

The Rhythm of Techno

Understanding the Method Applied

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Abstract

Nowadays qualitative research methods become very fashionable in studying the real world of information technology and communication technology. The paper focuses on a project of a global high-tech company (HTC). In the earliest stages of planning and designing a study the terminology for the method that was going to be applied within an interdisciplinary research group was quite varying. Ethnography, ethnomethodology, and action research seem to be similar on the first view. But similar does not imply that they are the same.

The purpose of this paper is to review the differences between ethnography, ethnomethodology, and action research in order to enhance understanding and to increase researchers' reflexivity for the fieldwork. Hence, this paper starts with outlining the histories and basic ideas of the methods that were taken into account by the research group. It continues with a discussion on which impact the application of these three different approaches would have. In particular the paper discusses from a theoretical point of view the motivation behind what method appeared to fit best for the interdisciplinary research group's work for understanding the rhythm of a high-tech company's team in a state of the art business and product renewal project.

Keywords: action research, ethnography, ethnomethodology, research approach, research method

BRT Keywords: AI, BD, IB

Introduction

The world of today is characterized by continuous change, implying many ventures for the current actors. Traditional models and assumptions of managerial literature had been established to illustrate traditional stable markets and business environments. Many authors acknowledge that the established methods are no longer generating authentic portraits of the new way of doing business. In the modern age systems developers were seeking for the underlying business processes.

However, companies today have to face unstable markets, rapidly changing standards, rules and regulations, new and altering customer demands and business

environments characterized by virtually and mobility. This has made the idea of "a model" thinking difficult. Facing up to modernity implies developing new tools for describing and analyzing the dynamics of business, often in a global context. More ad hoc models e.g. prototyping are replacing concepts like "system" and "process".

Shoshana Zuboff (Zuboff, 1988) postulates that the Information Revolution will transform human society, as did the Industrial Revolution. As we are witnesses of the Information Revolution, we can see that in the past few years Information and Communication Technology (ICT) have become a catalyst to the global competition for companies. The utilization of both technologies in companies has had a vast impact on production techniques, project management, work organization, and information management. Inasmuch as ICT had an impact on companies, so they had on Information Systems (IS). As a result the research of IS faces new challenges. Growing interdisciplinary research issues and because multidisciplinary methods and theories are becoming more common. One of the more notable trends in IS research has been the increasing influence of sociological perspectives in research design and evaluation. Researchers have been applying sociological methods and theories to study organizations and work-settings and qualitative research approaches have become very fashionable in studying the "real-world", the practice of IS, and have gained general acceptance for IS researchers (Avison et al., 1999).

When researchers go out to companies aiming for studying the real world they obtain almost instantaneously that the world out there is far from being static. Qualitative research can be approached from quite numerous and different methods.

A recently constituted interdisciplinary research group was given the task to conduct a longitudinal study on a product development project of a global high-tech company (HTC). The purpose of this study will contribute to a new framework on business and product renewal. The members of the research group are coming from completely different disciplines e.g. design, engineering, informatics, and business administration. The characteristic of the study is to take different perspectives and therefore to tangle different issues regarding the project at HTC. Three members of the research group will function as a "blackbox". The blackboxes will register every activity of HTC's project-team, but from their own specific perspective. The blackboxes will be placed at HTC working within the project-team. As two of the blackboxes are not familiar with the work settings and the company culture, they are forced to learn everything from scratch. In short, one could metaphorize the assignment of this research group as learning to dance to the rhythm of Techno. It is a different beat with a special kind of harmony that first has to be understood before dancing with grace.

The actual HTC-project is a follow up. Based on the prior HTC-project regarding conducting business on a special market the experiences indicated to deliberate the specific context of this market. That forced the former project-team to take a radically unconventional way to understand the business situation as well as organizing work in a new form using "concurrent synchronizing"¹. Since the first project resulted into commercial success for HTC it became a good example of highly innovative leadership and organizational principles. Even with this awareness of innovation and success there are several activities detectable within the company that indicate that some groups and units are eagerly trying to relate innovative projects to traditional and well-established principles of organization theory. Hence, such notions are still connected to sequential

¹ Concurrent synchronizing – synchronizing information within all members of the product development group immediately when the information occurs.

and planning oriented methods.

HTC's actual project-team is entrusted with a state of the art product and business renewal project that is of great importance to the company's future. One of the "blackboxes" has the task to record the use of ICT for enhancing information-flow within the HTC project-team. This includes even the information-flow with its suppliers and customer. Together with the other taken perspectives the research group's superior objective of the study is to contribute to a new framework on business and product renewal.

One important issue was that the research group had different perspectives. In the last stage, the findings will be coupled together to perceive an overall comprehension. The results will contribute to establish a new framework and approach which is capable of understanding the new business processes. Since the findings will be merged in the end it seems to ease the final process for the members of the research group if the same method is applied. In the earliest stages of planning and designing the study the terminology of methods that was going to be applied was quite varying. Ethnography, ethnomethodology, and action research seem to be similar on the first view. But similar does not imply that they are the same.

The purpose of this paper is to review the differences between ethnography, ethnomethodology, and action research in order to enhance understanding and to increase researchers' reflexivity for the fieldwork. Hence, this paper starts with outlining the histories and basic ideas of the methods that were taken into account by the research group. It continues with a discussion on which impact the application of these three different approaches would have. In particular the paper discusses from a theoretical point of view the motivation behind what method appeared to fit best for the interdisciplinary research group's work.

Learning the Differences

The period from the early 1980s to the present is characterized by continuous change along with the emergence of the postindustrial information economy. Jean-François Lyotard (1984) and David Harvey (1990) acknowledge these elements as the postmodern conditions. Postmodernism simply rejects the modernist ideals of rationality or individualism, for being anti-capitalist, contemptuous of traditional morality, and committed to radical uniformity. Postmodernism points to processes of flux, instability, and a new set of values.

For many years, qualitative research was the main research approach when studying people and organizations, but quantitative techniques, such as surveys and experiments began to be more attractive to researchers. By mid of the 20th century, quantitative techniques had become dominant in many fields of social study (Hammersley, 1992). However, the value of qualitative research appears to have been recognized once again in the postmodern age (Hammersley & Atkinson, 1995).

As researchers have moved over from quantitative approaches towards qualitative methods, many interesting forms of research have emerged. Methods as ethnography, ethnomethodology, as well as action research have been used in large varieties for such investigations.

The History of Ethnography

The use of participant observation as a research method dates from the pioneering ethnographies of Bronislaw Malinowski. Malinowski's work is different to that of his anthropologists' colleagues. The traditional social anthropologists had previously only visited societies for short periods to record general descriptions and statements about social life. Malinowski's approach of conducting research was quite different to the common practice at that time, as he lived for two years on the Trobriand Islands. His achievement was not only to record the principles of social organization, but also to observe and to record circumstances at first hand (Hammersley & Atkinson, 1995).

This new method ethnography permitted Malinowski to observe more than a static view of society. He was able to discover an organic structure in which interactions between individuals and groups were based on formalities, beliefs and institutions serving the social cohesion.

Ethnography has grown to be the predominant perspective of anthropological field workers, not simply for the collection of their materials, but also for their organization, interpretation, and presentation. Within ethnography, however, numerous analytic orientations may operate. The use of qualitative research methods first became popular in the studies of the "Chicago School". During the period from 1920 to 1940 researchers of the University of Chicago produced detailed participant observation studies on urban life. At the end of the 1940s the interest in qualitative methodology declined with the prominence of grand theories and quantitative methods (Taylor & Bogdan, 1984).

Since the 1960s ethnography studies reemerged. In IS research it is prominent as Dahlbom stated that he used "quick and dirty ethnography" for the InfraGlobe study (Dahlbom, 1998).

The Basic Ideas of Ethnography

The definitions of ethnography are as manifold as there are authors involved. John Van Maanen (1982) stated that ethnography is a method that stipulates extensive fieldwork of several types and called it fieldwork on the beat.

Ethnography should be seen in contrast with other methods in social anthropology. It is qualitative rather than it is quantitative. The importance in ethnography lies on the "member's point of view" and has a critical focus on the member's experience rather than concentrating the member's action.

Ethnography is the most realistic way of evaluating a system is to go into the place of work and watch real users using it over a prolonged period. Data collected include audio and video-tapes of work practices, field notes as to the most significant practices carried out by the participants, descriptions and diagrams of the work setting, and samples of various artifacts which illustrate the nature of work in the organization.

Traditionally, ethnography requires a long period of immersion - months or even years - in the study setting before the ethnographer can perform an informed analysis. However, as Randall et al. (1994) discuss, methods such as "quick and dirty ethnography" can still provide useful amounts of data in a shorter time.

The History of Ethnomethodology

According to Alain Coulon (1995) started Harold Garfinkel in the end of the 1950s to elaborate ethnomethodology. Garfinkel named as the most important sources for his accomplishment the works of Talcott Parsons and Alfred Schütz. Parsons opposed the mainstream sociology of his time with the theory of action. His book “The structure of Social Action” (1937) contributed mostly to the development of structural-functionalism which was the prevailing school of American sociology in the 1960s. Alfred Schütz (1932) developed a new understanding of Max Weber’s term *Verstehen*. With the reflection on the work of Max Weber (1949), Schütz pointed out that the conception of *Verstehen* was not clarified. His book founded sociological phenomenology.

During the 1960s and 1970s Garfinkel established with some colleagues a network which developed the idea of ethnomethodology. This network included researchers such as Aaron Cicourel, Lawrence Wieder, Don H. Zimmerman, and Harvey Sacks. This network published many articles determining the method of ethnomethodology. In 1967 Garfinkel published his book “Studies in Ethnomethodology” which aim was to respecify the subject and methodological approach of sociology.

Coulon (1995) states that in the 1970s ethnomethodology separated into two groups. One group consists of the conversation analysts around Harvey Sacks, who founded Conversation Analysis. They study the structures and formal properties of language considering in its social use who search in our conversations for the contextual reconstruction’s that enable us to pursue conversation and to give them sense (Sacks, 1992). The other group of ethnomethodologists consists of sociologists for whom the admitted frontiers of their discipline remain restricted to the more traditional objects studied by sociology, such as education, justice, organizations, administrations, and science.

As the latest ethnomethodology development, Dourish and Button (1996) expressed in their paper that the attempt of Human Computer Interaction design on the basis of ethnomethodology bears the risks of methodological danger. They proposed technomethodology as a possible solution.

The Basic Ideas of Ethnomethodology

Ethnomethodology proposes the study of social order, as it is constituted in and through the socially organized conduct of the society's members. Harold Garfinkel has derived the problem of social order and the notion of membership from Talcott Parsons' theory of action (Coulon, 1995). But the way in which he has undertaken it is mainly derived from the phenomenological tradition. Garfinkel borrowed it particularly from the constitutive phenomenology of the natural attitude that was instituted by Alfred Schütz.

However, in ethnomethodology it is the case that members may be studied in a procedural fashion. The central idea is that members are continuously engaged in establishing what may be reasonably assumed to exist, by connecting whatever presents itself to their attention with elements of their stock of knowledge. According to the argumentation of Schütz (1962) consists this knowledge consists of typifications and recipes, such as action-types, person-types and course-of-action types. Members demonstrate competence through showing their competence and through demonstrating

the understanding of a situation by connecting “indexical expressions²” in a reasonable style with generally available knowledge “what any competent member knows”. Along with fitting “cases” to “types”, a reasonable world is constituted (Garfinkel, 1967).

Since ethnomethodology has an interest in the procedural study of common sense as it is used practically, it is faced with an extraordinary methodological problem. This may be explained as “the problem of the invisibility of common sense”. Members have a practical rather than a theoretical interest in their constitutive work (McNiff, 1988).

The History of Action Research

The origins of action research are unclear within the literature. Authors such as Stringer (1996) or Kemmis and McTaggart (1990) have stated that the American psychologist Kurt Lewin instituted action research. According to McKernan (1996) action research evolved as a method of inquiry over the last century and it dates back to the science in education movement of the late nineteenth century. He discloses that forerunners used action research without knowing using this method.

In 1951 Kurt Lewin published his book on field theory in social sciences. He was keen to study in order to understand and change certain social practices and issues himself and also to provide people with an instrument to study their own relationships. The core of Lewin's model is the standpoint that research is consisting of action cycles including planning, acting, observing, and reflecting of action (Clark, 1972).

Even if action research was applied in the study of industry in the fifties and early sixties, by the end of the 1950s action research was in decline and under attack (McKernan, 1996).

Nowadays, as the qualitative methods have become more prominent and generally accepted, action research has become more popular again (Avison et al., 1999). In 1995 Braa and Vidgen introduced "Action Case", a new method combining aspects of case study and action research. Action Case views that the laboratory for IS research is the organization.

The Basic Ideas of Action Research

Action research is intended to achieve both action and research. It is appropriate to situations where action is appreciated in the form of change, and simultaneously improves understanding, which is an addition to what is known.

Despite all different kind of definitions of action research there are four basic themes manifested: social change, knowledge acquisition, participants' empowerment, and collaboration through participation. Typically action research is cyclic, with the later cycles being used to challenge and refine the results of the earlier cycles. The necessary process is the spiral of action research cycles consisting of four phases: planning, acting, observing and reflecting (Clark, 1972).

Action research's systemic inquiry is collective, collaborative, self-reflective, critical and undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices. As well as the participants understanding of these practices and the situations in which these practices are carried out (Kemmis & McTaggart, 1990).

² Indexical expression is the context-specific information attached to a word.

Learning to Dance to the Rhythm of Techno

The review above reveals that the methods are similar but each method is different to another. The research group reflected on the point that the method chosen should be capable to respond to continuous change. In modernity it was appropriate to apply just one method and stick to it. Since we are living in the postindustrial information economy it seems to be suitable to apply a research method capable to deal with the postmodern processes. Rejecting a modern approach implies to enable a postmodern approach. Postmodernism allows applying multiple methods in order to analyze and to describe a complex and unstable world that is constantly in flux.

As researchers we are no longer searching for the essence on the truth of reality rather drive us our interests as researchers. Combing several methods is one way. However, this puts greater demands on reflexivity for the researchers, since some elements of the research group's study also bear momentum that would make it quite difficult just to stick one method.

When considering ethnography as one possible research method the ideal observant would be "the fly on the wall", but this approach is questioned by many authors and stated as not practicable. In ethnography literature the problem of obtaining access to the data one needs occurs plentifully. However, the problem of gaining access is to large extends a practical issue (Hammersley & Atkinson, 1995). Getting tasks within HTC's project-team has solved this problem for the research group. For example, one responsibility for the HTC project is the designing and maintenance of a simple web-based information system. On one hand this suits the function as a "blackbox". The members of HTC's project team providing a considerable amount of information very freely, as they want to have a homepage that is of use for the group. On the other hand this job contributes to changes for enhancement of the information-flow within the project-team. Hence, this would cause problems if ethnography or ethnomethodology would be applied as the single method only. But it is not a typical action research cycle either.

Literatures on general participant observation utilize the term *triangulation*. The intention of triangulation is to utilize a combination of methods for data-gathering (Patton, 1980). Despite the fact that field-data is based on first-hand experiences provided by participant observation, other methods and approaches are allowed to be used for the fieldwork. By drawing on other types and sources of data, observers also gain deeper and clearer understanding of the setting and the people studied.

Another form triangulation is capable of coping with is team research, where more participant-observants can study the same or similar settings (Bogdan, 1974).

According to Douglas (1976) team research permits a high degree of flexibility in research strategies and tactics, which the "Lone Ranger" approach can not provide. For our research group this means that it is appropriate to take different roles in the field and study different perspectives. For team research to succeed with the study it is necessary to install clear ground rules regarding the responsibilities of each researcher.

Conclusions

Learning to dance to the rhythm of Techno is not easy as it consists of a new beat and a different understanding of harmony.

Postmodern conditions need postmodern research. For research groups aiming to study the real world, the practice of companies it is a necessity to be reflexive in order to respond to the unstable settings a company is confronted with. Qualitative research can be approached from quite numerous and different methods. Triangulation of methods seems to be an appropriate research approach to cope with the conditions of postmodernity.

Acknowledgement

During the process of writing this article, much valuable input and discussion was originated by the IT&Organization group at the Viktoria Institute, eagerly concerned to improve the ideas that this article contains. I am very grateful to the inspiring hints and thoughts of my colleagues Magnus Bergquist, Erik Johannesson, Rikard Lindgren, Mathias Klang, Stefan Olsson, Antonio Cordella, and Christopher Wallström.

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