Workplace Studies

Recovering Work Practice and Informing System Design

Workplace studies are of growing significance to people in a broad range of academic disciplines and professions, in particular those involved in the development of new technologies. This book brings together key researchers in Europe and the USA to discuss critical issues in the study of the workplace and to outline recent developments in the field. The collection is divided into two parts: part 1 contains a number of detailed case studies that not only provide an insight into the issues central to workplace studies but also highlight some of the problems involved in carrying out such research. Part 2 focuses on the interrelationship between workplace studies and the design of new technologies. This book provides a valuable, multidisciplinary synthesis of the key issues and theoretical developments in workplace studies and a guide to the implications of such research for technology design and the workplace.

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Recovering Work Practice and Informing System Design

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Preface

It is widely recognised that new technology has had a profound impact on our working lives. It is argued that the so-called digital revolution has transformed the ways in which we communicate with each other, how we store and handle information, the ways in which we classify people and events, how we calculate products and value, and how we market goods and services. Social scientists discuss new forms of organisation, the transformation of contemporary culture and, among many other things, globalisation and emergence of the network society. Despite our attempts to remain optimistic in the face of the inevitable pursuit for more advanced and sophisticated technologies, often at the expense of employment, there is a growing recognition that complex systems may not necessarily enhance work practice, human relations or even efficiency within organisations. Poor performance, mishaps and technological failures are encouraging those within industry to begin to reconsider the advantages of technology for technology's sake, and to recognise that there is more to the design and deployment of complex systems than simply identifying new functionalities for computer systems. There is also a corresponding change within academia, a recognition that for all our discussion of technology we actually know very little as to how ordinary people in their daily working lives go about using the tools of their trades.

Over the past few years, there have been a number of research projects concerned with the ways in which new tools and technologies feature in everyday organisational conduct. These investigations have come to be known as 'workplace studies'. They consist of ethnographies, field studies, sometimes augmented by video recordings, of work and communication in complex organisational environments. So for example we find studies of command and control centres, news rooms, architectural practices, medical consultations and financial institutions. In various ways these studies are concerned with the social and interactional organisation of technology in the workplace. They direct attention towards the fine details of human conduct and coordination, and demonstrate how technologies, ranging from paper documents through to complex multimedia

systems, rely upon the working procedures and practical reasoning of the members of particular settings and organisations. They are concerned, in a sense, with the work to make technologies work; with the tacit and 'seen but unnoticed' resources through which organisational activities are accomplished in and through tools and technology.

In this book we bring together a collection of these studies, coupled with discussion papers concerning their intellectual and practical implications. The investigations reflect the diversity of approaches that we find within workplace studies. So for example we find studies informed by ethnomethodology and conversation analysis, by activity theory and by analytic developments in cognitive science, such as course-of-action analysis. The investigations also address a range of substantive issues and domains. These include, for example, the role of documents in the International Monetary Fund (IMF), the organisation of software design meetings, the interaction between call centres and clients, the practical scrutiny of documents in large-scale legal cases, and the management of crises in the operations room of the RATP in Paris. In each of these investigations, the authors examine, from their particular analytic perspective, the practices and procedures, the *in situ* reasoning and knowledge, relied upon by participants in accomplishing their practical actions and activities. In various ways, therefore, the studies reveal the complex array of resources that inform the production and coordination of workplace activities – resources on which the participants rely and yet remain largely tacit and unexplicated.

The investigations discussed in the book, and workplace studies more generally, are providing an important contribution to our understanding of work, technology and interaction. They are generating a rich and diverse body of observations and findings, based on detailed empirical research, about how individuals in organisations use technologies to inform the production and coordination of their actions and activities. In one sense, workplace studies can be seen as a reflowering of the sociology of work, as contributing to, and developing, the rich body of research on organisations and interaction, which emerged in Chicago following the Second World War. But they have a broader relevance, and perhaps raise issues which lie beyond their purely empirical contribution. For example, some workplace studies, including chapters within this volume, are developing insights and analytic considerations which extend and enhance the growing body of research concerned with language use and interaction, or consider for example how demonstrations of interdependent courses of action in the workplace contribute to our understanding of shared and distributed cognition. But it is perhaps in disciplines such as human–computer interaction (HCI) and Computer Supported Cooperative

Work (CSCW) that workplace studies are having their most profound impact. They are for example challenging long-standing assumptions concerning how individuals use or interact with computers and the nature of the resources on which they rely in performing even the most seemingly mundane, individual activities. They also demonstrate how traditional ideas concerning group behaviour and roles, ideas which informed early work in CSCW, provide a relatively inflexible and impoverished understanding of collaborative work.

The contribution of workplace studies, therefore, to contemporary research and debates within various fields is not simply empirical. Rather, through wide-ranging yet detailed naturalistic research, workplace studies are beginning to readdress or, to use Garfinkel's term, 'respecify' many of the key concepts and ideas that currently infuse our understanding of technology in action. Take for example the idea of the 'user', and the individual's cognitive resources which have served to inform a substantial body of research in HCI. In various ways workplace studies have demonstrated not only how individual actions and activities are routinely produced with regard to the real-time contributions of others, but also that the competent and accountable use of a system in an organisation is inseparable from a body of local knowledge and reasoning through which technologically informed actions and activities are produced and rendered intelligible. Similarly, traditional ideas concerning the character of such concepts as 'information', 'communication', 'collaboration', 'cognition' and even 'technology' are being questioned and reconsidered in the light of detailed empirical studies of work and interaction in organisational environments. The contribution of workplace studies, therefore, in part derives from the ways in which they are building a new and distinct foundation for our understanding of technology and social action.

These empirical and conceptual contributions are also of some practical relevance. For example they provide an array of observations and findings concerning both generic and local features of collaborative work and thereby resources through which we can begin to consider, seriously, what it is that we are trying to support when we are thinking about technologies for cooperation and interaction in the workplace. This body of empirical research can also serve to delineate criteria and considerations which need to come into play if we are going successfully to evaluate, design, even deploy, new and innovative systems. Conceptual respecifications are also of some practical import. While debates concerning the user may strike one as abstract or even academic, such shifting (re)specifications have profound relevance for the shape of technologies to come, and are a critical methodological resource for those who are responsible for identifying the requirements for complex systems. Such

respecifications demand a significant change in the methods and considerations which people who develop, build and deploy technology rely upon in the course of their work. In an important sense, therefore, the practical contribution of workplace studies must and should be considered long term, and will involve the whole gamut of debates, discussions and organisational politics which are inevitably associated with the influence of academic research on practical activity whatever the field.

There is, however, a growing interest in using workplace studies to more directly inform the design and deployment of new technologies. Firms increasingly recognise that a more detailed understanding of work practices, even if it is hoped that these will change, is an invaluable resource when thinking about the design and deployment of systems. In consequence there is an increasing number of projects which involve close collaboration between social and computer scientists, academics and industrialists, concerned with the design of innovative technologies. Industrial research laboratories, government and intergovernment funding bodies and innovative 'high tech' organisations, all have helped foster projects which involve the use of workplace studies to inform the design and development of new technologies. These are early days and in most cases these are demonstrator and prototype systems, but they demonstrate the richness of ethnography and its ability to influence, even drive, design and development.

Understandably there is an interest among both academics and practitioners in identifying more systematic ways in which workplace studies can inform the design, evaluation and deployment of new technologies. Many of the chapters in this book address just this problem. They are concerned with considering whether a programme of work, which is by definition open-ended, naturalistic and qualitative, can be transformed to provide a method or set of procedures which can reliably inform technology production. The chapters explore whether this is feasible, and if so, what empirical, methodological and theoretical considerations need to be identified for workplace studies to influence successfully the shape of technology. For example, there is a long-standing debate as to whether ethnography is required or just simply fieldwork, and if ethnography is required, whether by virtue of the practical constraints of software projects, it can successfully be accomplished in weeks rather than months or years. In respect to these concerns, particular tools and techniques are proposed that may be necessary to support these more applied workplace studies, and given their observations and findings, how these studies might be tailored and transformed for designers rather than fellow academics. There is also debate as to whether workplace studies can enhance our understanding of organisational change, or whether, for example,

ethnographies can provide only information relevant to the current circumstances. These discussions therefore reflect debates concerning the methodological and empirical contributions of workplace studies and how these can inform practice. These are, of course, debates which have haunted the social sciences since their inception and which have certainly not been solved by others, whether social, cognitive or computer scientists.

The aim of this book therefore is to bring together a collection of workplace studies which have different substantive concerns and reflect different approaches to understanding technology and organisational conduct. It is also concerned with raising and exploring the more applied issues which arise with workplace studies and in particular the extent to which they may contribute to the design and deployment of new technologies. The book originally derived from a small conference that we held at King's College London. The conference was concerned with bringing together researchers and practitioners from various fields to present and discuss studies of work, interaction and technology. The book reflects much of the discussion and debates which arose during the conference, and we believe provides a demonstration of the contemporary issues which are informing both contemporary academic and industrial research.

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