work of certain kinds or in certain sub-fields and specialisations, of national priorities that skew the economics of scientific work, of celebrities, rewards, prizes – and of scientific heroes who have fallen like Icarus in the glare of scientific celebrity. In developing knowledge about the social field and praxis of science, our criteria for praxis-related research may prove useful, and may help to make more transparent those aspects of science (by which we mean much more than the dry ‘logic of discovery’) that constitute the work of science – scientific praxis.

Finally, however, we would wish to reiterate that R & D projects, and praxis-related research in general, should be judged not solely against the conventional criteria for scientific research reports, though those may be relevant. They should also be judged against criteria related to praxis and the social settings in which praxis occurs. We hope the criteria we have proposed here make some small contribution to the debate about how praxis-related research might best be evaluated.
REFERENCES


