

# ACTION RESEARCH

**ACTION GROUP:**

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# **OUTLINE**

- 1. WHAT IS ACTION RESEARCH?**
- 2. WHEN AND HOW DO I USE IT?**
- 3. ACTION RESEARCH IN ACTION**
- 4. WHAT IT IS NOT AND LIMITATIONS.**
- 5. CONCLUSIONS ON ACTION RESEARCH**

# 1. HELLO, ACTION RESEARCH

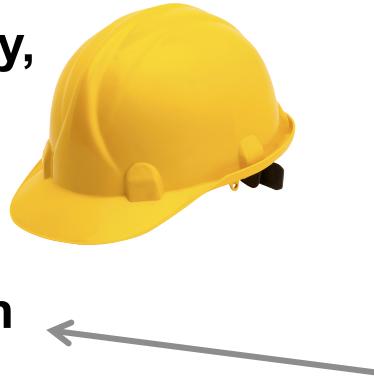
## Qualitative approaches:

Grounded theory,

Ethnography,

Case study,

Action Research

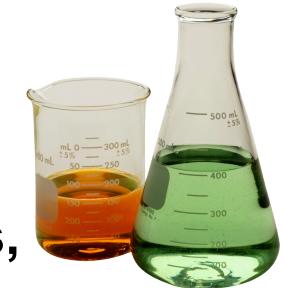


## Quantitative approaches:

Mathematical modeling,

Statistical analysis,

Laboratory experiments,



**A particular strength of qualitative methods is their value in explaining what goes on in organizations.**

# ON APPROACHING A FORMAL DEFINITION

based on separate early work by Kurt Lewin & the Tavistock Institute

AR is an **established research method**

in use in the social and medical sciences since the mid 20<sup>th</sup> century that grew in popularity for use in scholarly investigations of information systems in the late 1990s.

AR varies in form, the most typical being a **participatory method** based on a 5-step model, & responds to particular problem domains.

The method produces highly relevant research results, because it is **grounded in practical action**, aimed at **solving an immediate problem** situation while carefully **informing theory**.

# **WAIT... WHAT IS IT?**

## **ONE LINE DEFINITION:**

**“Action research is..**

**an iterative process**

**involving researchers and practitioners**

**acting together**

**on a particular cycle of activities,**

**including problem diagnosis,**

**action intervention, and reflective learning.”**

David Avison, Francis Lau, Michael Myers, and Peter Axel Nielsen, "Action Research , to make academic research relevant, researchers should try out their theories with practitioners in real situations and real organizations. Communications of the ACM, January 1999/Vol. 42, No. 1

# A QUESTION FOR AN ACTION RESEARCHER

How can we develop an understanding of the interaction of complex social organizations and their information systems?



action researcher

# How can we develop an understanding of the interaction of complex social organizations and their information systems?

I assume that complex social systems cannot be reduced for meaningful study, and that human organizations, can only be understood as whole entities.



action researcher

# How can we develop an understanding of the interaction of complex social organizations and their information systems?

The factoring of a social setting into variables or components, will not lead to useful knowledge about the whole organization! Complex social processes are thus best studied by introducing changes into these processes & observing the effects of these changes!



action researcher  
takes action

# **GENERAL THEORY**

**Action Research** then encourages researchers  
to experiment through intervention and  
reflect on the effects of their intervention  
and the implication of their theories.

## **BIG WORDS ALERT!**

This change-oriented research approach, known as  
**Participatory Action Research**, requires the adoption of:

- 1) An Interpretivist viewpoint of research enquiry
- 2) An Idiographic viewpoint of research enquiry
- 3) Acceptance of qualitative data

# **GENERAL THEORY**

## **1. Interpretivist viewpoint of research enquiry:**

- allows for social intervention into the research setting.
- when the researcher intervenes, s/he becomes part of the study!
- As the researcher attempts to understand what is observed, his prior personal understanding will invade the recording of the observation and the deductions that follow [Kant, 1908]
- the social meaning of action shared between researcher-subject and other subjects must then form part of the experimental data
- This shared meaning implies that the cognitive framework of the researcher and the other subjects has to be considered!

# GENERAL THEORY

## 2. Idiographic viewpoint of research enquiry:

- Proposes that each social setting involves a unique set of interacting human subjects.
- Thus any meaningful investigation must consider the frame of reference and underlying social values of the subjects.
- AR then "operationalizes" this idiographic method by incorporating the subjects into their research as powerful collaborators!
- hence, AR always involves a team that includes researchers & subjects as **co-participants** in the enquiry and change experiences.

# GENERAL THEORY

## 3. Acceptance of qualitative data

Since action researchers adopt **interpretive** and **idiographic** views of research enquiry, they must also adopt **qualitative data** as a medium for their empirical observations/experiments.

This “soft” data can sometimes be legitimately analyzed in its original state, with a limited set of mathematical and logical transformations( mapping, indexing and scaling ).

Qualitative analytical techniques like hermeneutics, deconstruction, and theoretical sampling are common companions to action research.

interpretive:  
researcher becomes part  
of the research and  
his prior beliefs  
and interactions  
must be accounted for

idiographic:  
frame of reference and  
underlying social values  
of subjects is important  
so they are collaborators

# **IN REVIEW: GENERAL THEORY**

**The key assumptions of the action research which stem from interpretivism, idiographic studies, and qualitative data are:**

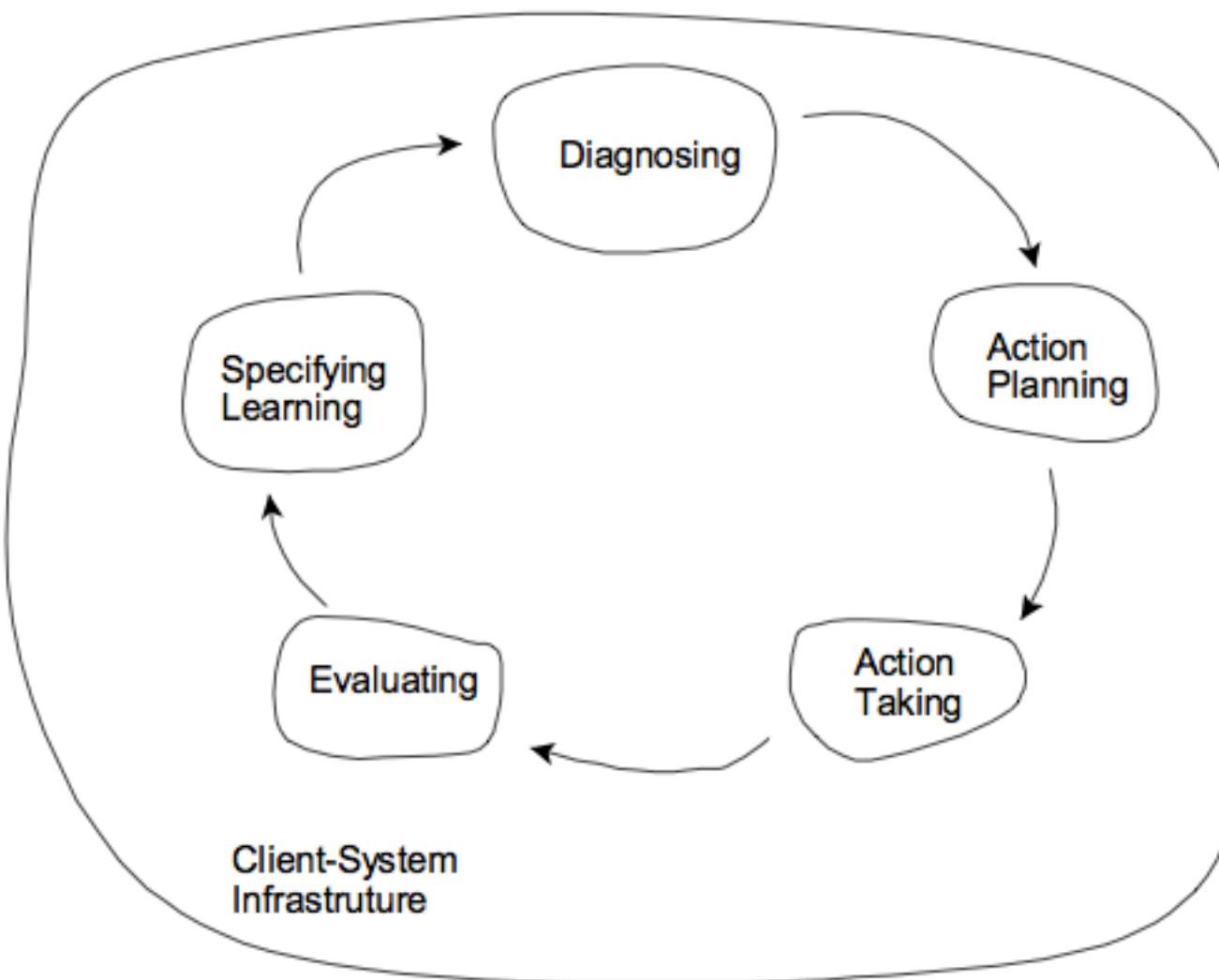
- (1) social settings cannot be reduced for study, and**
- (2) action brings understanding.**

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# SO WHAT DOES AN ACTION RESEARCHER ACTUALLY DO?

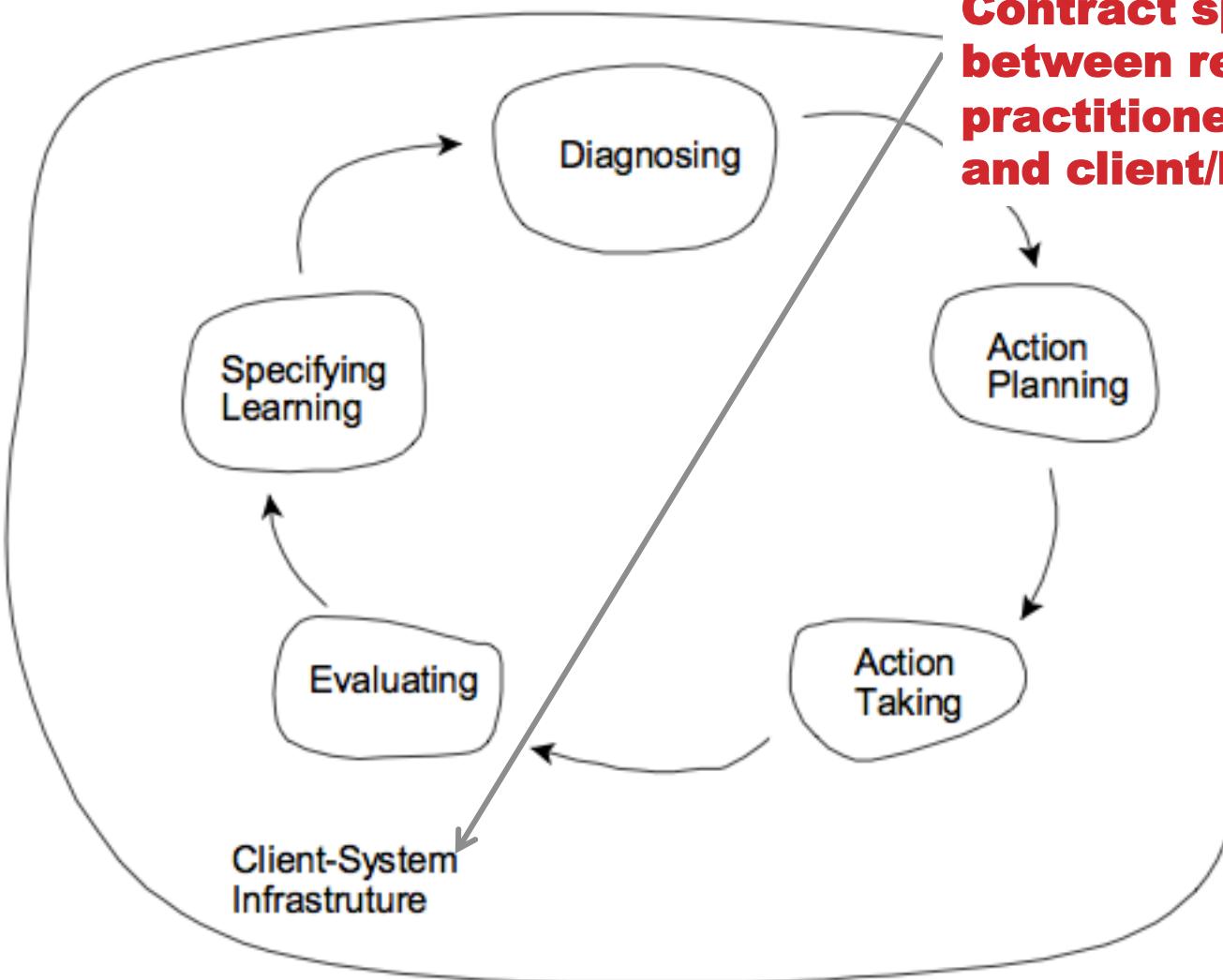


# ACTION RESEARCH STRUCTURAL CYCLE



- (1) diagnosing,
- (2) action planning,
- (3) action taking,
- (4) evaluating and
- (5) specifying learning.

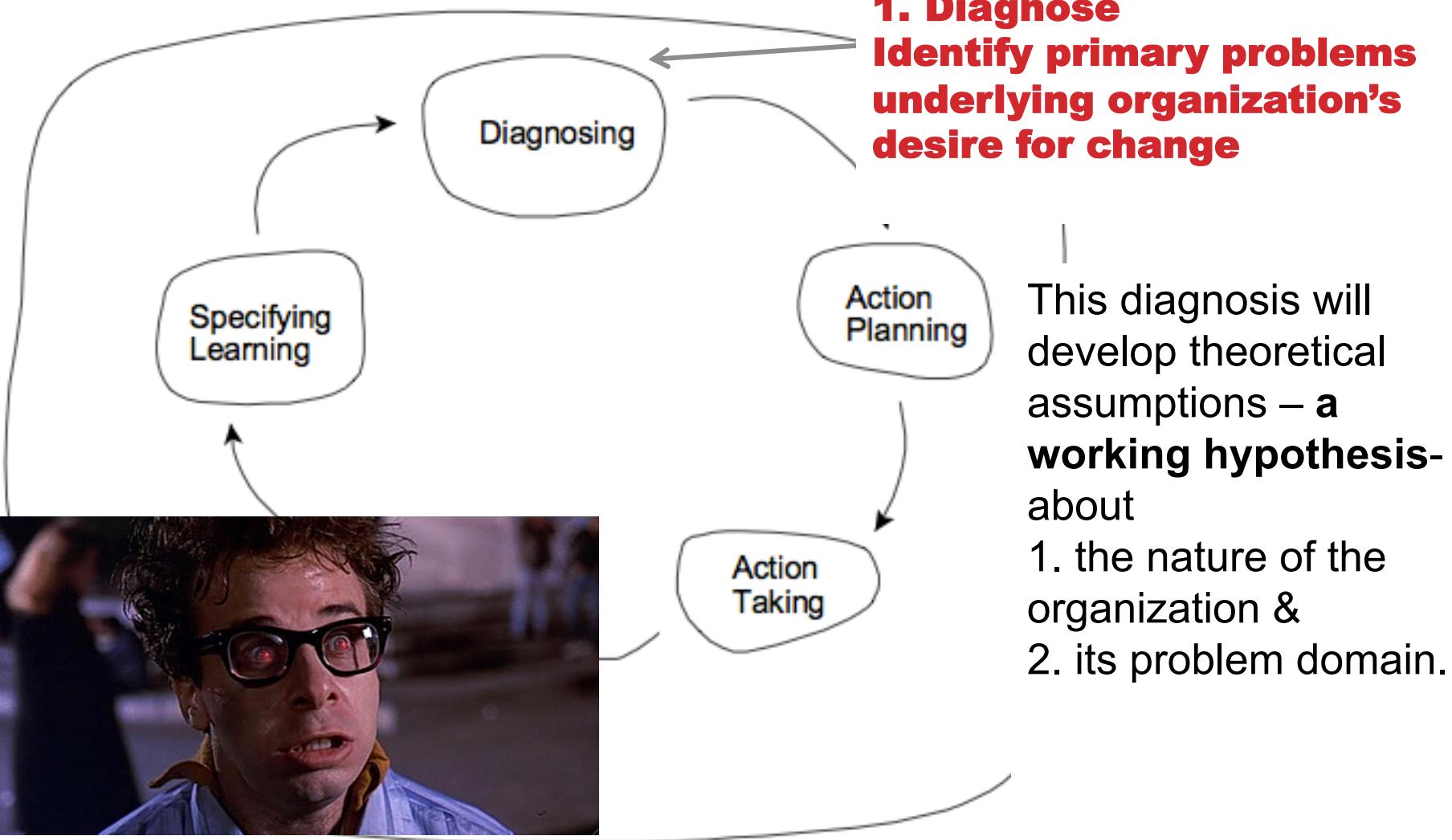
# ACTION RESEARCH STRUCTURAL CYCLE



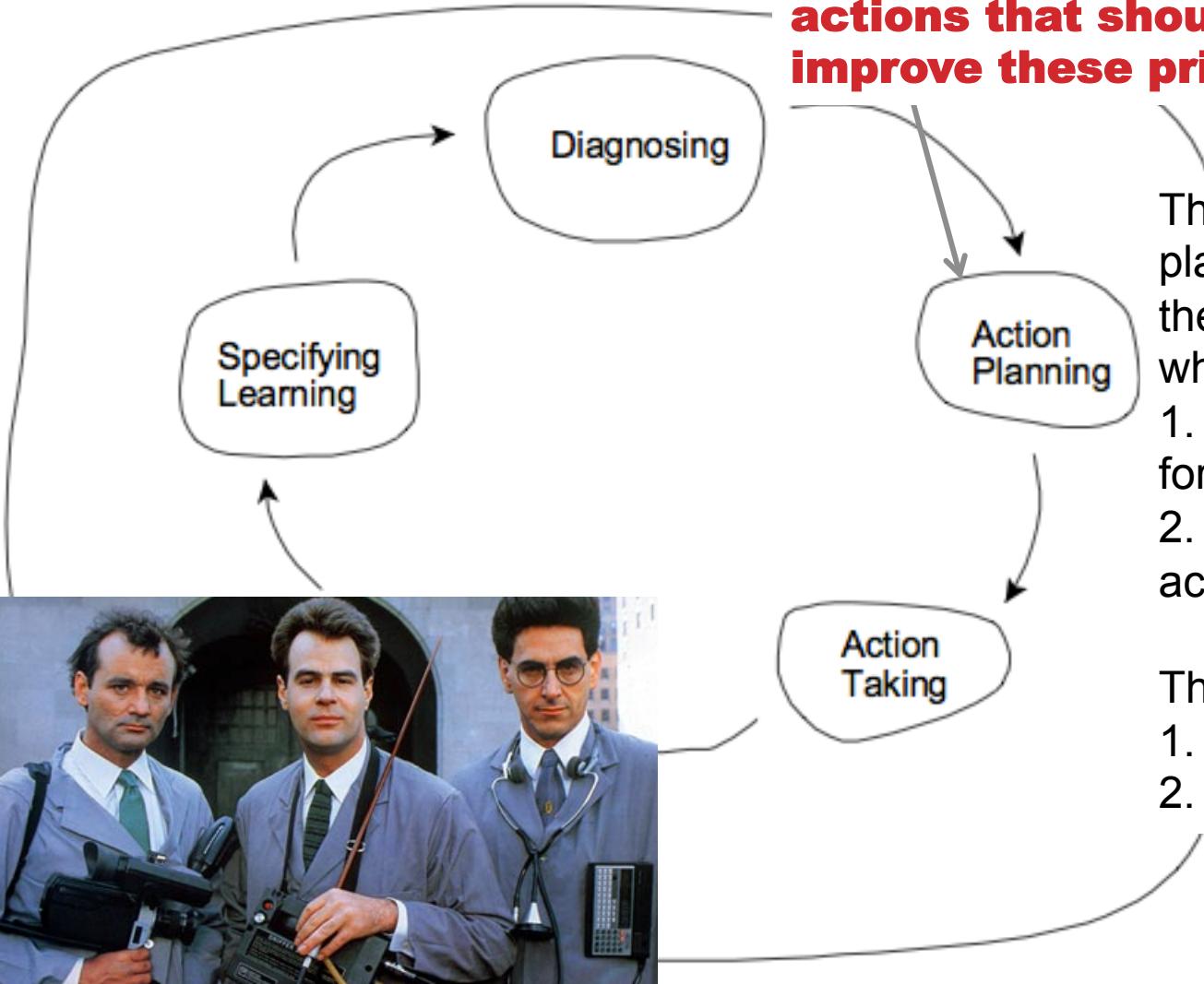
**Contract specifying everything between researchers, practitioners within system and client/host organization**

- Expectations
- Boundaries
- Dissemination
- Responsibilities
- Collaborative Undertaking.

# ACTION RESEARCH STRUCTURAL CYCLE



# AR STRUCTURAL CYCLE



## 2. Action Planning

**Make a plan specifying organization actions that should relieve or improve these primary problems**

The discovery of the planned actions is guided by the **theoretical framework** which indicates:

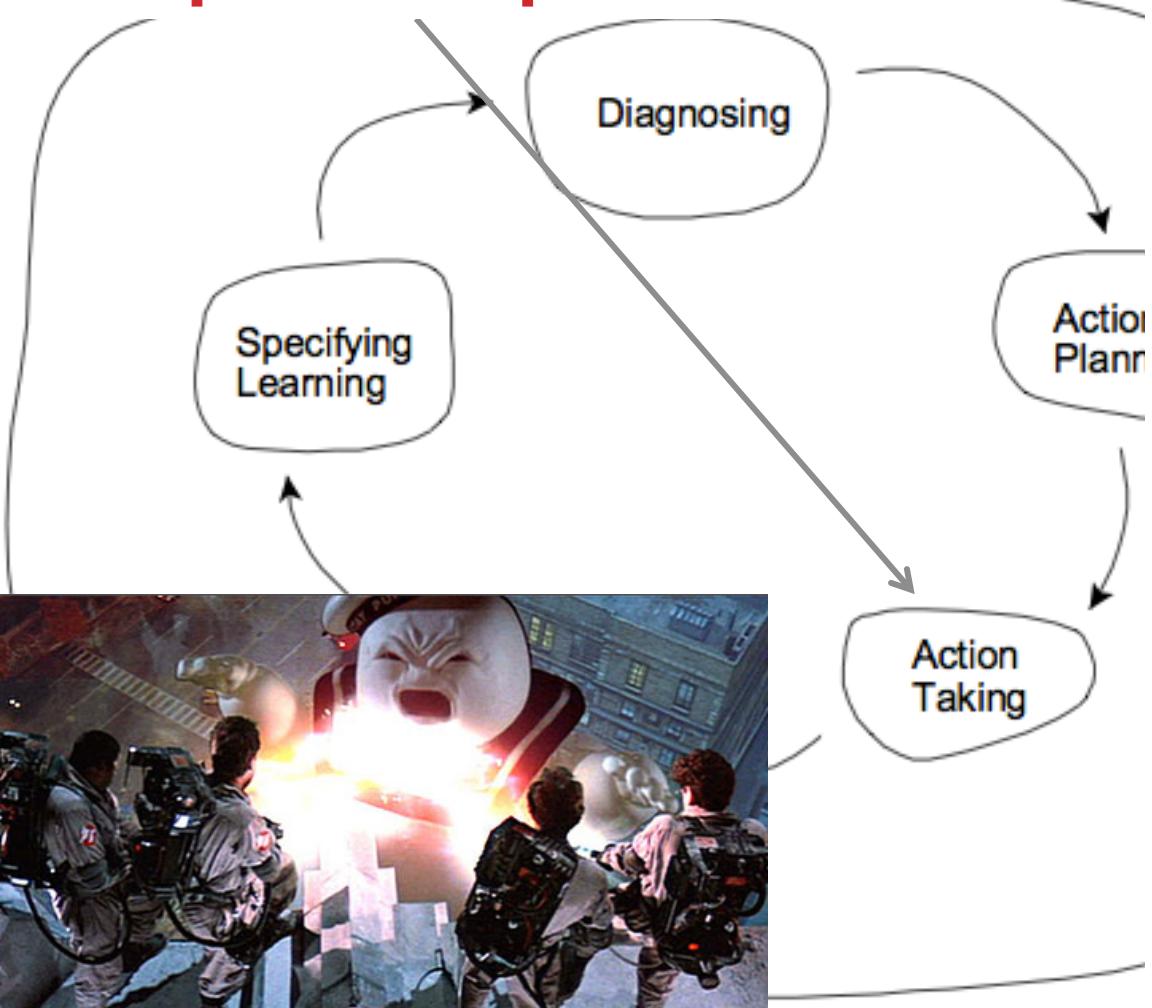
1. some desired future state for the organization, &
2. the changes that would achieve such a state.

**The plan establishes**

1. the target for change &
2. the approach to change.

# AR STRUCTURAL CYCLE

## 3. Action Taking Implement the planned action.



The researchers & practitioners collaborate in the active intervention into the client organization

Different forms of intervention strategy can be adopted.

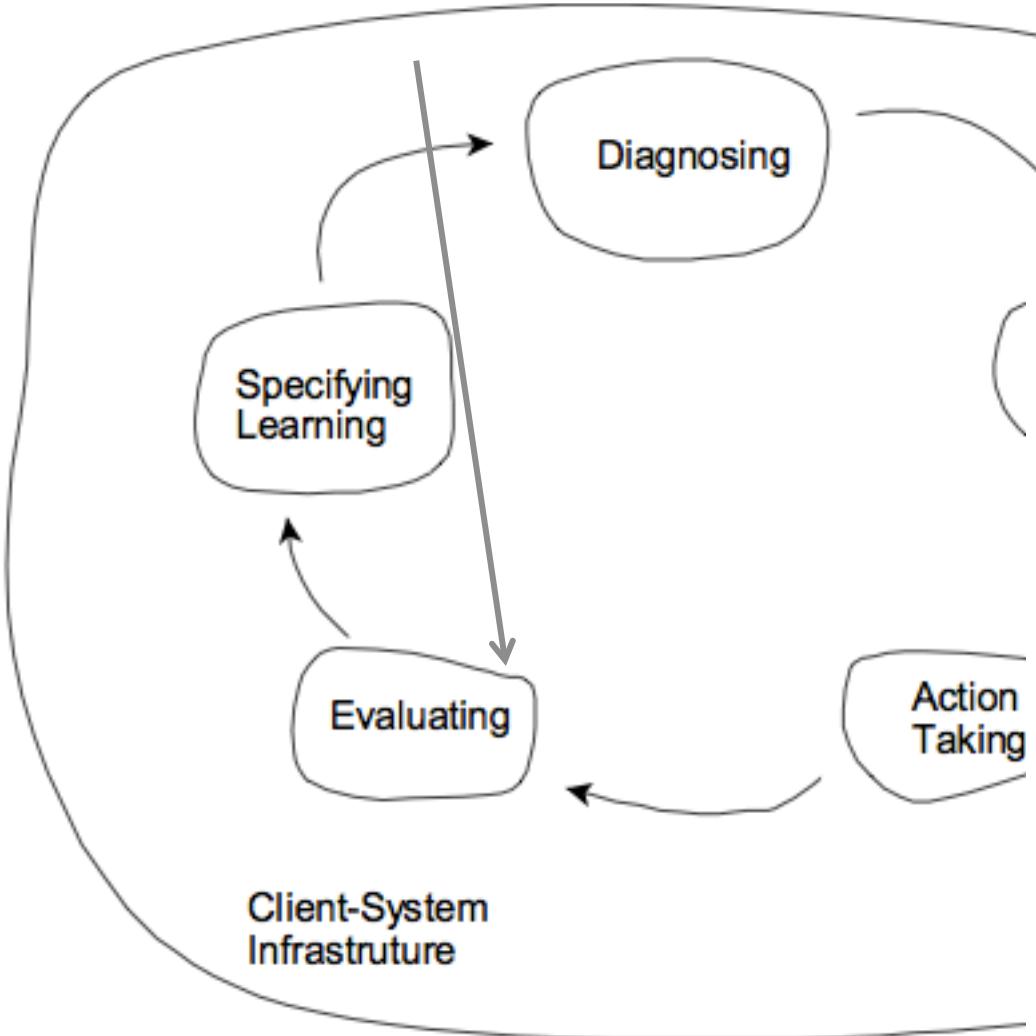
e.g. The intervention might be **directive**, in which the research "directs" the change, or **non-directive**, in which the change is sought indirectly.

Intervention tactics can also be adopted such as recruiting intelligent laypersons as change catalysts and pacemakers

\* social psychology influence

# AR STRUCTURAL CYCLE

## 4. Evaluating outcomes.



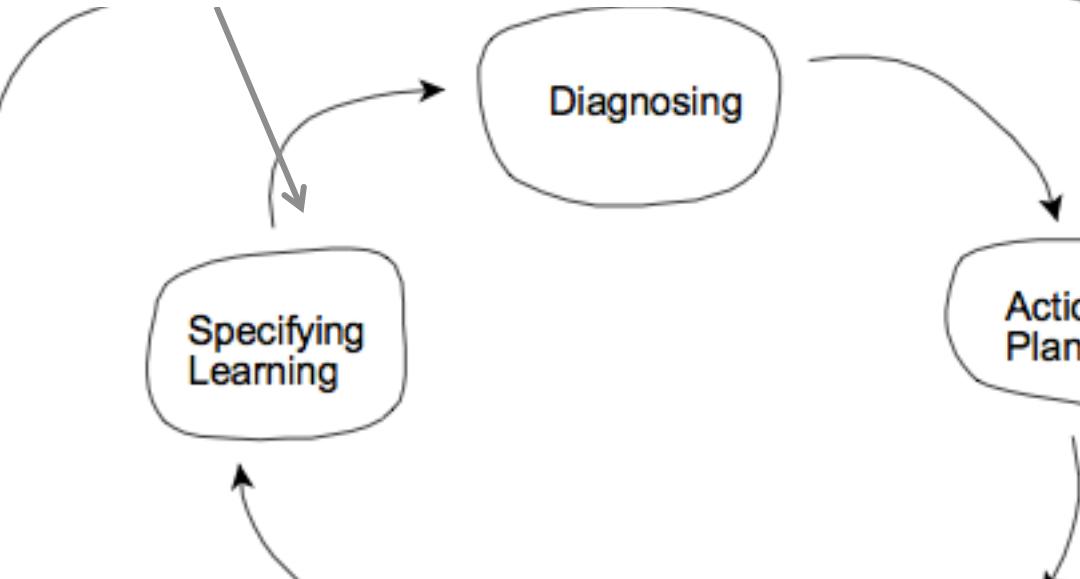
1. Determine whether the theoretical effects of the action were realized.
2. Determine whether these effects relieved the problems.

If successful, must question whether the action undertaken, among the myriad routine and non-routine organizational actions, was the sole cause for it.

If unsuccessful, a framework for the next iteration of the action research cycle (including adjusting the hypotheses) should be established.

# AR STRUCTURAL CYCLE

## 5. Specifying Learning: direct knowledge gained to groups.



1. Restructuring of organizational norms to reflect the new knowledge gained by the organization during the research.
2. If unsuccessful, the additional knowledge may provide **foundations for diagnosing** in preparation for **further action** research interventions.
3. The success or failure of the theoretical framework **provides important knowledge to the scientific community** for dealing with future research settings.

# **AR: STRATEGIES FOR SUCCESS**

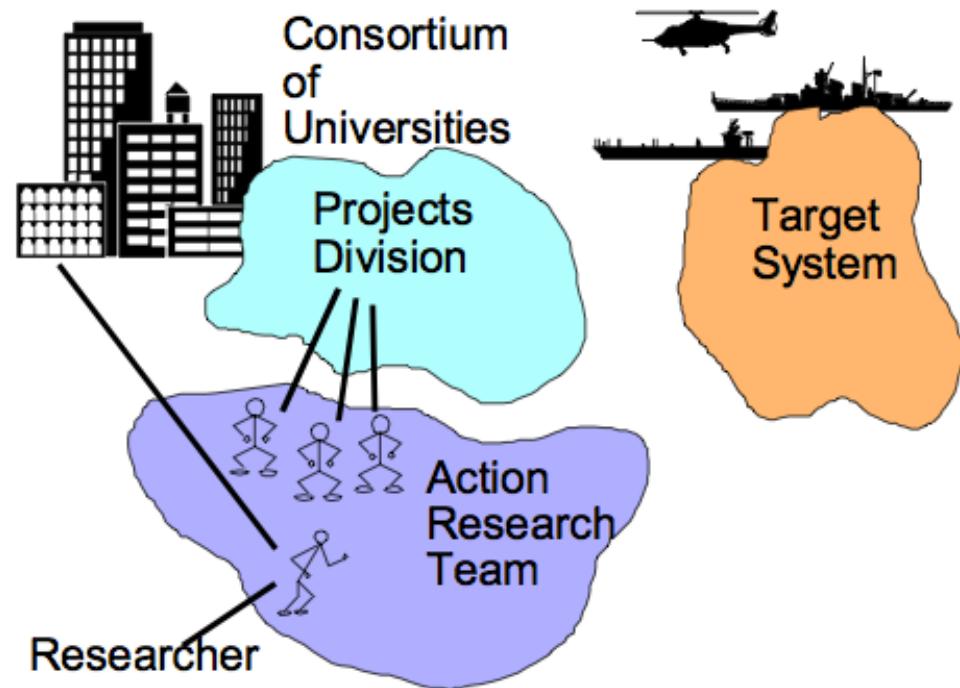
1. Be sure that action research is **appropriate** for the research question
2. Get “**informed consent**” from subjects otherwise its unethical
3. The **theoretical framework** must be present as a premise, otherwise the intervention action is no longer valid as research.
4. Carefully design and specify the **data collection techniques** clearly when setting up research infrastructure and revisit this issue when planning action.
5. The subjects will have key knowledge, both of theory and the practical setting, that is critical to the discovery of important aspects of the theory under test. Avoid dominating the diagnosis and action planning phases, and stress **collaboration**.
6. Action should **continue iteratively** until the immediate problem situation is relieved as they are powerful evidence of the practical effectiveness of an underlying theory.
7. **Generalized statements** cannot be made on the basis of the # of observations, but rather solely on a representative sample of one. They must thus be tempered with an interpretation of the extent of similar settings to which the theory can be expected to apply.

# ACTION RESEARCH IN ACTION

The research setting involved two organizations: the special projects division of a consortium of universities, and a military-related government organization.

The immediate problem situation regarded the failure to complete a systems analysis. The government organization had undergone two rather unhappy and failed attempts at analysis of their information requirements

A complicated data base and analysis requirement made two earlier teams fail and the users had now grown hostile and suspicious of analysts and designers.



Baskerville, R. (1993) "Semantic Database Prototypes," *Journal of Information Systems*, (3) 2, pp. 119-144.  
Baskerville, R. (1999) "Investigating information systems with action research", *Communications of the Association for Information Systems*, Volume 2, Article 19, October 1999

# ACTION RESEARCH IN ACTION

1. The initial **diagnosis** discovered that the early projects were defeated by the large set of data classes, the large volume of data, and the high degree of volatility in the organizational environment.
2. Due to time, money, and hostility to programmers, the team focused on the lack of interactive user validation of database designs, turning to prototyping theory as an initial framework. The **action plan** was to apply prototyping solely for the purposes of database design based on a formal group, an individual interview process and specification standards of components.
3. The team acquired hardware and software, and **implemented the action** as a group.
4. Upon **evaluation**, the initial outcome met with only mixed success. The organizations' management and users were positively impressed and motivated to pursue the proposed development approach. The technical process was less successful. There was an Herculean design and programming effort that couldn't make an approaching deadline. The programmers found that the specification for the prototype was largely a moving target that was impossible to achieve or track and were threatening to quit.
5. In **specifying the 1<sup>st</sup> cycle learning**, it was determined that development process could not be continued in its initial form to project completion and some adjustments were needed

ADJUST THEORY -> REITERATE CYCLE ->

ADJUST THEORY -> REITERATE -> IT WORKED -> PROBLEM SOLVED & THEORY EMERGES!

(\* *on use of prototypes for capturing semantic database design*)

# ACTION RESEARCH IS NOT CONSULTING

1. **Motivation.** – AR is motivated by its scientific prospects, perhaps epitomized in scientific publications where consulting is motivated by commercial benefits, including profits and proprietary knowledge about solutions to organizational problems.
2. **Commitment** – AR makes a commitment to the research community for the production of scientific knowledge, as well as to the client. In consulting, the commitment is to the client alone.
3. **Approach.** - Collaboration is essential in AR because of its idiographic assumptions. Consulting typically values its “outsider’s,” unbiased viewpoint, providing an objective perspective on the organizational problems.
4. **Foundation for recommendations.** - In AR, this foundation is a theoretical framework. Consultants are expected to suggest solutions that, in their experience, proved successful in similar situations.
5. **Essence of the organizational understanding.** - In AR, organizational understanding is founded on practical success from iterative experimental changes in the organization. Typical consultation teams develop an understanding through their independent critical analysis of the problem situation.

# SOME ACTION RESEARCH LIMITATIONS

- 1. People think its consulting** if researchers are not explicit in following the tenets of action research when working in real-life situations
- 2. People think its case study research.** The difference being that Action Research is associated with intervention into the group being researched and thus the emphasis is more on reporting what practitioners do as opposed to what they say
- 3. It lacks a detailed guidelines** for novice researchers & practitioners to understand and engage with in terms of design, process, presentation, and criteria for evaluation. This last item complicates the publication review process, and thus makes the approach a tough choice for academics tied to the journal system of scholarly communication.
- 4. Financial research support from the client is common**, and these payments only serve to further cloud the distinctions between AR and consulting, not to mention the ethical and professional problems which may ensue given the situation.
- 5. Diminished ability to control the process and the outcomes of the research** by the researcher due to the AR collaborative framework. Practitioners with serious problems typically drive the venue for action research. Scholars are not as free to “pick and choose” the problem they wish to investigate.

# CONCLUSIONS

## ACTION RESEARCH ..

- 1) Aims at an increased **understanding of an immediate social situation**, with emphasis on the complex nature of a social setting in a particular domain.
- 2) Assists both in **practical problem solving & expands scientific knowledge**
- 3) Is performed **collaboratively & enhances the competencies of respective actors.**
- 4) Responds directly to the pronounced needs for **relevance in information systems** research, and provides a rewarding experience for researchers who want to **work closely with the practitioner community.**
- 5) Can be used in many research modes, both to **generate new theory** and to **reinforce or contradict existing theory**, and **can be combined** with other research methods for diversifying a research program.