

# Meanings of Pragmatism: Ways to conduct information systems research

Göran Goldkuhl

VITS Research Network

Department of Computer and Information Science, Linköping University

Department of Informatics, Jönköping International Business School

Sweden

Email: ggo@ida.liu.se

## Abstract

There is a growing interest in pragmatism within organisational and informational studies. Pragmatism has been seen as a viable alternative to positivism and anti-positivism. This paper explores the meanings of pragmatism in terms of implications for how to conduct research on information systems. Its main source of inspiration is the American philosophy of pragmatism. The paper describes the necessity of a focus on actions and practices, how to anchor abstractions in pragmatist ontology, the significance of practical knowledge interests and how to retain a pragmatic focus in inquiry processes. The paper concludes with the formulation of an action manifesto.

**Keywords:** Pragmatism, information system, research strategy, action, practice, knowledge

## 1 Introduction

Peirce (1931), James (1907), Dewey (1931) and Mead (1938) formulated pragmatism as a philosophic alternative to abstract and rationalistic science. Pragmatism has a clear foundation in empiricism, but goes beyond a pure orientation to observation of a given reality. The basis in human action gives pragmatism an orientation towards a prospective, not yet realised world. Dewey (1931) writes “An empiricism which is content with repeating facts already past has no place for possibility and for liberty”. This means that pragmatism has an interest not only for what ‘is’, but also for what ‘might be’. The basic interest for action in pragmatism is not conceiving action as an end in itself. Action has, as Dewey (1931) states, the role of an intermediary. Action is the way to change existence. To perform changes in desired ways, action must be guided by purpose and knowledge. The world is thus changed through reason and action and there is an inseparable link between human knowing and human action. Pragmatism can be understood as a philosophy that fully acknowledges this mutual permeation of knowledge and action.

There is a growing interest in pragmatism within organisational and informational studies (e.g. Wicks & Freeman, 1998; Goles & Hirshheim, 2000). Pragmatism has been seen as a viable alternative to the two combatants positivism and anti-positivism (ibid). In certain respects pragmatism shares the objections made by a hermeneutic and constructivistic anti-positivism. However, pragmatism objects to a post-modernistic relativism in some currents of anti-positivism (ibid; Rescher, 2000). Pragmatism reacts to an over-emphasis of subjective interpretations. Not every interpretation (or description) is as good as the other. The way out from a relativistic quagmire is the practical meanings of conceptions made. It is not enough to say that an interpretation makes sense; it must make sense practically.

One of the foundational ideas within pragmatism is that the meaning of an idea or a concept is the practical consequences of the idea/concept. The meaning of it is the different actions, which we conduct, based on the belief in this concept. In his classical article “How to make our ideas clear, Peirce (1878) formulated this pragmatic principle: “Thus, we come down to what is tangible and practical as the root of every real distinction, no matter how subtle it

might be; and there is no distinction of meaning so fine as to consist in anything but a possible difference of practice”. Rescher (2000 p 9) describes Peirce’s position in the following way: “Peirce’s meaning pragmatism encompasses a pragmatic view of the meaning of concepts and ideas. Take the concept of an ‘apple’ for example. When we characterize something as an apple, we commit ourselves to treating it in certain ways – to handle it, store it, use it, discuss it, and so forth in the particular way appropriate to apples. And this is what it means to be an apple”.

If we want to further explore the possibilities of adopting a pragmatic position in organisational and informational studies, we should apply this principle by itself. If we state the question “What is the meaning of pragmatism?”, we should formulate the answers in what ways we then should conduct research in a pragmatically way; how do we act in research. The answers should not only be given as philosophical abstractions and reflections. It should involve references to ways to perform pragmatically inspired research. What difference pragmatism makes in the research process is an adequate pragmatic question to pose and answer.

This is the purpose of this paper: To explore the possible meanings of pragmatism in terms of ways to conduct research. I am not talking about any research. My main interest is concerned with research on information systems (IS) in organisational settings. Much of what I say might be valid for other subject fields. Other scholars may interpret and translate my writing to such other contexts.

The main reason for my endeavour in this paper was hinted above. Pragmatism can be seen as a viable alternative to positivistic and anti-positivistic schools of thought. Actually pragmatism takes a pragmatic position in this battle – what else could it do? Pragmatism uses simply what works. It can share concerns from positivism as well as from anti-positivism. I do think that it shares many more concerns with what is characterized as anti-positivistic, but as said above it objects to relativistic and idealistic positions.

This task to explore what pragmatism can do for IS research is made with main inspiration from what has been called American pragmatism, as it emerged through the writings of Peirce, James, Dewey and Mead among others. Pragmatic thinking is however not restricted to this American tradition. As described by for example Arens (1994) and Thayer (1981), there are resemblances and connections to many European thinkers. I will acquire inspiration from other sources that acknowledge the importance of an action standpoint.

In this short introduction I have only sketched some basic ingredients of a pragmatic thinking. I will in more detail discuss different pragmatic principles in direct relation to the different theses of research conduct, which I will explore below. This is a more pragmatic way of doing it.

## **2 Pragmatism and basic units of analysis**

*Pragmatism means an interest for actions.*

The primary concern, following a pragmatist position, in the empirical world is actions. This does not mean that a pragmatist is only concerned with actions and disregards other issues. A pragmatist researcher lets actions appear as something significant and fundamental to study.

Other matters may also be important to study but these other matters are centred around actions as the primary unit of analysis.

This pragmatist position does not either imply any anticipation of research questions and purposes. A fundamental principle in research is that the research purpose and its accompanying research questions should guide the delimitation of the objects to study, and thus the units of analysis (e.g. Patton, 1990). If there are no references to action in the research questions, should we nevertheless have a focus on actions? The answer a pragmatist will give to this is that a recognition of human actions (what people do) is a fundamental way of letting the social world become meaningful. A pragmatist questions if it is possible to arrive at a proper understanding of the social world (e.g. development of an IS) if we do not recognise the actions performed by people. A pragmatist researcher will of course try to get workable units of analysis based on workable (i.e. researchable) research questions.

These primary concerns for actions in the world will guide the researcher's ways to inquiry. He will state fundamental questions when encountering an empirical domain. There might be questions like these:

- What is the doing? (What *action* is performed?)
- Who is doing something? (Who is the *actor*?)
- What is done? (What is the *result* of the action?)
- When is something done? (What is the *time-context* of the action?)
- Where is something done? (What is the *place-context* of the action?)
- Towards whom is something done? (Who is the *receiver* of the action/result?)
- What should this doing lead to? (What are the *intended effects - purposes* of the action?)
- What was unanticipated during the doing? (What *unintended effects* arised from the action?)

Such fundamental questions need of course to be accompanied by other questions, which might be more specific to the research purpose at hand. These questions are not either only to be seen as empirical questions to ask. They can be used when studying literature, for example a theoretical text. If we have problems to understand an abstract theoretical account, we can pose such questions during our reading and see if, by way of such questions, we can derive and detect "what is going on there" according to the author.

The above presented questions are based on a certain action conceptualisation. One important feature is the division between the action and its results and its effects. This is a division emphasised by von Wright (1971). Action is the active performance of an action; e.g. the opening of a window. The result is what is within the range of the actor (what is being *done*); in this case the opened window. The effects are what arises as consequences of the performed action; in this case the possible fresh air flowing into a room.

In the literature there are many conceptualisations and definitions of an action. One important distinction is between social and instrumental (material) actions (confer e.g. Habermas, 1984). This sharp distinction (made by Habermas) can however be challenged. The close connection and intertwining of language actions and non-language actions are emphasised by for example Vološinov (1985) and Wittgenstein (1958ab). This means that the social character of many material actions should be recognised (Goldkuhl, 2001; Andersen, 2003). It is important to acknowledge a difference between communicative and material actions and at the same time acknowledge the social character of many material actions.

The term instrumental action implies the use of instruments when acting<sup>1</sup>. This is emphasised in the tradition of socio-cultural activity theory emanating from Vygotsky (1962). Material tools as well as immaterial ones (as e.g. linguistic concepts) are considered as instruments mediating the performance of an action (Engeström, 1987; Wertsch, 1998). This implies also a need to distinguish between the instrument (which is used) and the object to act upon (which may be transformed through the action into a result); confer Goldkuhl (2001). We can add some more pragmatic questions:

- How is the doing aided? (What kind of *instrument* is used in the action?)
- What is transformed in the doing? (What is the *base* to be transformed in the action?)

In the IS field, there is research performed with a clear action focus. One good example is what is done within the LAP (Language Action Perspective) tradition. In this tradition (e.g. Winograd & Flores, 1986; Dietz, 1999) actions are clearly described as the primary units of analysis. When describing for example business processes, language actions<sup>2</sup> appear as the essential phenomena. There are of course many other approaches within the IS field, which adopt an action focus in their studies. To give some more examples, there are studies based on activity theory – AT (e.g. Nardi, 1996), actor network theory – ANT (e.g. Walsham, 1997) and structuration theory – ST (e.g. Rose & Scheepers, 2001). To have an action focus in IS studies means an emphasis on what humans do; actions are described and characterised. One very crucial point in IS research is how to conceive what is done by IT systems. Is the information processing of computer-based systems to be conceived as actions? This crucial question has many philosophical implications. It is beyond the scope of this paper to do anything other than acknowledge the significance of this question<sup>3</sup>.

It is interesting to note that a general social science method as Grounded Theory involves a clear action focus; at least in the variant presented by Strauss & Corbin (1990). “Grounded theory is an action/interactional oriented method of theory building” (ibid p 104). Strauss & Corbin present an action oriented paradigm model to be used when analyzing data and constructing categories and theory. The paradigm model is built around action as a central category. Among paradigm categories there are antecedent conditions, context, action strategy and consequences.

### **3 Pragmatism and the avoidance of atomism**

*Pragmatism means an interest for actions in their practice context.*

As stated above, actions appear to be the basic phenomena to study. This does not entail that other phenomena are disregarded. It entails that descriptions and analysis are made with an action centeredness. Other phenomena are related, in one way or the other, to actions.

---

<sup>1</sup> There are several possible interpretations of “instrumental action”, which are discussed by Goldkuhl (2001), who distinguishes between “tool-instrumentality” (the use of a tool during action) and “means-instrumentality” (the action as means to achieve ends). I will mainly talk about tool-instrumentality here.

<sup>2</sup> There is a critical discussion concerning a sole emphasis on language action. Some authors claim the importance of modelling material actions as well (e.g. Goldkuhl, 2001; Andersen, 2003).

<sup>3</sup> Confer e.g. Nardi (1997), Goldkuhl (2001) and Rose et al (2003) for discussions on these matters. This includes discussions on how views from activity theory, actor network theory and structuration theory should be interpreted and translated to the IS area concerning human vs. machine agency.

There might be a danger in this action focus in the way that it might lead to atomistic descriptions. There has been a long debate in social science between micro and macro perspectives, especially in sociology as a core social science (e.g. Cuff & Payne, 1979). Macro perspectives emphasize the use of systemic and supra-individual concepts. Micro perspectives emphasize the use of individually related concepts. This long battle can be seen as a struggle between holism and atomism. The micro advocates argue for founding scientific reasoning in “atomic building blocks” of human action. They are accusing macro researchers to use reifying concepts; the human actors and their actions are lost and the used concepts are too abstract and thus unintelligible. The macro advocates argue for a holistic approach with societal forces and functions of systemic character. They accuse the micro researchers for a narrow detailed focus without contextual understanding. Pragmatists stand firm on the micro side in this battle. But is there not anything important in the macro arguments? Is there not a need for more holistic concepts above actions?

Well founded in pragmatic thinking, there is a movement in contemporary theory for a more holistic conception. The *practice* notion has been put forth as a holistic notion encompassing actions and at the same time avoiding a reified abstraction (e.g. Schatzki et al, 2001; Scollon, 2001; Goldkuhl & Röstlinger, 2003). One can consider the introduction of the practice concept in social science as a dialectical synthesis between these oppositions of holism vs atomism. Schatzki et al (2001) talks about ‘a practice turn in contemporary theory’. A practice is considered to be “embodied, materially mediated arrays of human activity centrally organized around shared practical understanding” (Schatzki, 2001 p 2). A practice is a web of actions that are related and combined in a meaningful way. Human actions are performed within a practice and determined by the practice which they are part of. A practice is constituted by human actions, which means that these phenomena are fully acknowledged as in a strict micro perspective. However, the practice approach goes beyond the atoms of human actions. A practice is considered to be a meaningful entity of holistic character. A practice is something more than the sum of human actions. A practice has an existence that transcends individual actions. A practice determines which actions are adequate within the practice; i.e. what actions count as enactments of the practice. A practice consists not only of human actions; it consists of humans and their shared practical understandings, and codifications of such understandings in a common language, and also of material objects (artefacts) used in the practice. This entails that a practice is a holistic notion. It does not however mean a reifying stance towards human actions and products. We can alternate between viewing the practice as a whole and viewing its different parts (e.g. different human actions) as going round in a hermeneutic circle when shifting between the whole and its parts (Bleicher, 1980).

I can exemplify with LAP again here. One of the core ideas in this tradition is that some doing is a consequence of an agreement between the doer and a requester. This requester initiates the performance of an action through a request and a subsequent negotiation and agreement between requester and performer (e.g. Winograd & Flores, 1986; Dietz, 1999). Following this thesis, a practice is considered to be governed by assignments from and agreements with actors in the environment. This means that a practice is social as one of its core features<sup>1</sup>. Goldkuhl & Röstlinger (2003) have developed a genuinely social model of workpractices. The LAP influence is clear in their model, but they have also included other pragmatic aspects. The workpractice is conceived to be pragmatically multifunctional. A workpractice is at the same time fulfilment of assignments, creation of products from pre-products, instrument and knowledge utilization, norm compliance and experiential learning (ibid). The activity

---

<sup>1</sup> The social character of practices is a main idea in many practice theories; e.g. Schatzki et al (2001) and Scollon, (2001).

notion in the socio-cultural activity theory is a concept of similar kind (e.g. Engeström, 1987). An activity is a social wholeness consisting of mediated actions. These activity and practice views have implications for IS research. An IS is always part of a practice/activity context. It is very hard to obtain a thorough understanding of an IS without studying the practice which is a part of. The practice is what determines the functions and roles of an IS (Goldkuhl & Röstlinger, 2003).

The practice thinking gives rise to further essential pragmatic questions to pose:

- Who initiates the doing? (Who is the *assigner* to the action?)
- What initiative is there to this doing? (What *assignment* is governing the action?)
- What kind of *knowledge* is used in the action?
- What kind of result is valued as good? (What *norms* govern the action?)
- Who is stating what is good when valuing the result? (Who are *norm-framers* of the action?)
- What is *learnt* through the action?

#### **4 Pragmatism and the avoidance of abstract conceptualism**

*Pragmatism means an acknowledgement of action permeation on knowledge.*

The pragmatic standpoint on ordinary knowledge is that it is shaped by human action. What people know about the world is shaped by what they do, can do and want to do in the world. And this includes to a large degree what they know about other people's doings (Schutz, 1962). Ordinary knowledge is permeated by human action and social practice.

This is in contrast with prevailing epistemic views in philosophy and science. Knowledge is often conceived to be a mirror of reality. The role of science is to make knowledge as true as possible so it mirrors reality in an accurate way. This mirror view of knowledge is contested by the pragmatists. Dewey (1931) explains the alternative pragmatic view with reference to the biological evolution: "The adaptations made by inferior organisms, for example their effective and coordinated responses to stimuli, become teleological in man and therefore give occasion to thought. Reflection is an indirect response to the environment, and the element of indirection can itself be very complicated. But it has its origin in biological adaptive behavior and the ultimate function of its cognitive aspect is a prospective control of the conditions of the environment. The function of intelligence is therefore not that of copying the objects of the environment, but rather of taking account of the way in which more effective and more profitable relations with these objects may be established in the future." Humans are not a species only observing reality. In order to survive, humans must act and change their environments in favourable ways. Perception is necessary for this, but subordinated to the necessities of changing the world. This is well described in the affordance theory of Gibson (1979). When perceiving the objects around us, we perceive what they afford to us in terms of action possibilities; i.e. in what ways they are actable.

The tendency in science to abstract and generalize has together with a mirror view of knowledge often led to conceptualisations, which are very hard to grasp and understand. A pragmatic position implies the necessity to make abstractions with remaining linkages to an actable world. Abstracted concepts must be possible to translate to practical reality. Pragmatism offers a way out from many debates on conceptual issues. James (1907) writes: "It is astonishing to see how many philosophical disputes collapse into insignificance the

moment you subject them to this simple test of tracing a concrete consequence. There can be no difference anywhere that doesn't *make* a difference elsewhere – no difference in abstract truth that doesn't express itself in a difference in concrete fact and in conduct consequent upon that, imposed on somebody, somehow, somewhere and somewhen”.

The imperatives made in section 2 and 3 above, about focusing actions and practices, are a first guard against a too abstracted and unclear conceptualism. There are needs for further guards. Goldkuhl (2002) proposes a question concerning *ontological location* to raise during the process of conceptualisation: “Where does this phenomenon exist?” (ibid). This question is complemented with formulation of what is called *an ontology of socio-instrumental pragmatism*. It must be possible to locate a categorised phenomenon in one, or sometimes possibly several, of the following realms (ibid):

1. Humans
2. Human inner worlds (knowledge, intentions, emotions etc)
  - 2a. Intrasubjective part (individualised)
  - 2b. Intersubjective part (shared knowledge and social institutions)
3. Human actions
  - 3a. Intervention-as-action (communicative or material actions)
  - 3b. Interpretation-as-action
  - 3c. Reflection-as-action
4. Symbolic objects (signs)
5. Artefacts (artificially made material objects and their processes)
6. Natural environment (objects and processes)

Abstractions which cannot be associated in a clear way to one or several of these realms should be reformulated so it can fulfil this criterion of ontological location. This follows the ontological positions in classical pragmatism, which Dewey (1931) describes as a “realist metaphysics in so far as it accepts things and events for what they are independent of thought”<sup>1</sup>. But as said above, pragmatism is not plain empiricism, so this realist position is complemented with “an idealistic metaphysics in so far as it contends that thought gives birth to distinctive acts which modify future facts and events in such a way as to render them more reasonable, that is to say more adequate to the ends which we propose for ourselves” (ibid).

It should not be interpreted that pragmatism is against abstraction and conceptualisation. It considers this to be fundamental in human existence and thought. Pragmatism warns against conceptualisations, which are not clearly rooted in the empirical and practical world of humans.

What implications does this have on practical IS research? We must be cautious and scrupulous when developing our concepts. The traceability to empirical data must be upheld. Definitions of concepts must be in accordance with pragmatic ontologies, as for example socio-instrumental pragmatism (Goldkuhl, 2002). Concepts must be possible to be penetrated through the eyes of practical reality.

A complementary safeguard is to be well aware of and apply the principles of (what Rescher, 2000 calls) semantic pragmatism: The meaning of terms consists of their use. This principle, well described and exemplified by James (1907), was further elaborated by Wittgenstein (1958ab) in his notion of language games. Wittgenstein warns us for using too abstract

---

<sup>1</sup> This realist position of pragmatism is emphasized by Rescher (2000).

concepts. We should start with simple concepts and gradually move to more complicated ones. Wittgenstein (1958a p 17) writes "...we shall with great advantage look at primitive forms of language in which these forms of thinking appear without the confusing background of highly complicated processes of thought. When we look at such simple forms of language the mental mist which seems to enshroud our ordinary use of language disappears. We see activities, reactions, which are clear-cut and transparent. On the other hand we recognize in these simple processes forms of language not separated by a break from our complicated ones. We see that we can build up the complicated forms from the primitive ones by gradually adding new forms." Complicated and abstract concepts (if we think that we need them) should be clearly anchored in clear-cut and primitive concepts. Wittgenstein (1958a p 1) also pronounces warnings of an exaggerated use of nouns: "We are up against one of the great sources of philosophical bewilderment: a substantive makes us look for a thing that corresponds to it." Many concepts are often given a substantival form instead of an original adjective or verb form. Following these ideas of Wittgenstein, Goldkuhl (2002) has formulated some principles of a linguistic reflection when developing scientific concepts. It is important to distinguish between entities (true nouns) and activities (true verbs) and different attributes and states of these entities or activities.

## 5 Pragmatism and knowledge interests

*Pragmatism means an interest for practical consequences of knowledge.*

It is not sufficient to just observe and then generalize according to pragmatists<sup>1</sup>. Knowledge should not be treated solely as summaries of past experiences. Dewey (1931) writes, with reference to James, that "reason has a creative function ... which helps to make the world other than it would have been without it". This is based on a view of the world still in a state of becoming. In the area of information systems, this would sure be an adequate position. There is a continuous change in IS practices! Dewey also emphasizes the value dimension in the creation of knowledge. There is a moral responsibility in presenting knowledge that has consequences for future application. "If we form general ideas and if we put them into action, consequences are produced which could not have been produced otherwise. Under these conditions the world will be different from what it would have been if thought had not intervened. This consideration confirms the human and moral importance of thought and of its reflective operation in experience." (Dewey, 1931).

A basic knowledge interest of a pragmatist researcher is what differences this knowledge will have in practice. A pragmatist tries to translate knowledge into action and he takes a special interest in what practical consequences this knowledge may have. The practicality of knowledge is an important criterion to differentiate between meaningful and not meaningful knowledge.

A pragmatist is interested in change and action. From a moral standpoint he gives priority to what is conceived as positive changes. The research endeavour is towards knowledge, which makes a positive difference<sup>2</sup>, i.e. knowledge which contributes to improvement of IS practices. The societal value of IS research lies within its possibilities to improve IS practices.

---

<sup>1</sup> A comment is necessary here: A pragmatist researcher can of course make observation and based on these, he can generalize. A pragmatist is however aware of possible applications of the developed knowledge, and he thus tries to formulate the knowledge in ways which makes it suitable for future applications.

<sup>2</sup> It must of course be added that what is a positive difference for one group of people, might not be a positive change for another group. A discourse into values is therefore needed.

Why should we else bother about having IS research? It gets its legitimacy from being a servant<sup>1</sup> to practice. The ultimate goal of IS research is to contribute to the improvement of IS practices. It does so through the generation of knowledge and its dissemination to students and practitioners. IS research should make a difference!

A pragmatist position can explain and justify the widespread application of action research and methods development in IS research. Both these research strategies are aiming at formulating and trying out what would be better to practice.

Basic knowledge interests<sup>2</sup> of science are description and explanation. These are also valid in research flavoured by pragmatism. Descriptions and explanations may serve as an indirect basis for action and improvement. There are however other knowledge interests which are more adequate to talk about in pragmatic research.

A *revealing knowledge interest* is concerned with uncovering what is not apparent. (“*Look what is here!*”). Research can contribute with reconstruction and making explicit what is taken-for granted and tacit. Hidden agendas and values are brought to open reflection and debate. This knowledge interest relates to and supports a *critical knowledge interest*. Being critical means that you question status quo. Arguments for what is not considered good are expressed. A critical and objecting stance is taken towards some parts of IS practices. (“*That is not good!*”). Research can contribute to practice through a *reflective knowledge interest*. Researchers can suggest alternative ways to view practice, new perspectives and conceptualisations. This knowledge interest may contribute to practitioners’ reflection and change of perspective. (“*You can see it like this!*”). A *prescriptive knowledge interest* is even more concrete and action oriented. New strategies, methods, procedures and design solutions may be suggested by researchers. (“*You can do it like this!*”). This can be made on a general level or directed to particular practice settings. Research can also contribute with ideas about new ways to develop or exploit technology; an *innovative knowledge interest* that goes beyond common applications. (“*This is a new possibility!*”). There is a need for a language community between practitioners and researchers (Apel, 1980). This can be expressed and addressed through a *dialogical knowledge interest*. Researchers may take part in public dialogues concerning the usage of IT in companies and society. Through such a participation in public dialogues, a knowledge exchange may be established together with improved conditions and ways of communication. (“*Can we talk about this?*”).

## 6 Pragmatic and alternating foci in inquiry processes

*Pragmatism means an interest in what works and what does not work.*

As stated above, pragmatism shares many concerns with anti-positivistic, interpretive and constructionistic research. There is a very clear thread from pragmatic philosophy (Mead, 1938) to particular interpretive and constructivist traditions as symbolic interactionism (Blumer, 1969). For a pragmatic IS researcher, an interpretive stance is unavoidable. The social practices of IS are meaningful practices, i.e. they are full of social actions and action traces which render meaning to those inquired as well as to those inquiring. A pragmatist is however not content by making solely interpretive descriptions. He has a fundamental interest

---

<sup>1</sup> Being a servant does not exclude being critical. Critique is a basis for improvement. Confer discussion below.

<sup>2</sup> The concept of knowledge interest has been elaborated by Habermas (1972). I will use this concept in a freer way here, than the three knowledge interests discussed by Habermas.

in actions and practices. Concomitant to this interest is a concern for *what works* and *how* and *why it works*. Likewise, there is a concern for *what does not work* and *how* and *why this does not work*.

This has consequences for the collection, description and analysis of empirical data. A pragmatist is not only interested in recording informant's conceptions, as in phenomenographic studies (Marton, 1981). What people think of the world is often very informative, both concerning the addressed world and what it reveals about the persons themselves. But the pragmatist is also interested in actions and which actions are successful and which are not. In a self-critical comment to their own interpretive case studies, Orlikowski & Baroudi (1991) write: "The study draws heavily on participants' experiences and interpretations, and hence is very dependent on these interpretations. To the extent that individuals are confused, unaware, or deceptive, these findings will be misleading". For a pragmatist, closeness to empirical phenomena and triangulation of sources and methods, are ways to escape a too large dependence on informants' conceptions. A pragmatist asks questions about what people do, and not only about what they think of the world. This means that pragmatism avoids a narrow interpretivism, which is not interested in change and improvement.

I will make a brief interlude on interpretivism vs pragmatism<sup>1</sup>: Interpretivist approaches declare to have a clear root in social-constructivist thinking (e.g. Orlikowski & Baroudi, 1991; Walsham, 1995). "The aim of interpretive research is to understand how members of a social group, through their participation in social processes, enact their particular realities and endow them meaning, and to show how these meanings, beliefs and intentions of the members help to constitute their social action" (Orlikowski & Baroudi, 1991). A pragmatist can agree on this, but would probably prefer another emphasis in the description. The interpretivists' emphasis on the subjective ("meanings, beliefs and intentions") should be reversed by the pragmatists. Rescher (2000) describes the pragmatic position as the following: "In the human realm, *praxis* (doing) has primacy over *theoria* (understanding) because all understanding must itself be the product of doing: whatever we know (understand) is the product of inquiry, an activity of ours". The pragmatist would rather stress the significance of actions and the external world of material and semiotic artefacts and our interaction with these through interventions and repercussions. In Orlikowski & Baroudi (1991) and Walsham (1995) there is clear positioning of interpretivism<sup>2</sup> in social constructivism. This involves objections towards a positivistic ontology which is understood to be a belief in a realistic position ("an external world independent of humans"). Pragmatism would rather take a dual position here. It takes a realistic position in saying that reality exists as an actable and affordable world. It also takes, however, a constructivistic position in saying that we live in a common world created through social interaction and dependent on intersubjective knowledge and language; i.e. an accountable and socially meaningful world.

It is interesting that such a dual position is clearly stated by Berger & Luckmann (1967)<sup>3</sup>. "Society does indeed possess objective facticity. And society is indeed built up by activity

---

<sup>1</sup> Confer also discussions in Wicks & Freeman (1998) and Goles & Hirschheim (2000).

<sup>2</sup> Orlikowski & Baroudi (1991) make a well-known division into three underlying philosophical perspectives on IS research: positivist, interpretive and critical. A pragmatist philosophy is missing in their overview. Pragmatism shares, besides interpretivism, many concerns with critical theory (Argyris et al, 1985), but here are also fundamental differences (ibid; Joas, 1993).

<sup>3</sup> Berger & Luckmann (1967) should be seen as among the most prominent scholars articulating a social constructivistic position. It seems however that their position have been over-interpreted and exaggerated by many of their successors; confer critique in Hacking (1999).

that expresses subjective meaning”. “It is precisely the dual character of society in terms of objective facticity *and* subjective meaning that makes its ‘reality *sui generis*’” (ibid p 30).

Back to the issue of pragmatically oriented inquiries: If a pragmatic inquiry has an underlying interest in improvement of actions and practices, then it could share some principles from practical change approaches and methods. A change method aims at understanding an organisation (or parts of it) and creating change measures. A proper change method includes ways to describe and diagnose as a basis for informed decisions on appropriate changes. A change method does not propose making descriptions of a current situation as a sake for its own purpose. Descriptions and evaluations are made based on a change interest. Matters are described and assessed due to potential change.

Can we learn from change methods for research inquiries? Yes, I think we can. This is also what has been done in several studies. Soft Systems Methodology (of Checkland, 1981) has been used widely for both research purpose and for practical change endeavours. This is also the case with the method Change Analysis/SIMM - CA/SIMM (Goldkuhl & Röstlinger, 2003). I will use the latter method to briefly exemplify how pragmatic research inquiries can be informed by change methods.

The initial part of CA/SIMM consists of workpractice diagnosis. We look into this part of the method. It starts with a workpractice definition. This gives a necessary contextual understanding of the phenomenon to inquiry (for example the use of an IT-system). This is in lines what has been said in section 3 above about the need for a practice orientation. CA/SIMM consists also of methods for description of actions and organisational processes; a pragmatic inquiry must nourish a great interest in actions (section 2 above). Besides these focal inquiry areas; the method consists of problem analysis and strength analysis. If we translate these kinds of analyses to pragmatic research inquiries, these can be seen as supports for an interest in what works (strength analysis) and what does not work (problem analysis). The method supports a socio-pragmatic explanatory analysis and modelling of problems and strengths. This means also that interpretation of actions is expanded into evaluation. The interpretive mode - of what an action means - is complemented by an evaluative mode<sup>1</sup>: Does the action work. The pragmatic position is very clear about this. For example Mead (1938) incorporates a post-assessment of the action results as a conclusive part of the action itself. The evaluations, as well as antecedent interpretations, are in inquiries based on several persons’ observations and reflections. Those inquired make interpretations and evaluations. Those inquiring make interpretations and evaluations. Researchers (as those inquiring) should, in a triangulation mode, base conclusions on their own interpretations and evaluations as well as from those inquired.

The four method components from CA/SIMM mentioned above (workpractice definition, action analysis, strength analysis, problem analysis) should be applied in an alternating way (Goldkuhl & Röstlinger, 2003). As practical instruments they can support a researcher having pragmatic ambitions. Such instruments can safeguard him from not backsliding into pure description and interpretation, and hence protect him from not losing a pragmatic perspective.

This means also that from a pragmatic standpoint, it is not enough to talk about empirical methods in terms of data collection - like for example interviewing and observation - when

---

<sup>1</sup> To evaluate is to interpret. For sake of clarity I here make a distinction between a (non-evaluative) interpretation of what something is and an evaluation (or rather an evaluative interpretation) of how something works.

designing an empirical study. It is necessary to find methods for analysis and description, which assist the researcher in keeping a pragmatic mode of inquiry.

## 7 Conclusions: An action manifesto

*Pragmatism means an acknowledgement of the full dialectics between knowledge and action:*

- *Proper action is knowledgeable action.*
- *Proper knowledge is actable knowledge.*

I have in this paper tried to elaborate on meanings of pragmatism in terms of its implications for IS research. It is of course not possible to give a thorough account of such research implications in a short paper like this. Following the classical pragmatists, I did state the importance of a focus on actions in empirical inquiries (section 2). This should however not be done in a narrow fashion. It is necessary, following contemporary practice-theorists, to take a broader practice context into consideration (section 3). The generation and formulation of categories should be well anchored in pragmatic views of reality. Abstractions that are not clearly related to practical reality, should be avoided (section 4). The development of knowledge should be done with interests to improve actions and practices. Research should be part in changing and improving the world, not just a disinterested observer standing aside (section 5). There is a need for pragmatic instruments in inquiry processes that assist us to focus which actions work and which do not. Interpretation is necessary but not sufficient. Evaluation of actions should also be done (section 6).

Putting these things together, a dialectic view of knowledge and action emerges. Proper action should be knowledgeable action. Proper knowledge should be actable knowledge. There is in ordinary life such a constant interplay between knowledge and action. Science should not be a province outside such fundamental dialectics. Researchers should pursue their research tasks in full awareness of this dialectics, taking into account different pragmatic dimensions.

I will end this paper with an *action manifesto*, which in very condensed form espouses the fundamental views of action significance.

<b>Action manifesto</b>
❖ A human life is a life in activity
❖ A human acts continually and accomplishes changes – differences – in her environment and/or to herself
❖ A human's doings permeates her thinking, conceptualisation and language use
❖ Our continual action is so natural and evident to us, that we tend to take it for granted and thus do not always recognize how thoroughly our consciousness is influenced by our actions
❖ The human consciousness is a practical consciousness in constant interplay with intervening, inquiring and evaluating actions
❖ Experiences from own earlier actions and socially mediated action experiences form the practical consciousness
❖ Collective conceptions, valuations and categories – linguistically expressed and mediated – serve the active life of humans

## References

- Andersen P B (2003) Saying and doing at sea, in Proc of the International workshop on Action in Language, Organisations and Information Systems (ALOIS-2003), Linköping University
- Apel K-O (1980) Towards a transformation of philosophy, Routledge & Kegan Paul, London
- Arens E (1994) The logic of pragmatic thinking. From Peirce to Habermas, Humanities Press, Atlantic Highlands
- Argyris C, Putnam R, McLain Smith D (1985) Action science. Concepts, methods and skills for research and intervention, Jossey Bass, San Francisco
- Berger P L, Luckmann T (1967) The social construction of reality, Doubleday & Co, Garden City
- Bleicher J (1980) Contemporary hermeneutics. Hermeneutics as method, philosophy and critique, Routledge & Kegan Paul, London
- Blumer H (1969) Symbolic interactionism: perspective and method, University of California Press, Berkeley
- Checkland P (1981) Systems thinking, Systems practice, John Wiley, Chichester
- Cuff EC & Payne GCF (Eds, 1979) Perspectives in sociology, George Allen & Unwin
- Dewey J (1931) The development of American pragmatism, included in Dewey J (1931) Philosophy and civilization, Minton, Balch & Co, New York
- Dietz JLG (1999) Understanding and Modelling Business Processes with DEMO, Proc. 18th International Conference on Conceptual Modeling (ER'99), Paris
- Engeström Y (1987) Learning by expanding: An activity-theoretical approach to developmental research, Orienta-Konsultit, Helsinki
- Gibson JJ (1979) The ecological approach to visual perception, Houghton Mifflin, Boston
- Goldkuhl G (2001) Communicative vs material actions: Instrumentality, sociality and comprehensibility, in Schoop M, Taylor J (Eds, 2001) Proceedings of the 6<sup>th</sup> Int Workshop on the Language Action Perspective (LAP2001), RWTH, Aachen
- Goldkuhl G (2002) Anchoring scientific abstractions – ontological and linguistic determination following socio-instrumental pragmatism, in Proceedings of European Conference on Research Methods in Business, Reading
- Goldkuhl G, Röstlinger A (2003) The significance of workpractice diagnosis: Socio-pragmatic ontology and epistemology of change analysis, in Proc of the International workshop on Action in Language, Organisations and Information Systems (ALOIS-2003), Linköping University
- Goles T, Hirschheim R (2000) The paradigm is dead, the paradigm is dead ... long live the paradigm: the legacy of Burrell and Morgan, Omega, Vol 28 p 249-268
- Habermas J (1972) Knowledge and Human Interest, Heinemann, London
- Habermas J (1984) The theory of communicative action 1. Reason and the rationalization of society, Polity Press, Cambridge
- Hacking I (1999) The social construction of what?, Harvard University Press, Cambridge, Mass
- James W (1907) Pragmatism. A new name for some old ways of thinking, Longmans, Green & Co, New York
- Joas H (1993) Pragmatism and social theory, University of Chicago Press, Chicago
- Marton F (1981) Phenomenography - describing conceptions of the world around us. Instructional Science, Vol 10, 177-200.
- Mead G H (1938) Philosophy of the act, The university of Chicago Press
- Nardi B A (Ed, 1996) Context and consciousness. Activity theory and human-computer interaction, MIT Press, Cambridge
- Orlikowski WJ, Baroudi JJ (1991) Studying information technology in organizations: research approaches and assumptions, Information Systems Research, Vol 2 No 1

- Patton M Q (1990) *Qualitative evaluation and research methods*, Sage, Newbury Park
- Peirce C S (1878) *How to make our ideas clear*, *Popular Science Monthly*, reprinted in Thayer (1982)
- Peirce C S (1931) *Collected papers*, Harvard U.P., Cambridge
- Rescher N (2000) *Realistic pragmatism. An introduction to pragmatic philosophy*, SUNY Press, Albany
- Rose J, Jones M, Truex D (2003) *The problem of agency: how humans act, how machines act*, in *Proc of the International workshop on Action in Language, Organisations and Information Systems (ALOIS-2003)*, Linköping University
- Rose J, Scheepers, R (2001) *Structuration theory and information system development - frameworks for practice*, in *Proc of the 9th European Conference on Information Systems*, Bled
- Schatzki TR (2001) *Introduction: Practice theory*, in Schatzki et al (Eds, 2001)
- Schatzki TR, Knorr Cetina K, von Savigny E (Eds, 2001) *The practice turn in contemporary theory*, Routledge, London
- Schutz A (1962) *Collected papers I*, Martinus Nijhoff, Haag
- Scollon R (2001) *Mediated discourse. The nexus of practice*, Routledge, London
- Strauss A, Corbin J (1990) *Basics of qualitative research. Grounded theory, procedures and techniques*, Sage, Newbury Park
- Thayer H S (1981) *Meaning and action. A critical history of pragmatism*, Hackett Publishing, Indianapolis
- Thayer HS (Ed, 1982) *Pragmatism. The classic writings*, Hackett, Indianapolis
- Vološinov V N (1985) *Verbal interaction*, in Innis R E (Ed, 1985) *Semiotics. An introductory anthology*, Indiana University Press, Bloomington
- Walsham G (1995) *Interpretive case studies in IS research: nature and method*, *European Journal of information systems*, vol 4, p 74-81
- Walsham G (1997) *Actor-network theory: Current status and future prospects*, in Lee AS, Liebenau J, DeGross JI (Eds, 1997) *Information systems and qualitative research*, Chapman & Hall, London
- Wertsch J V (1998) *Mind as action*, Oxford University Press, New York
- Wicks AC, Freeman RE (1998) *Organization studies and the new pragmatism: Positivism, anti-positivism, and the search for ethics*, *Organization Science*, Vol 9, no 2
- Winograd T, Flores F (1986) *Understanding computers and cognition: A new foundation for design*, Ablex, Norwood
- Wittgenstein L (1958a) *The Blue and Brown books. Preliminary studies for the "Philosophical investigations"*, Basil Blackwell, London
- Wittgenstein L (1958b) *Philosophical investigations*, Basil Blackwell, London
- Vygotsky LS (1962) *Thought and language*, MIT Press, Cambridge
- Von Wright G H (1971) *Explanation and understanding*, Routledge & Kegan Paul, London