Learning History
and
Organizational Praxis

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Abstract
We introduce a new action methodology called the “learning history” designed to catalyze organizational praxis. The learning history contributes to the field of action research in three ways. First, it offers an architecture which allows researchers and practitioners to act synergistically as “engaged historians” (rather than change agents per se). Second, it emphasizes the use of text (usually de-emphasized in action research) as a springboard to communal dialogue which integrates reflection and action. Finally, the learning history ensures rigor through an integrated validity network and seeks to offer a standard for judging validity in the work of action research.

KEYWORDS:
Learning
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Human history does not follow the path of resources or opportunities; rather, it follows the path of desires or, in more general terms, the path of emotions. In the history of the living, every moment, every change, whether it resulted in survival or extinction, has arisen along a path of preferences. (Maturana & Bunnell, 1999, p. 84)

This paper tells of on-going efforts to theorize and develop a formal action research methodology called a “learning history” designed to catalyze optimal integration of reflection and action in organizational life. We refer to this integration as “praxis,” which we define in the tradition of Freire (1992) as reflection on past action for the purpose of designing a preferred future. The learning history is an action research methodology designed to catalyze praxis by enabling organizational members to reflect on their and others’ past actions which have resulted in current organizational constructions. A learning history stimulates collective reflective dialogue focused on experiential and textual stimuli. The ultimate goal of a learning history is to contribute to on-going construction and reconstruction of organizational life according to organizational members’ intentions.

In this paper we present the theoretical framework of a learning history, illustrate its seven-stage process through an empirical example, and discuss its potential contributions to researchers and practitioners. Whereas descriptive overviews of the methodology of the learning history have been offered elsewhere (Bradbury, 1998; Kleiner & Roth, 1996; Roth & Kleiner, forthcoming), here we examine in depth its theoretical framework, design principles, and methodological rigor. We therefore propose a validity network which learning historians, or other action researchers, may use to ensure rigor. The second contribution of the paper is that it describes the benefits of conceiving the work of the action researcher and the practitioner as
analogous to that of “engaged historians,” which differs from conceptualizing this work from the perspective of a change agent. Finally, we acknowledge the importance of text based interventions, which are usually de-emphasized in the pursuit of action learning associated with action research.

Theoretical Framework for the Learning History

The learning history has been developed and tested in organizations affiliated with the Society for Organizational Learning, Cambridge, MA. The first author was a member of the group of people who helped develop the new methodology. As an intervention methodology, the learning history is situated within the field of action research. Action research, as conceived originally by Kurt Lewin (1951) and since developed in a multitude of arenas (for a review see Reason, 1994), seeks to fruitfully facilitate the creative tension inherent in the relationship between action and reflection by catalyzing synergy between practitioners and scholars. Knowledge, within the paradigm of action research, is construed differently than in other paradigms. Knowledge is about rendering useful interpretations for preferred action in the world, rather than simply knowing more “facts” which are thought to describe an independent reality. In this sense action research can be understood as a part within the wider trajectory of pragmatism (cf. Rorty, 1989).

The design requirements of a learning history stem from insights associated with two theoretical streams. The first is related to learning theory and concerns the importance of reflection and action for organizational praxis (Freire, 1992; Kolb, 1984; Argyris and Schoen, 1996; Fisher and Torbert, 1995; Senge, 1990). The second stream of thought is related to the social construction of organizational reality and the special importance of history as an informant
of organizational change (Maturana & Bunnell, 1999; Baret & Srivastva, 1991). This stream of thought emphasizes reflection on past action through dialogue and conversations, which are conceived as leverage points for change. The term ‘learning history’ derives from these two theoretical premises.

**Learning through action and reflection.** Learning theory suggests that reflection and action are two independent and dialectical processes for transforming experience (Mainemelis, Boyatzis, & Kolb, 1999; Kolb, 1984; Freire, 1992). Reflection is an inward process related to observation, sense-making, and analysis, whereas action is an outward process related to goal-setting, planning and implementation. In his writings, Freire calls for the optimal integration of the two processes:

> Within the word we find two dimensions, reflection and action, in such radical interaction that if one is sacrificed -- even in part -- the other immediately suffers.... When a word is deprived of its dimension of action, reflection automatically suffers as well; and the word is changed into idle chatter, into verbalism, into an alienated and alienating 'blah'.... On the other hand, if action is emphasized exclusively, to the detriment of reflection, the word is converted into activism. The latter action for action's sake negates the true praxis and makes dialogue impossible. (1992, pp: 75-78)

In the field of organizational sciences the integration of action and reflection has been related to organizational innovation (Drucker, 1985; Bartol, 1992), organizational transformation (Senge, 1990; Evans, 1992), visionary organizations integrating vision and execution (Collins & Porras, 1994), strategic innovation through “active thinking” (Markides, 1998), and mastering of competing organizational values (Quinn, 1991). Many scholars emphasize that the integration of
action and reflection is a characteristic of evolving learning systems which possess the ability of generative adaptation (Argyris and Schoen, 1996; Kolb, 1996; Senge, 1990). We assume that the ability to creatively integrate action and reflection exists among organizational members, and propose that a methodology is required to initiate and support them in this effort.

March, Tamuz, and Sproull (1991) have posed a “million dollar question:” how do we go about converting events to learning? The answer, we suggest, depends on the ability of the organization to learn collectively and in an integrated manner. We follow other organizational scholars who have noted that organizations learn better when they transform their experiences through “communities of interaction” (Nonaka & Takeuchi, 1995) or “communities of practice” (Brown & Duguid, 1991). We therefore propose that a methodology is required which allows a working community to reflect together on what it has created. Such a methodology, we suggest, should facilitate the anchoring of conversations in textual sources to stimulate organizational praxis. Dialogue and conversation have been suggested as the most appropriate modes both for integrating action and reflection (Baker, Jensen, & Kolb, 1998) and inquiring into, and possibly transforming, the values from which one is operating (Torbert, 1991; Neilsen, 1996; Schein, 1987). Written texts complement conversations by recording and crystallizing the conceptual and pragmatic products of dialogue. Appropriately constructed they may offer a concrete platform (Carlile, 1998) to focus a community’s conversation from which praxis may evolve.

**History as leverage for change.** When organizational members do not reflect on what they have collectively created, they tend to attribute to organizational realities an autonomous or immutable existence, without realizing that these realities are largely products of their own past actions (Morgan, 1997). The key to transformation is the ability to see that organizational reality is not reified, but rather, it is open for reconceptualization through changing old shared cognitive
scripts (Bartunek, 1993) or mental models (Forrester, 1961; Senge, 1990), and learning how to “unlearn” the past (Kolb, 1996).

Barrett and Srivastva (1991) write that reflection on organizational history can function as an important mode of inquiry in organizational life. It does so by allowing organizational members to acknowledge how people have created the organizational order through intention, preference for the future, contingency and accidents. When organizational members recognize that the present organization has resulted from historical action, they can in turn stop seeing the organization as reified, or as historically given and immutable. We suggest therefore an engagement with history not for the sake of the past, but precisely for the sake of informing the present of the possibilities for creating the future. Maturana and Bunnell write about the “history of preferences”:

We belong to a history that runs in a continuous changing present. Thus, history is something that happens in the present, so what we call history has to do with how we live in the present… I propose an image that conveys this notion of inventing a history to explain the present… Any explanation of the origin of life is based on the coherences of the present that allows us to invent an origin and a progression of happenings from that origin.” (1999, pp: 84-85)

Although organizational reality is socially constructed, neither individuals nor organizations are prisoners of it. Their survival and growth depend on their ability to co-create and transform it (Kolb, 1984). This suggests that we need an architecture to attempt to capture the historicity and continuity of organizational life, and the contingencies and decisions made through time.
The Process of a Learning History

The foregoing suggests important implications for catalyzing organizational praxis. In particular the following apply to the learning history: 1. The work of action research is conceptualized as a promotion of intentional organizational construction through focused communal conversation; 2. Text based methodologies (usually de-emphasized in the pursuit of action learning associated with action research) are acknowledged as important interventions; 3. The synergistic work of the scholar and practitioner is conceived as analogous to that of “engaged historians,” rather than change agents per se. Based on these premises, we introduce below the seven-stage process for developing a learning history.

The seven-stage process of the learning history is summarized in Table 1 and elaborated below within the context of an action research study with a Swedish environmental education group. We should be reminded that our primary goal in this paper is to focus on the methodology of the learning history rather than on the particular empirical example. Data therefore is introduced to facilitate the presentation of the methodological process and substantiate our claims that the learning history catalyzes organizational praxis.

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Insert Table 1 about here

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Illustration: A Learning History of the Natural Step

The Context. The Natural Step (TNS) is a not-for-profit organization headquarted in Stockholm in a small office with about ten administrative staff. It was founded as an environmental education effort in 1989 by a Swedish cancer researcher and physician named
Karl-Henrik Robèrt. Today it operates as a network of some 10,000 Swedes who are interested in the type of education The Natural Step provides. It has also grown into the international arena and operates networks on all continents. The Natural Step was designed as a partnership between business and environmental educators which heralded new openness on both sides to working together. Further, it has fostered a breakthrough in environmental education through its effort to articulate what it refers to as the “four system conditions for sustainability.” These are four brief, scientifically based, statements which suggest how an individual or business may begin to move, with confidence, toward a sustainable state: 1. Substances from the Earth's crust must not systematically increase in the ecosphere. 2. Substances produced by society must not systematically increase in the ecosphere. 3. The physical basis for productivity and diversity of nature must not be systematically diminished. 4. If we want life to go on we must have fair and efficient use of resources with respect to meeting human needs, because promoting justice will avert the destruction of resources that poor people must engage in for short term survival (e.g., rainforest). For more details of the actual TNS organization and the particular study more generally please see Bradbury and Clair (in press) and Bradbury (1998).

Stage 1: Initiating a partnership in action research

An action research effort with The Natural Step promised possible new insights on the relationship between scholars and practitioners, or more specifically on the potential for praxis if the integration between reflection on action is promoted and facilitated. After Robèrt’s first visit to the U.S. to spread The Natural Step message abroad, the first author proposed to key leaders of The Natural Step that they might benefit from reflecting on their own successes and failures as they moved forward in the international domain. She arranged for interested colleagues at the
MIT Center for Organizational Learning (the original hosts of Robèrt in the U.S.) to act as outsider-partners in the research team, while the founder and a few key leaders in The Natural Step agreed to act as the insider-partners. This insider/outsider research (Bartunek & Louis, 1996) was much informed by Reason and Heron’s (1995) descriptions of “cooperative inquiry,” thus outsiders/researchers were to help develop the research proposal, interview protocol and act as devil’s advocates as the coding and thematization of the data was pursued. The insiders’ role was to be as actively involved as possible especially with offering comments as to the degree that the drafts of the learning history captured what was exciting, or giving life, to their work.

Stage 2: Reflective interviews and dis/confirming conversations

An initial draft of the interview protocol was developed by the research team after completing five exploratory interviews with environmentalists in the USA who were familiar with the work of the Natural Step. The goal of the interview was to begin to unravel the elements which had contributed to the success of The Natural Step in Sweden. This was well received by the leaders in The Natural Step who described themselves as suffering from “homeblindness,” a Swedish term suggesting the difficulty inherent in seeing or understanding one’s own process. The protocol was then reviewed by leaders within The Natural Step so as to allow for co-designing which would ensure that their questions would be answered also. The help of staff at the headquarters of the Natural Step was crucial in securing a good interview sample because early leaders were influential people in both the economic and cultural domains and many had preferred to remain behind the scenes. The outsider team also expressed a desire to speak with people whom the insiders felt might have a negative story to tell. Again after it was clear why getting a “full picture” which might include apparently negative input was
important, the insiders made a good interview sample possible. In all, twenty five formal interviews were carried out along with twice as many informal conversations. While the former were planned and the interview protocol (shown in Appendix A) faxed to the interviewees in advance, the latter were serendipitous and were often used to elicit confirming and disconfirming information during the weeks of in-house participant observation undertaken in Stockholm.

Additionally archival data were gathered and analyzed. These included journal articles by the scientists involved, as well as newspaper and magazine articles about The Natural Step. Observation notes from a retreat for all Natural Step employees as well as notes and training materials from educational seminars by The Natural Step were particularly important sources of confirmation of interviewee perspectives as well as new information. Please see a list of all data in Appendix D.

The first round of interviews and data collection suggested a deep seated assumption, shared by The Natural Step leaders, that the success of The Natural Step was attributable to the charisma of the founder and his engaging delivery of scientific and technical information. One executive supporter of The Natural Step commented in a representative quote suggestive of the high esteem with which the founder was held “if [the founder] were archbishop of Sweden, the churches would be full on Sundays.” The founder himself explained his work as “if I make a business man less ignorant about why it is in his own self interest to undertake change, change will come.” He also gave a taste of his talent for enrolling reluctant supporters in his interviews. In the following quote he explain how he got support to mail a consensus statement from Swedish scientists about the environment to all Swedish households, a fact which was celebrated on TV:
I went to one of our best beloved pop-singers and said “I and all these scientists are going to educate the whole country, (and) would you please help us celebrate it on TV.” She replied, “of course.” And, on I went to the department of education, and the Swedish universities and asked if they would like to have this consensus document distributed free to the schools and to take part in celebrating with a group of celebrities when it hits the nation. They said they would like to take part. So, then I went to TV and said I had these people supporting the project, (and) would they like to have a part celebrating it on TV. They replied “certainly.” We decided that the last day in April would be a good date. From there I went to the King and asked for his endorsement. He agreed. I slept worse and worse the longer I did this because I was building a tremendous program with no money at all. I then gathered potential business supporters at Arlanda (airport) and was really nervous. However, they understood that if they didn’t support this project which was concrete with dates and celebrities and school children involved, then the crazy doctor would take it to someone else.

Thus after an initial round of interviews there was prima facie evidence for accepting that the success of The Natural Step was due to a charismatic leader with a clear message and a group of direct followers. However, a very important part of The Natural Step’s work was being carried out in professional networks by people who were not especially enamored of the founder. Indeed a minority of interviewees confessed that the style of the charismatic founder was not always engaging at all. For example, one said “[the founder] can be astonishingly unaware of the others person’s perspective.” While another complained even more strongly about the other TNS trainers noting that they were “arrogant, like they had seen the light, preaching the four
system conditions.” And the science was far from uniformly embraced. One (male) consultant
said “the science is a bit too masculine, a bit square.” An agronomist involved in the
development of a professional network said “for some of us, issues such as justice and quality
come first, these are not mentioned in the system conditions.” Thus a second round of interviews
was arranged for in which more of the less visible dynamics might show up and add to our
understanding of the reasons why The Natural Step was successful and in such a way as to allow
the work to spread beyond the area of influence of one charismatic man.

Stage 3: Distillation or finding what is exciting

All interviews, conversations and the regular reflections (usually captured following an
interview) were taped, transcribed and distilled. The goal of the distillation was to read the
written material and highlight what was “exciting,” that is, what appears to give life to the
interviewee with regard to The Natural Step. For example, one of the key leaders, an executive,
described his high degree of commitment to the work as follows: “I got the sad news that I was
sick with cancer and I decided soon thereafter that I wanted to dedicate as much work as I could
to the Natural Step.” This quote when set along side other interviewees’ explanations of their
involvement suggests what is generating energy in the organization. A second read through the
highlighted portions of the transcripts marked the beginning of the coding process. The insider
research team which consisted of four people, with the first author as director, then reached
agreement as to manifest themes (Boyatzis, 1998) were to be coded for. The specific quotes
were sorted into emergent themes, and then the themes were clustered in higher order categories
as per grounded theory methods (Glaser and Strauss, 1967). The categories of manifest themes
and sample quotes are shown in Appendix C.
Based on further interviews it was clear that while the founder was important, the interviewees experienced him as a catalyst that offered them a way to express their own commitment to the vision of sustainability that he articulated. The early leaders and supporters revealed how they could relate their self interest (e.g., to rescue their company from bad publicity on their environmental impact or to bestow meaning on a life blighted by cancer) to the common interest. In pursuing their expanded self interest they found themselves in attractive conversations, that is, conversations that were both interesting and useful, which they were willing to further promote to their own colleagues. This then led to the activation of their personal networks, whose growth stood to underscore the credibility of those involved in the growing movement. The interviewees explained their willingness to activate their own personal networks because The Natural Step science offered them a neutral position from which to argue, thus the basis of the science in physics allowed them to argue both for self and common interest but in a paradoxically neutral way. It is important to understand that the particular manifestation of The Natural Step is deeply influenced by the culture in which it developed. Thus all of the above is understood to have been shaped by the social-cultural norms of this Scandinavian society. Figure 1 depicts the causal loop model that emerged from the study and in which the elements beyond the immediate assumption of a charismatic leader's importance are related to each other.

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Insert Figure 1 about here
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To read the diagram, consider that the arrow means that the first variable causes the second, and the "+" sign next to the arrow means that the second variable changes in the same
direction as the first. Catalyzed by the founder’s resonant vision of a sustainable society, self interest is activated and engaged which leads to the development of the next variable, expanded self interest, which increases too. Expanded self interest in the community means that there will be more attractive conversations on the contribution of The Natural Step and this, by the nature of conversation requiring interlocutors, will lead again to activation of personal networks. As personal networks are activated, the credibility and effect of those thought leaders whose support began the work is increased which in turn acts to allow people’s self interest to be expanded. This closes a "reinforcing" or "positive" feedback loop that will drive exponential growth in the size of the Natural Step community. Around and around, like a rolling snowball (as the small picture signifies), the community will grow at a faster and faster pace, until it finds and reaches a limit. Thus the process by which ordinary people were spreading the work of The Natural Step comes to the foreground. The insight which was generated in the process of causal loop diagramming did not obviate the importance of the founder, but rather allowed the complexity of the elements inherent in the success of The Natural Step become more visible.

Stage 4: Verification/validation

Action research has been frequently criticized (justifiably most of the times) for lacking validity and methodological rigor. The learning history method offers to researchers a validity network which sets standards for rigor within the action research paradigm. The validity network is built around Torbert’s (1997) first, second, and third research/practice scheme, and addresses criteria for ensuring validity as these have been suggested from within the action and interpretive paradigms. Third person research-practice is that which is done within a community or field of scholarly endeavor made up of members (past and present) whose methods, mores and
mental models the research team is familiar with. This type of research-practice manifests itself here as engagement with the wider field of organization studies. Second person research-practice is that which is done with an other [research] subject, with whom one interacts directly. The development of a learning history provides ample opportunity for this as the work within the insider/outsider team comprised of researchers and practitioners, along with the interview and dissemination process, offer opportunities for direct interaction with others. First person research-practice is that which is done by oneself. The goal of this type of research-practice is to allow the general reader to understand the ‘epistemological standpoint’ from which the work is written, that is, to see the influence of the particular set of questions and biases which result from the research team’s lived experience, and to describe whether and how the standpoint has changed.

We believe that good action research ought to aspire to the interweaving of all three types. The validity of a learning history can be evaluated by a number of criteria which relate to these three research practices. We discuss below the validity criteria suggested by Guba and Lincoln (1989), Lather (1993), and Gergen (1994). Guba and Lincoln (1989) suggest that authenticity is most important in qualitative research. They dimensionalize authenticity as ontological, educational, tactical, and catalytic. Ontological authenticity is concerned with how the researcher's own constructions are developed. In addressing this issue a number of supports and safeguards were undertaken in the learning history of The Natural Step. As a first step toward ensuring ontological authenticity, and in accordance with the collaborative nature of learning history work, key stakeholders of The Natural Step were involved during the process of the gathering, verification and systematization of information. All interviewees received the transcript of their interview so that they could correct all quotes and add details. As a second
step the insider team assisted in the role of ‘devil’s advocate’ with regard to the development of the coding and themes (as suggested by Boyatzis, 1998). Data was also fed back to the informants to check for bias. As will be further discussed below, the dissemination meeting was also a significant opportunity for reassessment of the research trajectory.

Educative and tactical authenticity concern how the research subject’s understanding of others is supported (educative), and the subjects are thereby empowered to act in a way deemed consistent with their desired goals (tactical). The most important instance of this resulted from convening a validation and dissemination meeting in which all interviewees could interact and learn about each others perceptions. Given the alliance structure of The Natural Step many of these people had never interacted with each other, thus thinking together was educative. This thinking together in turn resulted in a clearer understanding of the dialogic and process skills necessary for dissemination of the work of The Natural Step, which we discuss later on.

Catalytic authenticity addresses the process of consciousness raising and action in support of economic and environmental sustainability. The most important instance of this concerns the publication of the learning history on the world wide web which allowed those interested to learn about The Natural Step. Many people have found it useful (judging from invitations to host related conversations, awards, group workshops, and related students’ projects.)

Lather (1993, p. 686) offers a “checklist that mimics checklists” which overlaps with Guba and Lincoln’s offered above and which has been used by other researchers in the action tradition to discuss validity (e.g., Torbert, 1997). Lather suggests that what Gergen calls ‘intelligibility’ might be understood as reflexive and situated validity. The latter arguably corresponds to what Guba and Lincoln suggest is ‘ontological authenticity.’ The terms ‘reflexive
and situated validity concern the degree to which the researcher makes clear how her/his own epistemological standpoint influences the data gathered and the way it is interpreted. For example, the research director has used the left hand column of the learning history (the special format of the learning history will be discussed below) to alert the reader to interests/perspectives and concerns which both limit and enable this particular study of The Natural Step. For example, she notes the degree to which her sensitivity to gender representation among the leadership of The Natural Step results from her own experience as a woman. This appreciation of the so-called ‘feminine’ has resulted in a description of The Natural Step which is different form other scholars’ who have focused on the ways in which the work of The Natural Step has resulted in new technological processes (e.g., Larsen, 1997; Natriss & Altomare, 1999).

Lather also calls for rhizomatic validity, that is, a commitment to showing the network of interactions at play in any organizational outcome. The term ‘rhizome’ (from the Greek rhizoma) refers to a mass of roots. Rhizomatic validity seeks to be attentive to the complexity of human organizing processes by including multiple voices. These multiple voices are most evident in the learning history itself.

Finally, Lather suggests that researchers be concerned with ironic and paralogic validity. This concern is similar to Gergen’s commitment to dialogue and Guba and Lincoln’s commitment to catalytic authenticity. In essence it refers to a researcher’s attempt to avoid the semblance of closure or unity of interpretation. That is, research is not aiming to be correct as is the case in empirical positivism, but rather to foster a useful conversation which may provoke a new and better coordination of behaviors. As a consequence the focus is on creating a desired future with the researchers acting as “future historians”. In Table 2 we summarize the criteria of validity from Gergen (1994), Guba and Lincoln (1989) and Lather (1993) as they relate to
Torbert’s (1997) types of research practice. The lower part of the table also includes a summary of the differences between the interpretivist paradigm (to which this action research project belongs) and the more traditional empirical positivist paradigm.

Insert Table 2 about here

Stage 5: Manuscripting the “jointly told tale” for reflection by the interviewees

The fifth stage involves the creation of a “jointly told tale” (Van Maanen, 1988). Learning history work is influenced by the emerging practice of organizational dialogue whose aim is to promote participants ability to inquire into the values from which one is operating, also called “double loop action inquiry” (Argyris, Putnam & Smith, 1985; Torbert, 1991; Nielsen, 1996). The presentation of a learning history is in a two column format, with sidebars and full text to support that. The right hand column is exclusively for primary data, which is mostly interview material. It may also include speeches, or other forms of primary data. The left hand column seeks to represent the author’s comment on the right hand column. It includes questions, interpretations, attributions, summary, implications. The learning history also contains some pieces of information that are set off in boxes. Called side-bars, these seek to present a sense of the whole, but not to undermine the narrative by making an assessment of the situation. The result is that the format of the learning history is quite unusual. Appendix B offers an illustrative page from the learning history of The Natural Step which contains an example of a left hand column, right hand column and “sidebar.”

Action researchers are in dialogue with the research subjects, this dialogue often takes the form of learning by reflecting on action as a community of inquiry. This allows them to verify
the importance of the information they hold and to inquire into the ways in which their own epistemological standpoint has influenced the selection. Action researchers, however, rarely focus the feedback on a document. Indeed many action research methods eschew documents (which may be seen as reinforcing an academic approach to knowledge) and instead favor conversation or other experiential engagement with the topic at hand. The design requirements noted earlier in the paper, which are predicated on learning and historical inquiry, suggest the necessity of using a text to focus the conversation and experiential engagement with the issues at hand. This additionally allows the researcher to make her/his work available for comment and criticism to the larger community of scholars and practitioners. In this case the document was put on a publicly accessible web site. We have sought to write an attractive document, one which is not off-putting to people not involved in academic research. The two columns assist in making the document attractive. It is important to note that the document is introduced as an open document, one whose goal is only to anchor a conversation not to capture a static truth.

Stage 6: Dissemination to organizational members

Dissemination is defined by two concerns. First it seeks to verify that what is in the manuscript is indeed correct while also noting what has been omitted. Secondly, the dissemination process is intended to create an opportunity for the interviewees to reflect collectively, often for the first time, on what they have created together. Following this the larger community to which the interviewees belong are to be involved in reading and reflecting upon the document. Large scale change interventions such as open space by Harrison Owen or other methods which bring the entire organization together (e.g., Weisbord, 1987) are useful models for engaging a whole community.
In the case of The Natural Step the research team invited all interviewees to participate in a dissemination meeting some months after the interviews. About 50% were able to attend given scheduling constraints. All offered written comments on the document, editing it for more clarity. Thus a group gathered in Stockholm having read the manuscript. A neutral facilitator was present.

The most important result of the action research work with The Natural Step began with a realization that occurred to one of the interviewees during this dissemination meeting. His insight was reflexively important for reorienting the inquiry and dialogue among those engaged with the action research. Having thoroughly read the learning history as preparation for the dissemination meeting, this interviewee, a natural scientist, expressed his belief that the way in which The Natural Step people engaged in dialogue about sustainability was at least as important as the scientific information that The Natural Step delivered. For those already oriented to the importance of process in organizational efforts, this may seem obvious, but to those with a natural science background it was difficult even to notice -- process being invisible and difficult to measure quantitatively -- and then to give credit to. This insight proved valuable to the others present as more comments were offered which sought to better grasp the importance of the dialogic process by which the work of The Natural Step had been carried out. The importance of process as a pedagogical scaffolding for education came as quite an insight to the interviewees, many of whom had little background in developing process skills and who had been trained as natural scientists. Leaders of The Natural Step thereby began to shift in their self conceptualization from being “tellers” of scientific information to being more consciously “interlocutors,” engaging with those interested in making sustainable development a focus of attention. One manifestation of this incorporation is contained in the description of a workshop
designed by The Natural Step after the dissemination meeting. In addition to teaching the principles of sustainability, representatives of The Natural Step facilitated a session about pedagogy, focusing on the importance of facilitating good conversations. This stands in contrast to the previous model used by The Natural Step trainers which was described by one American observer as a “Teutonic download.”

Stage 7: Dissemination to the scholarly community

The last stage involved with developing a learning history is the diffusion of results to the scholarly community, what Torbert (1997) refers to as “third person research/practice.” This stage involves constructing theory about the interesting phenomena noted in the learning history, thereby, in essence, seeking to answer the question “why and under what conditions does this happen?” This stage therefore requires additional data analysis and the enfolding of theory which is thought to explain further and help to generalize the insights which emerge in the primary analysis of the learning history. The manifest themes coded in the distillation stage were thus clustered in more abstract “axial” categories for secondary analysis (Strauss & Corbin, 1992; Boyatzis, 1998), and new theoretical constructs are introduced with which to theorize them (cf., Bradbury, 1998).

In further developing the work of the learning history of The Natural Step, the phenomenon of most interest emerged to be the importance of dialogue in the successful diffusion of the work of The Natural Step. For example, the themes related to the category ‘seeds and catalysts’ such as ‘cultural readiness for change,’ ‘willingness to commit to the work of The Natural Step,’ and the ‘emergence of a champion,’ raised the question of how to think theoretically about what had happened. Cultural issues were obviously important in the
development of the work in Sweden, but so too were individual level issues such as internal commitment and credible leadership. Turning to the work of Bourdieu (1991) and Giddens (1984) on structuration, it became possible to talk about these issues as recursively related. Thus the efficacy of The Natural Step is neither reduced to the uniqueness of a particular culture or special individuals, but instead was theorized as the potent relationship between the culture and individual thought-leaders. Turning most especially to the work on symbolic and linguistic capital (Bourdieu, 1991) it became more theoretically apparent why the particular presentation style of the leader of The Natural Step had success in attracting the support it did (for a detailed discussion see Bradbury (1998) and Bradbury and Clair (in press).

Contributions of the Learning History Method to Action Research

Drawing from the previous empirical example we focus now on the contributions a learning history makes generally to practitioners, scholars and the knowledge transfer between them. Our conclusions are based not merely on our experience with The Natural Step, but also on five other learning histories competed to date (i.e., Castleberg & Roth, 1998; Kleiner & Roth, 1998; Roth & Kleiner, 1996; Thomas, 1997; Weyer & Roth, 1997).

A learning history creates an opportunity for scholars and practitioners to work together, each using her/his own distinctive skills. This synergy is different from the relationship between scholars and practitioners in many strands of organizational action research. For example, Pasmore and Friedlander (1982) demonstrate a traditional division of labor with researchers focused on data gathering and delivery of results to top management. Barrett and Cooperrider (1990) demonstrate a quasi-unilateral intervention to bring about a more appreciative lens in an organization. In both cases the researchers were acting as change agents and consultants. The work of the learning history, however, is more in keeping with the traditions of participative
action research (Reason, 1994) in which the action research is co-designed and co-developed. This model originated in developing countries and has not much informed organizational action research.

The seven stages of the learning history offer different roles to scholars and practitioners; it is the synergy of their work together that allows knowledge to be generated between them. Earlier stages require the formation of a partnership, middle stages require conversation between scholars and practitioners to balance the imperatives as the manuscript is developed. Dissemination, during the final stages, offers an opportunity to the practitioners to reflect with the wider organization in which they are embedded. This allows the emergent knowledge which resulted from the work of the insider/outsider, scholar/practitioner team to be integrated into the larger organization.

The learning history therefore develops and integrates the distinctive perspectives and interests of scholars and practitioners. It does not require that scholars become practitioners or consultants. Similarly the work does not require that practitioners become scholars. Rather the two cultures of people, with their different sets of interests, have an opportunity to find common ground in their shared interest in organizational life. This common ground also allows space to “agree to disagree” about what is interesting and scholars have an opportunity to develop more theoretical work for dissemination to their own community of scholars. As noted above the typical organizational action research takes the form of a consulting relationship between researcher and client; the learning history offers something different to researchers who wish to be in the thick of organizational life but wish to do so as researchers rather than as consultants.
In the case of The Natural Step the scholars of the outsider/researcher team had backgrounds in organizational behavior, the insider/practitioner team had backgrounds primarily in natural science. Their partnership allowed more concentration on the originally invisible process issues at the heart of the success of the work of The Natural Step. The net effect for TNS was to shift from its teaching model to a more interactive and facilitative model of dialogic engagement with interested parties.

A premise for the design of a learning history is that the past actions which resulted in the present construction of an organization frequently get reified by organizational members. That is, the present is understood as the “the way things are” as opposed to a serendipitous and therefore malleable state that can be changed. Originally in the case of The Natural Step “the way things are” involved a self conceptualization as teachers/tellers of a scientific message. This evolved from the perspective of the founding group who were scientists and was then reinforced by the supportive business people who saw the work of TNS as a product to be marketed. The learning history provided an intervention which allowed this perspective to change. Developing the learning history allowed a cumulative picture to emerge in which multiple perspectives were juxtaposed and the value of the hitherto invisible process of inclusive dialogue could be seen. This is in keeping with newer developments in action research where the purpose is conceived of as having the organizational members think and talk differently about the organization, so as to leverage conscious volition, e.g., Barrett and Cooperrider (1990).

Greenwood and Levin (1998) express their dissatisfaction with standards of rigor in action research. With exceptions, it is rare to find an extended discussion of validity in reports of action research. In published action research cases from standard setting journals organizational journals (cf. Pasmore & Friedlander (1982) in Administrative Science Quarterly, or Barrett &
Cooperrider (1990) in *Journal of Applied Behavioral Sciences* rigor is established in the way most typical of the action research paradigm; the intervention is shown to have effected a significant improvement in the organization. With a learning history, however, rigor is also understood as operationalizing a network of imperatives. In the sense of first person research/practice is established through the reflexivity of the research team, whose work together promotes articulation of assumptions that underlie efforts at conceptualization. Rigor in the sense of second person research/practice is promoted through the efforts at dis-confirmation in the dissemination meeting and finally, in the sense of rigor as third person research/practice, the work is made available for comment to a larger audience. The documentation is presented as partial, in the sense of being both open ended and biased by certain perspectives. By presenting a clear enough focus for a springboard but without insisting on one particular way of seeing the research subject, a learning history makes dialogue possible through which a preferred future can be coordinated.

We conclude that the anchoring of conversation in a text, where it acts as a transitional object, was of great importance in the project with The Natural Step. The insights as to the importance of the hitherto invisible processes of dialogue and inclusion, alongside the more obvious issues of articulating scientific principles, required an anchor in a concrete set of examples and opinions offered by the interviewees. Without the text such insights may never have come to be realized by the interviewees themselves during their collective reflection. In this sense the text allows the insider/outsider team to act as historians who hold up a mirror to the reflective community. They are not 'change catalysts' or 'agents' per se, but, historians or 'change enzymes,' who themselves were educated and changed in the process which is essentially future oriented. We do not know of other action research in which texts play such a
pivotal role in anchoring a community dialogue. Often where texts are available they merely support the transfer of data, e.g., in feedback of survey data etc., (cf. Pasmore & Friedlander, 1982). Such a transfer is linear and as such rather different from the ecology of conversation and ideas inherent in dialogue (Grudin, 1997) which calls upon people to learn to think anew together (Bohm, 1990).

Learning histories are not the only way in which organizational scholars and practitioners can work together. They are, however, a deliberate and fairly formalized approach which offer rigor and result in the generation of knowledge which is of use to both communities. Knowledge, in this sense, means learning that is capable of creating useful construals of the organizational world such that a preferred future can be constructed. Such collaborative work is increasingly mandatory given the difficulty inherent in integrating action and reflection in organizational life (cf. Kolb, 1996). We believe that the learning history offers a credible and productive intervention-methodology in support of this.
References


Appendix A

Interview Protocol

The following questions are aimed at eliciting information on: 1) the development of The Natural Step, and 2) the personal story of your involvement with The Natural Step.

1. When did you get involved in this work? What is your role now? How has this role changed from the early stages of The Natural Step work?
2. Tell me about the early stages of The Natural Step work as you understand them.
3. What were the original goals? What was thought to work best in achieving them?
4. What information came back that made it necessary to adapt the goals?
5. Was there a structure already present that guided the early work? Where did it come from?
6. Was there a theoretical/behavioral orientation that influenced the goals, method and style?
7. Tell me about the evolution of the "four system conditions."
8. When were the system conditions first articulated?
9. To what extent were they the work of Dr. Robert which he tested with the other scientists?
10. To what extent did they emerge from the consensus-building process itself?
11. What processes developed for effective communication and collective thinking?
12. Can you articulate process conditions (as a behavioral analogue to the system conditions) for The Natural Step?
13. In what ways did the inquiry and consensus building process work?
14. Were the system conditions that eventually were articulated implicit in the entire approach?
15. In what ways is this process similar to, and dissimilar from, other consensus building processes?
16. Tell me about expanding in the early stages to involve business organizations.
17. What comparison and contrast may be made between the original consensus building process with scientists and that with business sponsors?

Before proceeding I want to ask you if there are any questions/directions that I have not yet addressed that you would like to make sure we address. My following questions are about specific events and your own personal stories.

18. I am trying to create a timeline of important events and notable results. (Here is my best effort so far) What for you are the notable results at the early stages of The Natural Step work that I do not have on my time line?
19. What is top of mind for you about any of the events you see there?
20. From where does The Natural Step derive its "spiritual" sustenance?
21. What are the deeper principles that are moving this work along?
Appendix B

A Page from the Learning History of the Natural Step.

| KHR thought a great deal about how to transmit knowledge. | Scientist: Robert writes very quickly and responds to ideas very quickly. So we discussed and you have to give and take. That's the way we all came to consensus. All of us were more or less satisfied. Civil Servant: I realized immediately that this man wasn't mad after all, but that he did have a very uncommon idea and a fantastic pedagogical instrument. |
| People appreciated his work and enjoyed being with him. | Scientist: The booklet** was again another opportunity for saying what I've said over and over, again and again and again and this time to a wider audience. Doctor: it was great fun to work with Robert. He's funny, charismatic. He has a free and creative mind. I learned from him, and I enjoyed it. Student unionist: It was fun, and it fulfilled my needs to get results in educating people about the environment. |

**The original consensus booklet:** Karl-Henrik drafted a first version of what would become the booklet to be sent to all Swedish households and schools. The booklet is a 37 page 8”X12”, soft cover, illustrated document. It begins with an overview of evolution and explains the development of the cells of plants, animals and humans. It explains the cyclic characteristic of the natural environment and the environmental dangers of non-cyclic energy sources such as nuclear power. It is an alarm document in its call to action. It notes the extinction of species, the ozone layer and rainforest degradation. It makes suggestions for daily life concerning saving energy, recycling and demanding chorine free paper and mercury free batteries.
### Appendix C

#### Categories of Manifest Themes and Sample Quotes.

<table>
<thead>
<tr>
<th>Category</th>
<th>Themes</th>
<th>Sample quotes (for theme 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeds and catalysts</td>
<td>1. Cultural readiness for change</td>
<td><strong>Student Unionist:</strong> In Sweden we have excellent preconditions for environmental activism. We have many scientists engaged in environmental work.</td>
</tr>
<tr>
<td></td>
<td>2. Willingness to commit to work</td>
<td><strong>Executive:</strong> We Swedes are so anxious, we like to reach consensus and to feel safe. Look at our Volvos! We are concerned about the environment and interested to hear scientific consensus on this.</td>
</tr>
<tr>
<td></td>
<td>3. A champion emerges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Knowledge points to directions for change</td>
<td></td>
</tr>
<tr>
<td>Consensus works on many levels</td>
<td>1. Simplicity without reduction</td>
<td><strong>Scientist:</strong> The vision was to create a simply stated consensus document and to send it to the whole population.</td>
</tr>
<tr>
<td></td>
<td>2. Developing shared understanding</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Consensus attracts business</td>
<td></td>
</tr>
<tr>
<td>Sustaining work for sustainability</td>
<td>1. Strategizing beyond initial impact</td>
<td><strong>Natural Step leader:</strong> We organized a gala event to announce the publication of the consensus document. The king was involved.</td>
</tr>
<tr>
<td></td>
<td>2. Articulating the four system conditions</td>
<td><strong>Scientist:</strong> The distribution of the booklet to all Swedish households was very interesting if not a very good idea. It didn’t have a major educational impact.</td>
</tr>
<tr>
<td></td>
<td>3. Involving the youth movement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Developing professional networks</td>
<td></td>
</tr>
<tr>
<td>The Natural Step’s expanse to the economic realm</td>
<td>1. Making the good guys do better</td>
<td><strong>Executive:</strong> I was instrumental in getting the relationship between The Natural Step and my company going. Really I was committed to the possibility of getting my company back into environmental issues again.</td>
</tr>
<tr>
<td></td>
<td>2. Attracting good ambassadors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Targeting good businesses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Creating engagement possibilities</td>
<td></td>
</tr>
<tr>
<td>Crisis as challenge: Reflecting to learn</td>
<td>1. When the others won’t engage?</td>
<td><strong>Founder:</strong> I was at a meeting in which I was to be guaranteed ten million kronor. Our work really threatened the chlorine bleach process paper manufacturers used.</td>
</tr>
<tr>
<td></td>
<td>2. Smear campaign</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Gender exclusion</td>
<td><strong>Founder:</strong> I was at a meeting in which I was to be guaranteed ten million kronor. Our work really threatened the chlorine bleach process paper manufacturers used.</td>
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<tr>
<td></td>
<td>4. A unique man and/or a unique idea</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Data used for the creation of the Learning History.

Interview transcripts
The heart of the study is interviews. These include:
- 5 hours of preliminary interviews with people familiar with The Natural Step in the U.S. These were used to develop a proposal for the study.
- 30 hours of interviews with 15 of the key actors in the early stages of The Natural Step conducted in Sweden.
- 10 hours of interviews with representatives of the professional networks and consensus document developers conducted in Sweden.
- 5 hours workshop for feedback on author’s study with 12 founding and leading members of The Natural Step conducted in Stockholm nine months after interviewing was begun.

Videotapes and audio tapes
- Of presentations made by Robèrt about The Natural Step to general and scientific audiences.
- Of North American scientific consensus conference (which lasted two days) on the System Conditions.
- Of Presentations by Scandic Hotel and Electrolux on their use of The Natural Step.
- Workshop with Swedes familiar with The Natural Step but not interviewed, conducted in Stockholm.

Other materials include:
- Journal articles published by Robèrt and other scientists on the Natural Step science, inc. original consensus booklet mailed to all households (first author’s translation).
- Consensus Documents on Energy and Agriculture (official translation).
- Dissertation of John Holmberg, the co-articulator of the four System Conditions.
- The Natural Step generated “marketing” and information brochures.
- Mini Case studies by The Natural Step trainers with information about The Natural Step companies.
- Numerous magazine articles describing different aspects of The Natural Step.
- Observation notes from a weekend The Natural Step employee retreat and visioning seminar.
Table 1.

The Seven Stage Process of a Learning History.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Background preparation, enrollment of partnership and co-planning</td>
<td>Establish a committed insider/outsider research (Bartunek &amp; Louis, 1996) team.</td>
</tr>
<tr>
<td>2. Data Collection</td>
<td>Conduct reflective interviews.</td>
</tr>
<tr>
<td>3. Distillation</td>
<td>Highlight what’s exciting in the data. Develop manifest and latent codes, chronological and thematic patterns.</td>
</tr>
<tr>
<td>4. Clarification and validation</td>
<td>Quote and fact check. Involve the insiders in deciding what is important to include. Generate opportunities for reflection and conversation about the emerging themes.</td>
</tr>
<tr>
<td>5. Manuscripting the jointly told tale</td>
<td>Write the manuscript in a two column format, attending to research, pragmatic and excitement imperative.</td>
</tr>
<tr>
<td>6. Dissemination to interviewees, whole organization and wider public</td>
<td>Invite all interviewees to a facilitated workshop. Two questions are tackled: “is the manuscript “right?” “What do we do based on what we’ve learned?”</td>
</tr>
<tr>
<td>7. Dissemination to the scholarly community</td>
<td>Enfold theory to theorize the primary analysis of the learning history.</td>
</tr>
</tbody>
</table>
Table 2.

The Validity Network for the Learning History.

<table>
<thead>
<tr>
<th></th>
<th>Criteria for first person</th>
<th>Criteria for second person</th>
<th>Criteria for third person</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>research-practice</td>
<td>research-practice</td>
<td>research –practice</td>
</tr>
<tr>
<td>Gergen (1994)</td>
<td>Intelligibility</td>
<td>Enhancement of human value</td>
<td>Promotion of dialogue</td>
</tr>
<tr>
<td></td>
<td>Transparency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guba &amp; Lincoln (1989)</td>
<td>Ontological authenticity</td>
<td>Educative/Tactical authenticity</td>
<td>Catalytic authenticity</td>
</tr>
<tr>
<td>Lather (1993)</td>
<td>Reflexive validity</td>
<td>Rhizomatic validity</td>
<td>Ironic validity and</td>
</tr>
<tr>
<td></td>
<td>Situated validity</td>
<td></td>
<td>Paralogic validity</td>
</tr>
<tr>
<td>Interpretivist paradigm</td>
<td>Exploration (appreciation)</td>
<td>Criticism, Help, Collaborate,</td>
<td>Multiplicity</td>
</tr>
<tr>
<td>(Italics indicates where the</td>
<td>of subjectivity biases (lens)</td>
<td>Increase consensus,</td>
<td></td>
</tr>
<tr>
<td>stress lies)</td>
<td></td>
<td>Appreciation</td>
<td></td>
</tr>
<tr>
<td>Empirical Positivism &amp;</td>
<td>Assumed absent, unimportant,</td>
<td>Reduce impact upon and/or</td>
<td>Replicate</td>
</tr>
<tr>
<td>Post Positivism</td>
<td>and dangerous</td>
<td>work with to dis/confirm</td>
<td>Generalize</td>
</tr>
</tbody>
</table>
Figure 1

Causal Loop Diagram of the Evolving Theory About the Success of The Natural Step.

Engaging vision

Credibility and effect of thought leaders

Activation of personal networks

Self interest

Expanded self interest

Attractiveness of conversation