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'Whither the Service Class? Re-investigating the middle layers of employment in the 21st Century'

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Abstract

The purpose of this working paper is to contribute towards the continuing debate on the nature of class structure in the West, recognising that occupation has constituted the central device in the construction of theoretical approaches in this area. The paper is critical of the notion that there can be a simple congruence between occupation and class, but is nevertheless committed to the view that the workplace remains a key site wherein class antagonisms are played out.

Using primary data the paper explores workplace relations between research scientists and their employing organisation, a major pharmaceutical firm. It considers theoretical approaches to locating these 'middle layers' and in particular the suggestion that they form a new 'service class'.

The paper concludes that there are weaknesses in the notion of a service class both theoretically and in practice and argues that Marxist theories of class, and labour process theories concerned with management control, have significant explanatory power when applied to the interview data presented here. Rather than witnessing the growth of a service class and the death of the working class, the paper argues, we are seeing it transformed and re-generated.

1. Introduction

The purpose of this paper is to contribute towards the continuing debate on the nature of class structure in the West, recognising that occupation has constituted the central device in the construction of theoretical approaches in this area (Parkin 1972, Reid 1981). The paper is critical of the notion that there can be a simple congruence between occupation and class, but is nevertheless committed to the view that the workplace remains a key site wherein class antagonisms are played out. The paper explores workplace relations between research scientists – an archetypal group of ‘knowledge workers’ - and their employing organisation, a major pharmaceutical firm.

The growth in the number and importance of professional and scientific occupations in the developed economies during the post-war period has been used by several authors working within a Marxist tradition as evidence of the development of a new class between the bourgeoisie and the working class (see Ehrenreich and Ehrenreich 1979, Poulantzas 1975, Carchedi 1977, Goldthorpe 1982, Abercrombie and Urry 1983). The terminologies used by these authors to describe this ‘new middle class’, as well as the analyses of its composition, vary and have been considered fully elsewhere (Smith 1987). However, the impact of the development of a service and consumer society on both class structure and the perception of class has been widely reported. While there is no analytical connection between the notion of a ‘service society’ and a ‘service class’ this latter approach to class analysis (Goldthorpe 1982, Abercrombie and Urry 1983) has considerable currency (Li et al 2002). Consequently, from amongst those theories that argue the case for a new middle class, greater consideration will be given to this particular approach. Others, also working within a Marxist tradition have, by contrast, identified a process of proletarianisation of professionals during the twentieth century, as they move from self-employed to salaried status and become subject to the twin constraints of hierarchy and the division of labour imposed by the modern capitalist organisation (Braverman 1974).

The paper begins with a brief description of the empirical study on which it later reports and then goes on to consider the role of scientists within industry. A short section follows which describes the historical

development of the Pharmaceutical industry and its competitive environment since the end of the Second World War. This is necessary in order to understand the forces working to reshape the employment relationship. The next section of the paper is devoted to a discussion of theories of class and the middle layers of employment and this is followed by a consideration of evidence arising from the empirical data gathered during the study. Finally some conclusions are drawn.

2. Empirical Basis of the Paper

The paper is based on a case study of research scientists employed in the UK R&D Division of a major pharmaceutical company. Eighty semi-structured interviews were carried out with scientists, their immediate and senior managers and members of the HR function over a five year period. The interviews, which were recorded and transcribed, were subject to a detailed qualitative analysis.

The study focussed in particular on the management of research science and examined issues emerging from the relationship between this group and their employing organisation (referred to here as Pharmco). A key consideration was the nature, purpose and perception of bureaucratic control mechanisms imposed by management and in some cases widely contested by employees. The study (Randle 1999) locates the development of and opposition to such control mechanisms within an analytical framework (Labour Process Theory) which identifies them as central to the relations of production.

During the course of the study Pharmco was involved in a merger with another large Pharma company. As a result of this the data consists of interviews with a sample of employees working for Pharmco prior to the merger and a second interview with those who remained with the merged company, eighteen months later, following a major redundancy operation. The merger, it is argued, led to sharp discontinuous change which had a significant impact on the way in which scientists viewed their employing organisation and experienced their work. Furthermore, the case provides us with an opportunity to consider empirical material that contributes towards our understanding of work organisations and class structure and processes.

3. Scientists in Industry

Forty years ago a seminal study (Kornhauser 1962) noted the rapid growth in the number of salaried professional workers in mature industrial societies. Massive continuing expansion in the number of organisational

professionals especially in Western Europe and the US, has ensured ongoing interest in their employment and management in both academic and practitioner oriented literatures (Randle 1996). The growth of the group has been attributed to the increasing size, complexity, and specialised nature of organisations. Furthermore, it includes new professions which, it has been suggested, are specifically the product of the development of the modern, science-based organisation (Ibid).

The most significant boost to the employment of scientists in industry can be traced to the development during the twentieth century of laboratories within manufacturing companies, initially with a production support function (Reich 1985). Over time laboratories became separated and insulated from the immediate demands of production: the genesis of corporate R&D. Continued growth in the employment of scientists occurred with the expansion of R&D organisations, stimulated in the first instance by the Second World War and then by post-war (cold war) military spending (Whittington 1991).

However, the 'ivory tower' isolation implied by this development has more recently been overtaken by greater integration with other business functions. Unlimited R&D funds are a thing of the past and increasingly interdisciplinary approaches are necessary in order to solve the difficult R&D problems of our time (Miller 1986). In the US these changes have been seen as marking 'the end of an era for corporate scientific research laboratories' as research is redirected;

.... toward activities that are more relevant to ongoing product and process development, more likely to produce results that can be kept proprietary, and more certain to produce a commercial payoff in the near future. At the same time, to increase productivity and shorten the time required to bring new technologies to market, they (*managers*) have restructured and resized their organisations (Nelson, Rosenbloom and Spencer 1996:229)

The question of how to increase the efficiency of the innovation process and improve productivity, against the backdrop of increasing competition, has become a particularly critical management problem for the pharmaceutical industry (Cookson 1996). In the section which follows we consider issues which have permeated much of the sociological literature on scientific professionals.

3.1 Scientists and Autonomy

Some theorists, perhaps most notably Bell (1973), have elevated salaried professionals to a leading position in what was seen in the early 1970s as the coming 'post-industrial' society. Bell argues that this 'post-industrial elite' have been able to maintain an exclusive control over their knowledge base and are therefore able to resist management attempts to encroach upon their autonomy. Professionals have actually gained power in organisations, he maintains, because of the increased importance to them of formalised bodies of professional knowledge. Others have argued that professional work involves specialist expertise which is not readily available to managers and is often characterised by the indeterminate nature of its outcome (Causer and Jones 1996). Littler (1990) maintains that the less direct and immediate the relation between activity and outcome, the more difficult it becomes to specify with precision the work tasks which the specialist or expert should undertake.

There has been a strong focus in the literature that scientists are unique as an occupational group and that the so called professional/ bureaucratic dilemma (managers' need for control against the autonomy of the professional) is a root cause of conflict within the science based organisation (Raelin 1985, Marcus 1985). The need for, and expectation of autonomy at work, clashes with the goals of the organisation. However, research in this area is far from conclusive with some theorists distinguishing between 'strategic' and 'operational autonomy' and concluding that the demand for operational autonomy is manageable (Bailyn 1985).

Others have concluded that corporate R&D is populated by 'technologists' rather than 'scientists' and does not, as a result, embody the traditional norms of science. Consequently, the question of the demand for strategic autonomy does not arise. However, neither 'knowledge worker', nor 'scientist' are unproblematic terms and in both cases may refer to someone doing high level, specialised and independent work, or someone whose role is closer to that of a laboratory technician, involving a degree of skill. The implication is that this cannot be assumed to be an homogenous group with comparable qualifications, skills or knowledge, autonomy, career expectations or rewards (Randle 1996).

In order to develop climates within which creativity can flourish, organisational structures, HRM techniques and management styles should, it is widely felt, accommodate the requirements of scientific professionals. This, nevertheless, has to be done in a climate where the environment is increasingly competitive and both new product and

process development must take place alongside continuing pressure to improve productivity. In tracing the history of R&D management some authors (de Leede et al [1994], Rousel et al [1991] Whittington [1991]) identify a developing emphasis on the integration of R&D with increasing management control of the process and a consequent limitation on the degree of autonomy available to R&D workers.

The dynamic underlying the context in which science takes place, will inevitably have an impact on the experience scientists have of their work. Much of the literature concerned with scientists fails to capture this point, assuming a timeless tension between the expectations of scientists and the goals of science-based organisations. This conflict may have been present, but of little real concern, during the unparalleled growth of these organisations after World War Two. However, as competition has heightened a need for greater control over the activities of scientists has developed.

4. The Pharmaceutical Industry: From Golden Age to Age of Uncertainty

4.1 1950 to 1990: The 'Golden Age'

The roots of the modern pharmaceutical industry can be traced back to the mid-nineteenth century (Bogner 1996). However, the period between 1950 and 1990 has been described as 'a golden age' for the industry (Pisano 1997) with its foundations in methods of drug research which developed shortly after the Second World War (Ballance, Pogany and Forstner 1992).

Methods of drug research deployed in the industry at this time were not sophisticated, rather they were 'tedious and sometimes cruel' (Ballance et al 1992) and the retention of an essentially trial and error methodology, was the major cause of the slowdown in drug development by the beginning of the 1960s. Many of the new products which entered the market at this time were 'me too' drugs; near substitutes for existing products and not representing significant therapeutic advances.

With the advent of rational drug design, a true technological revolution in drug development, an acceleration in discovery began. Behind this was the growing understanding of human biochemistry which reversed the traditional logic employed in drug discovery. Rather than screening to find new compounds and then finding out what they do, scientists could first determine what condition they wished to treat and design a compound to fit. Serendipity was no longer the source of innovation.

At the same time, an economic trigger to the growth of the ethical (prescription drug) industry was provided by the post war development of socialised medicine (Froud et al 1997). This allowed medication to be paid for through either social insurance, corporate welfare or private insurance schemes and market growth rates during the 1970s and 1980s suggested a recession proof industry. The outcome of this, it has been argued (Randle 1996) is that the 'golden age' benefited both the big pharma companies and their R&D staff who, in a tight labour market, could command premium pay and conditions, job security, and predictable careers.

By the mid 1980s the promise of biotechnology, a further extension of rational drug design, began to overshadow the developing interdisciplinary approaches of the still chemistry-based rational methodologies, representing a significant threat to the research base of the traditional pharmaceutical firm. Many of the competences required for this research are based within newer, smaller, biotechnology companies. The barriers to entry into the industry that operated in previous decades have, as a result, been lowered.

4.2 *The 1990s onwards: An Age of Uncertainty*

Changes in the economic environment led to far less favourable conditions for the Pharma industry during the 1990s with sharp increases in R&D costs prompted by longer testing requirements for new products. The consequently shorter patent lives led to increasing difficulty in recouping investment at a time when there was considerable pressure on public authorities to cut healthcare costs (Randle and Rainnie 1997). In the US over the same period drug pricing became a key competitive tactic as new products were introduced not at a premium as in the past, but at a discount (Longman 1995). The picture is now much less rosy for the R&D based prescription drug company (Froud et al 1997).

During the 1990s changing structural conditions resulted in very significant global restructuring of the industry. Mergers between ethical drugs producers, the result of pressures some of which are directly related to R&D (Tompkins 1996)¹ has led to an increasing concentration within the industry. Following mergers companies have cut payroll and closed sites shattering the stability evident from the early 1960s to the end of the

¹ These include; the need to control rising R&D costs; the need for rationalisation; falling profits; the globalisation of the market; the need to buy out the opposition; the desire for greater market share; the need for growth; deteriorating returns on R&D; a need for synergy in R&D; and pressure to consolidate the infrastructure of an over-fragmented market.

1980s and have 'unsettled scientists and managers alike' (Ballance et al 1992). The anticipated outcome is a bigger market share, reduced competition and reduced costs as headcount declines.

It is also possible that newer drug discovery technologies may result in a greater separation between the intellectual and the more routine aspects of pharmaceutical R&D, thus impacting further upon those employed in research. In its turn and combined with greater use of short-term contracts, agency workers and outsourcing of research to smaller biotechnology companies, opportunities for companies to further rationalise workforces may occur and may lead to a changing division of labour in the laboratory (Randle 1966).

The hallmarks of the industry from the 1960s onwards are consequently being eroded, leading Ballance et al (1992:175) to observe that: " Drug producers...are competing much harder with rivals...the pharmaceutical industry is losing some of its uniqueness and becoming more like other parts of the manufacturing sector." In turn those employed in high status occupations within it have found themselves subject to a changing employment relationship which has undermined their relatively privileged position.

5. Class and the Middle Layers of Employment

A Marxist analysis (McKenzie 1982) argues that classes derive their identity and definition from the relationships between them: a class is not a self-contained entity which can be understood simply in terms of its internal characteristics. This has particular significance for the analysis of workplace behaviour, as the conflictual relationships inherent in the Marxist conception of class will be played out in some form which reflects the needs of capital to extract surplus value from labour at the point of production. Nevertheless, identifying the boundaries between classes at workplace level is fraught with difficulties.

While Marx (1974) recognised the complexity of the class structure in England in his own lifetime, by the latter half of the twentieth century, new intermediate strata could be identified whose development has further increased the complexity of the division of labour and led to a more highly differentiated hierarchy of authority within organisations. Since Marx there have been a number of attempts within the Marxist perspective to amend class analysis in order to take account of this development.

During the last twenty years this has resulted in three broad approaches. In the first this group is seen as constituting a 'new working class', a natural ally of the 'traditional' proletariat (Gorz 1967, Mallet 1975).

However the work of Mallet has been painted as flawed by technological determinism and national specificity, while Gorz emphasis on ideology in locating technical workers has resulted in charges of idealism (Smith 1987). By the 1980s Gorz was dismissing work as no longer central to class analysis (Gorz 1982).

A second approach takes the view that the middle groupings constitute a separate 'professional managerial class' (Ehrenreich and Ehrenreich 1979), a 'new petty bourgeoisie' (Poulantzas 1975), a 'new middle class' (Carchedi 1977) or a 'service class' (Goldthorpe 1982, Abercrombie and Urry 1983). This second approach sees the working class becoming progressively smaller, while the 'middle class' grows. While all of these approaches have their critics some have greater currency than others. One recent paper (Li et al 2002:617) comments that :

'in the last 15 years much work in the field of class analysis has centred on the contrast between the service class....and the working class. Furthermore this 'structural distinction' between the service and working classes, is seen as 'analytically powerful, has validity, and is not in question here'

This theory argues that a new 'service class' of organisation-based professions is emerging as an independent 'third force' between capital and labour in advanced societies. This group consisting of managers, administrators, scientists, technical experts and human services specialists is seen to constitute a potential force for socio-political change. It advances the cause for rationalisation in the name of meritocracy, equity and efficiency as against the values of privilege, preference and stability defended by traditional elites and ruling groups. Organisational professions can be seen as a strategic source of moral regulation and cultural integration within increasingly differentiated and fragmented modern industrial societies (Reed 1992: 210).

Goldthorpe (1982) and Abercrombie and Urry (1983) have proposed the existence of a service class as a theoretical response to the growth of the middle layers (Crompton and Jones 1984). It is characterised as a 'class in itself' which has a recognisable set of interests and which cannot be understood simply from its intermediate position between capital and labour. It is capable of becoming a meritocratic 'class for itself' whose interests are most clearly served by credentialism as an exclusionary strategy and political strategies that stabilise capitalist relations of production.

Central to the relationship between the employer and the middle layers in Goldthorpe's (1982) work is 'trust'. Employees gain conditions of

employment and rewards which reflect this relationship. The employer requires service class members to accept delegated authority (managers) and give access to their specialised knowledge and expertise ('professionals'). Goldthorpe combines these roles on the basis of the high degree of autonomy and discretion that both incorporate.

Abercrombie and Urry (1983) are heavily dependent on the notion of career for defining the service class. This ensures members a fairly predictable trajectory through the organisational hierarchy of bureaucracies which function as internal labour markets. As individuals move up the hierarchy they will experience improved pay and conditions, increasing authority and discretion and greater opportunity for creativity and self-control.

A contrasting third perspective sees the middle layers as occupying a 'contradictory class location' (Wright 1978), 'a structurally ambiguous position' (Crompton and Jones 1984) or as otherwise placed in no fixed position between the proletariat and the bourgeoisie (Braverman 1974, Callinicos 1983). The middle strata are regarded within this perspective as a distinct group though not a separate class. In the capitalist organisation these strata may share the characteristics of the manager or workers to varying degrees and will be pulled simultaneously in both directions. Class position is seen as something fluid rather than fixed and amongst those with only labour power to sell there can exist different relations of production. For Braverman defining the actual class position of a given group remains difficult in that we are not confronting a fixed entity but rather :

'...ongoing processes, rich in change, transition and variation, and incapable of being encapsulated in formulas, no matter how analytically proper such formulas may be...'
(1974:409)

6. Pharmco: Experiencing professional work in a changing environment

It has been reported elsewhere (Randle and Rainnie 1997) that freedom of investigation, through relatively loose control structures, were seen by Senior managers at Pharmco as vital in promoting an atmosphere within which effective research could take place. However pressure to produce drugs meant that this was balanced by an increasingly ruthless approach to culling projects where no profitable outcome could be predicted. It was nevertheless accepted by managers at Pharmco that there is a degree of

indeterminacy in scientific research which means that management cannot always know what individual scientists are doing.

Across the research grades as a whole, interviews suggested, there was a relatively high degree of operational autonomy at Pharmco. However, at the lower levels a degree of supervision existed which meant that even day to day operational goals were set by someone more senior. Targets were set for the individual researcher such that there may be little real choice in what to do, the choice simply rests in how the work is to be structured within quite strict constraints.

The possession of a PhD was an important indicator of the freedom of action scientists could expect and this was closely related to placement on the R5 (Research) grade and above. There was evidence that having reached this stage the employee could be expected to have internalised the need to pursue project goals and would be handling her/his autonomy in the 'responsible' manner.

Project Leaders, taking on some management functions within the matrix structure, also had their projects to protect and would thus apply a degree of pressure to those lower down the hierarchy to deliver, while formally encouraging an element of tangential, more speculative work by team members. Failure to make progress could be fatal for the project.

More junior staff reported having no say in determining the future of projects. Strategic autonomy, for example, the selection of which therapeutic areas to target or the setting up and closing down of projects is very much in the hands of Senior Management. Even amongst the most senior scientists the limits of autonomy do not stretch to strategic decision making. In practice, as this section will demonstrate, there are also considerable restraints on individual freedom.

6.1 Managing Creativity

'Ten per cent time'

During the earlier stages of the study there were a number of references by more senior managers to 'ten per cent time'. Scientists were apparently encouraged to spend approximately half a day per week working on ideas not directly related to a therapeutic project that might prove to have some incidental value to the company. However, while managers or those higher up the research grade hierarchy believed tangential work to be important and believed that it was encouraged, those lower down the research grades were far more cynical about the extent of the opportunity to carry out such work in practice. Ann, an R2 Biologist reports;

... I'm a screening machine, which is OK because, you know, you can do it with your eyes shut, but it would be nice if I could go off to the library and read a couple of papers...

By the second interview round there was evidence that the notion of autonomous research was now being heavily squeezed by the emphasis on measurable productive output, reflected in progress towards project targets. No-one referred to 10% time any longer.

'Trust time'

During the first interview round respondents were also asked about the move from flextime to 'trust time'. This system replaced the requirement to spend an average of 37.5 hours per week on the premises measured by an individual clock, with one in which staff were expected to monitor their own working time outside of core hours. The flex system meant that hours accumulated each month above the target could be banked towards days off. Under trust there was no entitlement to compensation for excess hours, but line managers had discretion to allow time off where it was felt it could be justified. This was seen as creating an environment which puts less emphasis on bureaucratic 'presenteeism' and more on innovative activity as, for example, performance in the eyes of line managers would be one criterion upon which time off was awarded.

Many staff raised objections to the system, maintaining that the overall outcome was that they spent more time at work without a right to compensation. There was little disagreement that less time was now being taken off by the time of the second interview round. A Senior Research Biologist commented that;

... it works well, from the company's point of view, everyone is working longer hours than they used to ...

(Ben)

The Trust system appeared to have two benefits for management: firstly, in abandoning formal monitoring they actually achieved higher levels of attendance (less days taken off per year). Secondly, the role of line management in dispensing time off has the effect of pushing people to actively demonstrate high levels of performance and thereby make more transparent the indeterminacy of professional work. The shift to paying for performance with the introduction of a PRP system, rather than paying for attendance has a similar logic and the functions and dysfunctions of both HR practices in R&D have been reported extensively elsewhere (Randle & Rainnie 1997, Randle 1996, 1997, 1999).

6.2 Merger and Redundancy

The way in which the post-merger integration process of Pharmco and Drugco was approached in the UK had considerable impact upon employee morale. Once the new structure of the organisation had been determined by the most senior managers and middle managers had been appointed, research staff at laboratory level who wished to stay were required to apply for jobs in the new, smaller 'units', which replaced the previous, scientific discipline based, departmental structure.

The process took some time and caused widespread anxiety amongst employees. However, the relative privilege, which the research grades at Pharmco had enjoyed prior to the merger seems to have obviated the need for collective approaches to workplace issues in earlier years. There was a low union membership amongst those interviewed and this, it is understood, is reflected across research at Pharmco as a whole. The MSF union was not recognised for collective bargaining purposes but solely for individual representation. In all, about one third of the workforce in Research left as a result of either compulsory or voluntary redundancy.

The fate of those who had applied for positions in the Research Division of the merged organisation were communicated in a single day in which all staff were asked to report on site at timed intervals. The day was colloquially referred to as 'Black Monday'. The significance of the redundancy process, which appeared to have eluded the designers, was not lost on those who took part in interviews, although all of those who are quoted below were given 'good news'. The symbolism implicit in those who were to 'survive' being sent along a corridor to the left, while the 'victims' of the process were sent to the right, had clearly left a strong impression, and was mentioned by many interviewees :

... depending on whether you were going to be made redundant or stay in the company you went sort of one way, or the other ... sort of to the gas chamber... (Bob, Unit Head)

...there was this joke going around for a couple of months afterwards How do you scare a Pharmco2 scientist?Tell him to turn right (laughs) ... (Nick, Senior Research Manager)

While interviewees had differing perceptions of the rationale behind redundancy decisions, there seems to be a broad consensus that possession of scientific skills was a key factor. Some skills, such as those of molecular biology were in short supply, while classical pharmacological skills were over-represented in the organisation. Changes in scientific technologies suggested that this balance should be changed. Individual performance appears to be a secondary criterion. The company was able to choose between those with the required scientific skills using PRP data, individually produced career summaries and a managers report.

The process was seen as one which could produce a downsized organisation, better placed technologically to address the challenges perceived as facing pharmaceutical research. Intensifying competition required an organisation committed to reducing the time taken to deliver new drugs to the marketplace.

The research organisation had been delayed, as part of this process, to take out middle management jobs which were not explicitly connected with the management of research in the laboratory. The result was a flatter structure based more closely on the drug discovery process.

Within the new organisation a previously identified rift between exploratory and therapeutic research seemed to be growing, not only in terms of the technologies involved, but also as a result of a 'them and us' attitude developing between more and less basic research teams.

A senior member of the Human Resources team described how in the past :

...there was a sort of psychological contract, which was that if you keep your nose clean and do a good job you will retire here and that was very much the way people felt ... that has gone completely...

The company signalled the view that a job with Pharmco should not be considered a job for life, through changing benefit programmes. The symbolism of the, 'portable' pension, for example, was powerful and the message was not lost on staff. However it did prompt them to think about what a 'changing relationship' entails. Commitment or loyalty is a 'two-way street' .

The consensus appeared to be that the research work still provided many, especially the more senior scientists, with a relatively high degree of intrinsic interest. Many mentioned the satisfaction in the science itself, whereas the organisational changes, the new structures and the method of their implementation, as well as the sense of insecurity which arises

from a lack of confidence in the future, gave rise to cynicism, low morale and lack of commitment:

... I've got a very interesting jobbut I think its sad, the atmosphere that's developed around here... there are a lot of very cynical people who are pretty fed up with it it is a lot more pleasant to work in a place where people enjoy their work and see where they're going ...

(Pam)

Market turbulence vividly demonstrates the limits on the ability of the merged organisation to control the environment within which it operates. To ensure its future the company will be forced to continue to seek larger shares of the pharmaceutical market in competition with others and indeed this prediction by many staff was subsequently borne out.

Cynicism about the new company was reflected in attitudes, not only about the merger process, but about other organisational changes which had resulted in cost cutting and the intensification of work in order to heighten competitiveness:

...the more time you spend within this company, certainly recently, the more you realise that everything is.....trimmed down as much as possible, lets make everyone as absolutely efficient as possible, lets cut those costs right down to the bare minimum, lets maximise the number of millions of pounds that each employee gives to the company or brings to the company in terms of profit...

(Bernie, Chemist)

It has been noted elsewhere that mergers and acquisitions have been associated with high levels of voluntary resignation that have been termed 'the post acquisition drift factor' or 'the haemorrhage effect' (Cooper and Cartwright 1996: 45). It could plausibly be argued that after a period of upheaval, a level of normality will return and the previous relationship might be reconstituted. In this case however, continued instability in the environment for pharmaceuticals militates against a foreseeable return to the conditions of the 'golden age' after 1950.

What many similar groups of employees have experienced earlier as a result of 'shake-outs' following the end of the post-war long boom or the privatisation of formerly state-owned utilities have now taken hold in the pharmaceutical industry as a consequence of environmental change.

Scientists at Pharmco came to understand that their employing organisation was not committed solely to organic growth through

discovery and development of new medicines but was prepared to use merger and acquisition as a method of achieving a greater share of the market for ethical drugs. Along with this came a realisation that the company did not offer jobs for life and that greater insecurity now characterised work in the industry.

7. Conclusion

In considering the location of the middle layers of employment against data derived from the case, this paper finds weaknesses in the notion of a service class both theoretically and in practice. Three criticisms are most apparent. Firstly, in efforts to define the limits of the class, the 'boundary problem' remains. At the margins where do we draw the line between the service class and routine clerical workers, technicians and supervisors on the one hand and the capitalist class on the other? An associated problem is that service class theorists seem to attribute an homogeneity to the professional/ administrative/ managerial strata which is not borne out by the Pharmco data. Definitions of 'scientist', as we have seen, are extremely broad and include the most qualified, highly paid and senior with the greatest operational autonomy and degrees of responsibility and others doing far more routine work with little freedom of action.

In the case described here, the most senior staff had the power to hire and fire, deciding during 'Black Monday' who would stay with the organisation and who would be made redundant. This notion of a service class seriously underestimates the potential for conflict between groups in the centre of the hierarchy acting out their organisational roles. In this case the potential was made real by the changing economic environment which first required line managers to implement new devices for increasing efficiency and then placed more senior managers in a position of having to decide who stayed and who would leave Pharmco.

A second criticism of the service class thesis is that it understates, or ignores, the extent to which organisational professionals of all types are dependent on and subordinate to the power of economic elites, both within and external to the organisation. Within Pharmco the most senior managers made key resource decisions, for example, about project lives. These decisions were made, not on the basis of the viability of the science involved or the presence of a target for the drug, but on its market potential. In this case, researchers who may feel that certain projects have scientific merit or significant value to some sections of the community, had been relocated to work on what they described as 'lifestyle' drugs. Externally the markets proved powerful and the industry as a whole was in flux as a continuing trend towards concentration of capital resulted in a wave of mergers and acquisitions.

A third and perhaps most telling criticism is that the idea of an 'autonomous' service class, capable of furthering its own interests, seems a contradiction in terms and that this stratum should be seen as in 'a highly contingent relationship of rewards for its "faithful service" ' (Crompton and Jones 1984:225). This has become more apparent in recent times, for while much of this debate was carried on in the early 1980s the fragility of the relationship between the middle and upper layers of employment has been demonstrated during the 1990s. For R&D scientists the Pharmaceutical industry during its 'Golden Age' offered significant rewards, job security and an assured career structure. For scientists at Pharmco the merger described in this paper and the organisational restructuring meant that both job security and steps up a long career ladder have largely disappeared. The scale of 'downsizing' and 'delaying' across organisational hierarchies, perhaps epitomised by those formerly in the public sector which seemed to represent the corporatist future most clearly, have undermined the idea of a growing class on route to dominance.

Marxist theories of class and labour process theories concerned with management control do have significant explanatory power when applied to the interview data presented here. When the space for reassessment of the employment relationship is created, such as happened during the Pharmco merger, the relationship between the company and its employees is not a fixed or stable entity. Under these circumstances a dynamic and non-deterministic approach to analysis which can accommodate the notion of class as a fluid and changing phenomenon, and the development of the labour process as complex and non-linear, will provide most illumination.

There is, it is argued here, no contradiction in representing highly qualified, relatively well paid, white collar professionals who comprise the middle layers of organisations, as sharing a set of objective interests with the 'traditional' working class. The middle layers may represent a distinct grouping, occupying an ambiguous or contradictory position, but they do not constitute a separate (service) class. They will share the characteristics of both manager and worker to varying degrees and may be pulled simultaneously in both directions. However, the dynamic inherent in the capitalist mode of production ensures that even 'privileged' employees cannot count on maintaining that privilege indefinitely and the subjective experience of this group may shift over time to more closely reflect an objective assessment of its class location as increasingly proletarianised. Rather than witnessing the death of the working class, we may conclude, we are seeing it transformed and re-generated.

We must remain aware, then, of the contradictory nature of the capital-labour relationship which contains elements of both conflict and cooperation. Furthermore we must avoid imputing from the fact that cooperation must, in practice, exist for organisations to continue to operate, that workers necessarily accept management actions as legitimate. Finally, while the reality of class at work can be seen as intimately related to questions of control, hierarchy, privilege and autonomy the task is not to identify class boundaries and draw the resulting map but rather, as Smith and Willmott have suggested, '... to analyse how the processes of capitalism are practically organised within the sphere of work ...' (1991:29).

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