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Ursula Huws and Simone Dahlmann

Introduction

- 1 We are currently witnessing a global restructuring of work on a historically unprecedented scale, affecting especially, but not exclusively, those jobs that involve the processing of information that can be digitised and transmitted over telecommunications links. This paper looks at what this restructuring means for workers' occupational identities, class positions and class consciousness.

The importance of occupational identities

- 2 Whether they derive from a Marxist or a Weberian perspective, or from the more pragmatic approach adopted by national statistical offices, all systems of class categorisation use the occupational identity of the worker as the basic marker of class position. This approach brings a number of problems with it, not least the difficulty of resolving the contradiction whereby people enter the workforce as individuals and act as such in the labour market, but are often treated in their capacities as citizens or consumers as members of households. This creates difficulties in assigning a class position to households in which cohabiting adults have occupations which place them in different class positions. The tradition of assigning women to the class positions of their husbands or fathers has, as a result, had the effect of often rendering women's class identities as workers invisible (Huws, 2003:157ff). Although the market research industry continues to develop new methods for classifying the population according to a range of different variables, including their consumption patterns, where they live, their education etc., sociology has so far failed to come up with an alternative basis for

classification. Even Pierre Bourdieu, who has probably gone further than anyone else towards the development of a complex and nuanced theory of class that takes into account both structure and agency and both 'objective' and 'subjective' dimensions, insists finally on the importance of a classification which is fundamentally rooted in occupational identity:

« A group's presence or absence in the official classification depends on its capacity to get itself recognized, to get itself noticed and admitted, and so to win a place in the social order. It thus escapes from the shadowy existence of the nameless crafts of which Emile Benveniste speaks: business in antiquity and the Middle Ages, or illegitimate activities, such as those of the modern healer (formerly called an 'empiric'), bone-setter or prostitute. The fate of groups is bound up with the words that designate them: the power to impose recognition depends on the capacity to mobilize around a name, 'proletariat', 'working class', 'cadres' etc., to appropriate a common name and to commune in a proper name, and so to mobilize the union that makes them strong, around the unifying power of a word » (Bourdieu, 1984: 482).

- 3 An occupational identity – and how it is classified – is therefore of much more than academic or bureaucratic importance. It has the double power both of assigning an individual to his or her 'place' in society ('objective class position') and enabling that individual to develop a sense of fellow-feeling and identification with others who share some of the same features ('class consciousness') which can in turn form the basis for developing forms of organisation through which the common interests of the group can be represented. Occupational identities have historically constituted the building blocks from which class identities have been built. However they have also and often simultaneously created divisions within broader classes. Efforts by specific occupational groups to protect the interests of their members, for instance in order to restrict access to 'craft secrets' or qualifications, have not only often led to the pursuit of narrow sectional interests to the detriment of broader class interests but have also been associated with the exclusion of women or people of particular racial origins from privileged positions in the workforce.
- 4 This contradiction draws attention to the ways in which occupational identities must be seen as both socially constructed and contested. The development of a coherent occupational identity is not a one-off process but part of a continuing struggle by a group (which is itself being constantly renewed over time with a new and possibly demographically changing membership) to maintain its position vis à vis its employers on the one hand and other groups of workers on the other (the group may also be involved in other negotiations, eg with state or training authorities over control of qualification systems by which entry to the group is regulated). In these processes, its formal and informal rules, its status and its bargaining power are in a continuous process of being challenged, adapted and reproduced. Challenges to the status quo of the group do not just come about as a result of shifts in the overall power relationships between it and other social groups but also because of technological changes which enable changes in labour processes, thus calling into question the very nature of the skills and qualifications on which the occupational identity is based.

Impact of the introduction of ICTs on skills and occupational identities

- 5 The last quarter-century has seen a historically unprecedented transformation of traditional occupational identities in the wake of the introduction of information and communications technologies (ICTs). Several key stages can be identified in this restructuring. The first of these was ‘computerisation’ which started after the second world war with the extension of mainframe computers into banks, universities, process-controlled manufacturing industries and government bodies and gave birth to some entirely new occupations which were difficult to fit into existing occupational categories. As Ensmenger (2003) puts it:

« Despite their obvious importance to the history of information technology, computer programmers represent a perplexing problem for the historian. Neither laborers nor professionals, they defy traditional occupational categorizations. The ranks of the elite programmers included both high-school dropouts and ex-Ph.D. physicists. Originally envisioned as little more than glorified clerical workers, they quickly assumed a position of power within the organization vastly disproportionate to their official organizational role. Defined by their mastery of the highest of high technology, they were often derided for their adherence to artisanal practices. » (Ensmenger, 2003:154)

- 6 Ensmenger (ibid.) describes the development of splits between clerical and craft aspects of computer programming work during the 1950s and further shifts in occupational identities during the 1960s, in particular the development of a perception of programmers as ‘technicians’ who had to be ‘managed’. By the 1970s when one of the authors (Huws) began researching this topic in the UK, although there were considerable variations by sector, several distinct groups had emerged: at the bottom of the hierarchy were ‘key punch operators’, considered as a lowly group of clerical workers and entirely female. Many of these subsequently lost their jobs when the inputting of data to computers on cards with holes in them was replaced by data entry using alphanumeric keyboards. Above them in the hierarchy were ‘computer operators’ who carried out maintenance on the computers. They generally worked round-the-clock shifts, wore overalls and joined the same trade unions as skilled craft workers and were overwhelmingly male. Also in an intermediate position in the hierarchy, and with a higher social status (because they were ‘white collar’) but often lower earnings than the computer operators were ordinary ‘computer programmers’ whose work ranged from the very routine – carrying out simple coding, trouble-shooting existing programs or adapting them to new purposes – to more ‘creative’ systems analysis and contributing to the development of new programs. This group included both men and women and was recruited by a variety of means, including advertisements on the London Underground with IQ test questions designed to convince even arts graduates that they might have an aptitude for the ‘technical’ requirements of a computing occupation. Finally, at the top of the hierarchy were two quite distinct groups, each overwhelmingly male: high-flying computer scientists who were breaking new ground in the development of new computer processes and applications; and senior IT managers. Of these, the former would have been defined as ‘professional’ and the latter as ‘managerial’. The relatively small workforce directly concerned with the development and operation of mainframe computers,

therefore, already encompassed workers falling into five of the main occupational categories: clerical, craft, technical, professional and managerial.

- 7 With hindsight, this mainframe-related period of development can be seen as very transient, though it has undoubtedly left a long-lasting legacy in structuring broader divisions of labour and the qualification systems associated with them. Further developments in the history of the introduction of ICTs were to bring much more far-reaching changes. The next phase of this can be traced back to the mid to late 1970s when the cost of computing was drastically reduced through the introduction of the silicon chip, and computers became smaller and more ubiquitous. No longer just impacting a small group of specialist workers, computerisation spread to a range of functions that had previously been carried out by workers in quite different occupational groups. Prime examples of this were the substitution of word processing for typing on a traditional manual or electric typewriter and the introduction of computerised typesetting into the printing industry. The former affected a female workforce defined as 'clerical'; the latter a male workforce defined as 'craft' (or, in some designations, 'skilled manual') workers. The subjective shock of what was perceived not only as deskilling but as threatening to their traditional gender identities by this latter group was described by Cockburn (1983). In the early 1980s, the introduction of the IBM Personal Computer and the adoption of increasingly standardised Microsoft software helped to accelerate a process by which a high proportion of all workers found their traditional tools replaced by a screen and keyboard linked to a processing unit. Studies carried out at the time (summarised in Huws, 1982) found that the main productivity advantages achieved when computers were first introduced stemmed not from the computerisation per se but from the rationalisation and standardisation that preceded it. Computerisation depended crucially on a prior detailed analysis of labour processes, the codification of the workers' tacit knowledge and the development of standardised, replicable processes to replace those which had previously relied on individual 'craft' or 'judgement' (Braverman, 1974:307ff).
- 8 The effects of computerisation (IT) were dramatically multiplied when added to the potentialities of communications technologies (ICT). Telecommunications networks which over time became not only cheaper but also capable of carrying larger volumes of digitised data or voice traffic made it possible to link individual computers interactively into broader networks. During the course of the 1980s as protocols were standardised and software became increasingly generic these networks became more interoperable. During the 1990s, the introduction of the Internet brought about a new degree of seamlessness, creating an enabling infrastructure for another new phase in the distribution of work involving the processing of digitised information. The use of computers and the Internet spread inexorably across the occupational structure so that by 2003, 55.5% of all those employed in the United States used a computer at work and 41.7% used the Internet at work (BLS, 2003). Women were more likely both to be using computers at work (at 61.8%, compared with 49.9% of men) and to be using the Internet at work (at 45.1%, compared with 38.7% of men). As in other developed countries, although it was most concentrated among managers, professionals and other office-based occupations, this usage overflowed traditional occupational boundaries with significant numbers of blue-collar workers also using them.

« Managers and professionals were most likely to use a computer and the Internet; 79.6 percent reported that they used a computer at work and 67.1percent used the Internet. Sales and office occupations also had high rates of computer and Internet use - over two-thirds reported using a computer at work and nearly half said they

used the Internet. In contrast, computer- and Internet-use rates were lower for service workers (27.5 and 15.9 percent, respectively), for natural resources, construction, and maintenance workers (26.4 and 16.6 percent, respectively), and for production, transportation, and material moving workers (26.0 and 13.9 percent, respectively) ». (BLS, 2005)

- 9 Cumulatively, this represents an enormous redrawing of job descriptions for the majority of the workforce over the last quarter of a century.

The introduction of ICTs, the modularisation of work and the restructuring of global value chains

- 10 As already noted, the codification of tacit knowledge and the standardisation of work processes is an important precondition for computerisation. The more standardised each unit of work is, the more easily it can be monitored by results and managed remotely and the easier it is to fragment what used to form part of a single unified work process into separate modules that can be reconfigured in a variety of different ways. Such reconfiguration may take many different forms, ranging from the reskilling of an existing workforce remaining on the same site working for the same employer to offshore outsourcing to another continent (Huws, 2006). Figure 1 summarises some of these restructuring options, organised in relation to two dimensions: whether or not a legal separation is introduced (whether the work is outsourced by the original employer) and whether or not a spatial separation is introduced (whether the work is relocated to another site).

Figure 1: different forms of restructuring of work

	In-house	Outsourced
On the original premises	Reskilling New working practices Separate cost centre Market-testing Benchmarking	Use of temporary agency staff Body shopping Spin-off company External supplier working on premises Transfer of personnel to outsourcer
On a remote site	Remote back office Nomadic workers Homeworkers Workers in another branch of same company Own workers working on customer's premises	Individual freelancers / consultants Outsourced to dependent company Outsourced to SME Outsourced to global supplier Outsourced to strategic partner Outsourced via intermediary

Source: Ursula Huws, 2006

- 11 Typically this restructuring is experienced by workers as a series of incremental steps. Standardisation of processes may be followed by market testing or benchmarking against the service offered by external suppliers which may in turn lead to a partial outsourcing

to a local supplier which may then lead to larger scale outsourcing to a supplier in another part of the world. However there is nothing inevitable about such a sequence. It might also be the case, for instance, that a small-scale experimental outsourcing to a foreign supplier, if it is viewed as successful, might lead to that foreign company being bought up and becoming integrated into a restructured parent organisation with a developed internal international division of labour.

- 12 Once processes have been successfully modularised, they can be reconfigured rapidly in different ways, for instance either by centralising a range of different functions on a single site or decentralising them to many different sites around the globe (Flecker & Kirschenhofer, 2002). Modularisation can thus provide the basis either for aggregation or disaggregation. Whatever form it takes, however, because it involves a further fragmentation of labour processes, it can be regarded as contributing to an elaboration of the division of labour and hence a lengthening of value chains. A multiplication of options for employers is paralleled by the increasing replaceability of workers.
- 13 Generally speaking, the greater the degree of spatial and/or legal separation from the original site, the longer the value chain can be said to be. Value chains take a number of different forms, many of which are typical of particular industrial sectors (Gereffi, Humphrey & Sturgeon, 2005). However there do currently appear to be some general trends that characterise value chains in information services – those business functions that are being most dramatically transformed through the introduction of ICTs. On the one hand, these value chains appear to be becoming longer and more elaborated, with a growing number of steps and an increasing role for intermediaries in smoothing over these steps (Huws and Flecker, 2004). However this is also linked with an increasing centralisation of control, and requirements for ‘seamlessness’ in the management of these chains (Gurstein, 2007). Greater spatial dispersion of work may co-exist with greater geographical centralisation of control, and greater contractual dispersion may, by a similar paradox, co-exist with an increase in the extent to which what the workers situated at the bottom of a chain of subcontractors are required to do may be specified with ever greater exactitude at the top of the chain.
- 14 Modularisation must, however, be viewed as more than just a precondition for the restructuring of value chains. It is also an active driver of further restructuring. Large-scale outsourcing of increasingly standardised functions has made possible the emergence of new, and exponentially growing, global outsourcing companies which can achieve considerable economies of scale by carrying them out en masse (Flecker, 2007). These companies have evolved sophisticated internal divisions of labour, commonly known as ‘global sourcing’, taking advantage of a worldwide workforce to put together virtual teams for specific contracts which mix and match particular skills to achieve extremely competitive prices for their customers (Ramioul, Huws & Kirschenhofer, 2005) and cope with very large fluctuations in the demand for work. These companies actively market their services and their customers find it increasingly difficult to justify the retention of in-house departments providing bespoke services at a cost which is inevitably higher than those on offer from these global suppliers. They are then faced with the alternative of outsourcing to these suppliers or finding ways to cut the costs of their internal services, for instance by relocating to a cheaper site, by using migrant workers or by introducing new working practices to ratchet up the productivity of their existing workforce. Standardisation and modularisation can thus be seen as driving a

‘snowball effect’ whereby global sourcing acts as an accelerator of further global sourcing (Ramioul & Huws, 2007).

- 15 What is clear is that in this enormous global reshuffling of work, upheavals do not take place just at the level of companies or regions. They also take place in the labour processes of the individual workers whose outputs form the building blocks of these value chains. In the process, occupational identities, which have been shaped over many years, in some cases centuries, by regional cultures, national institutions, the results of past tussles between workers and management and the specific nature of the ethnic and gender division of labour in the locality, have been transformed almost beyond recognition. Whether this transformation represents a move upwards or downwards in the local occupational hierarchy will vary depending on these different variables. Likewise, its implications for workers’ abilities to ‘place’ themselves in relation to each other and maintain or develop forms of collective identification and allegiance will also vary.
- 16 In the rest of this paper, we draw on recent empirical work to try to identify firstly what overall occupational changes have taken place in developed economies and what this might mean in terms of the ‘objective class position’ of the information-processing workers whose labour lies at the heart of the restructuring maelstrom and secondly what this means for their subjective perceptions of the change that has taken place in their occupational identities.

Changes in « objective class position »?: the increasing unclassifiability of occupations

- 17 This section of the paper draws on a research exercise that was carried out as part of the STILE project. The starting point for the research was a frustrated realisation, arrived at in previous research projects, that the existing labour market statistics were inadequate for measuring occupational changes in the development of what might be called the ‘e-economy’. Attempts to plot the growth in, for instance, call centre work, or work involving website design was impossible because specific occupational categories did not seem to exist for them (or, when they did exist, did not appear to be used⁴). Under which categories were they concealed? The only way to find out seemed to be to reconstruct the process by which the statistics were created. We found some typical job descriptions of such workers and then, having anonymised them, gave them to experienced coders in four different national statistical offices in EU member states in order to see how they were coded using the International Standard Classification of Occupations (ISCO) developed by the International Labour Organisation (ILO).
- 18 This exercise was based in a recognition that several trends have converged to render obsolescent many of the stable occupational identities which, in the past, were entered into by young people leaving school or college and then adhered to for a whole working lifetime. In some cases, the death of the old occupational identity was brought about directly by the obsolescence of old technologies. In other cases, boundaries between older occupational identities have become blurred in response to increasing demands from employers for multiskilling, and to the rapid speed of technological change which created continuous demands for new skills whilst simultaneously bringing about convergence between old ones. The use of a computer, generally using standard software, has become

so generic a feature of so many professional, managerial, technical and clerical jobs that it has now become increasingly difficult to draw a clear boundary between those features of the job which are content-specific or employer-specific and those which require a general ability to use ICT effectively. It might be argued that generic ICT skills are now as essential as basic literacy and numeracy and should therefore be discounted. In practice, however, it is clear that there are some jobs in which ICT actually forms the content itself, or for which knowledge of a particular technology (e.g. a specialist software package) is the essential requirement. There will therefore probably remain for the foreseeable future an uneasy overlap between jobs which are defined by their use of ICT and those which, although involving extensive use of it, continue to be defined in relation to some other function. This raises a fundamental question that arises in the classification of occupations: should an occupation be defined in relation to the qualifications required to do it? (e.g. a doctor or an accountant); to the tools used to carry it out? (e.g. a lathe operator or a forklift truck driver); to the level of seniority of the post-holder? (e.g. a supervisor or a managing director); to the sector in which the work is carried out? (e.g. an insurance salesperson or a civil servant); or to some combination of these? (as frequently happens in practice).

- 19 Some specific problems that the exercise planned to address included: a very rapid obsolescence of a range of traditional occupational groups defined in relation to tools and technologies which have now been replaced by ICTs; the increasing need for multilingual skills and communications skills in occupations involving cross-border communication in a global economy, skills which rarely figure in traditional occupational descriptions; the increasing requirement, more generally, for generic skills related to the use of ICTs which, moreover, become obsolete very quickly; the blurring of boundaries between occupations because of increasing requirements for multi-tasking; the effects of 'delaying', blurring the distinctions between different levels of seniority (e.g. between 'managers', 'supervisors' and 'team leaders'); and the effects of outsourcing from one sector to another which mean that, for instance, workers formerly defined as 'civil servants' may have become specialists within a business outsourcing company.
- 20 In order to carry out this exercise, real-life examples were sought of occupations which illustrated some of these problems. These were derived from a number of sources, including business directories, job advertisements and cases from past surveys carried out by the research team (including cases known to have been involved in offshore outsourcing). Many of the job descriptions were drawn from databases held by the Irish national government's training body, FAS, and its planning body, Forfas. These were all carefully anonymised before being circulated and used. The National Statistical Offices in Ireland, Hungary, the Netherlands and the UK agreed not only to participate in the coding experiment but also to discuss with us the normal coding practices in each institute to enable us to provide the material in a form which conformed most closely to the information which they typically handled. These practices turned out to be extremely diverse and it was not possible to find a single form which matched all the normal criteria.
- 21 These variations, and the fact that in many cases in the real world coders would have been able to probe respondents more deeply as an aid to coding, meant that the exercise cannot be regarded as strictly representative of the everyday reality in the construction of national statistics. As far as we are aware, this is the first exercise of its kind to have been undertaken and must be regarded more as a pilot experiment than a definitive

study. It represented something of a step into the dark and we must begin by acknowledging the limitations of the methodology. Some of these, perhaps, can offer lessons for the design of further studies in this area, using larger samples and controlling for some of the unexpected problems that were encountered. The first of these limitations was that the descriptions used as the raw material for this exercise were not as complete as those normally found at a national level in most countries and reflected the Irish provenance from which many, but not all, the cases were drawn. This not only affected the terminology used to describe enterprises and occupations (some of which was difficult to translate into other national languages) but also the particular features of the local economy and labour market. Despite some convergence, much of it due to the development of a global information economy, it is clear that there remain strong differences between EU States in the ways in which the economy is organised and occupational identities constructed. It is inevitable that coders' experience and expectations will reflect this diversity and it is in some ways an 'unfair test' to expect them to code material which is so different from that which they encounter in their everyday work. Nevertheless, with the spread of globalisation, it is to be expected that in the future multinational companies will be more and more likely to spread their normal practices (and terminology) across national borders and that, especially in the eEconomy, such experiences will become more common in the future.

- 22 It was also recognised that variations in the results of the coding exercise would not necessarily shed light on particular classification problems. A number of possible causes for coding variations could exist, including: variations in practice by an individual coder; variations between different coders within a team, perhaps reflecting differences in training, background, experience, seniority or just individual preference; variations between different coding teams, perhaps reflecting explicit or tacit institutional rules, perhaps simply the preferences or experience of the manager or trainer, or the priorities of different government departments; variations between countries resulting from different national traditions, qualification systems and coding schemes; variations between countries resulting from the effect of translation of international terminology into the national language(s); variations between countries resulting from the ways in which national codes are converted into international ones; and finally variations resulting from inherent ambiguities in the international classification system itself.
- 23 Despite these reservations, the results do seem to tell us something quite dramatic about a major mismatch between the contingent realities of job requirements in the global 'new economy' and the stable universe imagined by those who design the classification scheme, rooted, as this still seems to be, in a view of the world in which continuity is the norm and change the exception.
- 24 The results were astonishing in their diversity. The ISCO classification scheme is a hierarchical one, in which the first digit (numbers 1-9) represents one of the major occupational categories (managerial, professional, clerical etc.) into which the workforce is divided, and each subsequent digit adds an extra level of detail. Of the 157 job descriptions the coders were presented with only forty (25.5%) were even given the same single-digit code by coders in each of the four participating countries. At a two digit level, this number fell to 23 (representing only 14% of cases) with a further fall to 18 cases (11.6%) at three digits and only six cases (3.8%) at four digits. In some cases, each of the four national teams assigned a different code and there were many cases where there was agreement between only two out of four. Table 1 illustrates some of these cases (a key to

the ISCO codes assigned in this table is given in table 2). A detailed analysis of these divergences (Huws & Van der Hallen, 2004) failed to find any consistent patterns in these codings other than the fact that coders showed a strong tendency when confronted with a 'new' occupation to avoid using newer catch-all coding categories in favour of the nearest match they could find to a traditional occupational category. For instance a telesales agent in a call centre was likely to be viewed, first and foremost, as a salesperson rather than a call centre worker, although this was not applied consistently, as the examples of the 'call centre agent – travel sales' and 'online marketing account manager' in Table 1 demonstrate. These divergences in coding (which we do not discuss further here for reasons of space) make it very difficult to assess whether class shifts have been taking place in the developed economies of the world as a result of the general decline in blue-collar occupations and the rise in white-collar ones. There is in general little agreement about the class position of office workers. Do they form a 'white collar proletariat'? Are they part of the petit bourgeoisie? Do they form part of a new technical-professional middle class with ambiguous allegiances? Or is the category so large that it needs to be subdivided to encompass several different identities (Huws, 2003)?

- 25 Most systems of classification (be they Marxist, Weberian or bureaucratic) would agree at the minimum that managers and professionals (denoted in ISCO at a single digit level by the numbers 1 and 2) belong to the upper and middle classes; and that agricultural workers, craft workers, assemblers and 'elementary occupations, (numbers 6-9) belong to the working class, with the main areas of ambiguity falling in the intervening numbers, 3-5 (technicians and associated professionals, clerical workers and service and sales workers). These results, unfortunately, shed little light on these questions, showing that some workers may be assigned occupational identities that cross even the basic demarcation lines of this tripartite division (for instance the 'team leader in sales call centre' and 'Mac operator' in Table 1). However they do illustrate very graphically what a high proportion of the workforce now occupies the ambiguous intermediate terrain.
- 26 Figure 1 shows the breakdown of the UK workforce in 2006 according to these single-digit ISCO categories. Even if we accept that categories 1-2 and 6-9 have clear class allegiances (which our results suggest is by no means warranted), no less than 38% of women and 37% of men fall into the contested intermediate category, a result which is not untypical of developed Western economies. How do these workers themselves view their occupational identities? That is the question we focus on in the final section of this paper.

Table 1: Coding of selected job descriptions in four European countries

Job title	Job description	ISCO code			
		UK	IE	HUN	NED
International product manager	I work for an international software company. My job is to develop, define and localize the products, liaising with developers and carrying out market research on competitors. I also have to support the sales cycle with literature, support material and training. I travel regularly to company HQ in the US.	123	123	341	241

Call centre agent – travel sales	I work in a call centre handling calls from US members regarding timeshare properties. I provide information on travel requirements and sell them travel and insurance products, working to meet sales targets.	911	911	341	422
Team leader in order management department	I'm team leader in a shared services centre for a pharmaceutical company. I check on ordering problems, identifying possible risks and bottlenecks and initiating corrective action, communicating with other teams and management. I support the sales and sales support agents on operational issues and advice on process improvement initiatives. The order management agents report to me. I use SAP, QMS VAntive and Excel in my work.	413	419	341	122
Customs relations team leader	I head up the “win back” team for the call centre of a financial services company. I coach and motivate a team of agents trying to persuade customers to return to our service.	422	419	123	122
Team leader in sales call centre	As a team leader I supervise the shift arrangements for the team, and monitor attendance, holidays etc. We work in a sales call centre. I have to ensure my team meets targets and goals. I handle time-consuming customer contacts, and coach and develop team members as well as arranging necessary training with the training manager.	911	419	343	122
Contact center team leader	As a team leader in a contact centre I carry out monitoring of calls to assess quality levels and use software to predict call loads and arrange staffing levels. I train new recruits and existing staff. I work to maintain motivation of the agents and to improve customer satisfaction. The centre handles holiday reservations.	422	419	343	122
Online marketing account manager	I am responsible for selling online marketing services to business customers in Ireland, the UK and the US. The services include search engine optimization, banner advertising, email marketing and consultancy services on design and revenue generation options.	123	123	241	522
Template designer	I design templates for online training courses that can include text, pictures, audio and video. The templates are used by programmers and content editors to prepare the completed courses.	213	347	312	235
Documentation scanning administrator	I scan documents received by post onto a computer system. I quality check the documents to ensure accuracy and legibility. I also retrieve documents from the system and print them out to order. I keep records of tasks completed each day.	915	414	411	419

Mac operator	I'm a Mac operator and I use Illustrator, Artpro and Photoshop to prepare artwork for reproduction via litho, gravure and flex services. The work involves making editorial revisions and keeping records of client contacts and order changes.	347	734	245	734
Supply chain analyst	As a supply chain analyst I maintain and control the master production schedule according to the business plan using a computerized system. I track actual build against planned build and highlight the supply and demand issues which result. I work to overcome any problems with marketing, purchasing and operations. I analyse inventory to make projections on obsolescence and future supply plans.	341	122	341	311
Database manager	I manage a computer database to record customer details and purchases. The database produces monthly sales reports and stock analysis.	312	123	312	419
Spam manager	I work for an ISP tracking down and removing subscribers who are spamming. This involves tracing senders, checking whether their return address has been used illegally, blocking email addresses and advising end-users on how to avoid spam.	123	213	343	312

Source, Huws and Van der Hallen (2004:175-195)

Table 2: Key to ISCO codes in Table 1

Legislators, senior officials and managers	<div>122= 'production and operations department managers'</div> <div>123 = 'other departmental managers'</div>
Professionals	<div>213 = 'computing professionals'</div> <div>235 = 'other teaching professionals'</div> <div>245= 'writers and creative or performing artists'</div>
Technicians and associate professionals	<div>311= 'physical and engineering science technicians'</div> <div>312 = computer associate professionals</div> <div>341= 'finance and sales associate professionals'</div> <div>347 = 'artistic, entertainment and sports associate professionals'</div> <div>343 = 'administrative associate professionals'</div>

Clerks	
	413= 'material recording and transport clerks'
	419 = 'other office clerks'
	422 = 'client information clerks'
Service workers	522 = 'shop salespersons and demonstrators'
Craft and related trades workers	734= 'printing and related trade workers'
Elementary occupations	911= 'street vendors and related workers'

Source: International Standard Classification of Occupations (ISCO), International Labour Organisation, 2004

Figure 1: Breakdown of UK workforce⁵ by occupation, 2006

Source: UK Labour Force data, January-March, 2006, analysis by Ursula Huws

Changes in class consciousness? The subjective experience of changing occupational identity

- 27 We now turn to how workers subjectively experience these changes, using three contrasting case studies as illustrations. The first of these, carried out within the scope of the Asian EMERGENCE project, concerns skilled editorial workers in the UK whose jobs were transferred to India and who were faced with the choice of retraining or going freelance. The second, carried out within the scope of the WORKS project, concerns IT workers in the public sector who were transferred, with their jobs, to private sector companies as part of an outsourcing deal. The third, also carried out within the scope of the WORKS project, also involved public sector workers, but this time they were clerical workers whose jobs involved dealing with the public. Under an e-government initiative, these were transformed into call centre jobs, managed under a public-private partnership. These cases demonstrate very clearly not only the changes in occupational identity experienced by the workers but also the ways in which these are shaped by gender, by the traditional 'place' of their work in the division of labour and by the specific conditions pertaining in the local labour market.
- 28 The fieldwork for the first case⁶ was carried out in 2003 in a British university town, the headquarters of a well-established and prestigious publisher of academic books and

journals. The editorial staff were mostly older women with a long experience of their jobs (average job tenure was 20 years) who belonged to a generation that entered the publishing industry as graduates between the 1960s and 1980s when it was a well respected and hard to enter field of work, one of the few to offer intellectually satisfying work to highly qualified women. In addition to formal academic qualifications, these copy-editors and readers had undergone a three-year apprenticeship. According to ISCO, they should have been classified as 'associate professionals'. In the public perception (and their own) they would have been regarded as firmly ensconced in the professional middle class.

- 29 When it was announced that their work was going to be relocated to India, their first reaction was one of disbelief:

« It seemed so impossible, reading being done in India, I guess we always thought we were doing a privileged job that could not be done anywhere else, especially not by non-native speakers »

- 30 Whilst a few staff were kept on in quality-control roles, to check on the work being done in India, the majority were offered the choice of taking redundancy or retraining to do typesetting. Although greatly transformed by the introduction of computerisation during the 1970s (Cockburn, 1983), typesetting had a very different occupational identity, having evolved as a 'craft' carried out by skilled male workers regarded as manual workers and generally considered to be part of the working class, albeit forming part of a 'labour aristocracy' within it. In fact the relationship between predominantly female copy editors (genteel, but relatively low paid) and male typesetters (well-paid rough-and-ready tradespeople) in the 1970s could be regarded as a paradigmatic example of the contradictions between class and gender in the formation of occupational hierarchies. Not surprisingly, the majority of the copy-editors in our case study rejected the option of become typesetters:

« In this area people are in their 40s and 50s, they have no IT skills and are used to reading. There was no appeal in retraining to work with computers. »

- 31 Instead, they chose to accept voluntary redundancy and enter the precarious field of freelance editing.

- 32 The change left them feeling shocked and betrayed, both by their management and by their trade union. However they still felt a strong pride in their work and were concerned that the quality would drop when the work was offshored and, interestingly they still identified strongly with their employer's 'brand'.

« I am worried about the future, quality, the company's reputation and what our customers think about us »

- 33 It was clearly difficult to separate their sense of their own expertise and pride in their skills from a nationalistic identification with the English language and tradition. One respondent said of the Indian workers:

« Being a graduate does not necessarily mean they're good at proof-reading. I know there still will be mistakes. I am English, that's why I don't get it wrong; my superiors don't want to see that ».

- 34 Interviews carried out in the Indian locations to which the work was transferred indicated that even though in principle the wage gap between the two countries should have eased the pressures on workers at the new sites, in fact the opposite had happened. The Indian workers were under considerable stress to meet tight deadlines and work to rigid standards. As a result, typical job tenure was only three years, compared with the

more or less lifetime employment pattern back in the UK. The new sense of precariousness and replaceability experienced by the British workers had, it seemed, been exported along with the jobs (and even intensified).

35 Our second case study, carried out in 2007 in the UK, concerned IT professionals employed in local government whose jobs had been outsourced to large global IT service providers. Interviews were carried out in two cities, one in Wales and one in the Midlands. In the first case, the trade union had originally opposed the outsourcing and there had been a strike which had favourably affected the terms on which the workers were transferred to their new employer (Company A). In the second case, the work had been outsourced three years earlier to another global IT company (Company B) which had subsequently lost the contract when it came up for renewal, the contract going instead to a British company which offered a lower price (Company C). Of the workers who had been transferred in the original outsourcing deal, some were absorbed into Company B, some were recruited by Company C and some took redundancy. Subsequently, Company C was bought up by a US-owned global company (Company D). Some of the workers interviewed in the second city had therefore had the experience, over a period of three years, of being employed by four different employers (the City Council, Company B, Company C and Company D) whilst still doing essentially the same work.

36 These workers were predominantly male, but included several women. Although from diverse backgrounds, most of them had made a conscious decision to work in the public sector, valuing its lack of commercialism, the feeling that they were doing some good in the world and in the knowledge that the public sector offered a less cut-throat pace of work, with more security and a better work-life balance than the private sector, even if this meant lower earnings.

« I had the choice to be working for a private service provider in a bigger town, for example London. If this is what I wanted I'd have made that choice... I thought it was a job for life. I liked IT and that is why I got a job as an IT support technician with [name of city council]. I progressed and now everything has changed and IT is not a job for life anymore »(software developer, Company A)

« We made a choice for working in the public sector and if we wanted to work elsewhere we could have made that choice but we didn't want to; we preferred to work for the council because it was a job for life ». (IT technical manager, Company A)

37 Some of the women, in particular, valued the fact that the public sector had a tradition of offering family-friendly policies (including flexitime, the opportunity to work part-time and childcare facilities) that made it easier for them to combine parenthood with a career. It was seen as acceptable to be relatively unambitious.

38 Transferring from this kind of working environment to the private sector has meant a complete change of culture.

« I'm not ambitious, I never wanted to go into management which is not an attitude that is liked in [Company D]. They want young, hungry [people] trying to get up the ladder. »(female programmer, Company D)

39 Workers in Company D told us that their new employer (like Company C for whom they previously worked) is vehemently opposed to the idea of part-time working or flexibility. When one worker asked to be allowed to work from home (in line with UK government policy which stipulates a right for parents of young children to request flexible working arrangements):

« My line manager passed on the request but it was rejected by [his more senior manager]. He said that: "If your whole team can work from home then their jobs can be outsourced to India ». (Project Manager, Company D)

40 Such statements exacerbate the general anxiety around further restructuring and increase the feeling that workers should

« keep your head down, get on with the job, but ask for nothing »,
« keep your head down and hope you will keep your job for another year »,

41 and

« get the job done, no matter what ». (IT workers in Company D)

42 Employment in these global IT companies is not just perceived as less sympathetic to work-life balance issues and more precarious, it is also seen as having different values which has made them reconsider their commitment to the work

« I do my work, I don't slack but you have to look for meaning outside. I walk out and switch off. It is hard to get recognition here, You don't get credit for your work so that is why I can't be bothered. If I lose this job I'll go find another one somewhere else, I am not bothered. I have other things going on » (Project Manager, Company D)

« I am less tempted to stay in IT because it got too cut-throat and has become a risky industry. » (Account maintenance manager, Company A)

« The way they do things just makes you want to come into work, do your job and go home ». (Project manager, Company D)

43 Some of the workers interviewed told us of colleagues who had already left the industry, in some cases to do skilled manual work in the construction industry. Others were planning to do so. One woman was hoping to find another job in the public sector, not caring whether it involved IT or not. A man who had reached a stage in his life with more financial options (children left home and mortgage paid off) was planning to make his living by buying up run-down properties to renovate and sell on.

44 Even if these workers have not formally changed their class position, it is clear that they have undergone a profound change in their commitment to their work, their motivation and their sense of a secure and permanent occupational identity. Some of their attitudes reflect those found in his study of new media workers in New York by Andrew Ross, who speaks of the way in which many of these workers are not so much interested in financial rewards but 'have a nostalgia for an irresistible work environment' and a resistance to being 'branded' by large corporations (Ross, 2003:15). Here, the scale of their disillusionment seems even greater and some give the sense of participating in the death of the occupation they joined, typically one or two decades earlier.

45 Our third case also involves local government workers involved in what might be regarded as a commercialisation, if not an outright outsourcing, of public services. In this case, however, the mechanism was not one of transferring personnel to a private sector employer but using the device of 'secondment', whereby they retained their formal contractual employment with the local government body but were moved under the managerial control of a newly formed 'public-private partnership' with the strong involvement of a large private telecommunications company. This company had reached similar arrangements with several different local councils in the UK and our interviews were carried out in 2007⁷ in two different locations, one in a relatively prosperous rural county in the East of England and one in a relatively depressed 'rustbelt' town in the North of England with high unemployment levels due to the decline of its traditional manufacturing and resource-based industries.

- 46 In contrast with the workers in the previous two cases, who could be classified as associate professional or technical workers, most of the workers involved here had previously held clerical jobs in local government. As part of an e-Government initiative, call centres were opened providing a 'one stop shop' whereby local citizens could access any of the 400-odd services provided by local councils by calling a single phone number or attending a single drop-in centre. In effect, the workers were transformed from department-based specialists into generalists working out of communal offices where call centre work was combined with providing face-to-face services. The vast majority were women, most of whom had chosen public sector work because it offered good working conditions and flexible working time arrangements, making it easy to combine their work with parenting. Few were ambitious; most saw their primary role as that of housewife and mother and the job as a way of providing extra income to supplement their partners' earnings.
- 47 In the rural county in the East of England, most were fairly satisfied with the change. Many felt they had been able to acquire new skills, and they enjoyed working in teams. Some considered that the work had been enhanced.
- « I don't think, well from my point of view, serving the customer is any different. We can give them more information now which is something we couldn't do before. It was always oh I'm sorry, you've got to go here, or you've got to go there. Whereas now you can actually answer 99.9% of the questions that they have, because you've got the tools to do it. »
- 48 Although they now had to work to more rigid 'service level agreements' than before, as a result of working under the terms of a contract between the Council and the public-private partnership, this had not yet put them under the kinds of pressure experienced in comparable studies of public information call centre workers in other countries (Pupo, 2007). For instance, when a customer was distressed,
- « You can say "right, come back in the back office", you can take them in there, get them a drink, you can sit there for an hour and a half with a box of tissues, nobody's on your back saying "get rid of that customer". There's no pressure like that at all. »
- 49 Their main complaints related to the increased rigidity in working hours. Previously most had been able to work flexitime and there were now requirements for the phones to be covered at set times, including Saturday mornings, which meant they had to work shifts which sometimes interfered with domestic plans. Restrictions had also been placed on their ability to take vacations with their families during the school summer holidays.
- 50 The workers interviewed in the North of England had objectively had a more difficult work experience in that there had been a difficult transition period when the scheme was first introduced when there was a severe shortage of staff and the workers were put under considerable stress. However they were, if anything, even more positive in their responses. This is, perhaps, in part a reflection of the lack of alternative choices on the local labour market and a sense that it is necessary to be realistic about what is possible. Interestingly here, where unemployment was higher, there were more men in the call centre workforce. One of these (a stepfather of two) told us that he was happy with the work-life balance the job gave him and that, although it was not the 'dream' career he once envisaged, he felt satisfied with his work. Unlike the women interviewed, he had expectations that he would be able to work his way up to a management job within five years. In strong contrast with the IT workers in our second case, he saw the job as much more secure than previous employment. He had previously worked at a large bank call

centre and wanted to move into the public sector because he felt that there was 'greater stability' there since it was working, as he saw it, for the government. He thought of it 'as a job for life' and thought the public service aspect of the job was worthwhile. His career trajectory was interesting and fairly wide-ranging; he had done a stint at college studying graphic design, but left before completing the course. He expressed some regret at this. This would have been his ideal job. There followed a range of stop-gap jobs: he had worked in a sewing factory as general labourer, in warehouse work, and on construction sites.

- 51 A female interviewee said that she 'loves the job' and 'goes home happy'. Her career trajectory too exhibited the ups and downs of life in a precarious labour market. After leaving school she had worked for two different electricity boards as a clerical worker. Then came marriage and two children which meant no paid employment for the next 14 years. To get back into the labour market, she went on a community care practice course and decided that something in the public sector would suit her. When she secured her job, she found it 'ideal.' She felt she was doing something 'worthwhile.' For her, there is a type of personality which best suits the work: being 'interested in people', and being willing to take time and 'connect' were important qualities. 'Taking the trouble and not being judgmental' were important attributes. She felt that this job enabled her to exercise all of these things. Again, this is in strong contrast with our second case, where the 'caring' aspects of the job were perceived as having been squeezed out by the commercial pressures of the private sector.
- 52 These cases make it clear that occupational identities cannot be viewed outside the context of the alternatives available to the worker, alternatives which are shaped both by the nature of the local labour market and by personal attributes, including gender, qualifications and experience. The first case represented a drop in status and job satisfaction for a group of middle-class female professionals; the second also represented a drop, in terms both of job security and job satisfaction, for a group of male professional/technical workers; in the third case, entry to the world of ICT-related work represented a step up the occupational ladder for a group of relatively low-qualified workers whose career prospects had in the past been severely limited, either because they were women workers in dead-end clerical jobs stereotyped as being for 'secondary earners' or because they had previously only been able to obtain contingent work in an area of high unemployment and few opportunities.

Conclusions

- 53 These snapshots provide no easy general conclusions. It is clear that major upheavals are taking place in occupational identities across a broad swathe of employment as a result of the restructuring of global value chains. It also seems to be the case that this represents a deterioration in job security and job satisfaction for more highly skilled professional workers, as well as a routinisation of many aspects of their work⁸. However these changes must be viewed relative to their previous conditions and to the alternatives available, factors which are affected by gender and other variables. For groups which have been disadvantaged in the past, the impacts may be more contradictory. However a great deal of further research will be required to establish how permanent these impacts are and what this means for workers' perceptions of their class positions and interests. In the meanwhile, the speed of change of global restructuring, combined with a lack of clarity in

the definition of the new occupations leaves both workers and those who analyse them at a loss. As Bourdieu would say, there is an urgent need, both objectively and subjectively, for a nomenclature for this new breed of workers, to give them a place in the social order.

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BIBLIOGRAPHY

- Bourdieu, P. (1984) *Distinctions. A Social Critique of the Judgment of Taste*, Cambridge MA: Harvard University Press
- Braverman, H. (1974) *Labor and Monopoly Capital: the Degredation of Work in the Twentieth Century*, New York: Monthly Review Press
- Bureau of Labor Statistics (2005) *Computer and Internet Use at Work Summary*, Washington DC: Bureau of Labor Statistics. Retrieved, August 8, 2007 from <http://www.bls.gov/news.release/ciuaw.nr0.htm>
- Cockburn, C. (1983) *Brothers*, London: Pluto Press
- Ensmenger (2003) « Letting the « Computer Boys » Take Over: Technology and the Politics of Organizational Transformations », in A. Blok and G. Downey (eds), *Uncovering Labour in Information Revolutions*, International Review of Social History Supplements, December:153-180
- Flecker, J. & S. Kirschenhofer (2002): *Jobs on the move: European Case Studies in relocating eWork*. IES Report 386. Brighton, Institute for Employment Studies
- Flecker, J. (2007) « Network economy or just a new breed of multinationals? Relocation of eWork as a window to the restructuring of value chains », in U. Huws (ed) *Defragmenting: towards a critical understanding of the new global division of labour, Work Organisation, Labour and Globalisation*, Vol 1 No 2, Summer:36-51
- Gereffi, G., J. Humphrey, & T. Sturgeon. (2005): « The Governance of Global Value Chains », *Review of International Political Economy*, Volume 12, Issue 1 February:78-104
- Gurstein, P. (2007) « Navigating the seamless environment in the global supply chain: implications for Canadian regions and workers », in U. Huws (ed) *Defragmenting: towards a critical understanding of the new global division of labour, Work Organisation, Labour and Globalisation*, Vol 1 No 2, Summer:36-51
- Huws, U. (1982), *New technology and women's employment: case studies from West Yorkshire*, Manchester: Equal Opportunities Commission
- Huws, U. (2003) *The Making of a Cybertariat*, New York: Monthly Review Press

- Huws U & P. Van der Hallen (2004) *Opening the Black Box: Classification and Coding of Sectors and Occupations in the eEconomy*, Leuven: Hooger Instituut Voor der Arbeid
- Huws U., Flecker J. (eds) (2004): *Asian EMERGENCE: the World's Back Office?* IES Report 409, Brighton: Institute for Employment Studies
- Huws, U. (ed) (2006) *The transformation of work in a global knowledge economy: towards a conceptual framework*, Leuven: Hooger Instituut Voor der Arbeid
- Huws, U. & S. Dahlmann (2007) « Sunset in the West: outsourcing editorial work from the UK to India – a case study of the impact on workers » in U. Huws (ed) *The Spark in the Engine: creative workers in a global economy*, Work Organisation, Labour and Globalisation, Vol 1 No 1, January:59-75
- Paul J. & U. Huws (2003) *How can we Help? Good Practice in Call Centre Employment*, Brussels: European Trade Union Confederation
- Pupo, N. (2007) « Behind the screens: telemediated work in the Canadian public sector », in U. Huws (ed) *Defragmenting: towards a critical understanding of the new global division of labour*, Work Organisation, Labour and Globalisation, Vol 1 No 2, Summer:36-51
- Ramioul M., Huws U. & Kirschenhofer S. (2005), *Offshore outsourcing of business services*, Dublin: European Foundation for the Improvement of Living and Working Conditions
- Ramioul M. & Huws U. (2007) « The Snowball effect: Global sourcing as an accelerator of economic globalisation », submitted to *Journal of Architectural and Planning Research*, (under review)
- Ross, A. (2003) *No-collar: the Humane Workplace and its Hidden Costs*, New York: Basic Books

NOTES

1. STILE stands for Statistical Indicators on the Labour Market in the eEconomy. For further information, see <http://www.stile.be>. The project was funded by the European Commission and Eurostat under the Information Society Technologies Programme (5th Framework Programme).
2. EMERGENCE stands for Estimation and Mapping of Employment Relocation in a Global Economy in the New Communications Environment. For further information, see <http://www.emergence.nu>. The project was funded by the European Commission under the Information Society Technologies Programme (5th Framework Programme).
3. WORKS stands for Work Organisation Restructuring in the Knowledge Society. For further information see <http://www.worksproject.be>. The project is funded under the 6th Research Framework Programme of the European Commission.
4. In the UK, the category 'call centre worker' was introduced for the first time in the 2000 revision of the occupational classification, SOC2000. However there is some evidence that workers do not identify with such new job titles (or their interviewers fail to acknowledge them) leading to considerable underestimation of their numbers. In Spring 2003, the UK Labour Force Survey recorded numbers in this category that grossed up to only 81,000 nationally, although it is known from other sources (such as industry estimates derived from shipments of workstations) that there were more call centre workers than this in a single British city such as Leeds or Liverpool, with the total number of such workers in the UK estimated conservatively at well over 1 million in that year (Paul and Huws, 2003 :11).
5. « workforce » is defined as all in employment.
6. This case is discussed more fully in Huws & Dahlmann (2007).

7. This case study was carried out as part of the WORKS project.
 8. For reasons of space we have not elaborated on this aspect of our case studies here. See forthcoming publications from the WORKS project on <http://www.worksproject.be> for further information on this.
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ABSTRACTS

This paper looks at the impacts of the restructuring of global value chains on skills, occupational identities, class position and class consciousness. The codification of tacit knowledge and standardisation of work processes are both preconditions for restructuring and triggers of further restructuring. This leads to a modularisation of skills and work processes enabling them to be reconfigured spatially and contractually and results in a fracturing of traditional occupational identities. The resulting difficulty in pinning down stable occupational descriptions is illustrated from the work of the STILE¹ project on occupational classification in an international comparative perspective. The paper then draws on qualitative research among workers involved in telemediated employment carried out as part of the EMERGENCE² and WORK³ projects in order to tease out what this means for individual perceptions of occupational and class identity.

Ce texte s'intéresse aux transformations des chaînes de valeur et à leur incidence sur les compétences, les identités professionnelles, les positions de classe et la conscience de classe. Les auteurs soulignent que la codification des connaissances tacites et la standardisation des processus de travail sont des préconditions pour la restructuration. Elles conduisent à une modularisation des compétences et processus de travail, en leur permettant d'être reconfigurés spatialement et contractuellement et se traduisent par une transformation dans les identités professionnelles traditionnelles. Le texte repose sur une recherche qualitative auprès des travailleurs associés à des pratiques d'emploi télémediatisés, recherche réalisée dans le cadre de projets européens Émergence et Works.

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