



Studies of Work ‘in the Wild’

The Field Study Tradition in Work Practice Research

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1. Introduction

In a paper on decision-making in technically complex domains, two scholars of the North American cognitive engineering tradition, Emilie Roth and Emily Patterson, argue that ‘naturalistic observation studies’ are essential in that they support the ‘discovery phase’ of scientific research: they ‘serve to draw attention to significant phenomena and suggest new ideas whose validity and generality can then be evaluated through additional studies’ (Roth and Patterson 2005). This conception of the role of field studies in technological research is of course rather similar to the conception of ethnography in CSCW as outlined by, for instance, Hughes et al. (1994) and Randall et al. (2007).

When introducing this concept of ‘naturalistic observation studies’ Roth and Patterson make an interesting distinction:

‘Naturalistic observation studies employ a methodology similar in approach to other ethnographically derived methods (e.g., Jordan and Henderson 1995; Nardi 1997) and the European field study tradition’ (De Keyser 1990; Heath and Luff 2000). (Our emphasis).

This special issue is a step within a small ‘project’ that explores the field study tradition in work practice research: a large and rich body of literature much of which may not be well known to most CSCW researchers. Since it has influenced especially European CSCW research and addresses important issues of working life and working practices, we consider it relevant for the CSCW community to know about and consider this legacy. Prior to conceiving this special issue, a group of researchers conducted two workshops: ‘Francophone Ergonomics and CSCW – a comparative analysis’ (ECSCW 2013), organized by Françoise Darses, Pascal Salembier,

Kjeld Schmidt, and Ina Wagner; and ‘The European Field Study Tradition’ (COOP 2014), organized by Dave Randall, Pascal Salembier, Kjeld Schmidt, and Ina Wagner.

The purpose of this editorial is to provide a brief historical overview of the various field study traditions, starting with early studies that were carried out in Britain, the US, Germany, and France from the 1870’s until before the First World War. It then describes the basic approach of several important fieldwork traditions: German Industrial Sociology, Francophone Ergonomics, and ethnographic workplace studies.

2. Early Field Studies

The European Field Study tradition is intimately connected to the Labor Question as it arose and developed in Europe in the wake of industrial capitalism in the 18th, 19th, and 20th. centuries: the labor movement’s struggle for legal control of labor hours, limitations on child labor, and eventually working conditions generally. Also the modern fieldwork tradition, as De Keyser (1990) observes, was driven forward as part of the Coal and Steel Union’s social commitments.

Among the first systematic attempts to investigate and document working conditions in a systematic way, was the work of the British Factory Inspectors that were employed as a result of the Factory Act of 1833. Karl Marx in *Das Kapital* (1867) frequently refers to information provided by these inspectors. For example, in describing the fight for a 10-h workday, he mentions that in the district of one Leonard Horner,

10,270 adult male workers in 181 factories had been questioned. Their statements can be found in the factory reports for the first half-year period, ending up October 1848. These questionings of witnesses offer material that is also of value in other ways (p. 225).

With respect to the manufacturing of matches, a report points at ‘unhealthy and appalling conditions’. Of the workers a commissioner questioned in 1863

270 were under 18 years, 40 under 10, 10 only 8 and 5 only 6 years old. Change of the workday from 12 to 14 and 15 hours, night work, irregular meals, mostly within the working areas that were contaminated with phosphorus’ (p. 191).

The following sections provide an overview of early field studies, the methods they used and the purposes behind them in three different traditions: the UK and the US, Germany, and France.

3. Early Survey Studies in the UK and the US

Towards the end of the nineteenth century, going out into the field to observe, ask and collect facts about (working) life was intricately linked to an awakening interest

of the bourgeoisie in the poor, women and men, who slaved in mines, sweatshops and factories. In the UK, Charles Booth's extensive field work amongst the poor in London was one of the first examples of empirical research driven by a political reform agenda:

Trevelyan wrote that the 'scientific study of the London poor . . . did much to enlighten the world and form opinion' (1931: 400). Canon Barnett expressed a similar view that the Inquiry prepared 'the Public mind for reforms and for efforts' (1918:54) (Bales 1999, p. 164)

Under his influence, Seebohm Rowntree (1901) undertook a survey of all of the working-class households living in York in 1899, and he collected data for over 11,500 households through interviews. Factual information collected from interviewees was complemented by comments and personal judgments by the interviewer. While hardly 'objective', these comments provided

a flavour of working-class urban life in 1899 [...] There are also vivid accounts of the grim conditions in which so many people had to live, with several families sharing a single water tap and lavatory or earth closet (in 1900 there were over 6000 'midden privies' in York, implying that more than half of the working-class families relied on this most primitive form of sanitation, consisting of a brick-lined pit that needed to be manually emptied at regular intervals; [Rowntree 1901] p. 185). (Malpass 2012, p. 401).

Around the same time, Beatrice Potter (later Webb) who did an apprenticeship with Booth, a relative, engaged in conducting numerous interviews with workers, men and women. She also sought employment in a small sweat shop acting as a 'participant observer' for 3 days. In 'The Diary of an Investigator' (1898) she paints a vivid picture of the place, the women working there, their relationships, and many details of the work processes. Analyzing Webb's autobiographical 'My Apprenticeship' (1926), 'O'Day (1993) describes the relationship between Potter/Webb and Booth:

Together they developed views about the proper balance between and use of quantitative and qualitative materials in presenting a snapshot of the social problem. Her interest in and expertise in interview work was cultivated. Her natural talent for observation was fostered. Her inclination to milk a variety of types of source was encouraged (p. 241).

Potter was greatly influenced by another woman, Harriet Martineau, the British author of the first treatise on methods of social research, *How to Observe Morals and Manners* (1838). Comparing the principles these early women sociologists followed, Broschart (2005) observes that:

the methods they endorsed are remarkably similar and complementary. For example, both of these early British social scientists considered observation to be the most valid method of data collection. They actively encouraged the practice of systematic note taking and record keeping and cautioned researchers to avoid making premature generalizations or conclusions based on spotty evidence. Recognizing the superior value of documents and other types of material evidence, they expressed serious reservations about the validity of oral testimony. Nevertheless, when conducting interviews or collecting verbal statements, they both urged polling the widest possible number and variety of informants. They also supported the use of descriptive statistics and called for the dissemination of research findings and reports for external review and verification (p. 83f.)

Field observation methods were also used in the United States from the early 1900s to the 1930s. The most famous example is the so-called Pittsburgh Survey (1907–1908) - a ‘landmark of the Progressive Era reform movement’ - that was funded by the Russell Sage Foundation of New York. Nearly 70 investigators, among them Elizabeth Beardsley Butler (see also Balka and Wagner, this Issue), together with photographer Lewis Hine and artist Joseph Stella, studied the working and living conditions of working-class Pittsburgh. The findings were published in six volumes. The director of this study, Edward Devine, described the results of this huge enterprise:

In attempting thus to reckon at once with the many factors of the life of a great industrial community, we may not have been able to go so deeply into most of them as, for example, special inquiries have gone into tuberculosis, child labor, housing, or the standard of living; although on the other hand we may have gone into others, such as the cost of typhoid, the effect of industrial accidents, the status of the steel workers, the boarding-boss system, and the place of women in modern industries, more deeply than has heretofore been attempted. [...] All of these results of the survey, relating to overwork, low wages, immigration, destruction of families, archaic institutions, and indifference to adverse living conditions, appear to me worthy of your very careful consideration (Devine 1909, p. 660, 661).

The Pittsburgh survey drew upon the skills of social workers as well as many different types of specialists. It combined a variety of survey methods, including statistical analysis, with interviews and direct observation; and it also made use of photography and drawings in documenting working and living conditions.

4. Max Weber and the ‘Verein für Sozialpolitik’

In Germany, it was Max Weber’s interest in what he called the ‘psychophysics of industrial work’ that laid the grounds for building a fieldwork tradition. Max Weber himself, in 1908/1909, carried out empirical research in a family-owned textile

factory with the aim to gain insights into the dynamics of industrial worksites. He was convinced that it would ‘be possible, in principle, through physiology, experimental psychology, and perhaps even anthropology, to gain insights into the assumptions and the effects of alterations in technical and economic conditions of industrial work’ (Weber 1995, pp. 163–164). While his notion of empirical work did not include direct observation and interviews as methods, he nevertheless believed that the psycho-physics of work could arrive at a deeper understanding of workers’ performance through collecting and interpreting ‘data’.

Every process of the ‘division of labor’ and ‘specialization in the modern large enterprise’ but in particular ‘the breaking down of the components of work’ (*Arbeitszerlegung*) within the modern large enterprise, every alteration of working tools or machines, every alteration of work-time and work-pauses, every introduction or alteration of the wage-system, which aims to optimize the specific qualitative or quantitative work performances, — each of these processes means in each case an alteration of the expectations placed on the worker’s psycho-physical apparatus (Weber 1995, p. 163)

Weber’s notion of useful data was shaped by the psychological theories and experiments of his time, namely Kraepelin’s experiments with mental work (Brain 2001).

When in 1872, a group of social-conservative and left-liberal scholars founded the ‘Verein für Sozialpolitik’, Max Weber, his brother Alfred and Heinrich Herkner initiated an extensive empirical research program ‘Untersuchungen über Auslese u. Anpassung (Berufswahl u. Berufsschicksal) der Arbeiter in den verschiedenen Zweigen der Großindustrie’¹ whose results were published by the ‘Verein für Sozialpolitik’ between 1908 and 1916. It included, for instance, research by Marie Bernays, who took employment at the factory and based her report on participant observations and talk with workers (see Balka and Wagner, this Issue) in the Gladbacher spinning and weaving industry; Dora Landé in the manufacturing industry in Berlin; and Fritz Schumann at the Daimler motor factory in Stuttgart Untertürkheim.

The German reformers were less progressive than their colleagues in Britain and the US looking at social reforms as a means to prevent the aspirations of the worker movement that was forming.

Already the Weber brothers and Herkner recruited young women researchers, stressing their female intuition that, ‘in general takes care of accounting for the individual moment’ (quoted in Schütter 2012). Also the economist Gustav Schmoller, full of admiration for the work of Beatrice Webb, had started to promote women researchers. In 1895 he personally helped Elisabeth Gnauck-Kühne to get the permit to study at the university. Her

¹ ‘Research on the selection and adaptation (vocational choice and vocational fate) of the workforce in the different branches of heavy industry’.

[...] empirical study ‘Die Lage der Arbeiterinnen in der Berliner Papierwarenfabrik’ (The situation of women workers in the Berlin paper product factory), in which she [...] combined covert participant observation with statistical analyses and expert interviews was published in 1896 in Schmoller’s *Jahrbuch*. Along with her first appearance as a woman and presenter at the protestant-social congress this established her reputation as ‘the first German social politician grand style’ and leading expert on social issues (Gerhard 2013, p. 80).

These and other studies prepared the grounds for what in German Industrial Sociology after the Second World War became the ‘company case study’.

5. Field Studies in France

The first half of the nineteenth century in France saw a multiplication of the use of surveys, which can be explained by the recognition of the state of the workers’ condition and by the joint emergence of the social sciences and the socialist currents of thought. These latter based their project of transforming the workers’ conditions on a precise knowledge of the realities of work.

The status of surveys during this period remains ambiguous: for some they were a means of de-escalating social tensions and regulating revolutionary velleities; for others, it becomes a vector of social demand and an alternative strategy to strikes (which are rendered impossible).

From a methodological point of view, a key date is the survey carried out in 1828 in the tobacco factories by Alexandre Parent-Duchâtelet and Jean-Pierre Darcet (Jarrige and Le Roux 2019). It constituted a rupture with the tradition of hygienist studies which favored clinical examinations of the workers, and visits to hospitals. In contrast, the emphasis here is on field surveys based, in particular, on observations carried out in work situations, including the collection of workers’ accounts of their activity.

From the second half of the nineteenth century, physicians and engineers started to update their knowledge of craftsmen’s illnesses by using systematic and ‘scientific’ observations of workplaces and work practices. This work was extended by industrial hygienists at the end of the nineteenth century with the aim of systematically highlighting and recording the evolution of occupational pathologies in the context of the development of industrialization.

The activist investigations carried out by the brothers Léon and Maurice Bonneff², marked the beginning of the twentieth century in France. They are noteworthy for the wide range of situations covered (rail transport, blast furnaces, construction, hotels and restaurants), and for their attention to detail in the description of their activities, which went beyond a simple journalistic

² <http://www.bonneff.com>

project and sometimes verged on what could be described as a proto-ethnography of professional situations³.

This period was also marked by the emergence of a critical movement against Taylorism epitomized by the book by the psychologist and physiologist J-M Lahy *Le système Taylor et la Physiologie du Travail Professionnel* (Lahy 1916). In this book, Lahy denounces in particular the technicist approach of the work organizers of the time, who confined their consideration of the human component of work to the mere extension of a tool.

Every time it was a question of organizing work on new bases, the reformers put the refinement of technique at the forefront, considering the worker as an element of production, a complement to the tool. (Lahy 1916, p.14)

Incidentally, it was this same Lahy who, as early as 1910, had analyzed the work of typographers in the context of the introduction of a new technology (the linotype). These studies were followed by others, for instance on tramway drivers.

6. German Industrial Sociology

After WWII, German Industrial Sociology took up the tradition of the 'Verein für Sozialpolitik', embarking on a path to understanding modern workplaces and working conditions which was strongly based in the theory tradition of Marxism, as well as in the sociological industrialization and modernization theories of Werner Sombart (*Der moderne Kapitalismus*, 1902) and Max Weber. German industrial sociologists started carrying out large-scale empirical studies of work, many of which included union representatives, and discussed consequences on a strategic level. The ground for this research was laid by early observational studies conducted by Heinrich Popitz, Hans Paul Bahrddt, Ernst A. Jüres, and Hanno Kesting in the German iron and steel industry (*Technik und Industriearbeit*, 1957). They explicitly refer to Max Weber 'who has stressed the task and possibility of capturing on a more concrete level the "problem of humans and machines, humans and technology" through empirical research' (p. 26).

They spent nine months in the field, documenting and analyzing numerous work processes at eight different technical plants (from feeding the blast furnaces to the wire mill and the briquetting plant), with a focus on the tasks and practices of workers performing more than 20 different jobs. They used a combination of observations

³ This type of militant mediation approach, which gives particular importance to a detailed description of work practices and to the workers' words about their real activity, can be found during the 1970s in the immediate post-May 1968 period. This is the approach followed by what was then called 'les établis' (the 'settled'): an immersive practice of putting militants, intellectuals of the extreme left for the most part, to work in factories to organize workers and to develop a class struggle. The testimonies of these 'settled' people occasionally took the form of elaborate descriptions of the gestures of the trade, informed by the words of those who carried them out (see for example Linhart 1978).

and interviews in which the workers related their experiences that is consonant with contemporary notions of workplace studies. Popitz et al. (1957) describe the interest and pleasure they encountered in the workers they talked to:

Often there was a gradual process of becoming aware of their own practices: each time we returned, we had new things to talk about. The worker had a new aspect and we had discovered a new question. In this way mutual trust developed that led to further conversations, appointments and all kinds of discussions (p. 217).

They stress that this trust enabled them to move about in the plant completely freely and points at the benefits of combining observations with conversations:

Moreover, it allowed us to sometimes put more weight on just observing and another time more on information provided by the workers. In most cases it was effective to have both blend into one another. We never were able to follow a strict rule. Each work process required a special approach. Also the records that we kept continuously during our research in the plant were not always organized in the same way (p. 217).

The approach Popitz et al. chose for their investigations was exceptional. Later work, for which German Industrial Sociology is widely known and reputed, did not always place the same value on direct observation.

In the 1970s, Kern and Schumann carried out case studies in the automotive, the tool and the chemical industry, which they summarized in *Industriearbeit und Arbeiterbewußtsein*⁴, published in 1970. Studies in the cement, petrochemical and electricity industry performed by Mickler et al. (1977) drew attention to the role of work organization as an intervening factor between production technology and work practice. Martin Baethge and Herbert Oberbeck in their book *Zukunft der Angestellten*⁵ (1986) extended the rich debate to white-collar work. These and many more studies were part of the so-called ‘automation debate’ that sought to understand the impact of computer-based technologies on working life. Key concepts, such as skills, stress, and margins of disposition, influenced the design of these studies.

The methodological frame of this research was the so-called company case study (*Betriebsfallstudie*). It started from the premise that technology, organization and the workforce are the ‘flexible potentials’ that are shaped by the company:

In order to apprehend changes of work, it was necessary, from this perspective, to focus the research interest on the company’s strategies. This required extensive investigations already prior to a case study. It for example warranted a general

⁴ *Industrial work and workers’ consciousness.*

⁵ *The future of white-collar work.*

analysis of the sector, knowledge about markets and customers, about legal regulations and collective wage agreements that could exert an influence in the field, about available technologies, etc. (Nies and Sauer 2010, p. 16)

Most of this research was not university-based but took place in large research institutes that had built up considerable research capacities. While for some research groups (the ISF in München), expert interviews with the company’s decision-makers had a central role, others (at the SOFI in Göttingen) used interviews with workers and direct observation as main research methods (Brückweh 2017).

7. Francophone Work Psychology and Ergonomics⁶

The genesis of ergonomics in the French-speaking tradition cannot be disconnected from the field of psychometrics. This may seem ironic when one considers that the founding project of ergonomics is the adaptation of work to ‘Man’ - in reaction to psychometrics which aimed, via selection procedures based on ‘scientific’ knowledge of the aptitudes of individuals, to adapt workers to the nature of the tasks to be carried out. Yet French-language ergonomics has largely been built by rejecting the notion of aptitude.

J.-M. Lahy’s position is illustrative of this tension between the principles constituting psychometrics and an appreciation of its intrinsic limitations. This appraisal led him to set the conduct of a work analysis as a prerequisite for any psycho-technical analysis. However, Lahy goes even further as he postulates that it is necessary to study the work and its conditions of realization, and to do so in real situations

[...] it is not a matter of studying human activity in the ordinary conditions of the laboratory, but in a specific environment, the work environment. Instead of transporting the worker to the laboratory and assimilating his activity, thus distorted, to the usual work, the appropriate scientific equipment must be transported to the factory.

We are convinced that the extrinsic conditions of work, haste, the emotions that accompany it, boredom, the imposed rhythm, moral constraint are causes that escape laboratory research and which determine the most serious accidents for the worker (Lahy 1916, *Le système Taylor et la psychologie du travail professionnel*).

From this point of view Lahy has a special place in the landscape of psychometrics in France at that time. He will be followed in this (at least partly) by his student Suzanne Pacaud who, by the end of the 1940’s, conducted an analysis of the work of

⁶ The connection between francophone ergonomics and CSCW was discussed in detail in Schmidt et al. 2011.

telephonists which has become a classic in French-speaking ergonomics literature (Pacaud 1949). In this study, Pacaud used a mix of different methods including observations, interviews with the workers, as well as the participant observation method⁷.

1955 is a key date in the history of French-speaking ergonomics. It was the year of publication of Ombredane and Faverge's seminal book (Ombredane and Faverge 1955) *L'analyse du travail*⁸, which was instrumental in defining the methodological tools for analyzing work situations. The approach presented constitutes a decisive departure from the principles of differential psychology and its applications in the field of psychometrics. While it takes up positions defended by Lahy and Pacaud (to study man's aptitudes for work, one must first study this work), the volume specifies the conditions of this work – '[...] one must describe the conditions of a job in terms of work and not in terms of psychology.' (Ombredane 1955).

This volume also introduces a point that will shape francophone ergonomics in the long term: the identification of gaps between the prescriptive dimension of the work to be carried out and the practical dimension of its realization: 'Two perspectives are to be distinguished from the outset in a work analysis: that of the What and that of the How. What is to be done and how do the workers do it?' (Ombredane, op.cit.)

This aspect will be thematized in analyzing the data collected in field studies through the systematized tension between 'task' (objectives assigned to the workers and the set of externally defined prescriptions for achieving these objectives), and 'activity' (the accomplishment of the task in a particular context of achievement by an individual or a group of individuals).

In the chapter 'How to conduct an analysis of work', Faverge distinguishes three complementary modes of analysis: the learning of the work by the analyst; the observation of the worker during his work; the study of the traces of work. The apprenticeship phase (which is merely a familiarization with the work) should make it possible:

- [...] to understand the difficulties encountered in learning the work;
- to experiment on oneself by varying factors (Faverge 1955, p. 203).

The observation phase of the worker at his or her workstation consists essentially of producing, sometimes in great detail, descriptions of the gestures, but also of identifying the strategies used and their variants. The workers' discourse on their activity is here a resource deemed relevant.

⁷ She thus anticipates an approach implemented nearly 25 years later by Catherine Teiger in a study that has become a classic in the tradition of work analysis in France.

⁸ Analysis of work

During the phases of observing the worker at his workstation, and of analyzing the traces of the work activity, Faverge urges the analyst to pay particular attention to everything that goes beyond the so-called 'normal' register of working: incidents, singularities, faults, variations in the work (Faverge 1955, p. 203). For Faverge, the discourse on the supposed normality of work situations should always be treated with the utmost suspicion:

There are always a lot of observations to be made, even if it is said in the factory that everything is always normal; in the course of a visit to a shearing station which was considered unproblematic, and during the course of half an hour, three incidents occurred which interrupted the work, one of which required a visit from an opener to the infirmary (Faverge 1955, p. 205).

The methods of work analysis therefore aim to describe the motor sequences for carrying out a task. In addition, they also aim to achieve a certain understanding of the mechanisms, reasoning and strategies that pilot these motor sequences. Particular interest is thus given to the way in which workers collect and analyze signals from the environment (Ombredane and Faverge 1955).

The importance given to signals in work was to last for a long time, and was taken up by Maurice de Montmollin some 20 years later:

The methods of time and movement give indications only on the operator's responses, but are silent on what triggers the responses, i.e. the signals. The work cannot be explained by breaking it down into elementary gestures, it can only be described (de Montmollin 1974).

In a text written afterwards Faverge would elaborate on elements of the 1955 publication (Faverge 1972). He would specify four ways of analyzing work in terms of gestural activity, information, regulation and thought processes. For each of them, he suggests models and methods of analysis described in a very operational way.

After Ombredane and Faverge, the use of work analysis in real work situations has become the almost obligatory doctrinal touchstone of French-speaking ergonomics. This founding reference, often thought of as a reaction to other approaches deemed 'limited', has in a way led it to adopt a posture of 'superb isolation', and consequently to close itself off from the influences of other currents of thought from which it could have benefited, particularly with regard to the theorizing of its practices.

Nevertheless, from the 1950s, work analysis from the perspective of francophone ergonomics was gradually used in a wide range of professional situations (and also later in non-work situations: education, cultural activities, leisure, etc.), accelerating around the end of the 1970s in response to pressure from trade union demands. This militant commitment to ergonomics in the analysis of work situations is clearly identifiable in the studies conducted in Alain Wisner's laboratory at the Conservatoire National des Arts et Métiers. It leads to a renewal of the methodological posture

by explicitly giving primacy to the analysis of work over the experimental approaches often still dominant at the time (Teiger et al. 1974).

It is also from this period that one can observe a gradual shift in terminology towards the term ‘activity analysis’ (Guérin et al. 1997). This evolution can be explained by the fact that it is the place of Man in work which is of major interest in ergonomics. Task analysis (the identification of the conditions that define work and influence its performance) is only considered as a subset of activity analysis (Leplat 1993).

The permanence of the key, founding, role of the analysis of work activity in Francophone ergonomics can be explained by various reasons. De Keyser, in an oft-quoted article, proposed identifying three types of purposes (De Keyser 1990):

- Assistance in defining strategic orientations for technological and/or organizational development in a company or sector of activity;
- Support for changes aimed at improving an existing work situation (from the layout of a workstation to the functioning of the organization);
- The pursuit of a scientific program aimed at establishing a corpus of knowledge on human activity at work (identification of the cognitive mechanisms implemented in different professional situations in particular).

To these three objectives, a fourth, inclusive aim could be added: the establishment of an ethic of intervention and design based on active and informed participation by workers in documenting and understanding their activity and, consequently, in the construction of knowledge about these activities.

8. The Ethnographic Fieldwork Tradition

Ethnography as a research paradigm has its roots in anthropology and has been extended to cultural studies, sociology, CSCW, and social psychology. One might say that some of the academics and/or social reformers that collected facts about the (working) lives of men and women in sweatshops, mines and factories were ‘early ethnographers’, as they used observational methods and interviews. However, their focus was more on the living and working conditions than on work practices. One of the anthropologists who joined Xerox PARC in Palo Alto early on, Brigitte Jordan, sums up the reasons why researchers interested in understanding work practices started using ethnography as an approach:

[...] research that focuses on work practice requires a radical conceptual switch from seeing knowledge as a property of the individual, as a kind of quantity that can be measured, assessed, and ‘transferred’, to seeing knowledge and meaning as socially constructed within ongoing communities of practice. Taking this view seriously means to investigate the ways in which people in the workplace ‘co-construct’ knowledge and skill by drawing on the social and material resources available to them (Jordan 1996, p. 18).

As CSCW researchers, in particular those that see themselves as part of the European CSCW tradition, are familiar with ethnography, we here focus on providing a brief overview of its history as an approach to studying work practices (or workplace studies). Understanding how people carry out work in the natural settings, in which it usually occurs, is a common principle of ethnographic studies of work. Hence, the main method used by ethnographers is participant observation of what people do and how they do it. The idea is to describe these practices from the practitioners’ point of view (rather than from the point of view of predefined categories or selected variables). This is a critical requirement for which Egon Bittner (1965) has provided a good explanation, writing:

[...] one is confronted with a rich body of background information that normally competent members of society take for granted as commonly known. In its normal functioning this information furnishes the tacit foundation for all that is explicitly known, and provides the matrix for all deliberate considerations without being itself deliberately considered. While its content can be raised to the level of analysis, this typically does not occur. Rather, the information enters into that commonplace and practical orientation to reality which members of society regard as ‘natural’ when attending to their daily affairs. (p. 244)

What he is saying is that members’ view is essential for understanding a practice. Practitioners normally do not raise what they are doing ‘to the level of analysis’; they just tend to do what they normally do and this is what an ethnographer focuses on. Connected with this is, what Blomberg and Karasti (2013) call the ‘holistic view’: taking account of the context, in which these practices unfold, not abstracting the observations from this context. Finally, ethnography

is concerned with providing an analytic account of events and activities *as they occur*, without attempting to evaluate the efficacy of people’s practices. These descriptive understandings however enable the possibility of more interventionist agendas (Blomberg and Karasti 2013, p. 374).

In this quote, the terms ‘analytic’ and ‘descriptive’ stand out as potentially contracting each other. Blomberg and Karasti provide a clarification:

As Anderson (1994, p. 155) notes, ‘The ethnographer’s eye is always interpretive.’ It is not enough to simply record what is seen or heard in a straightforward way. Accounts are informed by the ethnographer’s analytic eye and are shaped by frameworks and theories that both emerge from the ‘data’ and build on previous research (p. 401).

This has implications for the significance of ‘theory’ in ethnographic accounts: Hughes et al. (1994) emphasize that ‘an analytic framework of some generality

needs to be developed “from the ground up” as it were, and capable of retaining a sensitivity to the details and the variety of work domains’ (p. 129).

The practices of doing ethnography in work organizations (and other places where technologies are designed for and used) were developed by largely three partially interwoven groups of researchers in different places from the mid 1970s onwards: the group at Xerox Palo Alto Research Center that was formed upon encouragement of John Seeley Brown, who ‘brought a sensibility to social scientific research’ to the center (Szymanski and Whalen 2011, p. 2). (Almost) in parallel, ethnomethodologists in the UK, most prominently John Hughes in Lancaster, Wes Sharrock in Manchester, Bob Anderson at Xerox in Cambridge, and Christian Heath in London developed an approach to fieldwork and ethnography, sometimes called ‘ethnomethodologically informed ethnography’ (EIE) (see Randall et al., in this Issue). Their work was taken up by researchers practicing participatory design that used ethnography as a way of getting an in-depth understanding of the work practices they intended to support with technologies that are appropriate to these practices.

At Xerox PARC, John Seely Brown who in the 1980s came in contact with Harold Garfinkel, Brigitte Jordan and Jean Lave encouraged the hiring of young anthropologists from the University of Berkeley, among them Eleanor Wynn and Lucy Suchman, who in 1989 founded her own group Work Practice & Technology. Marilyn Whalen and Jack Whalen joined the group in the late 1990s. Looking back at the work of the group, Suchman refers to social and cultural studies of science and technology (STS) as an important ‘home’ for researchers at that time, to ethnomethodology as a ‘radically alternate program for social studies’ (p. 23), and to CSCW research that had been initiated in the mid 1980s. Among the seminal studies the group produced are Jeanette Blomberg’s (1987) critical look at machine ‘reliability’ (the big Xerox photocopiers) in which she came to the result that ‘the “same” events measured by the company could be experienced in radically different ways by machine users, depending on just how those events were embedded in a specific worksite and course of activity’ (Suchman 2011, p. 27). Another influential and widely quoted piece of ethnographic work was Julian Orr’s (1986) study of the work of technicians in relation to training that later shaped interventions with ‘Eureka’, Xerox’s platform for knowledge-sharing. As part of the ‘Workplace project’, Suchman and Trigg (1991a, 1991b) studied how ground operations of an airport are coordinated and the role of a specific coordinative artifact, ‘the complex sheet’.

In 1988 EuroPARC was established in Cambridge, and subsequently (in 1994) Xerox Research Center in Grenoble, hiring ‘researchers with an ethnomethodological and conversation analysis interest [...] to build up work practice studies’ (Sharrock and Button 2011, p. 35).

Xerox work practice studies have been very practically oriented. They have tended to fall into two domains. First, they have been intended to either generally influence how systems designers approach design with regard to building in the practicalities of using a system within an organisational context, or to influence the

design of a particular system that is being built. Second, those doing work practice studies have also worked alongside Xerox consultants in building an understanding of the operations and organisation of a particular Xerox customer, with the objective of enabling Xerox to better support that customer than its competitors (p. 36).

Among the researchers that were strongly associated with Xerox in Europe were Wes Sharrock, Graham Button, Richard Harper, Christian Heath, Peter Tolmie (and many more). In parallel, these UK researchers had built up their own tradition of ethnographic fieldwork studies of work practices. Randall et al. (in this Issue) point at the distinctiveness of this tradition:

Our position will be that ethnomethodological work which was done in the main in the UK during that early period of CSCW had a distinctive flavor and made very significant contributions to the study of complex organizational environments for design-related purposes.

This assessment is based on several major ethnographic studies of work that had been carried out in the late 1980s and early 1990s: the Lancaster study on air traffic control (Hughes et al. 1992) and the study of work in a control room of the London Underground (Heath and Luff 1992) (which was also one of the first to use video documentation). Their significance was to 'have made the CSCW community understand the delicate interplay of individual and cooperative activities and appreciate the crucial role of "awareness" in ensuring that individual activities are seamlessly integrated' (Schmidt 2011, p. 153). Many other seminal studies followed, such as for example Bowers, Button and Sharrock's 'Workflow within and without' (1995) in the print industry.

One of the first and highly influential attempts at describing the role of field work in CSCW is a paper by John Hughes, Wes Sharrock, Tom Rodden, and others (1994).

Many of the early writings in CSCW attempted to identify 'co-operation' as a distinct, discrete type of activity whereas, and as many studies of the social organisation of work show, matters are much more subtle, and more complicated, than this assumes. [...] The association, for example, of co-operation with synchronously, co-located persons working in a team, tends to ignore the pervasiveness of a variety of interdependencies within work settings which are immensely relevant to CSCW design. In other words, the relevant properties of the social organization of work do not appear as 'readily packaged' within work domains but need to be brought out by an analysis of the ethnographic materials. (Hughes et al. 1994, p. 130)

In this paper, they identify some of the key orientations ethnographers assume when studying cooperative work and the challenges they face. One is to account for the heterogeneity of the domains and to develop 'analytic tools which are capable of

exhibiting the relevant scope of this variety' (p. 129). An associated problem is to, in a particular work setting, to identify 'cooperative activities and, relatedly, the interdependencies of activities' (p. 130), a task that may require considerable time and effort. They also stress the insight that 'the features of an organisation are not transcendent in the way that organisational theory often presumes, but are very much part of the locality of the work's settings and its self-explicating character' (p. 134). This, again, makes clear that theoretical constructs have to be dealt with caution as what matters is members' understanding how things are organized in a practical way.

Ethnography has also been taken up by participatory design researchers (many of whom were also part of the growing CSCW community at that time). They conceived of ethnographic workplace studies as an important part of the 'mutual learning' process involving users and designers. First examples were the *Florence* project where an ethnographer was hired to observe the work practices of nurses in a hospital ward (Bjerknes and Bratteteig 1988); Bødker and Kensing's (1994) action research project in a Danish radio station; and Bødker and Grønbaek's (1989) work of designers and users cooperatively prototyping a patient record system for municipal dental clinics. While for CSCW the connection to design has been and still is strong due to the 'commitment to understand cooperative work practices for the purpose of influencing the development of appropriate collaborative technologies' (Schmidt and Bannon 2013, p. 357), ethnography in participatory design is often seen as a way of engaging workers as experts in their domain of knowledge. Blomberg and Karasti (2012) state

that a dichotomy has emerged in how ethnography is positioned in relation to Participatory Design; on the one hand ethnography seems to have been normalised, accepted as part of Participatory Design practice. On the other hand 'backgrounded', secondary to those activities that directly engage participants in design. What seems to have been lost is the analytic purchase of ethnography as more than method, providing insights that point to future possibilities and ground those possibilities in the realities of the 'here and now' (p. 108).

9. Harvesting this Diversity

The European Field study tradition is widely ramified and cannot be covered in a few articles that neatly fit together. These traditions are heterogeneous and differ in terms of research motivation, research question, approach and methods, topic, and so forth. And they are embedded in different national traditions. As De Keyser wrote in her seminal paper 'Why field studies' (1992):

The diversification of goals brings to light research practices which, from the point of view of the time they require, of the technical competence demanded of the researchers, and of the possibilities of concrete results, have no relation to one another (p. 10).

The present first issue therefore brings together a small set of papers, with the intention of filling the most obvious gaps in the planned follow-up issue.

Dave Randall, Marc Rouncefield, and Peter Tolmie in their paper 'Ethnography, CSCW and Ethnomethodology' reflect on the UK tradition of 'ethnomethodologically informed ethnography' in the context of European CSCW elaborating on key aspects of this approach that own 'to Wittgenstein and Winch as much as Garfinkel and Sacks': the notion of 'unique adequacy' (meaning that it 'requires some mundane competence in the practices of the domain such that the researcher can deliver an account that is intelligible to competent members'), as well as a set of 'precepts' for doing ethnography that go back to Hughes et al. (1994). They also reflect on the complicated relationship between ethnography and design.

The other two papers included in this issue both focus on women's work. 'Observing inequality' by Karen Messing, Mélanie Lefrançois, and Johanne Saint-Charles is based in a long-standing interest in occupational issues (and gender). Working in the tradition of 'work activity ergonomics' that is firmly rooted in Francophone Ergonomics, they present an analysis of twenty case studies that have been carried out in the time period 1993–2010 in response to an agreement that three Quebec labour unions established with the Université du Québec à Montréal in the 1970s, concerning training and research 'in response to union requests'. The researchers used observational work in combination with 'solution-oriented ergonomic interventions' in fields of work ranging from bank-tellers to teachers, food servers and hotel cleaners. Going back to these studies, the authors reflect in particular on how to 'observe' gender at the family-work interface.

'A Historical View of Studies of Women's Work' by Ellen Balka and Ina Wagner provides an historiographic account of fieldwork-based studies of women's work, undertaken from different perspectives and in varied locations between the 1960s and the mid 1990s. Starting with early studies of women's work, they include studies done in particular within three fieldwork traditions - Francophone Ergonomics, German Industrial Sociology and research done in the Anglo-American context – to reflect on key themes and issues pertaining to feminism and the value of work, including labour market segmentation, the notion of skill, paid work versus work in the home, (occupational) health, and technology. In a concluding section the authors reflect on 'opportunities for learning that an historical analysis of studies of women's work offers, focuses in particular on the European CSCW research program'.

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