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**CENTRE/GROUP/NETWORK
DIRECTOR'S**

ANNUAL REPORT FORM

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CENTRE/GROUP/NETWORK DIRECTOR'S ANNUAL REPORT 2004

(This page must be completed by the Case Officer before forwarding to the Director)

Reporting period : **1st January 2003 to 31 December 2004**

Name of Centre/Group/Network : **ESRC Centre for Organisation and Innovation**

Director's name : **Professor Toby D. Wall**

Start and End Dates : **October 1996 to September 2006**

Year of Operation : **Seven and eight**

Total budget from ESRC : **£2,238,794**

The Director's Annual Report should be completed in accordance with the attached guidelines. It should be sent to the relevant ESRC Case Officer by **31 March 2005** by **email** and in **hardcopy** (original plus three copies, with signed cover letter).



University of Sheffield



ESRC CENTRE FOR ORGANISATION AND INNOVATION

ANNUAL REPORT 2004

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1. EXECUTIVE SUMMARY

ESRC funding of the Centre for Organisation and Innovation (COI) began on 1st October 1996, for an initial five years. Following the Mid-Term Review in 2000-2001, funding was extended for a second quinquennium, to 30th September 2006. There was no Annual Report in 2003 because the application process for further funding from 2006 required an alternative report covering the entire seven years to that time. Thus, to maintain continuity in the Annual Report series, this document covers both 2003 and 2004.

The objectives of the Centre's research are to advance understanding of:

- how work organisation affects the successful use of new technologies, techniques and management practices, and other new forms of work; and
- how job, team and organisational practices affect employee innovation.

These objectives are pursued through seven lines of research that concentrate on:

1. Modern management practices and innovation (surveys and expert panels).
2. Teamwork (comparative and change studies).
3. New and emerging forms of work (virtual teams, e-business, portfolio working).
4. Customer service centres (i.e., call centres) (comparative, change and diary studies encompassing emotional labour, monitoring and work design).
5. Innovation and learning (including creativity, suggestion schemes and selection for innovation).
6. The validity of reported performance measures (examination of the equivalence between reported and 'objective' organisational performance).
7. The rationale for a national HRM performance study.

We have reached all our research targets. Particularly significant activities and outcomes include:

- a report on the 'Social and Economic Challenges of Nanotechnology';
- publication of our most recent findings on the use and effectiveness of modern management practices;
- publication of a book drawing together our own research with that of national and international colleagues 'The New Workplace: A Guide to the Impact of Modern Working Practices';
- setting up new data-bases and international collaborations;
- contributions to policy-making;
- the organisation of a conference on skill and productivity in collaboration with two other ESRC investments, the Future of Work Programme and Centre for Skills, Knowledge and Organisational Performance; and
- the publication of 15 books, 28 chapters and 35 refereed journal articles.

We have secured co-funding approaching £300,000 in each of the two years, which maintains previous levels and is more than 3 times greater than that originally targeted. We have an effective dissemination strategy that has clearly delivered in the academic, practitioner and policy spheres. Plans for the remainder of the life of the Centre have been specified.

2. INTRODUCTION

The scientific programme of the ESRC Centre for Organisation and Innovation (COI) focuses on innovation and effectiveness at work. The rationale is based on the recognition that innovation is occurring in two important ways. On the one hand there is the emergence of new technologies, practices, kinds of organisation and forms of employment (e.g., computer-based manufacturing systems, supply chain partnering, empowerment, virtual team working, learning culture, e-commerce, call centres, portfolio working), which are intended to enhance competitiveness. On the other hand there is a move to make better use of the creative potential of employees to improve work processes, and more generally to foster proactivity, initiative and new work orientations (e.g., readiness to embrace change and learn).

Evidence shows that these developments frequently fail to produce the anticipated benefits. It is often suggested that this is because of lack of knowledge about the types of jobs, teams, management practices and other aspects of internal work organisation necessary to support them. Similarly, there has been little systematic empirical investigation of the factors that promote or inhibit employee innovation, or underpin the success of newer forms of employment. The Centre's research addresses these issues.

The Centre began on 1st October 1996. Following a successful Mid-Term Review in 2000-2001, funding was extended for a further five years, to 30th September 2006. There was no Annual Report in 2003 because we were required to submit an alternative report reviewing our work over the life of the Centre up to that time, in support for our bid for further funding from 2006. Thus, to maintain continuity in the series, this report covers the two years 2003 and 2004 (Years 7 and 8).

ESRC funding for the Centre for 2001-2006 is £2.2 million. Until October 2003 this provided six full-time research posts and two FTE support staff, plus some non-staffing costs. Since then, as agreed in the Mid-Term Review, ESRC's commitment has been reduced by two research posts, which have been taken on by the University. The ESRC's contribution is more than matched by the University's estimated £2.8 million (salaries of the Directors, research and support staff, plus non-staff costs), and £1.8 million in co-funding from within and outside the science vote (e.g., EPSRC, NHS, Rolls-Royce, BAE Systems).

By employing two previously ESRC core-funded staff, and allowing them to continue to work full-time in Centre, the University further underlined its commitment to this initiative and to the Institute of Work Psychology within which the Centre is positioned. The University formed the Institute in 1994, for two reasons. The first was as part of its strategy of creating and supporting centres of excellence to consolidate its position as one of the UK's leading research-led Universities. The second was to provide the infrastructure for the Centre and associated research. The Institute is positioned intellectually and organisationally between the Department of Psychology and the School of Management. Relevant staff within those departments conduct their research within the auspices of the Institute. The Institute also has links with Engineering Departments and the School for Health and Related Research (with both of whom we have collaborative co-funded research). The policy has been to align the Institute's programme with that of the Centre so that funding from the host institution and from external sources complements support provided by the ESRC. Staff of the Centre and Institute more generally contribute to postgraduate training at Masters and PhD level.

3. OBJECTIVES

The objectives of the Centre remain as specified in the contract with the ESRC (p.21) for the second quinquennium (2001-2006), and also as outlined in our previous Annual Report (2002). They are to advance understanding of:

- how work organisation affects the successful use of new technologies, techniques and management practices, and other new forms of work; and
- how job, team and organisational practices affect employee innovation.

These objectives provide continuity from the first five years but represent a progression by being pursued within the context of the four related themes, namely: a broadening of the focus from manufacturing to other types of organisation; the inclusion of newer and emerging forms of work; an emphasis on process innovation and employee creativity (rather than also encompassing product innovation); and a stronger focus on human resource management (HRM) issues.

Seven lines of research were established for the second quinquennium, each typically incorporating two or more of the above themes. These concern:

1. *Modern management practices and innovation*: large-scale survey work to establish the prevalence and effectiveness of a wide range of practices.
2. *Teamwork*: detailed comparative and change studies of teamwork (including virtual teams, see next).
3. *New and emerging forms of work*: studies of virtual teams, portfolio work and e-business.
4. *Customer Service Centres ('Call Centres')*: investigations focusing on emotional labour, performance monitoring and human resource management issues.
5. *Innovation and learning*: examination of creativity, creativity training, the link between work organisation and employee initiative and learning, and the prevalence and effectiveness of suggestion schemes.
6. *Reported and 'objective' organisational performance*: examination of the validity of reported organisational performance and of ways to enhance that validity.
7. *National HRM performance study*: development of a rationale for mounting a large-scale, multi-participant, national study of the effect of human resource management and other practices on organisational performance.

These objectives and lines of work combine user with academic relevance. The underlying agenda with regard to user relevance is to generate knowledge that directly contributes to organisational effectiveness and employee well-being. The research agenda reflects two priorities. One is to exploit the opportunity offered by developments in the world of work for the kind of research that has to date been lacking, namely theoretically-based cross-sectional, comparative and longitudinal field studies that capitalise on planned and naturally occurring change. Studies of this nature are of immense importance to research progress but all too rare in the literature. They provide an ideal core for an ESRC Centre, where continuity and scale of funding enables them to be conducted. The other research priority is to develop knowledge of work organisation that applies equally to current settings and to future developments.

4. MAIN OUTCOMES

Significant activities and outcomes for the period covered by this report include:

Research Highlights (see Appendix 1)

- Production of a report on *The Social and Economic Challenges of Nanotechnology* published by the ESRC.
- Publication of the findings from the most recent stage in our survey of modern management practices.
- Increased data and collaboration through: (a) obtaining financial performance information to add to our extensive data base on the use of modern management practices (see Sections 7.1 and 7.7); (b) setting up an international study of customer service centres (see Section 7.4); and (c) securing further co-funding to 2008 (circa £800,000).

Communication Highlights (see Appendix 1)

- Publication of *The New Workplace: A Guide to the Impact of Modern Working Practices*, and a contract for an updated version in 2005 (research highlight, see Appendix 1).
- Organisation of a conference for academics and policy makers with the Future of Work Programme and SKOPE on skills, innovation and performance (see Appendix 1).
- Contributions to government policy-making, including: a) invited evidence to and membership of the Academic Panel of the DTI's Innovation Review; b) membership of the Working for Health Task Group.

Other

- Publication of 15 books and major reports, 28 chapters and 35 refereed journal articles (see Appendix 3).
- Reports for the national Audit office on managing attendance (see Appendix 1).
- The attainment of all research targets (see Section 5).

5. PROGRESS TOWARDS OBJECTIVES

Targets

Our targets for the current reporting period, as established in our contract and the previous report (Annual Report 2001), were to:

2003

1. Begin the Stage 3 survey work on modern management practices, innovation and learning.
2. Start the comparative and longitudinal investigations of virtual teamwork, and continue other teamwork studies.
3. Develop research on e-business.
4. Complete fieldwork on the effectiveness of creativity training.
5. Finish work on the initial study of the validity of self-report organisational performance measurement; begin the analysis of the stage 2 findings.
6. Progress longitudinal research on, and international survey of, HRM in Customer Service Centres.
7. Continue fieldwork on portfolio working.
8. Complete our analysis of HRM research as a basis for our efforts to broker a national HRM study.

2004

1. Complete the Stage 3 survey work started in 2003, and collect associated organisational performance data.
2. Plan and begin the final stage 4 survey work (into 2005).
3. Continue studies of e-business.
4. Continue studies of virtual teamwork.
5. Complete fieldwork on portfolio working.
6. Continue studies of customer service centre work.
7. Begin to develop detailed development/exit strategy.

Progress Against Targets

As will be evident from our research reports (section 7, p. 13), we have achieved all the above targets. For example, the stage 3 survey work is complete, with the collection of associated organisational performance data well advanced (see reports 7.1 and 7.5). Research on e-business, virtual teams and portfolio working has been developed and continued as planned (see 7.2 and 7.3). Our work on customer care centres has developed in two ways: one is the

mounting of an intervention study designed to improve employee well-being and performance. The other is through an international collaborative study comparing the nature and effects of call centre work across a range of different countries (see 7.4).

Progress against two of the 2004 targets, however, warrants more detailed discussion. We have modified our original plan to re-survey organisations concerning their management practices and innovation (target 2) in favour of obtaining further objective organisational performance data. Our latest survey (2003) enabled us to determine when particular practices were first introduced in a given organisation. When set alongside the up to 20 years of performance data we have been able to collect, this provides a very useful data set for testing for the effects of individual and groups of practices. However, some of the practices are very recent (i.e., adopted in 2001-3) and the performance data only goes up to 2002/3. Findings for such recent initiatives will only emerge once the performance data for 2004 and 2005 is available, especially since evidence to date suggests it takes two or more years before effects become evident. Therefore we have decided to redirect our resources to the collection of the performance data, and reconsider if a fourth stage for the survey of practices would be valuable in 2006-7. That takes us to the question of the work post 2006, which is the subject of the second 2004 target on which we wish to comment.

Considerable progress was made with regard to our strategy for funding research from 2006 onwards (2004, target 7). One strand of that strategy (Plan A) was for further ESRC Centre funding. To this end in 2003 we submitted to ESRC a report covering the first 7 years of the Centre's work, as required to receive permission to apply for further core funding from October 2006. We were successful in gaining that permission. Our subsequent application, from Stephen Wood, Chris Clegg and Peter Totterdell, was submitted in December 2004. In support of that application, the University invested further in the Institute of Work Psychology. The current Centre Director, Professor Toby Wall, is to retire at the end of 2007, and thus succession plans have been made to ensure that any further external funding would benefit from being set within a vibrant and successful Centre. To this end the University has approved the appointment of a new chair, to start a year before Professor Wall's retirement. The search for the new appointment will begin this year, and the person selected will be expected to be a candidate for the position of Institute Director from 2006 onwards.

In the course of writing this report, however, we have been advised that our application for further ESRC Centre funding has been unsuccessful. The alternative (Plan B) is to seek other forms of support, and that will be further developed in the coming year (see Section 12, Forward Look).

6. MAIN ISSUES, PROBLEMS AND ACTIONS TAKEN

There have been no substantive issues arising in the period of this report. Such problems are for the future as we try to maintain momentum in the face of ESRC funding ending in September 2006.

7. BRIEF RESEARCH REPORTS

7.1 Modern Management Practices

Large-scale Survey Work

Our first survey in 1996 (Waterson *et al.*, 1999; Clegg *et al.*, 2002) found modest levels of use and effectiveness of 12 modern practices in manufacturing companies. During the current reporting period we have continued the analyses of and published the results from the follow-up survey completed in 2000. The second survey involved a further sample of more than 500 organisations (Wood *et al.*, 2004), including a subset of the earlier manufacturing companies together with new organisations from four service sectors, namely Financial Services, Public Administration, Health and Social Work, and Transport and Communications. We focused on the 7 key practices identified from the previous survey. These were the four ‘operational’ practices of Total Quality Management (TQM), Just-in-Time working (JIT), Integrated Computer-based Technology (ICBT) and Supply-Chain Partnering (SCP); and three ‘human resource-based’ practices, namely, Team-based Working (TBW), Empowerment (Emp) and Learning Culture (LC).

The findings include: 1) Use of the practices in manufacturing has increased significantly, with operational practices more prevalent than the human resource ones. 2) The increase in use reflects more comprehensive deployment by user companies, rather than an extension of the user base. 3) Reported success has increased across all practices, but especially for SCP, ICBT and LC. 4) Extent of use is unrelated to previous use or success. 5) There is an indication of a cluster of successful practices, namely TBW, TQM, JIT and LC; but no evidence of the theoretically predicted synergy among them. 6) Service sector organizations report less use of the operational practices than manufacturing companies, but there are no significant differences between the sectors for the use of human resource-based practices.

We have recently completed the fieldwork for the third survey in the series, covering learning as well as management practices, with a sample of 580 organisations (see 7.5). In collaboration with Dr Andrew Robinson of Leeds Business School, we have also collected financial performance data stretching back up to 20 years for organizations in all three stages in our series of surveys. That performance data can only be brought fully up to date this year and next as the information for 2003 and 2004 becomes available. Coupled with the new information about when practices were first introduced obtained in the Stage 3 survey work, this will enable us to test more stringently causal propositions about the single and joint effects of particular practices on different indicators of performance. Critical overviews of the research domain are given in the Holman *et al.* book (2003).

Management Practices and Performance in Single-Site Companies

In a related study (Patterson *et al.*, 2004), we examined the relationship between Advanced Manufacturing Technology (a form of ICBT), Total Quality Management, Just-in-Time inventory control and Empowerment with company productivity and profitability. The sample comprised 80 single-site manufacturing companies, to ensure direct equivalence in the unit of analysis for the practices and performance data. Our main findings were: 1) AMT, JIT and TQM were positively associated with Empowerment – thus contradicting arguments that these practices deskill operators. Rather, it is apparent that such practices are accompanied by more enriched work conducted by more skilled employees. 2) There was no effect of JIT or TQM on performance, but an effect of AMT on subsequent productivity but not profitability. 3) The strongest effect was a positive one for empowerment on subsequent productivity, which in turn was reflected in increased profit (controlling for prior productivity/profit). Thus it appears that one of the lesser-used practices in UK companies may well have the strongest effect on performance.

7.2 Teamwork

Innovation, Methods and Meetings

Our comparative and change studies of teamwork have progressed as planned. For example, a longitudinal study (Axtell, Holman & Wall, under revision) examined how the implementation and development of teamwork in a food-processing factory affected employee innovation. Findings show that in the period immediately following the introduction of teams, increased idea implementation was linked to changes in managerial support. Subsequently, though, increased suggestion making was related to increased job control, whereas an increase in idea implementation was linked to improved team support for innovation. The pattern of findings is consistent with the notion that initially external support is important for innovation, but that structural job changes and local regulation are more important in the longer term.

A methodological contribution comes from a study (William & Meân, 2004) comparing different ways of measuring the gender composition of teams. This showed how current practice can be biased. The study demonstrated how a continuous, proportional-based measure is the most appropriate method for this important dimension of diversity.

Work meetings represent a particular form of teamwork, as they often involve group problem-solving, decision-making and information dissemination. Two studies (Rogelberg, Leach, Warr & Burnfield, in press) were conducted to examine the effects of meeting time demands (i.e., the number of meetings attended and the duration of meetings) on job attitudes and well-being. The first examined meetings attended during a typical week, and the second study assessed meetings attended on a particular day. Both studies used surveys that were administered via the internet. Counter to the hypothesis that meetings have universally negative effects, the study showed that the time spent in meetings in a typical week was negatively associated with intentions to quit (i.e., desire to find another job) only for employees who reported high task interdependence. Similarly effects on productivity were contingent, with the number of meetings attended on a particular day being negatively related to personal productivity only among employees with a strong desire to complete task goals.

Virtual Teamwork

We have now published a comprehensive literature review on virtual team working (Axtell, Fleck & Turner, 2004), which has highlighted and developed areas for further research. This underpins our studies in progress, of which the following are examples.

One of our studies investigated the experience of work in virtual teams among employees from two engineering companies (Fleck, 2004). This addressed shortcomings in the literature regarding how dispersion is conceptualised by using a set of continuous, multi-dimensional, spatial and configurational measures to assess how dispersion is associated with a range of team member outcomes. Alongside this, interviews and observations were used to investigate how virtual team members are affected by their local sites. Among the findings has emerged the identification of the concept of 'site embeddedness'.

Based on prior qualitative work, a survey on virtual team working has also been administered within a large dispersed systems development team, focusing particularly on perspective-taking and communication. Data is also been gathered from three different organisations involved in mobile-teleworking.

Much of this work is being prepared for publication. Some has already been disseminated by invitation at various meetings, including the CIPD Human Resource Development Conference (2004) and the Future Work Forum at Henley Management College (2004).

7.3 New and Emerging Forms of Work

Portfolio working

The term “portfolio work” refers to individuals who are self-employed and work for multiple clients in exchange for fees. Our initial work used interviews to build a grounded theory that identified key elements in the experience of portfolio work (Clinton, Totterdell, & Wood, in submission). Capitalising on this, we implemented an online diary questionnaire that was completed by 65 portfolio workers from a range of professions every week for 6 months (and in some cases longer). Over 1000 weekly diaries were submitted (Totterdell *et al.*, 2003).

We found that portfolio workers were highly qualified but not high earning. They had an average of 12 clients a year, though typically half their work was for one client. They spent little time on personal development and, although their work hours were not long, evening and weekend work were common. The main reported advantages of portfolio work were autonomy and flexibility, and the main disadvantages were isolation and financial uncertainty. We also identified personal characteristics and work conditions conducive to portfolio workers’ well-being and effectiveness, such as optimism and social support.

We have since used the portfolio dataset to conduct the first known intra-individual test of Karasek’s demand-control-support model of psychological strain (Totterdell, Wood, & Wall, in submission). Multilevel analyses supported the additive but not the interactive form of the model. Optimism moderated the influence of job characteristics, with the highest levels of strain reported by pessimists on weeks when demands were high and control was low. The study showed that: a) strain varies with temporal variations in job characteristics; and b) the model helps understanding of how strain arises from person-situation interactions.

Future developments in this area will include an examination of work-family issues in portfolio work, and a replication of the diary study using a German sample (in collaboration with Dr. P. Klumb, now at Fribourg University).

e-Business

Our expert panel study of e-business, involving interviews with 70 leading practitioners and experts in e-business, was completed in 2004. This used sociotechnical principles to identify the major organisational and managerial problems with e-business investments, and to identify good practice. The findings (Clegg *et al.*, in press) identify the distinguishing novel features of e-business, highlight the key issues it raises, and provide evidence of current uptake and impacts. A review of the field is in Holman *et al.* (2003).

As a result of this broad ranging study, we initiated a set of four detailed case studies undertaken in three leading-edge companies. The cases included business to business, business to customer and business to employee ways of working. The focus is on the impact of e-business activity on the competitiveness of the companies concerned. The benefits recorded include: speeding up processes and ways of working; reducing the impact of distance; increasing availability ('opening time'); reducing costs; improving data visibility and integrity; and providing the opportunity to offer new services. Whilst costs also increased in some circumstances, and customers became more demanding, the benefits served to enhance the competitiveness of each of the companies. The studies also found that new ways of thinking were required. For example, while many companies have spent the last decade trying to operate processes that cut across internal silos, this approach is now being extended to the supply chain, which requires companies to manage a new, extended and more complex system (see Clegg & Spencer, 2005 a, b, c and d).

Virtual Teamwork (see previous section, 7.2).

7.4 Customer Service Centres

Our research on customer service centres (also called call centres) has two main strands. The first concerns the nature and effects of HRM in CSCs. The second focuses on the nature and effects of work design, particularly job design and performance monitoring, on front-line CSC employees.

The Nature and Effects of HRM

Work on HRM in CSCs has involved two interconnected sets of activity. The first involved developing the Global Call Centre Project, principally with Professor Rosemary Batt from Cornell University. This has entailed the design of a standardized survey, the development of a qualitative case study methodology, and the recruitment of academics in 20 countries to use these instruments in their respective locations. The countries include Canada, Australia, Korea, India, Brazil, South Africa, Germany, France, Poland and Sweden, and the academics involved include: Professor Steven Frenkel, Australian Graduate School of Management; Professor Karen Shire, University of Duisberg, Germany; and Professor Ann Frost, University of Western Ontario, Canada. This work adds an international dimension to our previous research, and will expand it theoretically to include a focus on institutional effects and gender issues.

The second main activity in 2004 involved conducting the survey of HRM in CSCs in the U.K. This was done in conjunction with the UK Call Centre Association. Initial findings suggest that task discretion is associated with quit rates, and that the quality of jobs (including wages) is lower in subcontractors when compared with in-house centres.

Job Design and Performance Monitoring

Research on the effects of job design and performance monitoring has comprised two parts. First, as planned, we conducted studies in four call centres that extended our research on performance monitoring to focus on the cognitive factors through which performance monitoring has its effects on both well-being and performance. Results confirm that the relationship between performance monitoring characteristics (goal difficulty, constructive feedback) and well-being is mediated by one cognitive factor – awareness of monitoring, i.e., the perception that monitoring is constant and intense. There were however some interesting and contrary findings, namely, that constructive performance feedback has a negative relationship with monitoring awareness. This may be due to the fact that feedback increases employee skills and it is only when employees lack skills that they are threatened by, and overly aware of, monitoring practices. Performance monitoring characteristics are also shown to have a direct unmediated relationship with performance.

The second part of the research on job design has been a large intervention project in a health service company. The main aims were to implement improved ways of working so as to enhance employee well-being and to give employees a say in how their job is designed. All employees participated in a one-day offsite workshop and identified areas where job design could be improved. A selection of team members was then given the responsibility to examine how the changes could be implemented. The changes included increasing task variety and job discretion, improving inter-team co-ordination, and removing job obstacles. The project was evaluated using a longitudinal survey. Initial results indicate improvements to job design and call-handler well-being.

The findings of the research have been disseminated to academics, call centre managers and trade union representatives at conferences, seminars and workshops. For example, the research has been presented to six practitioner conferences on well-being in call centres.

7.5 Innovation and Learning

Employee Creativity

Our survey of learning practices (see below) shows that 19% of organisations conduct creativity training. A study of the effectiveness of such initiatives has been completed, using a sample of 195 civil service employees and involving a comparison between staff who had creativity training with those who had not (Birdi, 2003). This shows that amount (but not type) of creativity training, grade of employee and motivation to innovate are all positively associated with the generation of new ideas. However, this does not necessarily result in the implementation of those ideas, in which respect environmental factors such as management support and innovation climate are more significant. A follow-up study of how individual and environ-mental factors enhance creativity training is under way in an engineering company.

An emerging but little-studied initiative is the Creativity Retreat Centre (CRC). This is an off-site facility in which employee creativity is encouraged through the use of creative stimuli of various kinds coupled with brainstorming. In collaboration with Professor Fiona Patterson of City University, we have been conducting a longitudinal study of the effectiveness of one such provision, the Department of Trade and Industry's 'FutureFocus' (Magadley, Patterson and Birdi, 2004). This shows that: 1) users report a high level of satisfaction with the facility; and 2) users produce a higher number of better quality of ideas than those exposed solely to traditional workplace brainstorming methods. Follow-up work is examining the extent to which ideas generated by use of 'FutureFocus' are implemented.

Further work on suggestion or idea capture schemes, based on a sample of 182 UK organisations, shows that decentralised work-based systems are more effective than centralised ones, and that the factors most associated with effectiveness are publicity for the scheme and the use of non-monetary rewards (Leach, Wood and Stride, under review).

The Use and Effectiveness of Learning Practices

We completed the fieldwork for our learning practices survey in 2003 (integrated with the management practices survey, see 7.1), obtaining data from 580 organisations in the private and public sectors (Birdi, Wood, Patterson & Wall, 2004). The collection of associated financial data is well advanced. Preliminary analyses suggest: 1) Personal development reviews and plans have the highest rates of participation among both managers and non-managers. 2) On-the-job training, development centres and mentoring schemes are gauged to be the most effective practices, and open learning centres and e-learning the least effective. 3) The use of learning practices is lowest in the transport and communications sector relative to the others (i.e. manufacturing, financial services, public administration and health and social work). 4) Organisations with greater team learning and knowledge management provision report better financial performance, a relationship that appears to be mediated by human resource management performance. The link to objective financial performance has yet to be determined.

Knowledge Management

Associated research in engineering is examining knowledge management practices, using a variety of methods, including observation, tracer studies and interviews. One significant initiative is that of 'communities of practice' (CoPs), which we have found can improve the identification of relevant experts, the sharing of knowledge across intra-organisational boundaries and the development of best practice (Kerr & Stewart, 2003). An evaluation of CoPs by a collaborating company showed an estimated saving of at least £165k per year.

7.6 Reported and Objective Organisational Performance

The rationale for this component our programme is that much research on the relationship of management practices to organisational effectiveness is based on reported performance. Often there is no alternative, as objective data (e.g., productivity and profit) are not recorded for some types of organisation, or at the levels of analysis (e.g., for sites within companies) often required. It is for this reason that investigators have used reported performance, and will continue to do so (e.g., the Workplace Employee Relations Survey). Such data, however, is of unknown validity.

The first stage in our research was to examine the validity of reported organisational performance by comparing such data with that obtained from audited accounts. We already had one sample with both kinds of measure and we have supplemented this with two further samples, through collaboration with Professor Michie (Birmingham Business School) and Dr. Sheehan (University of Dallas).

Analysis of this data, based on principles for establishing validity in psychometric testing theory, has shown (Wall, Michie, Patterson, Wood, Sheehan, Clegg, & West, 2004):

- Reported and objective measures are positively associated - showing evidence of convergent validity.
- Relationships between reported and objective measures of the same aspect of performance are stronger than between different aspects of performance measured by the same basic method (i.e., either reported or objective) - showing discriminant validity.
- Crucially, reported and objective measures of performance relate similarly to work practices, that is to say the same conclusions would be reached whichever measure were used - demonstrating construct validity.

These are highly positive results in favour of the validity of reported measures. This increases confidence in previous findings based on such evidence and augurs well for their future use. Nevertheless, one study is insufficient as a basis for generalisation; and the direct relationship between the two types of measure (convergent validity) is not as strong as might be expected. This may be because current self-report measures ask about performance in general, whereas objective measures are more specific. Thus we initiated further work designed not only to see if we could replicate the findings, but also specifically to investigate the relative validity of alternative self-report measures and methods (e.g., directly equivalent specification of performance, with and without prior advice to the respondent that this is to be covered).

That data for this stage of the research has now been largely collected, as part of the learning practices and management practices survey and the associated collection of objective performance data (see 7.1 and 7.5). This is a large heterogenous sample covering many sectors in both manufacturing and service. The analysis is currently underway. Preliminary findings suggest less equivalence between reported and objective measures than originally found. However, such equivalence does increase as a function of: 1) homogeneity of sample (perhaps explaining the discrepancy with our earlier results based solely on manufacturing companies); 2) the use of more specific measures; 3) greater correspondence between reported and objective measures; 4) type of respondent (e.g. CEO or finance rather than HRM or engineering manager); and 5) where there is prior warning of the information required. If confirmed, those findings provide clear guidance on the approach best adopted where reliance on reported performance data is necessary.

7.7 National HRM Performance Study

The aim of this project was to set out the requirements for future work on the effect of HRM practices on company performance. To this end our main effort has been on extending our earlier reviews of the HRM literature (Wood, 1999; Wood and Wall, 2002). We have conducted a systematic analysis of all the relevant HRM papers published in refereed journals (Wall and Wood, 2005). This confirms that the empirical evidence is as yet too weak and incomplete to justify the conclusion that HRM initiatives will result in performance gains, either in all situations or even where deemed appropriate by contingency arguments. There is a lack of longitudinal studies of the kind enabling causal interpretation, and much of the cross-sectional evidence could be over-estimating such a relationship due to contamination (e.g., common method variance) between measures of the HRM and performance. Conversely, studies could be underestimating the strength and consistency of the relationship through inadequate measurement of HRM practices. We lean to the latter view, because there is little evidence of common method bias leading to spurious conclusions (Wall, *et al.* 2004). So the evidence is at once encouraging but ambiguous.

We have also reviewed the literature on operational management practices (e.g. total quality management, just-in-time, lean production) and their link to performance that has recently emerged (Wood, 2004). This revealed a considerable diversity in the results with some studies showing effects for all types of operational management practices and others for only some. Again that literature has clear methodological limitations, but does point to the importance of human resource practices as supports or integrated elements of such production operational management practices (e.g., de Menezes and Wood, *in press*).

Our analysis leads us to the conclusion that a national longitudinal study should be conducted, covering HRM and operational management practices more broadly, and specifically designed to overcome the methodological weaknesses of research so far. What is now required goes beyond that which can be supported by a single research group or Centre. Thus we have designed a framework for such “big science”. It is for a large-scale repeated cross-section and panel study that:

- Covers a wide range of promising practices across all key areas of management.
- Measures practices through independent audit obtained from site visits and triangulating data from multiple sources.
- Uses a large representative sample of all major sectors of the UK economy (requiring a good response rate).
- Measures both the use, and effective use, of those practices.
- Collects data at the level where economic performance data is readily available, that is in the case of private sector firms the company level.
- Integrates data on the use of practices with existing data on company performance and health and safety.
- Is repeated on a regular basis (so that the changing picture is recorded and advantage can be taken of longitudinal methods).

The specification for such a project, and how it advances the work currently undertaken under WERS, has been put forward to the ESRC, at appropriate meetings (e.g. Human Resource Management 1st Annual Conference, University of Bath), and in a forthcoming refereed paper (Wall & Wood, *in press*).

8. DISSEMINATION AND ENGAGEMENT STRATEGY

COI has a policy on user engagement developed in collaboration with its Steering Committee and is included in the induction of new staff. It is based on the following principles:

- a) Dissemination involves effective communication of the Centre's work both externally and internally.
- b) Dissemination can take place at any time throughout a project and does not have to be confined to results.
- c) Initiating projects that may have a policy dimension, and involving users in their design, are integral to effective dissemination.
- d) Making dissemination effective involves recognition that it takes time and effort.

The specification, achievement and exploitation of our research programme has entailed considerable user engagement. We have involved users in the research process from project selection and design to dissemination. For example, research in Norwich Union Health Insurance involved presenting our earlier results to managers, who discussed how it related to their problems, and a research project involving a survey of employees was designed to address the issues of performance monitoring identified in this discussion. Dissemination of specific results has included presentations to academic and practitioner groups, bespoke reports for participants (of which there were 75 in this reporting period, see Appendices 3 & 5) and the use of company magazines. More generally, dissemination to users has been via a range of means including: our web site, practitioner journals (n = 26), press releases, conferences (99 papers presented), workshops and seminars (n = 63), in-house company presentations, teaching future managers and occupational psychologists, and responding to interviews from journalists or requests for advice from practitioners (46 newspaper, radio or TV items) (see Appendix 5).

COI has been developing its user engagement and dissemination during the past three years in several directions, including targeting its activities more to specific audiences and using intermediate bodies such as the Work Foundation, Royal Society, the Call Centre Association and the Chartered Institute for Personnel Development as vehicles for dissemination. We also developed in late 2003 and early 2004, a bespoke COI web site (<http://www.shef.ac.uk/esrcco>), having previously incorporated details of the centre on the IWP web site. Our approach was to design a site for both academics and practitioners which highlighted the diversity of our work and its contribution to applied social science. We have made additions to our 'What Is?' series, which provides brief descriptions of the latest research findings on key issues such as: knowledge management, perspective taking, virtual teamwork, team conflict, empowerment, job design, idea capture schemes, and emotion management. The series (<http://www.shef.ac.uk/esrcco/influence/dissemination/whatis.shtml>) has been accessed by, and led to many enquiries from, consultants, practitioners, professional bodies and students.

Finally, we have maintained and extended our existing links with policy-makers and opinion leaders, including through regular contact with colleagues from the CIPD, DTI, Work Foundation, TUC, ACAS, CBI, IoD, and HSE, as well as with managers in all types of organisation. Such working relationships are critical. The processes by which our research outcomes may be translated into policy include: providing material that will be read by policy makers and their advisors, ensuring that people in key advisory roles are aware of our research, using such advisors as gatekeepers, participating in policy meetings, speaking at and attending conferences with a practitioner audience, acting directly as advisors to organisations and governments, and contributing to ESRC events. Our advisory board plays a key role in these processes.

9. CAPACITY BUILDING AND RESEARCH ENVIRONMENT

The Centre is housed within the Institute of Work Psychology, which itself is linked to the University of Sheffield's Department of Psychology and its Management School. Through co-funded projects we also have active collaboration with engineering departments and the School of Health and Related Research.

These links provide access to three seminar series, those in the Centre/Institute itself, and those of the two host departments (Psychology and Management), all of which staff take advantage.

There have been 24 seminars in the Centre's own series, with international speakers including: Professors Neil Anderson (Amsterdam, the Netherlands), Richard Badham (University of Wollongong, Australia), Michael Burke (University of Tulane, USA), Ruth Kanfer (Georgia Institute of Technology, USA), and Steven Rogelberg (University of Charlotte, USA); and Drs Jane Carstairs (Macquarie University, Australia) and Brett Myers (Griffiths University, Australia). UK speakers have included: Professors John Arnold (Loughborough University), Gerard Hodgkinson (University of Leeds), and Jo Silvester (Goldsmiths College, University of London); and Drs Angela Dale (ESRC Research Methods Programme, University of Manchester) and Frank Bond (Goldsmiths College, University of London).

The seminar series is complemented by two other types of event. One is our periodic research methods workshops. For example Professor Burke ran a day-long session on conducting and interpreting meta-analyses (for 12 staff); and Dr Chris Stride, our statistician, conducted sessions on statistical methods. The other event is our 'First Thursday' series, held as implied on the first Thursday of the month, in which members of the Centre take it in turn to brief others on emerging issues of interest. Staff have also attended relevant training events provided by the ESRC (i.e., media training and on liaison with policy makers and MPs).

Not all individual training and development needs are met by such general provision. This gap is met by the University's Staff Review and Development Scheme, in which all members of the Centre participate. The scheme is designed to identify individual requirements, and action plans to ensure those are met. Such training has included courses in survey design, group facilitation and generic academic skills. Members of the Centre as a whole have received a total of 48 days of research training and 19 days of generic skills training (figures for ESRC core-funded staff alone being 22 and 9 days respectively, see Appendix 4).

Another way in which staff members develop their research knowledge and skills is by working on joint projects, with one another and with other researchers across the world. With regard to the latter we currently have 50 active collaborators from 10 countries. Some of these spend an appreciable time in the Centre itself (see list of visiting scholars Appendix 2), others we visit in their own department, and in all cases we work together via the internet.

Capacity building is not solely concerned with the development of research staff themselves, but also involves their contribution to the training of others. All Centre staff contribute to the training of students on the MSc in Occupational Psychology (28 graduates during this reporting period) and to the Management School's MSc in Human Relations, as well as by delivering lectures, conducting workshops and supervising projects.

Equally, there is contribution at the doctoral level. Six PhD students completed within the permitted time (4 years) schedule during the present reporting period, and a further 17 are pursuing their studies (see Appendix 2).

10. KEY PERFORMANCE INDICATORS

Publications

The 15 books, 28 chapters and 35 refereed journal articles published, and other outputs (e.g., 101 conference presentations), show we are keeping up the consistently high research publication record of the Centre. Particularly pleasing are both the quality and the diversity of journals in which papers appear, together with the increasingly central contributions from ESRC core-funded and from co-funded staff. The number of items in press (e.g., 22 for refereed journals for 2005) shows that the momentum is being maintained.

Co-funding

In each of the last two years the Centre has secured co-funding approaching £300,000, gained from a wide variety of sources almost entirely outside the science vote (see Appendix 6). The bulk of that is long-term funding from the private sector. We have also secured over £500,000 from the NHS for 2005 onwards. Thus we are on track to continue to exceed our co-funding targets (originally set at 20% of the ESRC funding) by a factor of 3 to 4 for the duration of the life of the Centre. Together with the contribution in excess of £400,000 per year from the University of Sheffield, the gearing achieved for the ESRC contribution is substantial.

Other

In all other respects we have continued to perform well, with staff contributing to both the wider research enterprise and to practice. Thus, inter alia, we have:

- Helped build capacity by: (a) contributing to undergraduate modules (c. 100 students per year); (b) teaching and supervising projects on MSc Courses in Occupational Psychology and Human Resource management (c. 30 students per year); (c) by supervising doctoral candidates (currently 17); and (d) developing research staff.
- Contributed to the work of learned journals by undertaking editorial roles (n = 7), being members of editorial boards (n = 19), and refereeing submissions (>300).
- Developed national and international research collaborations.
- Contributed to policy development (see next section).

11. SCIENTIFIC REPRESENTATION

Staff have contributed in numerous ways to international and UK scientific debate and development. This has spanned both the user and academic domains, as evident from the following examples:

- Evidence provided to the Innovation Review, initiated by the Chancellor of the Exchequer and jointly organised by the DTI and the Treasury. Scientific contributions have included: 1) membership of the Review's Academic Panel; 2) a report 'Developing and Innovation Culture: Implications from Research' (see Appendix 3, final section); 3) contributions to AIM reports on (a) the implications of the Porter UK Competitiveness Review, and (b) organisationally promising practices.
- Membership of the Government's Working for Health Task Group that contributed to the White Paper on Public Health.
- Co-organisers of, and papers presented at, ESRC Future of Work Programme /COI / SKOPE conference in Cumberland Lodge.
- Invited paper presented at the London School of Economics (LSE) and Chartered Institute for Personnel and Development (CIPD) Conference on Voice and Value.
- Presentations (more than 60) at major international and national meetings, including: the American Psychological Association Section for Industrial and Organizational Psychology Annual Conference; the Academy of Management Annual Meeting; the Australian Industrial and Organizational Psychology Conference; the European Association of Work and Organizational Psychology (EAWOP) Conference; the British Psychological Society Occupational Psychology Conference; the British Academy of Management Annual Conference.
- Contributions to refereed scientific journals through: (a) editorial work (editors and associate, consulting and guest editors) (5); Editorial and Advisory Board membership (19); and journal refereeing (more than 40 journals and circa 300 hundred submissions).
- Analysis of the economic and social implications of nanotechnology, as requested and commissioned by the ESRC, with numerous presentations thereon to help promote debate about its impact on the social science agenda.

12. FORWARD LOOK

In the absence of further ESRC funding from October 2006 we have two priorities for the 21 months from January 2005: the first is to complete our contracted research; the second is to develop alternative funding.

As set out in our contract for the second quinquennium our more specific targets are to:

- Collect further performance data for our survey of modern management practices and innovation.
- Complete the analyses of the above data set relating practices singly and collectively to objective financial performance.
- Complete the fieldwork on e-business, virtual teamwork, portfolio working, customer service centres and innovation.
- Write-up as much of the above as possible.
- Secure alternative funding for 2006 onwards.

13. MAJOR BUDGET ISSUES

13.1 Major Variances from Agreed Spending Levels

None

13.2 Co-funding Secured

2003: £298,251 (+ £409,701 from host institution).

2004: £287,288 (+ £444,303 from host institution).

APPENDIX 1: HIGHLIGHTS

Scientific Advances

Our report *The Social and Economic Challenges of Nanotechnology* (Wood, Jones and Gerhart, 2003), published by the ESRC, represents both a research and dissemination highlight. Described in the ESRC Annual Report (2004) as “ground breaking”, this report summarised the state of current knowledge on the implications of nanotechnology and set options for the future. It is one of the rare examples of the social science implications of a new technology being systematically and publicly considered in the early stages of its development.

Another research highlight with practical and policy implications is the most recent publication (Wood *et al.*, 2004) in our ongoing studies of the use and effectiveness of modern management practices (for the previous papers see Waterson *et al.*, 1999, and Clegg *et al.*, 2002; see also 7.1). The practices covered included Total Quality Management, Just-in-Time working, Integrated Computer-based Technology, Supply-Chain Partnering, Team-based Working, Empowerment, and Learning Culture. Among the findings of interest are: 1) that the use of the practices by UK organizations has increased from 1996 to 2003, but largely through increased deployment by established users rather than through an extension of the user base; 2) the effectiveness of the practices has improved; and 3) the use of the human resource focused practices (teamwork, empowerment and learning culture) is as strong in the service sector as in manufacturing.

Associated with the above there have been developments improving our research capacity. In particular we have secured a data-based of up to 20 years of financial performance for the organisations covered by our series of studies on modern management practices. We have also: (a) set up an international panel for the study of customer service centres (see 7.4); and (b) secured further long-term co-funding (to 1998) for work on the knowledge management and the interface between computer-based and human work systems.

Communications

Our book entitled *The New Workplace: A Guide to the Human Impact of Modern Working Practices* (Holman *et al.*, 2003) brought together much of the Centre’s work with that of collaborators in the UK and abroad. This has sold well, and as a consequence the publishers have commissioned and updated version, *The Essentials of the New Workplace*, that comes out in 2005. As for the nanotechnology report, this publication spans the research and dissemination divide.

In collaboration with the ESRC Future of Work (FoW) Programme and its Centre on Skills, Knowledge, and Organisational Performance (SKOPE), we ran a conference at Cumberland Lodge bringing together academics and policy makers to consider organisational factors affecting performance in modern organisations. This was written up in a report entitled *Skills and Innovation in Modern Workplaces* (Taylor, 2003) published by the ESRC.

Staff from the Centre have disseminated research findings through their contributions to various policy-making initiatives, including the DTI Innovation review and the Working for Health Task Group (thus contributing to the most recent White paper on health). Similarly, but more in the way of technology transfer, Centre staff have collaborated with the National Audit Office to produce reports on *Current Thinking on Managing Attendance* (2004) and on *Managing Attendance in the Department of Work and Pensions* (2004).

APPENDIX 2: STAFF AND PhD STUDENTS

Staff category	Name	Funding source	FTE	Period
<i>Director</i>	Professor Toby Wall	Host institution	0.6	Oct 1996 - present
<i>Co-directors</i>	Professor Chris Clegg	Host institution	0.7	Oct 1996 - present
	Professor Stephen Wood	Host institution	0.7	Jan 2000 - present
<i>Core-funded research</i>	Carolyn Axtell	ESRC	1.0	Oct 1996 - Sep 2003
	Dr Kamal Birdi	ESRC	1.0	Oct 1996 - Sep 2003
	Nikki Barker	ESRC	1.0	Jan 2004 - Dec 2004
	Antonia Dietman	ESRC	1.0	Jun 2004 - Dec 2004
	Dr Rachael Finn	ESRC	1.0	Apr 2003 – Oct 2004
	Dr David Holman	ESRC	1.0	Oct 1996 - Sep 2003
	Dr Desmond Leach	ESRC	1.0	Oct 1996 - present
	Malcolm Patterson	ESRC	1.0	Oct 1996 - present
	Craig Shepherd	ESRC	1.0	Oct 2004 - present
<i>Co-funded - research</i>	Dr Angela Carter	Miscellaneous	0.3	Oct 1996 - present
	Alison Geldart	ESRC	1.0	Jan 2002 - May 2003
	Linda Hall	Miscellaneous	1.0	Nov 1999 - present
	Dr Michael Kerr	RR/BAe	1.0	Jan 1998 - present
	Timothy Norfolk	NHS Executive	1.0	Sep 2000 - Aug 2003
	Dr Jo Rick	Miscellaneous	0.8	Aug 2004 - present
	Mark Robinson	RR/BAe	1.0	Nov 2000 - present
	Caroline Spencer	RR/Bae	1.0	Oct 2003 - Nov 2004
	Christine Turgoose	Miscellaneous	0.8	Feb 1999 - present
<i>Host-funded - research</i>	Carolyn Axtell	Management	1.0	Oct 2003 - present
	Dr Kamal Birdi	Psychology	1.0	Oct 2003 - present
	Professor Cathy Cassell	Management	0.4	Oct 1996 - present
	Dr David Holman	Psychology	1.0	Oct 2003 - present
	Dr Fiona Patterson	Psychology	1.0	Sep 2000 - Apr 2003
	Christine Sprigg	Psychology	1.0	Oct 2002 - present
	Dr Christopher Stride	Psy/Management	1.0	Oct 1996 - present
	Dr Peter Totterdell	Psychology	1.0	Oct 2002 - present
	Professor Peter Warr	Emeritus	0.5	Oct 1996 - present

Staff category	Name	Funding source	FTE	Period
<i>Secretarial</i>	Janet Brookman	ESRC	1.0	Oct 1999 - present
	Kate Fields	ESRC/Host	1.0	Feb 1998 - present
	Margaret Holmes	ESRC	0.8	Jan 2003 - present
	Diane Thompson	Host Institution	1.0	Oct 96 - Dec 2002
	Karen Thompson	Host Institution	1.0	Oct 1996 - present
	Vicky Welton	Host Institution	1.0	Aug 2000 - present
<i>Administrative and IT support</i>	Fiona Cameron	ESRC	0.6	Sep 2004 - present
	Catherine Congreve	Various co-funding	0.5	Oct 1996 - present
	Dr Robin Horton	Various co-funding	0.5	Oct 2002 - Sep 2004
	Ruth Stacey	ESRC	0.5	Oct 1996 - present
	Mark Steele	Host Institution	1.0	Oct 1996 - present

Visiting Scholars

Professor John Arnold, Business School, Loughborough University, UK (1 year to Aug 2004)

Professor Michael Burke, Tulane University, USA; President APA SIOP (6 months to Dec 2004)

Dr Jane Carstairs, Macquarie University, Australia (6 months to June 2004)

Associate Professor Brett Myors, Griffiths University, Australia (6 months to June 2004)

Chongyuan Xu, Wuxi Government and Chinese Academy of Sciences (1 year to Jan 2005)

PhD Students

<i>Completed</i>	Dr Robin Horton	Dr Gillian Symon ²	Dr Kerrie Unsworth
	Dr Rebecca Port	Dr Nick Turner	Dr Angelica Zimmermann
<i>Current</i>	Paul Ainsworth ²	Chrysanthi Lekka	Susanne Sondergaard
	Carolyn Axtell ¹	Wissam Magadley	Christine Sprigg ¹
	Thomas Christopherson	Karen. Niven	Tracey Swift ²
	Steven Fleck	Ale Ortiz	Li Tao
	Joan Fraser ²	Malcolm Patterson ¹	Kun Yang
	Belen Icasati-Johanson	Craig Shepherd	

¹ Staff candidate

² External part-time candidate

APPENDIX 3: PUBLICATIONS

Books and Major Published Reports

- Arnold, J. with Silvester, J., Patterson, F., Cooper, C. L., Robertson, I. T., & Burnes, B. (2004). *Work Psychology* (4th edition). Harlow: Pearson.
- Cassell, C. M., & Symon, G. J. (Eds.) (2004). *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage.
- Clegg, C. W., Legge, K., & Walsh, S. (Eds.) (2003). *The Experience of Managing: A Skills Guide*. Beijing: PHEI Publishing House of Electronics Industry.
- Daniels, K., Jones, D., Perryman, S. & Rick, J. (2003). *Cognitive Factors' Influence on the Expression and Reporting of Work-Related Stress*. Sudbury, UK: HSE Books
- Ewing, K., Moore, S., & Wood, S. J. (2003). *Unfair Labour Practices: Trade Union Recognition and Employment Resistance*. London: Institute of Employment Rights.
- Gospel, H., & Wood, S. J. (Eds.), (2003). *Representing Workers: Trade Union Recognition and Membership in Britain*. London: Routledge.
- Hall, L., Turgoose, C., Stride, C. B. & Warr, J. (2004). *People and Technology*. London: Chartered Institute of Personnel Development.
- Holman, D. J., Wall, T. D., Clegg, C. W., Sparrow, P. R., & Howard, A. (Eds.) (2003). *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley.
- Holman, D. J., & Thorpe, R. (2003). *Management and Language: The Manager as a Practical Author*. London, Sage.
- Leseure, M., Birdi, K., Bauer, J., Denyer, D. & Neely, A. (2004). *Adoption of Promising Practice: A systematic review of the evidence*. AIM literature review for UK Department of Trade and Industry Innovation Review. AIM Research, London Business School: London.
- Payne, R. L., & Cooper, C. L. (2004). *Emotions at Work: Theory, Research and Applications for Management*. London: Wiley. (Reprint of 2002 book).
- Rick, J., Evans, C., & Barkworth, R. (2004). *Evaluation of Reducing Risks: Protecting People*. Sudbury, UK: HSE Books.
- Sprigg, C. A., Smith, P. R., & Jackson, P. R. 2003). *Psychosocial risk factors in call centres: An evaluation of work design and well-being*. Sudbury, UK: HSE Books.
- Thomson, L., Neathey, F., & Rick, J. (2003). *Best Practice in Rehabilitating Employees Following Absence Due to Work Related Stress*. Sudbury, UK: HSE Books.
- Wood, S. J., Jones, R., & Geldhart, A. (2003). *The Social and Economic Challenges of Nanotechnology*. Swindon: ESRC.

In press

- Holman, D., Wall, T.D., Clegg, C., Sparrow, P., & Howard, A. (Eds.), *The Essentials of the New Work Place: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley.

Chapters

- Axtell, C. M., Fleck, S. J., & Turner, N. (2004). Virtual teams: collaborating across distance. In C. L. Cooper, & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology*, Vol. 19. Chichester: Wiley.
- Cassell, C. M., & Johnson, P. (2003). The management of diversity and business ethics. In M. J. Davidson, & S. L. Fielden (Eds.), *Managing Diversity: A Psychological Approach*. London: Sage.
- Cassell, C. M., & Symon, G. (2004). Qualitative methods in organizational research. In C. Humphrey, & B. Lee (Eds.), *The Real Life Guide to Accounting Research*. Oxford: Elsevier. Science.
- Cassell, C. M., & Walsh, S. (2004). Analysing repertory grids. In C. M. Cassell, & G. Symon (Eds.), *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage.
- Clark, L., Evandrou, M., & Warr, P. B. Family and economic roles. In A. Walker and C. Hennessy (Eds.), *Understanding Quality of Life in Old Age*. Maidenhead: Open University Press.
- Clegg, C.W., Icasati-Johanson, B., & Bennett, S. (2003). E-business: Future prospects? In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. London: Wiley.
- Gospel, H., & Wood S. J. (2003). Representing workers in modern Britain. In H. Gospel, & S. J. Wood (Eds.), *Representing Workers: Trade Union Recognition and Membership in Britain*. London: Routledge.
- Holman, D. (2003). Repertory Grid Technique. In M., Lewis-Beck, A., Bryman, & T. Futing Liao (Eds.), *Encyclopedia of Social Science Research Methods*. London: Sage.
- Holman, D. J. (2003). Call Centres. In D. J. Holman, T. D. Wall, C. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Work Place: A Guide to the Human Impact of Modern Working Practices*. Chichester, John Wiley and Sons.
- Holman, D. (2004). Employee well-being in call centres. In S. Deery, & N. Kinnie (Eds.) *Human Resource Management and Call Centre Work*. London, Palgrave.
- Holman, D. J., & Thorpe, R. (2003). Full of characters: Identity and talk in practical authoring. In D. J. Holman, & R. Thorpe (Eds.), *Management and Language: The Manager as a Practical Author*. London: Sage.
- Holman, D. J., & Wood S. J. (2003). The new workplace: An introduction. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Work Place: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley.
- Holman, D. J., Wall, T. D., & Howard, A. (2003). The new workplace: Taking stock and looking forward. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley.

- Kerrin, M., & Icasati-Johanson, B. (2003). Supply chain partnering. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. London: Wiley.
- Mumford, E., & Axtell, C. (2003). Tools and methods to support the design and implementation of new work systems. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. London: Wiley.
- Nadin, S., & Cassell, C. M. (2004). Matrices analysis. In C. M. Cassell, & G. Symon (Eds.), *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage.
- Parker, S. K., Turner, N., & Griffin, M. A. (2003). Designing healthy work: A multi-level perspective. In D. A. Hofmann, & L. E. Tetrick (Eds.), *Individual and Organizational Health*. San Francisco: Jossey-Bass.
- Patterson, F. (2004). Personal initiative and innovation. In C. Spielberger (Ed), *Encyclopedia of Applied Psychology*. USA: Academic Press.
- Sivanathan, N., Arnold, K. A., Turner, N., & Barling, J. (2004). Leading well: Transformational leadership and well-being. In A. Linley, & S. Joseph (Eds.), *Positive psychology in practice*. Hoboken, NJ: Wiley.
- Symon, G., & Cassell, C. M. (2004). Using qualitative methods: Some reflections. In C. M. Cassell, & G. Symon (Eds.), *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage.
- Unsworth, K. L., & Parker, S. K. (2003). Proactivity and Innovation: Promoting a new workforce for the new workplace. In D. J. Holman, T. D. Wall, C. Clegg, P. Sparrow, & A. Howard (Eds), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. London: Wiley.
- Wall, T. D., Wood, S. J., & Leach, D. J. (2004). Empowerment and performance. In C. L. Cooper, & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology (Vol. 19)*. London: Wiley.
- Warr, P. B. Work, well-being and mental health. In J. Barling, K. Kelloway, & M. Frone (Eds.), *Handbook of Work Stress*. Thousand Oaks, CA: Sage.
- Warr, P. B. Some historical developments in I-O psychology outside USA. In L. Koppes (Ed.), *The Science and Practice of Industrial and Organizational Psychology*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Wood, S. J. (2003). Manufacturing practices and performance. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley.
- Wood, S. J. (2004). From voluntarism to partnership: A third way overview of the public policy debate in British industrial relations. In A. Moschonas & S. Koniordos (Eds.), *European Integration and Industrial Relations: Concerns and Explorations at National and Inter-European Level*. Athens: Guttenberg.
- Wood, S. J., & Moore, S. (2004). Crafting a statutory union recognition procedure that works for the UK. In A. Verma, & T. A. Kochan, (Eds), *Unions in the 21st Century: An International Perspective*. London: Palgrave Macmillan.

Wood, S. J., Moore, S., & Ewing, K. (2003). The impact of trade union recognition under the Employment Relations Act 2000-2002. In H. Gospel, & S. J. Wood, (Eds.), *Representing Workers: Trade Union Recognition and Membership in Britain*. London: Routledge.

In Press

Burke, M. J., Holman, D., & Birdi, K. Enhancing safety in the workplace: Strategies for acquiring and applying knowledge and skills. In G. Hodgkinson & J.K. Ford (Eds.), *International Review of Organizational and Industrial Psychology*, vol. 21. Chichester: Wiley.

Clegg, C. W. Sociotechnical theory. In N. Nicholson, P. Aidia, & M. Pilluta (Eds.), *The Blackwell Encyclopedic Dictionary of Organizational Behavior* (2nd Edition). Oxford: Blackwell.

Clegg, C. W., & Walsh, S. Soft systems analysis. In M. S. Lewis-Beck, A. Bryman, & T. F. Liao (Eds.), *Encyclopedia of Social Science Methods*. Oregon, USA: Sage.

Holman, D. Call centres. In D. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The Essentials of the New Work Place: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley, pp. 111-132.

Holman, D. J. Employee well-being in call centres. In S. Deery, & N. Kinnie (Eds.), *Human Resource Management and Call Centre Work*. London: Palgrave Macmillan.

Holman, D., Totterdell, P., & Rogelberg, S. G. A daily diary study of goal-striving: The relationship between goal distance, goal velocity, affect, expectancies and effort. In N. Ashkanasy, W. Zerbe, & C. Hartel (Eds.). *Research on Emotions in Organizations, Volume 1, The Effect of Affect in Organizational Settings*. Elsevier.

Holman, D., Wood, S. J., Wall, T. D., & Howard, A. Introduction to the Essentials of the New Workplace. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The Essentials of the New Workplace: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley.

Kerrin, M., B., & Icasati-Johanson. Supply Chain Partnering. In D. J. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The Essentials of the New Workplace: A Guide to the Human Impact of Modern Working Practices*. Chichester: Wiley

Shepherd, C. Enterprise resource planning. In N. Nicholson, P. Aidia, & M. Pilluta (Eds.), *The Blackwell Encyclopedic Dictionary of Organizational Behavior* (2nd Edition). Oxford: Blackwell.

Shepherd, C., Holman, D., Axtell, C. M., & Clegg, C. W. Changes in modern manufacturing practices. In Karwowski, W. (Ed.), *International Encyclopedia of Ergonomics and Human Factors* (2nd edition). London: Taylor and Francis.

Totterdell, P. Work schedules. In J. Barling, K. Kelloway, & M. Frone (Eds.), *Handbook of Work Stress*. New York: Sage.

Turner, N., & Parker, S. K. Teams and safety. In J. Barling, & M. R. Frone (Eds.), *The Psychology of Workplace Safety*. Washington, DC: American Psychological Association.

Turner, N., Parker, S. K., & Williams, H. M. (in press). Teamworking in organizations: Implications for workplace safety. In P.R. Jackson & M. Shams (Eds.). *Recent*

developments in work and organizational psychology: Implications for international business. London, UK: Elsevier.

- Wall, T. D., & Clegg, C. W. Job dDesign. In N. Nicholson, P. Audia, & M. Pillutla (Eds.), *The Blackwell Encyclopedia of Management: Organizational Behavior* (2nd Edition). Oxford: Blackwell (pp. 193-196).
- Walsh, S., & Clegg, C. W. Soft systems analysis: Reflections and update. In C. M. Cassell, & G. J. Symon (Eds.), *Qualitative Methods in Organizational Research*. London: Sage.
- Warr, P. B. Some historical developments in I-O psychology outside USA. In L. Koppes (Ed.), *The Science and Practice of Industrial and Organizational Psychology*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Warr, P. B. Work, well-being and mental health. In J. Barling, K. Kelloway, & M. Frone (Eds.), *Handbook of Work Stress*. Thousand Oaks, CA: Sage.
- West, M. A., & Patterson, M. G. Organizational psychology. In M. Hewstone, F. F. Fincham, & J. Foster (Eds.), *Psychology*. Oxford: Blackwell.
- Wood, S. J. Job deskilling. In N. Nicholson, P. Aidia, & M. Pilluta (Eds.), *The Blackwell Encyclopedic Dictionary of Organizational Behavior* (2nd Edition). Oxford: Blackwell.
- Wood, S. J. Organisational performance and manufacturing practices. In Holman, D., Wall, T. D., Clegg, C. W., Sparrow, P., and Howard, A. (Eds.), *The Essentials of The New Workplace*. London: Wiley.

Refereed Journal Papers

- Arnold, J. (2004). The congruence problem in John Holland's theory of vocational decisions. *Journal of Occupational and Organizational Psychology*, *77*, 95-113.
- Arnold, J., Coombs, C., Wilkinson, A.J., & Loan-Clarke, J. (2003). Corporate images of the United Kingdom National Health Service: Implications for the recruitment and retention of nursing and allied health profession staff. *Corporate Reputation Review*, *6*, 223-238.
- Axtell, C. M., & Parker, S. K. (2003). Promoting role breadth self-efficacy through involvement initiatives, work redesign and training. *Human Relations*, *56*, 113-131.
- Burke, M. J., Drasgow, F., & Edwards, J. (2004). Closing science-practice knowledge gaps: Contributions of psychological research to human resource management. *Human Resource Management*, *43*, 299-304.
- Burnfield, J. L., Rogelberg, S. G., Leach, D. J., & Warr, P. B. (2003). Laying a solid foundation for Internet surveys: An international case study. *Journal of e-Commerce and Psychology*, *3*(3), 89 - 106.
- Clegg, C. W., & Walsh, S. (2004). Change management: Time for a change. *European Journal of Work and Organizational Psychology*, *13*, 217-239.
- Cohen, L., Finn, R., Wilkinson, A., & Arnold, J. (2003). Professional work and management. *International Studies of Management and Organization*, *32*, 3-24.
- Dick, P., & Cassell, C. M. (2004). The position of policewomen: A discourse analytic study. *Work, Employment and Society*, *18*, 51 – 72.

- El-Sawad, A., Arnold, J., & Cohen, L. (2004). 'Doublethink': The prevalence and function of contradiction in accounts of organisational life. *Human Relations*, *57*, 1179-1203.
- Epitropaki, O., & Martin, R. (2004). Implicit leadership theories in applied settings: Factor structure, generalizability, and stability over time. *Journal of Applied Psychology*, *89*, 293-310.
- Hardy, G. E., Woods, D., & Wall, T. D. (2003). The impact of psychological distress on absence from work. *Journal of Applied Psychology*, *88*, 306-314.
- Heery, E., & Wood, S. J. (2003). Corporate governance and employment relations: Editors' introduction, *British Journal of Industrial Relations*, *41*, 477-479.
- Holman, D. J. (2003). Phoning in sick? An overview of employee stress in call centres. *Leadership and Organizational Development Journal*, *24*(3), 123-130.
- Leach, D. J., Wall, T. D., & Jackson, P. R. (2003). The effect of empowerment on job knowledge: An empirical test involving operators of complex technology. *Journal of Occupational and Organizational Psychology*, *76*, 27-52.
- Leseure, M.J., Bauer, J., Birdi, K., Neely, A. D. & Denyer, D. (2004). Adoption of Promising Practices: A Systematic Review of the Evidence. *International Journal of Management Reviews*, *5-6*, 169-190.
- Ludlam, S., Wood, S. J., Heery, E., & Taylor, A. (2003). Politics and employment relations. *British Journal of Industrial Relations*, *41*, 609-616.
- Morrison, D. L., & Payne, R. L. (2003). Multilevel approaches to stress management. *Australian Psychologist*, *38*, 128-137.
- Morrison, D., Payne, R. L., & Wall, T. D. (2003). Is job a viable unit of analysis? A multi-level analysis of demands-controls-supports models. *Journal of Occupational Health Psychology*, *8*, 220-231.
- Nolan, P., & Wood, S. J. (2003). Mapping the future of work. *British Journal of Industrial Relations*, *41*, 165-74.
- Patterson, M. G., Warr P. B., & West, M.A. (2004). Organizational climate and company productivity: The role of employee affect and employee level. *Journal of Occupational and Organizational Psychology*, *77*, 193-216.
- Patterson, M., West, M. A., & Wall, T. D. (2004). Integrated manufacturing, empowerment and company performance. *Journal of Organizational Behavior*, *25*, 641-665.
- Payne, R. L., & Clark, M. C. (2003). Dispositional and situational determinants of trust in two types of managers. *International Journal of Human Resource Management*, *14*, 128-138.
- Silvester, J., Patterson, F., & Ferguson, E. (2003). Attributional styles as a predictor of customer service and sales performance in retail sales assistants. *Journal of Occupational and Organizational Psychology*, *76*, 115-132.
- Totterdell, P., & Holman, D. (2003). Emotion regulation in customer service roles: Testing a model of emotional labor. *Journal of Occupational Health Psychology*, *8*, 55-73.

- Totterdell, P., Wall, T. D., Holman, D., Diamond, H., & Epitropaki, O. (2004). Affect networks: A structural analysis of the relationship between work ties and job-related affect. *Journal of Applied Psychology*, 89, 854- 867.
- Totterdell, P. (2004). Ideas galore: Examining the moods of a modern caveman. *Behavioral and Brain Sciences*, 27, 272-273.
- Wall, T. D., Michie, J., Patterson, M., Wood, S. J., Sheehan, M., Clegg, C. W., & West, M.A. (2004). On the validity of subjective measures of company financial performance. *Personnel Psychology*, 57, 95-118.
- Warr, P. B., & Pearce, A. (2004). Preferences for careers and organizational cultures as a function of logically-related personality traits. *Applied Psychology: An International Review*, 53, 423-435.
- Warr, P. B., Butcher, V., & Robertson, I. T. Activity and psychological well-being in older people. *Aging and Mental Health*, 2004, 8, 172-183.
- Warr, P. B., Butcher, V., Robertson, I. T., & Callinan, M. (2004). Older people's well-being as a function of employment, retirement, environmental characteristics and role preference. *British Journal of Psychology*, 95, 297-324.
- Waterson, P. E., Older Gray, M. T., & Clegg, C. W. (2003). A sociotechnical method for designing work systems. *Human Factors*, 44, 376-391.
- Williams, H. M., & Meân, L. J. (2004). Measuring gender composition in work groups: A comparison of existing methods. *Organizational Research Methods*, 7, 456- 474.
- Wood, S. J., de Menezes, L., & Lasasosa, A. (2003). Family friendly management in Great Britain: Testing various perspectives. *Industrial Relations*, 42, 221-250.
- Wood, S., Stride, C. B., Wall, T. D., & C. W. Clegg, (2004). Revisiting the use and effectiveness of modern management practices. *Human Factors and Ergonomics in Manufacturing*, 14, 415-432.
- Zimmermann, A., Holman, D. J. & Sparrow, P. (2003). Unravelling adjustment mechanisms: Adjustment of German expatriates to intercultural interactions, work, and living conditions in the People's Republic of China. *International Journal of Cross-cultural Management*, 3, 45-66.
- In Press*
- Cassell, C. M. Creating the role of the interviewer: Identity dynamics in the management research process. *Qualitative Research*.
- Cassell, C. M., Buehring, A., Symon, G., & Johson, P. Assessing the quality of qualitative management research. *Management Decision*.
- Clegg, C. W., Chu, C., Smithson, S., Henney, A., Willis, D., Jagodzinski, P., Hopkins, B., Icasati-Johanson, B., Fleck, S., Nicholls, J., Bennett, S., Land, F., Peltu, M., & Patterson, M. Sociotechnical study of e-business: Grappling with an octopus. *Journal of Electronic Commerce in Organizations*, 3, 53-71.
- de Menezes, L., & Wood, S. J. Identifying human resource management in Britain using the workplace employee relations survey. *International Journal of Human Resource Management*.

- Griffin, M. A., Patterson, M., & West, M. A. Job satisfaction and team work: The role of supervisor support. *Journal of Organizational Behavior*.
- Inness, M., Barling, J., & Turner, N. Understanding supervisor-targeted aggression: A within-person, between-jobs design. *Journal of Applied Psychology*.
- Leach, D. J., Wall T. D., Rogelberg, S. G., & Jackson, P. R.. Team autonomy, performance and member job strain: Uncovering the teamwork KSA link. *Applied Psychology: An International Review*, 54, 1-24.
- Machin, S., & Wood, S. J. Human resource management as a substitute for trade unions in British workplaces. *Industrial and Labor Relations Review*, 58, 201-218.
- McClough, A., & Rogelberg, S. G. Selection in teams: An exploration of the teamwork knowledge, skills, and ability test. *International Journal of Selection and Assessment*.
- Patterson, F., Ferguson, E., Norfolk, T., & Lane, P. A new selection system to recruit GPRs: Preliminary findings from a validation study. *British Medical Journal*.
- Patterson, F., & Price, R. E. Introducing competency-based application forms in selection: Preliminary findings from a validation study. *British Medical Journal*.
- Patterson, M. G., West, M. A., Dawson, J., Shackleton, V., Lawthom, R., & Maitlis, S. Development and validation of a measure of organizational climate. *Journal of Organizational Behavior*.
- Robinson, M. A., Sparrow, P.R., Clegg, C., & Birdi, K. Design engineering competencies: Future requirements and forecasted changes in the forthcoming decade. *Design Studies*.
- Rogelberg, S. G., Leach, D. J., Warr, P. B. & Burnfield, J. L. (in press). "Not another meeting!" Are meeting time demands related to employee well-being? *Journal of Applied Psychology*.
- Shipton, H., Fay, D., West, M. A., Dawson, J., Birdi, K., & Patterson, M. Managing people to promote innovation. *Creativity and Innovation Management*.
- Shipton, H., West, M. A., Dawson, J., Patterson, M., & Birdi, K. HRM as a predictor of innovation. *Human Resource Management Journal*.
- Unsworth, K., Wall, T. D., & Carter, A. Creative requirement: A neglected construct in the study of employee creativity. *Group and Organization Management*.
- Van Eerde, W., Holman, D., & Totterdell, P. Diary studies in work psychology: Special section editorial. *Journal of Occupational and Organizational Psychology*.
- Wall, T. D., & Wood, S. J. The romance of HRM and business performance, and the case for big science. *Human Relations*.
- Whalley, C. J., Morrison, D. L., Payne, R. L., Fritschi, L., & Wall, T. D. Chronicity of psychological strain in occupational settings, and the accuracy of the General Health Questionnaire. *Journal of Occupational Health Psychology*.
- Warr, P. B., Bartram, D., & Martin, T. Personality and sales performance: Situational variation and interactions between traits. *International Journal of Selection and Assessment*.

Wood, S. J. & Fenton O’Creevy, M. P. Direct involvement, representation and employee voice in UK multinationals in Europe. *European Journal of Industrial Relations*.

Non-Refereed Journal Papers

Arnold, J., Coombs, C., Loan Clarke, J., Wilkinson, A.J., Park, J.R. & Preston, D (2004). Cut to the chase. *Health Service Journal*, 22 January.

Arnold, J. & Coombs, C. R. (2004). The patient factor. *Nursing Standard*, April 7 16-17.

Axtell, C., Patterson, M., Wheeler, J., & Leach, A. (2003). The barriers and facilitators of virtual team working. *The Occupational Psychologist*, 49, 34-41.

Axtell, C., Wheeler, J., Patterson, M., Leach, A. (2004). From a distance. *People Management*, 25th March 2004, pp. 39-40.

Coombs, C., Arnold, J., Loan Clarke, J., Wilkinson, A. J., Park, J. R., & Preston, D. (2003). Perceptions of nursing in the NHS. *Nursing Standard*, 18 (5), 33-38.

Holman, D. J., & Wood, S. J. (2004). Discretion pays in call centres. *Professional Manager*, January, p8.

Jones, R., & Wood, S. J. (2003). The world’s next trillion Euro industry. *Eurobusiness*, September, 63-66.

Kerr, M. P. (2003). Knowledge Management. *The Occupational Psychologist*, 48, 24-26.

Lee, B, & Cassell, C. M. (2004). Learning representatives in UK organizations: A review of current developments”. *Development & Learning in Organizations: An International Journal*, 18, 7-9.

Patterson, F., & Hopley, S. L. (2003). A new way to evaluate training and learning. *Knowledge Management Review*, 6, 20-23.

Price, R. E., & Patterson, F. (2003). On-line application forms: Psychological impact on applicants and implications for recruiters. *Selection and Development Review*, 19, 12-19.

Rick, J. & Briner, R. (2003). Risk assessment for psychosocial hazards. *Occupational Health Review*, March, 102.

Rick, J., & Briner, R. (2004). Trauma management vs stress debriefing: What should responsible organisations do? *Counselling at Work*, Autumn 2004, 46, 2 – 4.

Wood, S. J. (2003). Human resource practices showing their promise: ESRC Centre for Organisation and Innovation confirms the vital importance of involvement and employee development for UK productivity. *Social Sciences*, January, 6.

Wood, S. J. (2003). Striving for a procedure that works: Union recognition under Britain’s Employment Relations Act. *Perspectives on Work*, 7(1), 35-36.

Wood, S. J., & Holman, D. J. (2003). Burying the stereotype of call centres. *Public Service Review: Transport, Local Government and the Regions*, Winter, 30-31.

Wood, S. J., Geldart, A., & Jones, R. (2003). Nanotechnology is the latest neologism, *Social Sciences*, 55, 12-13.

Wood, S. J., Geldart, A., & Jones, R. (2003). The social and economic challenges of nanotechnology. *Technikfolgenabschätzung - Theorie und Praxis* (Technology Assessment - Theory and Practice), 12(3), 72-73.
<http://www.itas.fzk.de/eng/tatup/inhalt.htm>.

Wood, S. J., Jones, R., & Geldart, A. (2003). Science fiction or wave of the future? *CentrePiece*, 8(3), 30-32.

In Press

Napier, B., & Carter, A. J. Research: The enduring challenge. *The Psychologist*.

Port, R., & Patterson, F. Maximising the practical benefits of psychometrics in organisations. *Selection & Development Review*.

Other Publications

Arnold, J. (2004). Editorial. *Journal of Occupational and Organizational Psychology*, 77, 1-10.

Birdi, K., & Wall, T. D. (2003). Developing an Innovation Culture: Implications from Research. Discussion paper for Department of Trade and Industry Innovation Review, published on DTI website - www.dti.gov.uk/iesee/innovationreview.htm.

Birdi, K., Denyer, D., Munir, K., Neely, A., & Prabhu, J. (2003). Post Porter: Where Does The UK Go From Here? Summary report from the AIM Management Research Forum. London: Advanced Institute for Management (AIM).

Myers, B., & Carstairs, J. R. (2004). *What is A Psychological Test?* 'What is?' series, on IWP website – www.shef.ac.uk/~iwp.

Hayday, S., Rick, J., Patterson, M., Turgoose, C. (2004). *Current Thinking on Attendance Management: A Short Guide for HR Professionals*. [National Audit Office Research Paper 4378RF](#).

Lekka, C., & Axtell, C. M. (2003). Have you made the perfect match? *Graduate Recruiter*, 14, 4.

Wood, S. J. (2004). Burying some myths about UK management. *Employee Relations Forum for Yorkshire and Humberside*, 3 (March), 1-2.

Wood, S. J., & Moore, S. (2003). Reviewing Statutory Union Recognition (ERA 1999) Procedures. Centre for Economic Performance, Discussion Paper No. 583.

In press

Leach, D. J. Empowerment, job knowledge and performance: A challenge for the future. *People and Organisations@Work*, BPS Division of Occupational Psychology.

Audio Visual & Electronic

Arnold, J. (2004). Companion website for Arnold (2004) *Work Psychology* (4th edition) Harlow: FT/Prentice Hall book: www.bboksites.net/Arnold_workpsych

Sprigg, C. A., & Totterdell, P. (2004). Wellcome Sciart Collaboration with Third Angel Arts Company. Hurrysickness (Performance Lecture) and Realtime (Video Piece) appeared as part of Wonderful: Visions of the Near Future Exhibition in Bristol (Arnolfini), Rotherham (Magna) and Manchester (Cornerhouse).

Reports to Collaborating Organisations and Sponsors

- Birdi, K., & Wall, T. D. (2003). *Developing an Innovation Culture: Implications from Research*. Report to Department of Trade and Industry/Treasury Innovation Review, <http://www.dti.gov.uk/iese/innovationreview.htm>.
- Booth, L., & Leach, D. J. (2003). *Employee opinion survey*. Report to Pennine Healthcare.
- Brown, C., Axtell, C., & Hislop, D. (2003). *Mobile Tele-working: Overall Study Findings* (General report to Participants).
- Brown, C., Axtell, C., & Hislop, D. (2003). *Mobile Tele-working Findings for British Gas*.
- Brown, C., Axtell, C., & Hislop, D. (2003). *Mobile Tele-working Findings for Pearn Kandola*.
- Brown, C., Axtell, C., & Hislop, D. (2003). *Mobile Tele-working Findings for Wickland Westcott*.
- Burnfield, J., Leach, D. J., Rogelberg, S. G., & Warr, P. B. (2003). *Work Meetings: An international Study*. Report for respondents.
- Carter, A. J. (2003). *National Staff Survey 2002-2003*. Confidential report to a Hospital Trust. NHS trust.
- Carter, A. J., & Kerr, M.P. (2004). *XXX Hospital at Night: findings from pilot study*. Confidential report to a Hospital Trust.
- Carter, A. J., & Kerr, M.P. (2004). *XXX Hospital at Night: findings from main study*. Confidential report to a Hospital Trust.
- Carter, A. J., Stride, C. B., & Turner, N. (2003). *Safety at XXX*. Confidential report to a Hospital Trust.
- Carter, A.J., & Williams, H.M (2004). *Positively Diverse Audit: Headline findings*. Report to XXX NHS Trust.
- Carter, A. J., Stride, C. B., & Williams, H. M. (2003). *Staff Attitude Survey 2003*. Report to XXX NHS Trust
- Carter, A. J., Stride, C. B., & Williams, H. M. (2003). *Staff Survey Highlights*. Confidential report to a Hospital Trust.
- Carter, A. J., Stride, C. B., & Williams, H. M. (2004). *Staff Attitude Survey 2004*. Report to XXX NHS Trust
- Carter, A. J., Stride, C. B., & Williams, H. M. (2004). *Staff Survey Highlights: Report to XXX NHS Trust*.
- Clegg, C. W. (2003). *IGR Report on Knowledge Capture, Sharing and Re-Use in the Design Process*. End of project report to Engineering and Physical Sciences Research Council.

- Chng, J. T-H., & Leach, D. J. (2004). A qualitative study of the effects of multi-source feedback. Report to Walsall Metropolitan Borough Council.
- Fleck, S. J. (2003). *Virtual Teamworking Feedback Report 1*. Report to BAE SYSTEMS, Indirect Procurement Business Unit.
- Fleck, S. J. (2003). *Virtual Teamworking Feedback Report 2*. Report to BAE SYSTEMS, Indirect Procurement Business Unit.
- Fleck, S. J. (2003). *Virtual Teamworking Toolkit*. Report to BAE SYSTEMS, Indirect Procurement Business Unit.
- Hall, L., & Stride, C. B. (2003). *Workplace Stress Survey for Centre for Ecology and Hydrology*. Report to the NERC CEH.
- Hall, L., Turgoose, C., & Stride, C. B. (2004). *A Thematic Skills Foresight Report: Securing a Successful Prosecution*. . Feedback report to PSSO.
- Hall, L., Leach, D. J., Stride, C. B., & Fraser, K. (2003). *Survey on the Working Lives of Educational Psychologists*. Report to the Association of Educational Psychologists.
- Hall, L., Stride, C. B., Turner, N., & Fleck, S. (2003). *Employee Opinion Survey*. Report to Grant Rail Ltd.
- Hayday S, Rick J, Turgoose C, Patterson M, (2004). *A Review of Attendance Policies and Procedures at DWP*. Report for the National Audit Office. Resulting in
- (2004). *Managing Attendance in the Department for Work and Pensions*. London, the Stationery Office (2004).
- Hayday S, Rick J, Turgoose C, Patterson M, (2004) *Attendance Management: A Research Paper for the National Audit Office*. Report for the National Audit Office. Resulting in
- (2004). *Current Thinking on Managing Attendance: A Short Guide for HR Professionals*. London: National Audit Office.
- Holman, D. J. (2003). *Report on Evaluation of Call Separation Project*. Report to BUPA.
- Holman, D. J., & Axtell, C. M. (2003). *Evaluation of Job Re-Design Project*. Report to BUPA.
- Holman, D. J., Axtell, C.M., & Sprigg, C. (2004). *Evaluation of Membership Job Re-Design Project*. Report to BUPA.
- Hubert, F., & Leach, D. J. (2003). *Staff Turnover Survey*. Report to Sunglass Hut.
- Icasati-Johanson, B., (2004). *Comparative case study findings on the implementation of e-business supply chain technology in Rolls Royce and Sainsbury's: A consolidating Report*. Report to J. Sainsbury plc., Rolls Royce plc., and other participating companies. Department of Automatic Control and Systems Engineering and IWP/ESRC Centre for Innovation and Organisation.
- Kerr, M. P. (2003). *Proposal for Research into Service to Design Feedback*. Report to BAE Systems and Rolls-Royce.
- Kerr, M. P. (2003). *Proposal for Research into Communities of Practice*. Report to BAE Systems and Rolls-Royce.

- Kerr, M. P. & Leach, D. J. (2003). *Proposal for Research into Design Definition and Audit Meetings*. Report to BAE Systems and Rolls-Royce.
- Kerr, M. P. (2004). *Updated proposal for Research into Service to Design Feedback*. Report to BAE Systems and Rolls-Royce.
- Kerr, M. P. (2004). *Updated proposal for Research into Communities of Practice*. Report to BAE Systems and Rolls-Royce.
- Kerr, M. P. & Leach, D. J. (2004). *Updated proposal for Research into Design Definition and Audit Meetings*. Report to BAE Systems and Rolls-Royce.
- Kerr, M., Clegg, C.W., & Søndergaard, S. (2004). *Service to Design Feedback*. Report to Rolls-Royce.
- Kerr, M., Søndergaard, S., & Robertson, B. (2004). *Tracer Study Project Overview*. Report to Rolls-Royce.
- Kerr, M., Søndergaard, S., & Clegg, C. (2004). *Service to Design Milestone*. Report to Rolls-Royce, Bristol.
- Locker, T, Mason, S, Carter, A. J., & Wall, T. D. (2004). *Report on the findings of a pilot study of organisational factors affecting waiting times*. XXX Trust Department of Accident and Emergency Medicine.
- Locker, T, Mason, S, Carter, A. J., & Wall, T. D. (2004). Report on the findings of a pilot study of organisational factors affecting waiting times undertaken at YYY Trust Department of Accident and Emergency Medicine.
- Magadley, W., Patterson, F., & Birdi, K. (2004). *A Comprehensive Evaluation of Future Focus*. Report to the Department of Trade and Industry.
- Napier, B., & Carter, A. J (2003). *Research in the practice of psychology: The enduring challenge*. Report for the British Psychological Society from the Research and Professional Practice Boards.
- O'Neill, A., & Birdi, K. (2004). *An Evaluation of the LEO Leadership Training Programme in Rotherham Primary Care Trust*. Report to Rotherham NHS Primary Care Trust.
- Ortiz, A. (2003). *Optimising Diverse Teams*. Rolls-Royce, Derby.
- Patterson, F. (2004). *The development of a competency-based selection process in secondary care medicine*. Report to Department of Health.
- Patterson, F., & Magadley (2004). *Evaluation of futurefocus@dti*. Report to Department of Trade and Industry.
- Robinson, M. (2003). *Preliminary Data Analysis of Rolls-Royce Designer Skills Survey*. Report to Rolls-Royce.
- Robinson, M. (2003). *Final Data Analysis of Rolls-Royce Designer Skills Survey*. Report to Rolls-Royce.
- Robinson, M. (2003). *Proposal for Research into Integrated Project Teams in BAE SYSTEMS and Rolls-Royce, within the Remit of the University Technology Partnership for Design*. Report to BAE SYSTEMS and Rolls-Royce.

- Robinson, M. (2003). *Proposal for Work Investigating “the Future Role of the Designer” in BAE SYSTEMS and Rolls-Royce*. Report to BAE SYSTEMS and Rolls-Royce.
- Robinson, M. (2003). *Revised Proposal for Work Investigating Integrated Project Teams in BAE SYSTEMS*. Report to BAE SYSTEMS.
- Robinson, M. (2003). *Research examining Integrated Project Teams within BAE SYSTEMS*. Presentation to BAE SYSTEMS.
- Robinson, M. (2003). *Plan for research investigating Integrated Project Teams*. Report to BAE SYSTEMS.
- Robinson, M. (2003). *Plan for research investigating “how designers spend their time”*. Report to Rolls-Royce.
- Robinson, M. (2004). *Update on research investigating Integrated Project Teams*. Presentation to BAE SYSTEMS.
- Robinson, M. (2004). *Update on research investigating “how designers spend their time”*. Presentation to Rolls-Royce.
- Robinson, M. (2004). *Literature review for research investigating: “interaction between teams and its implications for concurrent engineering”*. Report to BAE SYSTEMS.
- Robinson, M. (2004). *Activity categories for research investigating “how designers spend their time”*. Report to Rolls-Royce.
- Shepherd, C. (2003). *People and Knowledge: Research Summary*. Report to Rolls-Royce, Derby.
- Shepherd, C. (2004). *Investigating the Implementation of DATUM*. Report to Rolls-Royce, Derby.
- Søndergaard, S., Kerr, M. P., & Clegg, C.W., &. (2004). *Integrated Products and Services Research Programme*. Report to Rolls-Royce.
- Stride, C. B. (2003). *LOM Inner Skills Profile*. Report to Inner Skills
- Totterdell, P., Wood, S. J., Wall, T. D., Stride, C. B., & Patterson, M. (2003). *A Study of Portfolio Workers*. Feedback report to participants (65 participants).
- Turgoose, C. (2003). *Internal Communication and Consultation Project: Stage 1*. Report for the Organisational Development Board, Sheffield Hallam University.
- Turgoose, C., & Axtell, C. M. (2003). *Communication within Cultural Studies*. Report to the Cultural Studies Department, Sheffield Hallam University.
- Turgoose, C., & Hall, L. (2003). *Web-based Good Practice Guide for Academic Consultants*. Office of Central Partnership.
- Turgoose C, Hall, L, & Stride C (2004). *Police Sector: A Thematic Skills Foresight Report: Working To Reduce Crime, Disorder and Tension Within the Community*. Published by Skills for Justice
- Turgoose, C., & Stride, C. B. (2004). *Interim Report on the Results of the Audit of Police Officer Skills in Relation to Working With Community Partners*. Feedback report to PSSO.

Wheeler, J., Axtell, C., & Patterson, P. (2003). *Overview of New Ways of Working Research Panel Findings*. Pearn Kandola and IWP report to Panel Members.

Wheeler, J., & Axtell, C. (2003). *Evaluation of the Solution Centre: Notes Development Virtual Team*. Pearn Kandola and IWP report to Eli Lilly.

APPENDIX 4: TRAINING AND CAREER DEVELOPMENT
ESRC Core-Funded Staff

Training

Type of Training	Number of person days
Off the job training in research skills	22
Off the job training in transferable skills	9

Next known employment destination of leavers

Destination	Number of people
Research	2
Teaching	0
Other public sector	2
Private sector	0

APPENDIX 5: KEY PERFORMANCE INDICATORS 2003/4

Performance Indicator		Achieved	Comments
Publications	Books and major reports	15	See Appendix 3
	Chapters	28	See Appendix 3
	Refereed journal articles	35	See Appendix 3
	Non-refereed journal articles	19	See Appendix 3
	Other articles	8	See Appendix 3
Other research contributions	Academic conference papers	101	
	Journal editorial boards	19	Including the leading international ones (e.g., <i>Journal of Applied Psychology</i> ; <i>Personnel Psychology</i> ; <i>Journal of Occupational Health Psychology</i>).
	Journals refereed for	40	
Journal submissions refereed	> 300		
Research collaborations	International (n people)	40	
	UK (n people)	40	
Visiting International Scholars	Short term (up to 5 months)	20	e.g., Prof. C. Long, Chinese Academy of Sciences; Prof. G. Grote, ETH, Zurich; Dr. N. Turner, Queens' School of Business, Canada; Prof. Ruth Kanfer, Georgia Institute of Technology, USA.
	Long term 6 months plus	5	See Appendix 2
User engagement	Presentations to business events/users	18	
	Reports/substantial advice to collaborating organisations	75	
Public policy contributions	Reports for policy makers	5	e.g., On innovation to DTI; Nanotechnology via ESRC
	Participation in working groups	3	e.g., Working group on health
Advisory Committee	Meetings	2	For membership see p. i
Media coverage	Newspaper items	34	
	TV, radio and theatre	11	

APPENDIX 6 : BUDGET INFORMATION

Source	Budget head	2003 ¹		2004 ¹	
		<i>Budget</i>	<i>Expenditure</i>	<i>Budget</i>	<i>Expenditure</i>
<i>ESRC</i> ²	Academic salaries	240,534	225,627	159,952	131,520
	Technical salaries	17,842	44,669	12,688	19,819
	Clerical salaries	30,004	43,705	31,672	41,979
	Overheads	138,628	144,445	93,984	88,822
	Travel & subsistence (overseas)	14,623	17,318	11,913	10,637
	Travel £ subsistence (UK)	38,423	30,740	29,173	22,356
	Consumables	27,265	10,286	27,636	6,801
	Equipment	19,347	19,767	0	8,896
	Exceptional items	57,293	105,245	15,927	20,391
	Total	583,959	641,802	382,945	351,221
<i>Other Funding</i>	University - staff		364,701		399,303
	- consumables		45,000		45,000
	Other Research Councils		8,486		0
	UK charities		1,207		0
	UK Government		579		271
	UK industry		217,070		259,123
	UK Health Authorities		70,020		27,894
	Overseas		889		0
		Total		707,952	

¹ All figures are for the calendar year. Discrepancies between budget and expenditure result from uneven patterns of spending coupled with the fact that accounts are based on the financial year. The figures reconcile within financial years.

² Includes additional ESRC funding in 2003.

APPENDIX 7: POLICY/PROCESS ISSUES

(Confidential to Office/Board)

For the sake of Centres applying for further funding in the future there is a case for reducing the reporting demands in Year 8. Over the last 15 months we have had to produce: (1) a report covering the first 7 years of the Centre's work; 2) a proposal for the next five years; and 3) an Annual Report. Each of these takes considerable resources affecting all staff. It occurs to me that the first report could be omitted, as there will already be considerable evaluation of a Centre's performance up to Year 8 through the Annual Report series and the Mid-Term review.

The decision not to award us further funding is a great disappointment. We will strive both to obtain alternative support and to complete our programme. However, it will be appreciated that this decision creates considerable uncertainty, and staff on limited term contracts may well seek employment elsewhere. Thus we are likely to face retention problems that could affect our performance. Any support from ESRC in developing an alternative way forward and finding sources of funding that can be in place in sufficient time to retain key staff would be appreciated.