Action Research in Human-Environment Studies

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This paper describes the process of action research as a new “participatory paradigm” of social research and discusses how its principles can be applied to the field of human-environment studies, and in particular the sub-field of community studies. The first section defines action research and introduces a typology of its main types of inquiry. The second section compares and contrasts the participatory paradigm to the traditional paradigm of social science research, and the third section discusses recent attempts to incorporate the concepts of the action research participatory paradigm into the field of human-environmental studies and suggests changes that should be made in our thinking if we are to truly realize a participatory paradigm in the field.

Keywords: Action Research, Community, Human-Environment Studies, Participatory Paradigm

1. Introduction

The broad field known as human-environment studies includes a wide variety of academic disciplines and perspectives, including architecture, environmental psychology, sociology, anthropology, and community studies. Some of these disciplines have long-standing histories and traditions of research, while others have no such traditions and thus tend to borrow and emulate other disciplines as they develop. For example, it is not uncommon for researchers with backgrounds in design, architecture, environmental psychology, or sociology to contribute to the more recent discipline of community studies (see Sanoff, 1984 and 1990, for design; Wates & Kneivit, 1987, for architecture; Altman & Wandersman, 1987, for environmental psychology and sociology; and see below for further discussion on community studies). In such cases, it naturally follows that the established methods and procedures for the researcher’s respective field of training will be followed. However, from the perspective of such recent disciplines like community studies, are traditional methods and procedures that have evolved through other disciplines truly the best way to go about planning and conducting research? This paper examines the nature of community studies as a unique endeavor that requires both participation within and understanding of the communities involved in the research project and suggests the action research paradigm as a more productive and successful way of conducting research for the purpose of realizing the potential for long-term change in communities.

Basic Definitions of Action Research

There is not one agreed upon definition of “action research.” The term was originally coined in English by social psychologist Kurt Lewin (1946), who described it as proceeding in a spiral of steps, each of which is composed of planning, acting, observing, and evaluating the result of the action performed. Central to Lewin’s idea is the cyclical nature of the research process, for he recognized that real social situations are complex and that therefore it is impossible to anticipate beforehand all that needs to be done. Thus, the cycle of action and reflection was included to allow for changes in plans for action as group members learned from their experiences. It was Kurt Lewin who brought social experiments to a new level by designing them to achieve a specific social outcome, and he is credited as the originator of some well-known phrases in the action research field, such as “The best way to understand something is to try to change it,” and “Nothing is as practical as a good theory.”

According to McTaggart (1997), who prefers the term “participatory action research,” the process of action research begins with a general idea among a group of people that some kind of improvement or change is desirable. Next, in order to decide where to begin making such improvements, the group identifies an area where the members perceive problems of mutual concern. The group then decides to work together on that “thematic concern.” As he summarizes, “action research is the way in which groups of people can organize the conditions under which they can learn from their own experience and make this experience accessible to others.”

Stated most succinctly, however, the two words refer to the combination of three elements: research, action, and participation. That is, action research seeks to generate
knowledge claims for the express purpose of taking action to promote social change and social analysis. Further, it aims to increase the ability of the members of a particular community or organization to control their own destinies and to keep improving their capacity to do so (Greenwood & Levin, 1998).

The Major Types and Characteristics of Action Research

Just as there is no single definition of action research, there are also a number of types of action research, each depending largely on the respective assumptions and expectations of the participants regarding the research project, the social and political relationships among the participants, and the degree of collaboration and the nature of the participation (Wortley, 2000). That is, the power relationships surrounding the participants are what determine the type of action research. Historically, however, there seem to be three major types of action research: technical, practical, and empowering (Grundy, 1982; Masters, 2000; Wortley, 2000). In technical action research, which is perhaps the oldest form of action research popularized by Lewin in the 1940s, the goal of the research is to test a particular intervention based on a pre-specified theoretical framework. The researcher identifies the problem and works with a practitioner to implement the intervention (Masters, 2000). In practical action research, the researcher and practitioner (or practitioners) work together from the beginning to identify potential problems, their possible causes, and the appropriate interventions. The goal is to improve actual professional practice through the combined knowledge of the participants (Grundy, 1982). The third type, or empowering action research, according to Grundy (1987, as cited in Masters, 2000), "promotes emancipatory praxis in the participating practitioners; that is, it promotes a critical consciousness which exhibits itself in political as well as practical action to promote change." There is less of a distinction between "researcher" and "practitioner," and all participants can be considered "co-researchers." Table 1 shows how these three types compare with regard to research relationships and degrees of collaboration.

2. Traditional Social Science and Action Research

Traditional Social Science Research Paradigm

For most of the twentieth century logical positivism has been the dominant social science paradigm (Patton, 1990). Indeed, of the three types of action research described above, technical action research is largely based on the foundations of positivism. This paradigm is based on the belief that in the world there exists an objective reality, and it is the duty of the researcher, through testing rival hypotheses, to uncover that reality through inductive logic. Popper has influenced this paradigm greatly with his concept of falsifiability. Falsifiability refers to altering the positivist way of thinking from that of testing the verifiability of systems to one where the falsifiability of systems is tested. Or, to put it in Popper's words, "It must be possible for an empirical scientific system to be refuted by experience" (Popper, 1959: 41).

However, in recent years there have been a number of challenges made to the traditional positivist paradigm by more recent paradigms, such as post-positivism, critical theory, and constructivism, which place more emphasis, to different degrees, on the more subjective or relativist qualities of social interactions and research activities (Guba, 1990). These perspectives are more concerned with understanding behavior as it is experienced by humans (Patton, 1990). Thus, the scientist is required to become more active and personally involved in research.

Emancipatory Action Research and the New "Participatory Paradigm"

On the surface, it would seem that the traditional label of "applied social science" would also apply to action research and that it would fall neatly into one of the paradigms of social research listed above. However, that is not the case. To term a particular type of research as "applied" implies that it is conducted separately from "pure" research. In action research, however, this distinction is rejected in favor of the pursuit of "valid knowledge" (Greenwood & Levin, 1998) in whatever forms it may take.

### Table 1

<table>
<thead>
<tr>
<th>Research Type</th>
<th>Technical</th>
<th>Practical</th>
<th>Emancipatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant</td>
<td>Experimenter/Respondents</td>
<td>Practitioner/Collaborators</td>
<td>Co-researchers/Co-change</td>
</tr>
<tr>
<td>Relationships</td>
<td>(Differentiated Roles)</td>
<td>(Merged Roles)</td>
<td>Agents (Shared Roles)</td>
</tr>
</tbody>
</table>

(adapted from Wortley, 2000)
Similarly, it would also appear that action research would fall under the umbrella of what is popularly called “qualitative research,” but action research does not, and should not, consist of qualitative methods only. Depending on the group’s goals and the nature of the research project itself, action research endeavors may include surveys, statistical analyses, interviews, ethnographies, or any other method or technique that is deemed appropriate at the time.

Thus, action research as a type of social science does not lend itself to being accurately understood in terms of traditional categories or dichotomies such as “pure-applied,” or “qualitative-quantitative,” or even in terms of one of the more recent research paradigms listed above. This is because a true understanding of the goals of action research requires the advancement of an entirely new research paradigm. That is, in order to truly understand the goals of action research and its participatory methodology, one must first understand its participatory worldview.

This participatory worldview, or paradigm, takes participation as a way of life and a matter of principle. According to Peter Reason, one of the most prominent proponents of this paradigm, the central agenda of human inquiry may be stated as:

an approach to living based on experience and engagement, on love and respect for the integrity of persons; and on a willingness to rise above presupposition, to look and to look again, to risk security in the search for understanding and action that open possibilities for creative living (Reason, 1994: 9; as quoted in Greenwood & Levin, 1998: 203).

This paradigm of action research centers on solving real-life problems, and the focus of the inquiry is determined by what the participants themselves consider to be important. Thus it rests on a pragmatic philosophy, one in which the results of the actions are evaluated in terms of the workability of the solutions tried. Workability refers to whether or not a solution resolves the initial problem (Greenwood and Levin, 1998).

Table 2 shows how the participatory research paradigm compares and contrasts to the traditional positivist paradigm regarding a number of key issues such as the nature of knowledge, how knowledge is accumulated, what makes research “good” or of high quality, whether values are included or excluded from the research process, the ethical stance of research, the inquirer’s (researcher’s) posture, researcher (participant) training, axiology (value judgments), orientation toward action, control of the research situation, considerations of validity, and issues of voice in the research process and its product.

3. Realizing the Participatory Paradigm in Human-Environment Studies

In the broad field of social science research known as human-environment studies, the participatory action research paradigm has yet to be adopted in any large-scale way, though there have been attempts to introduce its concepts into a number of smaller sub-disciplines (See Churchman, 1987; Edelstein & Wandersman, 1987; Flynn, et al., 1994; Lykes 1993 and 1997; Montero, 1994; and Chataway, 1997, for applications in community studies; See Sommer, 1987, and Clark, 1972, for applied behavior science; See Foster, 1972, for organizational studies). For example, in the field of environmental psychology, Sommer (1977, 1987) has made a strong case for Lewin’s model of action research as being appropriate for environmental studies contexts:

I believe we could do no better than design graduate programs to produce Lewin’s ... brand of action researcher-psychologists who undertake research on important social problems ... and then apply their findings to improve social institutions, while monitoring and documenting the process (Sommer, 1977: 201).

Action research has also been granted its own chapter as a separate approach to behavioral research in a recent text covering the various approaches in the field (Sommer & Sommer, 2001).

Moreover, action research has been suggested as a valuable approach in the fields of environmental design and environmental programming. Weisman notes:

The action research model can contribute a sense of overall direction and guidance regarding the selection and sequencing of programming operations ... an action research perspective would serve to establish a key role for user participation within the environmental programming process (Weisman,
Table 2
Positivist and participatory paradigms compared on selected issues
(adapted from Tables 6.4 and 6.5 of Lincoln & Guba, 2001).

<table>
<thead>
<tr>
<th>Issue</th>
<th>Positivist Paradigm</th>
<th>Participatory Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of Knowledge</td>
<td>Verified hypotheses established as facts or laws</td>
<td>Extended epistemology; primacy of practical knowing; critical subjectivity; living knowledge</td>
</tr>
<tr>
<td>Knowledge accumulation</td>
<td>Accretion—&quot;building blocks&quot; adding to &quot;edifice of knowledge&quot;; generalizations and cause-effect linkages</td>
<td>In communities of inquiry embedded in communities of practice</td>
</tr>
<tr>
<td>Goodness or quality criteria</td>
<td>Conventional benchmarks of &quot;rigor&quot;: internal and external validity, reliability, and objectivity</td>
<td>Congruence of experiential, presentational, propositional, and practical knowing; leads to action to transform the world in the service of human flourishing</td>
</tr>
<tr>
<td>Values</td>
<td>Excluded-influence denied</td>
<td>Included-formative</td>
</tr>
<tr>
<td>Ethics</td>
<td>Extrinsic-tilt toward deception</td>
<td>Intrinsic-process tilt toward revelation</td>
</tr>
<tr>
<td>Inquirer posture</td>
<td>&quot;Disinterested scientist&quot; as informer of decision makers, policy makers, and change agents</td>
<td>Primary voice manifest through aware self-reflective action; secondary voices in illuminating theory, narrative, movement, song, dance, and other presentational forms</td>
</tr>
<tr>
<td>Training</td>
<td>Technical and quantitative; substantive theories</td>
<td>Co-researchers are initiated into the inquiry process by facilitator/researcher and learn through active engagement in the process; facilitator/researcher requires emotional competence, democratic personality and skills</td>
</tr>
<tr>
<td>Axiology</td>
<td>Propositional knowing about the world is an end in itself, is intrinsically valuable</td>
<td>Practical knowing about how to flourish with a balance of autonomy, cooperation, and hierarchy in a culture is an end in itself, is intrinsically valuable</td>
</tr>
<tr>
<td>Action</td>
<td>Not the responsibility of the researcher; viewed as &quot;advocacy&quot; or subjectivity, and therefore a threat to validity and objectivity</td>
<td>Intertwined with validity; inquiry often incomplete without action on the part of participants; constructivist formulation mandates training in political action if participants do not understand political systems</td>
</tr>
<tr>
<td>Control</td>
<td>Resides solely in researcher</td>
<td>Shared to varying degrees</td>
</tr>
<tr>
<td>Extended considerations of validity (goodness criteria)</td>
<td>Traditional positivist constructions of validity; rigor, internal validity, external validity, reliability, objectivity</td>
<td>See “action” above</td>
</tr>
<tr>
<td>Voice, reflexivity, postmodern textual representations</td>
<td>Voice of the researcher, principally; reflexivity may be considered a problem in objectivity; textual representation unproblematic and somewhat formulaic</td>
<td>Voices mixed; textual representations rarely discussed, but problematic; reflexivity relies on critical subjectivity and self-awareness</td>
</tr>
</tbody>
</table>
Thus, from the perspective of environmental programming, the overall sense of direction and sense of user “ownership” that the incorporation of action research allows should be very important to the success of the design process.

In his work in the area of community design, Sanoff has relied heavily on the principles of action research:

participation becomes a central component of the research approach where the users of the place being studied become active participants in the research. The users are involved in evaluating the research results and developing recommendations on how to address problems that have been identified... This approach offers designers who are concerned with user needs a new set of tools. These social science tools not only provide the designer with a deeper understanding of the human condition, but an opportunity for engaging in an effective dialogue with people who use the environment, since more casual methods typically reveal what is obvious and traditional research approaches tend to generalize people’s requirements (Sommer, 1990: 1).

Of the research in community studies to receive attention in the environment-behavior field, Churchman (1987) has examined the proactive role that neighbors can take in revitalizing neighborhoods through citizen participation and citizen partnerships with governments, while Edelstein and Wandersman (1987) have used a framework of citizen participation in community organizations to explore how residents join forces to deal with environmental toxic waste.

In order for action research to really take hold in any branch of human-environment studies, however, there first needs to be a clear and definite explication of the action research paradigm as a truly unique and independent research paradigm that does not fall under any other previous paradigm. In the following paragraphs, the traditional concepts of “generalizability,” “knowledge,” and “researcher skills” are reconsidered in light of this new action research paradigm.

From Generalizability to Transference

In place of the traditional (positivistic) concept of generalizability, in which useful knowledge gained from research is defined as being able to be abstractly “generalized” to all other similar cases, the action research paradigm strives for the “transferability” (Guba, 1990; Lincoln & Guba, 1985) of the knowledge gained through its projects. The transferring of knowledge from one context to another requires the understanding of the contextual factors of the situation where the initial inquiry took place, actively judging the new context where the knowledge is to be applied, and then making a critical assessment of whether or not the two contexts have enough characteristics in common to warrant such a transference of knowledge. In other words, the act of transference is an active process that requires the subjective judgments of the people involved.

Changing the Nature of Knowledge

Action research values both “local” knowledge and “professional” knowledge, attempting to bridge them together through a process of “co-generative” research (1998, Greenwood & Levin). Local knowledge refers to the knowledge that people in the community or organization have, while professional knowledge refers to the professional social research knowledge that is brought to the research situation by the researchers. Through mutual cooperation and constant dialog between the professional researchers and the local participants, project members can gain very real, practical, and specific understandings through their actions, as well as be able to reflect upon those actions. Even though this type of knowledge is usually different from the typical types of knowledge used to develop scientific theories, their co-generative property of the action research process allows for the creation of both new local knowledge and new scientific understandings. Thus, for the action researcher, the most “valid” and useful knowledge is not objective knowledge that can be manipulated and synthesized outside of local contexts, but rather the context-bound local knowledge that often has a complex narrative structure. Action research strives to examine the extent and ways local knowledge can be mobilized, relied on, acted on, and interpreted, and to learn how research results based in part on local knowledge can be communicated and contextualized effectively beyond local situations where it was generated.

Stance of the Researcher: The Friendly Outsider

Action researchers believe that those who face social problems already possess much of the information as well as the analytical skills necessary to solve them. Therefore they value the knowledge of local people much more than do
conventional researchers and are skeptical about the overpowering of professional knowledge over all other forms of knowing. Action researchers also believe in the value of shared decision making among all members of the research project, and they believe that research results should be used firstly for local people to gain increased control over their situations and secondly for the larger, more general research community. For these reasons action researchers must have an attitude of openness toward the future and be able to consider both the possible and the actual aspects of situations (Greenwood & Levin, 1998). Therefore a core belief in action research is that there are always more possible futures than appear at first to be open, and that other, possibly more desirable, futures may be available.

Table 3 summarizes 10 characteristics of the researcher in the participatory paradigm and contrasts them with the characteristics normally valued in the conventional social science researcher. Because of their orientation toward processes, action researchers are more concerned with figuring out "how" something is occurring than with determining "what" is happening in a given situation. As for the scientific method, action researchers must also strictly adhere to its principles because the results of their projects are by nature immediately applied to local situations, and therefore the cost of not being successful, or "rigorous," is much greater than in conventional research.

Regarding the role of the researcher in a project, action researchers take on the position of "coach," working with the other co-researchers and providing professional knowledge or advice when necessary. Conventional researchers, on the other hand, are expected to assume the role of "boss," thereby dictating how the research project should be carried out and controlling its direction. Accordingly, the basic outlook of the action researcher (coach) is one of optimism and

<table>
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<tr>
<th>Table 3</th>
<th>Traits and skills of the action researcher as &quot;the friendly outsider&quot; compared with the conventional social science researcher.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action Researcher</strong></td>
<td><strong>Conventional Social Science Researcher</strong></td>
</tr>
<tr>
<td>2. Use of Scientific Method: Extremely important because of local nature of results and their subsequent application</td>
<td>2. Use of Scientific Method: A necessary standard, but only leads to universal application and not tied to local situations/conditions</td>
</tr>
<tr>
<td>3. Role as &quot;coach&quot; of research project</td>
<td>3. Role as &quot;boss&quot; of research project</td>
</tr>
<tr>
<td>4. Basic Outlook: Optimism and self-confidence with regard to researcher’s power to change local situation/condition</td>
<td>4. Basic Outlook: &quot;Unruly&quot; world must be brought under rational control</td>
</tr>
<tr>
<td>5. Must be risk taker</td>
<td>5. Must avoid risks as much as possible</td>
</tr>
<tr>
<td>6. Playful personality; makes use of irony and humor in research activities</td>
<td>6. Serious personality; values objectivity and self is not to be reflected in research</td>
</tr>
<tr>
<td>7. Incorporates reflection-in-action &amp; reflection-on-action (Schon, 1983)</td>
<td>7. Doesn’t incorporate active reflection into research process</td>
</tr>
<tr>
<td>8. Actively seeks out local knowledge as elements of the research process</td>
<td>8. Does not incorporate local knowledge into research project</td>
</tr>
<tr>
<td>9. Brings knowledge and skills to collaboratively open up the possibilities for self-managed social change</td>
<td>9. Applies previously learned techniques to the research project</td>
</tr>
<tr>
<td>10. Socially active and can open up lines of discussion with both local and professional collaborators</td>
<td>10. Socially passive; abstract intellectualization valued</td>
</tr>
</tbody>
</table>
self-confidence that the “team” of co-researchers can work together to change the local situation, while the traditional researcher (boss) is more concerned with controlling what would otherwise be an unruly situation.

Regarding the personality of the researcher, in contrast to the serious and objective conventional social science researcher who tries not to reflect the self in the research process or results, action researchers are more likely to welcome risk and know how to make use of personality traits such as humor and irony in the research process:

Humor and playfulness have an important role in social change processes. This is because action research projects attempt to suspend business as usual and try to produce unlikely but positive outcomes. In these contexts, the powers of irony, absurdity, and humor are considerable precisely because they cause ordinary thought to stop momentarily, creating juxtapositions that can provoke both amusement and openness to change (Greenwood & Levin, 1998: 107).

Further, with regard to actively incorporating one’s own thoughts and feelings into the research process, action researchers learn to “reflect-in-action” as well as to “reflect-on-action,” as described by Donald Schon (1983). That is, researchers realize that they constantly, and often automatically, reflect on their past experiences and understandings of events that happen around them, and they learn to apply those understandings to the current situation as well as future situations. This type of active reflection is not generally acknowledged in conventional social science research.

Regarding knowledge and skills, as discussed above, action researchers actively seek out local knowledge and work to incorporate such knowledge with the professional and other knowledge the researchers have brought with them to the research project. Conventional social science researchers, on the other hand, tend to avoid using local knowledge and try to apply previously learned techniques to all research situations regardless of the local context or conditions.

Finally, action researchers are required to be socially active and adept at opening up lines of discussion with both local and professional collaborators, while conventional social science researchers learn to minimize social interactions with local collaborators and to value abstract intellectualizations regarding the research project. Table 3 summarizes these traits of the action researcher and compares them with those of the conventional social science worker.

Conclusion

Learning Under the New Participatory Paradigm

In order for the participatory paradigm of action research to take hold in the field of human environment studies and its sub-fields such as community studies, we must find a way to wean ourselves away from the positivist worldview and start to incorporate a participatory worldview. This will require new styles of training, new sets of rules, and new procedures for those wanting to conduct research in a more socially meaningful way. For example, a new understanding of what constitutes “knowledge” is necessary. This includes learning to appreciate all types of knowledge, taking into account its complexities and how it can consist of many different types of knowing. We must realize how local knowledge can be mobilized, acted on, and interpreted and how it can be communicated effectively beyond the local situations where it was generated (Greenwood & Levin, 1998).

Secondly, we must learn to be more social in our interactions with others. We must not hide behind the walls of the university, but rather become an active participant in the communities and lives of others who share similar situations with us. We must refine our skills of initiating and facilitating discussion and learn how to better incorporate humor and irony into our social interactions.

Third, we must learn to appreciate the history behind actions taken and communities we encounter as a powerful source of learning. This requires a receptive posture and a stance that listens to the “local history” of a situation and incorporates it into what we have learned previously from other situations.

Fourth, regarding our conceptions of the communities of which we become members and conduct research projects, it is important to learn that communities are more than just geographical locations or places where we conduct fieldwork. Indeed, according to Kirkpatrick (1986: 2), one model of community consists of a “mutuality in which distinct persons find fulfillment in and through living for each other.” This model stands in deep contrast to the more common model of independent members “rationally contracting with each other
for the terms of their enforced relationship." In other words, researchers need to acknowledge the power of mutual relationships and the possibilities for fulfillment through working together toward a common goal.

A New Role for Universities

Realizing this new participatory paradigm in human-environment studies will require significant changes in the way universities train researchers. All too often university students are not treated as original and independent thinkers, and therefore they end up simply imitating their professors or peers. Thus the biggest challenge for universities should be how to “turn away from conventional lecturing to learning situations based on the search for solutions to real-life, open-ended problems” (Greenwood & Levin, 2001). Conventional social science has continually claimed to produce valid knowledge as well as social improvements, but only a participatory paradigm such as that offered by action research can provide such results in real time, for the immediate application to our communities.

Multiple Expressions for Research Project and Results

One of the core principles of the participatory paradigm is its respect for multiple voices and reflexivity throughout the research process. Research in this paradigm welcomes all of the voices of the co-researchers. Research participants are encouraged to "speak for themselves" in whatever forms they are comfortable with. Of course, the researchers with the "professional knowledge" will be the ones to write up academic accounts of the research project, but this should be only one aspect of the research product. All members should work to express their various forms of knowledge in as many creative ways as possible. This type of work is tied directly to the practices of reflexivity and narrativity (Fossen, 1994), and therefore these types of skills should be both taught and encouraged throughout the research process.

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付録

和文タイトル
人間環境学におけるアクションリサーチ

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和文要約
本稿は，社会科学における新しい「参加型学習」概念賞といったアクション・リサーチのこれまでの軌跡を描いていく。そして，いかにその原理を人間・環境学研究や環境デザイン，さらにその一分野であるコミュニティ・スタディに応用できるのかを検討するものである。具体的に第一部では，アクション・リサーチに関する様々な定義やアプローチの類型を概観した。第二部では，参加型学習と社会科学研究における従来型学習との比較・対照を行った。そして，第三部では人間・環境学研究において，参加型アクション・リサーチという概念の具体化を試みた先行研究について検討した。その上で，今後我々「研究者」が参加型学習学習によると研究を実現するために，どう社会問題や研究課題に向かい合い，どうも者と関わるべきかについて提案を行った。

キーワード：アクションリサーチ, コミュニティ, 人間環境学, 参加型学習