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TECHNOLOGY, ORGANISATION AND INNOVATION: THE HISTORICAL DEVELOPMENT OF THE UK MAGAZINE INDUSTRY

ABSTRACT

For most of the twentieth century, the publishing of magazines was technologically and organisationally embedded within the printing industry. By charting the origins and evolution of Britain's principal magazine publisher, IPC, this paper demonstrates how these organisational inflexibilities served to constrain new product development and promoted a competitive regime based upon mass production coupled with a low pricing strategy founded on cheap weekly magazines. During the 1980s, however, radical changes in working practices within the printing industry, stemming from the political reforms to trade union power, paved the way for a revolution in publishing technology. The introduction of desktop publishing (DTP) packages after 1985 thus heralded a new competitive phase in the magazine industry, promoting a much greater emphasis on innovation as a competitive weapon and supporting enhanced forms of product differentiation and organisational flexibility.

INTRODUCTION

Since the early 1990s, consumer magazines have figured as one of the most dynamic and innovative sectors of the modern UK economy. As a natural beneficiary of the technologies of the ICT revolution, in recent times the industry has successfully launched an unprecedented variety of new titles onto the market, spanning a wide range of styles and consumer interests.¹ The growth in the market for magazines in Britain over the past decade has been especially pronounced amongst high value-added monthly magazines, which had previously captured only a small share of total sales. Particularly significant was the rapid rise in men's lifestyle magazines, an entirely new category of magazine title,² which between 1993 and 1999 achieved a tenfold increase in sales value (Mintel, 2002).

This recent explosion in the number, range and type of consumer magazines was facilitated by a combination of organisational and technological changes that have completely transformed the operations of magazine publishing firms over the past quarter of a century. Back in the late 1970s, magazine publishing was a fairly stagnant industrial sector in the UK. Its leading players were wedded to the newspaper publishing industry, with its inflexible and often perverse working practices, whilst the impact of electronic text inputting remained in its infancy. Then, as now, the leading magazine publishing firm was the International Publishing Corporation (IPC), formed originally through a series of mergers and acquisitions in the late 1950s and early 1960s. Large in its own terms, IPC was originally created as an arm of the Mirror Group newspaper publisher. In 1970 the Mirror Group was acquired by Reed International to form a printing, publishing and paper-manufacturing organisation that was the kind of conglomerate monstrosity typical of Britain's corporate sector at that time. Along with IPC, the industry consisted of a handful of other medium-sized publishing firms and a group of small publishing enterprises that continued to roll out well-established titles to loyal groups of consumers. Compared with the current situation, the extent of product innovation was extremely limited.

In discussions of the changing nature of magazine publishing, much of the current popular debate has concentrated on the anticipated shift to an electronic mode of delivery – an area where progress was surprisingly limited during the 1990s. Only very recently have electronic formats begun to play a truly significant role in determining the success of a magazine title, and even now use of websites is designed to complement rather than to supersede the traditional printed product (Guidone, 2000). However, prior to this quite recent shift toward a more multi-media stance – often referred to among publishing firms as the adoption of a media-neutral approach – the conventional paper-based product obtained a fresh lease of life as a result of ICT developments prior to those based around the world wide web.

It is the contention of the present paper that innovations in the process of producing magazines have required fundamental organisational changes to the way in which publishing firms operate. These organisational changes involve, in various ways, the use of interpersonal networks such that even the largest entities in the magazine publishing sector, like IPC, are in many respects better thought of nowadays as constellations of networked groups rather than firms in the traditional sense. Attempts in organisation studies to grapple with this shift towards networked structures have recently focused on the concept of project-based organisations (Grabher, 2002). In such a scenario, the traditional notion of a firm pursuing consistent, long-term goals – such as production targets - is replaced or supplemented by the performance of a series of discrete tasks that depend for their success critically on managerial co-ordination of project teams. Whilst such organisational forms have long constituted the fundamental characteristic of working procedures in industries such as construction and engineering, the project form has recently emerged as an important element across a wide range of more conventional consumer-driven industries like automobiles and textiles (Abernathy *et al*, 1999; Grabher, 2002).

The impact of this organisational reconfiguration on working practices and conditions has been profound, facilitating a plethora of new opportunities but presenting, simultaneously, greater economic insecurity for those who earn their livelihood in the industry (Stanworth and Stanworth, 1988). Equally important are the implications for the competitive process. It is no longer safe to assume, for example,

that the simple firm structure of an industry can be taken as a guide to its competitive condition. Large firms may continue to exert a strong influence in certain respects but in the absence of fundamental restructuring they may be handicapped by their very size from responding to changing circumstances with appropriate speed. The history of IPC provides an excellent example of the way in which the large company of the Information Age constitutes an entirely different corporate animal to that which was designed to meet the competitive challenges provided by the Industrial Age.

THE NATURE OF MODERN MANUFACTURING

The identification of business networks as an important feature of modern economic systems has been evident across a range of academic disciplines (Ebers, 1997; Grabher, 1993; Lane and Bachmann, 1998; Nohria and Eccles, 1992; Oliver and Ebers, 1998; Powell, 1990). Initially viewed in institutional terms as a kind of market/hierarchy hybrid (Hennart, 1993), the significance of networks within and between firms has now been recognised as a genuine type of organisational species. Lately, attempts to classify these “fuzzy-boundary” firms have directed their attention towards the project-based organisation (PBO). According to Hobday (2000), for example, in contrast to the matrix, functional, and other forms, the PBO can be defined as one in which the project is the primary unit for production organisation, innovation and competition. To begin with, authors looking at PBOs considered them to be temporary institutional solutions to the problem of managing transient economic activities (Lundin and Soderholm, 1995) such as theatre or motion picture productions (Faulkner and Anderson, 1987; Goodman and Goodman, 1976). However, permanent organisations that are driven by the demands of project management, such as construction companies, also clearly operate under the prevailing conditions of the PBO. The modern magazine publishing industry would also seem to readily fall into such a category (Ekinsmyth, 2002).

Project-based organisations feature a number of characteristics that serve to distinguish them from continuous-process type activities. A project invariably involves the performance of a unique (and frequently complex) task which: (i) is time constrained; (ii) requires interdependent inputs from a range of actors; (iii) falls under

the direction of a project co-ordinator; (iv) is embedded in the power relations between and within different stakeholders (including the final consumer), and; (v) operates via the disciplines of schedules and deadlines. From such a definition it is clear that project-based assignments will necessitate the formation of a project-specific interpersonal network arranged normally as a hub-and-spoke structure around the project co-ordinator. For this reason the PBO readily assimilates certain organisational features of the networked firm.

The growing importance of the PBO as an organisational form stems directly from changes that have been brought about by the ICT revolution. Whereas traditionally, the manufacturing of consumer products under a regime of mass production would have been geared around producer-led commodity chains, the more flexible production and information-gathering technologies of the Information Age have tended to facilitate customisation which, in turn, has empowered consumers (Gereffi, 1994). Product innovation has emerged as a key strategic weapon and has made consumer-responsiveness a crucial determinant of competitive advantage (Cox, Mowatt and Prevezer, 2002). The shorter production runs of modern flexible systems of manufacturing allied to the need for new product development has meant that firms have shifted their organisational approach increasingly away from formal structures towards the network-type arrangements characteristic of PBOs. In turn, this has significantly changed the firm structure of industries. Although large firms continue to exist, to a growing degree these are becoming virtual organisations in which control over flows of information, rather than the traditional ties of ownership, determine relative competitive positions across an industrial sector (Chandler and Cortada, 2000; Dunning, 1997). In addition small firms, operating independently but often within the parameters of the network structures of the industry, have grown in importance and seem to have led to an increase in the firm density of many information-driven industries.

In the context of these changes, the recent history of the UK magazine publishing industry presents a particularly interesting case study. It can certainly be argued that the production of an individual magazine issue constitutes a project-based type of activity (Ekinsmyth, 2002), and as a result certain network features have been a long-term feature of the industry's mode of operation. However, the

physical process of printing magazines constitutes an industrial activity that, for most of the twentieth century, remained the decisive feature determining the operations and organisation of the leading British magazine publishers. Until the 1980s, industrial processes at the production end of the industry tended to exert a greater influence over the firm conduct of magazine publishers than the editorial, consumer oriented elements of the process. Despite its inherently project-based form, therefore, it was the entrenched logic relating to the industrial aspect of the magazine publishing industry's activities that determined its shape and key competitive strategies. Only with the emergence of desktop publishing (DTP) in the second half of the 1980s were the leading magazine publishers in Britain finally able to cast off the fetters of the Industrial Age and find their place among the nation's leading consumer-driven innovators.

DEVELOPMENT OF THE POPULAR MAGAZINE INDUSTRY IN BRITAIN

A market for popular magazines really began to develop in Britain during the course of the nineteenth century. Although the term 'magazine' was used for published periodicals as early as 1731, it was only with the invention of the steam-driven printing press in 1814 and the introduction of practical stereotypes in 1829, which allowed a single letterpress printing plate to be made up, that cheap mass circulation magazines became technically feasible. Britain's first popular magazine retailing for one penny commenced publication in 1832 and achieved an average weekly circulation of 209,000 copies. With the growth of the railway network during the 1840s it became possible for publishers to target a national market for their products. The centre of the industry gravitated towards London, where by 1840 evidence shows that 80 cheap periodicals were circulating, two thirds of which cost a penny and none of which cost more than twopence (Reed, 1997).

Repeal of the stamp duty on newspapers in 1855 acted to diffuse demand for periodicals away from magazines, and it was not until the closing decades of the century that another great surge in popular magazine sales occurred. The precursors to this development are to be found in the United States, where between the end of the Civil War and the mid-1880s the number of magazine titles in

circulation rose from around 700 to 3,300 (Tebbel and Zuckerman, 1991; Bannard, 1990). These magazines included mail order journals whose booming circulation figures provided manufacturers in America with an advertising channel of national dimensions. The link between popular magazines and commercial advertising provided the basis on which American publishing empires, such as those created by Cyrus H.K. Curtis and William Randolph Hearst, were able to grow around the turn of the century.

Magazine publishers not only benefited from advertising revenues, they also successfully utilised the various promotional forms that were becoming available to increase their own circulation. In Britain, the most successful magazine publishing entrepreneur in the late nineteenth century was George Newnes. Innovative and ambitious by nature, in 1881 Newnes launched a weekly periodical entitled *Tit-Bits* using money he had raised from running a vegetarian restaurant in Manchester (Jackson, 2001). Drawing mostly on materials that had already been published elsewhere, the new periodical avoided expenses in relation to illustrations and was printed on cheap newsprint. The resulting eclectic mix of material was peddled at the minimal cover price of one penny and promoted by the use of outlandish competitions and other devices such as the offer of free insurance to its readers. By 1890, its circulation had reached 350,000 making it the most successful magazine in Britain (Reed, 1997) and the revenues generated through its advertising provided Newnes with the basis for a veritable frenzy of innovation during the closing decade of the nineteenth century.

In 1886 the offices of *Tit-Bits* were moved from Manchester to London, located close to The Strand, and in 1891 Newnes floated his publishing business on the London Stock Exchange as a limited company valued at £400,000. That same year, the company launched *The Strand* as an up-market monthly magazine, retailing at sixpence and intended to directly compete with successful American-style magazines that were finding success in the UK (Henry, 2002). Throughout the remainder of the 1890s, as Newnes gave free rein to his innovative instincts, his company launched a range of new titles including the still-surviving *Country Life* in 1897. As Jackson points out, by 1900 Newnes' list covered a diverse range of journalistic prototypes: the penny weekly, the sixpenny illustrated magazine, the colour-printed paper, the

penny evening newspaper, the true story magazine, the women's magazine and the boys' paper (Jackson, 2001).

Together with Newnes, two other publishing entrepreneurs of the early twentieth century were also products of his stable. Alfred Harmsworth worked originally on the staff of *Tit-Bits* before launching *Answers to Correspondents* as a successful rival publication. Harmsworth, later Lord Northcliffe, formed Amalgamated Press in 1901 as the magazine arm of a publishing empire that was ultimately founded on a string of national newspapers (Ferris, 1971). Under Harmsworth's direction, the *Daily Mail* had been launched in 1895. The *Daily Mirror* followed in 1903, aimed initially at a female readership, but was only truly successful when it began to employ extensive use of pictures (Martin, 1993). Five years later Northcliffe gained control of *The Times*. Another successful protégé of Newnes was Arthur Pearson. Brought on to the staff of *Tit-Bits* following his success in winning a competition, he subsequently set up his own business and launched *Pearson's Weekly* in June 1890. Along with *Tit-Bits* and *Answers*, these three magazines were the best selling titles of the early twentieth century and, over time, grew to become even more similar in their approach and content than had been the case at the outset (Reed, 1997).

The lack of dynamism apparent amongst Britain's magazine publishers throughout much of the twentieth century is perfectly demonstrated by the story of Harmsworth's Amalgamated Press. When Alfred Harmsworth died in 1922 his brother Harold (Lord Rothermere) briefly took control, but four years later he sold the company to the Berry Brothers from South Wales for £8 million to cover death duties (Ferris, 1971). From this point onwards, Amalgamated Press did not successfully launch a single new magazine title before it was absorbed into IPC in 1958 (Reed, 1997).

By the outbreak of the Second World War, Arthur Pearson's company had been amalgamated with the Newnes group and another leading competitor had emerged in the shape of Odham's Press. William Odham's Ltd was originally a newspaper group, publishing the *Guardian* newspaper from 1890, and in 1920 it acquired the publisher of *John Bull* magazine and became Odham's Press Ltd. *John Bull*

magazine was a leading title of the inter-war period, consistently selling over a million copies per week between the 1920s and 1940s (Reed, 1997).

One successful innovation that Northcliffe's Amalgamated Press had introduced before the First World War was the first weekly women's interest magazine: *Woman's Weekly*.³ Between the wars this segment of the popular magazine market became increasingly important. In 1926 Amalgamated Press added *Woman* and *Home* to which Newnes eventually responded in 1932 with *Woman's Own*. This segment of the market saw a significant development in 1937 when Odham's founded the first women's weekly featuring colour, called *Woman*, which it printed using the gravure process (Daly, Henry and Ryder, 1997) in its own dedicated high-speed print works (Norton, 1992). Such was the degree of inertia within the industry that as late as 1977 *Woman*, *Woman's Weekly* and *Woman's Own* still accounted for 65 per cent of the sales of weekly woman's interest magazines (Price Commission, 1978). Moreover by that date the women's interest segment was responsible for around one in four of all magazine sales in the UK⁴ and all three of them, together with *Women's Realm* launched in 1958, were owned by a single company: IPC.

The creation of IPC by the Mirror Group through the amalgamation of Newnes, Odham's and Amalgamated Press between 1958 and 1961 naturally led to a sharp rise in concentration, and the company dominated the popular magazine market during the 1960s and 1970s. By bringing under single ownership the UK's three leading magazine publishing firms, Mirror Group became responsible for operating 29 printing companies, publishing three daily newspapers and a wide range of consumer magazines, albeit with a strong dependence in the women's interest weekly market. In 1970 the paper and packaging company Reed International acquired IPC (Reed Elsevier, 2003). Under the Reed Holdings Ltd division, IPC controlled four subsidiaries: two magazine publishing companies, IPC Magazines and IPC Business Press, and two printing companies, International Printers and Odham's (Watford). As a vertically integrated organisation, Reed operated as a trading group with IPC using the company's paper and printing services through an internal market.

During a period of escalating costs in paper, printing and distribution that was a characteristic of the 1960s and 1970s, IPC's size and position within Reed gave it a competitive cost advantage over smaller rivals, even though the structure acted to subsidise sub-standard productivity in the company's printing firms (Price Commission, 1978). IPC's quasi-monopolistic position within the industry allowed it to disguise for many years its other manifold problems. Indeed, the very size of the organisation lent itself to over-centralisation and bureaucratisation, which tended to stifle entrepreneurship and creativity. A large in-house staff of journalists was retained to produce copy for its titles. As these were mainly weekly publications⁵ and relatively unvarying in nature, it meant that IPC's editorial teams generally lacked innovative drive. With a secure position as market leader, the company generated an air of complacency that was exacerbated by organisational rigidities stemming from industrial relations practices that resisted change of any kind. These latter pressures were most acute in the area of printing, where a group of rival trade union organisations ensured that innovation and industrial strife went hand-in-hand across the entire UK printing and publishing industry in the 1970s.

DEVELOPMENTS IN THE PRINTING INDUSTRY

Before the great wave of mechanisation that transformed printing processes from the 1880s, labour organisations in the printing industry had largely been represented by local craft associations whose existence was designed to promote training through apprenticeships (Littleton, 1992). This had been feasible because the industry was relatively small scale,⁶ and the division between tasks was clear: most printed matter was clearly either textual or graphical in nature.⁷ The early growth of unions within the printing industry was therefore consistent with the developing production technologies within the industry, but gradually by the post-Second World War period they had become increasingly preoccupied with regulating the use of technology in order to preserve existing practices and employment.

The letterpresses used up to the middle of the nineteenth century were still recognisable as variants of the Gutenberg letterpress invented over 400 years earlier. The essential tasks of assembling type by arranging characters in a tray

(composition) then printing copies (presswork) were the result of arduous and skilled human labour (Daly, Henry and Ryder, 1997). However, three key developments towards the end of the 1800s heralded the dawn of modern printing: the automation of composition, the increased mechanization of printing and the introduction of novel techniques of graphical reproduction. Typically, mechanisation of publishing increased the need for labour specialisation for tasks that had previously been undertaken from beginning to end by craftsmen (Tolliday and Zeitlin, 1991: Chapter 3). Craft-based typesetting unions however retained their strong guild-like characters, which were adopted by newly formed printing industry unions.⁸ The dramatic growth of the printing industry during the 1880s and 1890s was in fact accompanied by the rapid establishment of new labour unions and the fragmentation of those already in existence: a process observable both in the UK and the US.⁹ Although the full picture of trade unionism within the printing industry is exceptionally complex, the principal features can be traced alongside the development of the key technologies employed.¹⁰

The letterpress itself underwent a transformation during the 1880s following the introduction of rotary presses powered by steam and fed by automatic paper feeders.¹¹ The refinements to the letterpress resulted in a robust printing technology that was excellent for producing both short imprints and long print runs because of its ease of maintenance and stability. Whilst the replication of black and white text was the great strength of letterpress, the integration of colour, half-tones¹² and graphics posed considerable difficulties.¹³ Images, for example, could only be printed from negative plates that had to be laboriously prepared from the original. These complex tasks necessitated even more pronounced labour specialisation, but also brought those employed in typesetting alongside those essentially concerned with the reproduction of images, thereby creating an issue of union demarcation between letterpress and graphics that endured in newspaper and magazine printing into the mid-1980s.¹⁴ Eventually, that portion of labour involved in the technical and subsidiary operations of the printing process became co-ordinated under the banner of the Society of Graphical and Allied Trades (SOGAT 1982), which combined the forces of the National Union of Printing, Bookbinding and Paper Workers (NUPBPW, stemming originally from the Printers' Labourers' Union of 1889) and the National

Society of Operative Printers' Assistant (NATSOPA, originally the Printers' and Warehousemen, Cutters' and Assistants' Union of 1889).¹⁵

The position of the letterpress was gradually encroached upon the by use of a new form of printing: lithography. This chemical printing process could be used to integrate text and graphic images, although its fragile nature restricted its application largely to the creation of pictures until the onset of the twentieth century. The Amalgamated Society of Lithographic Printers (1880) and the Society of Lithographic Artists, Designers and Writers, Copperplate and Wood Engravers (founded in 1885 and eventually amalgamating into the union best known by the acronym SLADE)¹⁶ were the leading lithographic unions, both having their origins in the creative arts. The creation of offset litho printing¹⁷ enabled lithography to be used for significantly larger print runs, but the replication of text by this method still fell short from the standard set by the letterpress. The evolution of photography and photomechanics subsequently created a new opportunity for lithography – the mass production of images and texts together without the use of expensive and complicated metal plates: a technique known as photolithography. These developments in the techniques of lithography had a fundamental impact on the possibilities available to publishing firms in general and upon magazines in particular, although the pace of change was slow. Not until the late 1970s and the need for ever greater combinations of text and pictures and short print-runs was lithography able to realise the potential it had to offer the magazine industry.¹⁸ As late as 1972, 77 per cent of the National Graphical Association (NGA) membership was still engaged in letterpress. By 1989, this had fallen to 55 per cent, whilst the proportion engaged in lithography had risen from 17 per cent to 27 per cent during the same period (Gennard, 1990). The great advantage for photolithography was its directness – images could be reproduced from originals without the need for engraving or the creation of metal plates. As lithography did not rely on hot-metal processes or plates for printing, its adoption eventually had disastrous consequences for conventional typesetters as well as those expressly concerned with graphical reproduction.

In 1914 another method of graphical reproduction was added to the options available to magazine publishers as photogravure was used to create a picture supplement to the *New York Times*. Although gravure itself dated from Gutenberg's

time (1446) it was only perfected for mass production and able to incorporate photographs at the end of the nineteenth century. Photogravure produces the best quality picture reproductions but is expensive to use. Where quality images are paramount it remains the optimal method of reproduction even today, having been adopted initially by quality magazines such as *Vogue*. With the emergence of lithographic and gravure printing techniques, magazines (literally meaning, “data from many sources”) had at their disposal a variety of reproductive media. More significantly still, it also began to differentiate the printing technologies employed in magazine printing from those of the newspaper industry, where resistance to technological change was unparalleled (Littleton, 1992).

The skilled function of composition also underwent a technological transformation during the 1890s with the introduction of the Linotype machine invented by Ottmar Mergenthaler at the *New York Tribune* in 1886 (Kelber and Schlesinger, 1967). This mechanical keyboard-based composition machine set type automatically by filling a mould with molten lead - the ‘hot metal’ process – and could operate at speeds more than four times those achieved by hand-composition.¹⁹ Typesetting was still the essential task of composition, and the existing craft-based Typographical Association (TA) of 1849²⁰ remained the dominant union in this field up to and beyond its amalgamation with the London Typographical Society to form the NGA (1963). Faced with the introduction of Linotype, the union’s strategy was not to oppose the implementation of the new technology, but to “secure an effective control over these machines” (General Secretary of the TA, 1890, in Musson, 1954). Various developments enabled the mechanisation of typesetting to be increased, but the technology could not automatically surmount the technical difficulty of breaking print lines and hyphenating words.²¹ These decisions had to be made by the machine’s operator, thus preventing full automation and preserving, at least in name, the craft origins of the task (Daly, Henry and Ryder, 1997) and allowed the union to charge a premium for typesetting sufficient to place its members amongst the highest paid of any manual workers in the UK (Royal Commission on the Press, 1962: Table 4). Nevertheless, for those publications composed mainly of text, hot metal was still a relatively efficient form of composition, and a natural ally of letterpress printing methods.²²

For the unions involved in the skilled and laborious work of composing type and mixing it with images, the introduction of photolithography as a rival process demonstrated that typesetters could be made redundant because the technique needed no metal plates to print from. However, to print text it was still necessary to produce a clear original, something best created by the letterpress. It was with the introduction of photocomposition, a non-mechanical way of creating a film-based plate combining text and images without setting real type, which proved to be the true agent of change. This cold-type process instead used a computerized system to create an original document that could be used by photolithography to create a printing non-metal plate, bromide paper copy or, as the technology advanced, film. At a stroke this technology severed the link between the creation of a typeset original and the traditional typesetting techniques associated with letterpress, allowing for the development of computer-based systems that integrated typesetting and layout with an associated system of printing.

THE ADVENT OF COMPUTER-BASED PUBLISHING

Working practices within the industry did not reflect the changes that were inherent in this transition. There are many reasons for this: the emergent nature of the technology, the installed base of the letterpress and the generally traditional nature of the printing industry. More important than any of these factors, however, was the resistance of the unions to compromise the lines of demarcation, which they had established between activities defined by stages in the letterpress composition and printing process. The unions “compelled the industry to retain its original 16th Century manual crafts ... and in no other industry had the roots of ancient tradition formed so stout a barricade against any fundamental change in methods and processes” (Delafons, 1965:49). By the 1970s the main unions in the sector, the National Union of Journalists (NUJ, 1907), the NGA and SOGAT controlled the organisation of the production process in much of the industry. The resultant inefficiencies have been extensively researched in the newspaper printing industry and in relation to printing industries in general. Unions regulated the industry labour market, the technology of production and the distribution of the finished product. Changes in production technologies therefore had little organisational impact, as

unions were able to retain control of the labour processes. For example, tasks that could be managed as a single activity (such as input through a word-processing system) were artificially separated by the unions by such processes as double-keying (the re-typing of information), and ensuring that tasks were undertaken by the correct union (often resulting in employees charging double as though two people had performed a single task). The introduction of photocomposition and direct entry single-keystroke systems to replace hand typesetting / manual linotype was resisted by unions keen to enforce demarcation, which was “certainly a deterrent to the introduction of new techniques and particularly to those which may cut across established spheres of influence” (Royal Commission on the Press, 1962:39). Publishers who attempted to cut out union composition discovered that unionised printing companies would only print work prepared by certified union members. IPC, for example, was constrained by union rules to use Odham’s Press as its major print contractor, which employed 6000 unionised workers arranged into some 400 management grades, although it was technically possible to petition the union to use external contractors provided this was with unionised establishments or at closed shops. The Price Commission (1978) found that the technologies used at Odham’s were largely obsolete and very inefficient.

Publishing firms also found that the regulations enforced by the printing unions restricted their managerial capacity. Union members were considered “not employed for employers business but one publication” (Royal Commission on the Press, 1962:42) which meant that they could not be used on the launch of new titles. The union’s power, which held questionable legal legitimacy in the 1880s, was by the post-Second World War period founded firmly on the social and political consensus. In the case of the newspaper and magazine industry this was further reinforced, albeit accidentally, by the concerns for the continued independence of the sector resulting in the first Royal Commission on the Press in 1949²³ and the latent fear that “monopolistic control is a social control issue in magazine publishing.” (White, 1970).

Whilst photolithography and photocomposition began to undermine the legitimacy of the printing unions, it was the introduction of computer systems that completely destroyed it. The distinction between input (by journalists for example), composition and even the press were eroded to the point where the terms front-end

and back-end became mere names to distinguish between different software packages. Despite their success in resisting organisational change it was clear to the printing unions that a fundamental shift had taken place, creating demarcation problems between the printing unions²⁴ that resulted in a spate of strike actions.²⁵ The NGA commissioned a consultative document to examine the implications of these new developments for periodical publishing, and the report found that “the economic rationale which underpinned the way in which this sector of the printing industry operated was based very much on the technology by which the printed word was produced” (NGA '82, 1984:2.14) and photocomposition had changed that. The spectre of increased computerisation logically led to the idea of single-entry writing and composition, and the NGA-SOGAT-NUJ formed a ‘joint initiative on technology’ to assess the threat (Anonymous, 1984:6). The NGA foresaw that “should the publishers be allowed to ‘capture the first key-stroke’ in this way the implications for the NGA would be extremely serious” (NGA '82, 1984:2.27).

Web-offset lithography offered magazine publishers a cheap and reasonably high-quality production process that could reproduce material from almost any source. Photocomposition allowed for a break with the letterpress in preparing text-based inputs but still required the re-typing of text into compositors that unions could lay claim to as typesetting – but the introduction of personal computers (PCs) realised the NGA’s fear of single-keystroke entry completely cutting out intermediary stages of production. The mid-1980s witnessed the invention of desktop publishing (DTP), which combined the technologies of PCs, page-layout software and laser printing into an integrated publishing system (Mowatt, 2002). Publishing entrepreneurs at this time could imagine using the capability of web-offset lithography to print their own magazines, but only with the ability to use DTP to create a professional looking title could a low-cost original be produced and printed. Magazine publishers also realised that they too could lay out their own magazines internally, and were the frontrunners in bringing pre-press composition, artwork and layout (the entire process of origination) in-house (Bannard, 1997). The logic of increasing computerisation has recently led to computer-to-plate (CTP) printing, where publishers are able to create magazines simply as computer files and transmit them electronically directly to the machine of a printing contractor. Before this recent innovation, publishers could themselves create the ‘printing plates’ (from the late

1980s mostly simply as film output from a special printer), but one final hurdle remained: the printing union's power to refuse to print any material not having been composed by fraternal unions. Changes in the printing unions authority and structure finally overturned this power as well.

For the newspaper industry the breakdown in the industrial logic of union demarcation resulted in the News International disputes at Wapping in 1986. This bitter dispute was not about technology itself, but the unions' ability to dictate both the technology used, the working methods employed and wage levels (Gennard and Bain, 1995). The computerisation of the origination process allowed technology-led unions such as the Electrical, Electronic, Telecommunications and Plumbing Union (EETPU)²⁶ to replace SOGAT and NGA workers during strikes (Fraser, 1999). For the magazine publishing industry this transition was less severe as the need to introduce more pictures and colour had created a more gradual adoption of new technologies than in the newspaper industry where the logic of the letterpress lasted longest (Martin, 1981). For many firms in the magazine industry their small size had in any case resulted in a more pragmatic approach from the local union chapters,²⁷ and their lack of capital made sweeping changes in their technological base rare – photocomposition and in-house typesetting was still something of a rarity even in the late 1980s (Bannard, 1990:53). Despite this it was clear that the craft-bases of printing had disappeared, and that publishing and printing were now completely separate activities. The unions were forced to accept the logic of this and reform accordingly: in 1991 the NGA and SOGAT merged into the Graphical, Paper and Media Union (GPMU), and the NUJ only dropped out of the merger at the eleventh hour. More than simply collapsing the stages of the production process, technological change thus gave the editorial team control of the origination process, in terms of both speed and quality for the first time. For large firms such as IPC organisational change became a necessity as small firms were now able to enter the market with a new idea using DTP systems and non-unionised printers to compete for customers with the established players. A number of significant firms were established in niche markets because of the possibility of in-house (or even one man) DTP publishing.

CHANGING STRATEGIES IN THE MAGAZINE INDUSTRY

With the advent of DTP systems many of the strategic benefits that IPC had gained from its large size and vertically integrated structure evaporated. A report produced by the Price Commission in 1978 rationalised why the magazine publishing industry was predisposed towards the structure of a dominant producer. The report identified three sources of competitive advantage that IPC had been able to obtain from its large size. Two of these stemmed from the company's ownership of mass-circulation, popular magazine titles. First, the high sales volumes achieved by many of its titles provided IPC with the ability to charge premium rates to advertisers and thereby keep the cover price of magazines predatorily low. Second, because the company owned the only magazine printing plant in Britain that could handle such high production runs, IPC derived scale advantages unmatched by its rivals. Despite its demonstrably inefficient technology and fractious industrial relations, the Odham printing plant in Watford provided IPC with a decisive strategic asset. The third area of IPC's size-based competitive advantage, as identified by the Price Commission, was in relation to financing new product development, where the launch of a new high circulation magazine title could cost as much as £1 million in the case of new women's weekly magazine.

These advantages of large size dictated that the logic of industrial efficiency through cost minimisation and economies of scale were the principal determinants of competitive success in magazine publishing up until the early 1980s. The benefits of large scale and vertically integrated production had, after all, provided Reed International with the main rationale in its acquisition of IPC in 1970 (Martin, 1993). Cheap weekly mass circulation periodicals, containing relatively standardised content, represented the fundamental key to success in the industry because they offered the greatest audience to would-be advertisers. Small, often single title companies - such as Gramophone plc producing the monthly *Gramophone* magazine - were able to exist at the margins of the industry by satisfying the demands of a loyal group of consumers, but successful new innovations of this kind of title were few and far between. Indeed, during the nine years spanning 1966 and 1974, the Price Commission noted that there were only 1,013 births and a total of 892 deaths of

consumer magazines in Britain. In the 1990s, by contrast, the introduction of new titles was running at an average of 500 per annum (Pira International, 2002: Figure 8.7).

One rival firm that did make progress against IPC under these conditions was EMAP. Founded in 1947 as the East Midland Allied Press, a regional newspaper conglomerate, EMAP began to produce consumer interest magazines in 1953 in order to utilise its spare printing capacity. Like IPC, EMAP implemented a low-cost, low-price strategy to produce weekly periodicals, but did so on the basis of magazines that held limited, rather than mass appeal. Although progress was rather slow – EMAP had developed only nine successful titles by 1972 – the experience did serve to demonstrate the potential that existed for niche titles (such as *Trout and Salmon*) under the correct conditions. Between 1977 and 2000 EMAP expanded the number of its titles from 11 to 136, compared with IPC's growth from 70 to 116. The bulk of EMAP's successful new title launches was concentrated in the 1990s and focused on monthly specialist titles that have provided the fulcrum for expansion in the industry as a whole during this period. As EMAP extended its magazine portfolio, the company deliberately developed an organisational structure that placed more emphasis on decision-making at the level of the individual magazine title. It created a series of subsidiary companies, each with the scope to engage in innovation of new titles. Thus by the mid 1990s, EMAP's Consumer Division was composed of five separate areas: EMAP Metro (music and film), EMAP Elan (women's titles), EMAP Nationals/Images (cars, motorcycles and computer games), EMAP Publishing (sports and pets titles) and EMAP Apex/Choice (gardening, photography and trains) (Bunting, 1997). This devolved structure enhanced EMAP's ability to engage in innovation of new titles through its detailed knowledge of consumer groupings, and has been further developed into media-neutral networks based around markets (Cohen, 2001; Anonymous, 1999a; Anonymous, 1999b).

By the late 1980s, IPC's market dominance was under threat from two directions. In the low price, weekly magazine segment, IPC found itself confronting competition from large-scale European publishing groups, notably Gruner+Jahr and Bauer, who successfully launched *Best* and *Bella* respectively as competitors in the women's interest market.²⁸ From this point, the weekly popular magazine market

became increasingly pan-European.²⁹ At precisely the same time as the weekly market was undergoing a process of internationalisation led by publishing giants, the market for monthly magazines was being transformed by DTP technology which enabled even relatively small firms possessing quite low budgets to engage in the launch of new titles. Indeed, the dissemination of professional quality DTP systems, together with the changes in working practices within the printing industry, allowed new entrants to launch a magazine title profitably aimed at a relatively narrow interest group. A particularly significant breakthrough was the successful launch of *The Face*, a magazine that identified a new market segment, which appealed to men's lifestyle as well as a female readership. *The Face* proved that with free access to printers a business run by a single entrepreneur was now able to break into the market for relatively high quality magazines hitherto inaccessible to a small operator. This model was one whose full potential was realised with the arrival of DTP technology, and subsequent developments around the burgeoning consumer interest in computers saw the successful establishment of British magazine houses such as Future, Dennis and Paragon.

Between 1970 and 2000 the structure of the popular magazine industry in Britain significantly increased in its firm and product density. Whereas in 1977, four IPC titles had accounted for 76 per cent of the weekly women's interest market segment, by 2000 six IPC titles accounted for only 32 per cent of sales, as shown in Table 1. In 1977, only three other titles were included in this market segment, accounted for by two firms: DC Thomson and The Lady (Price Commission, 1978). In 2000, IPC's rivals numbered seven and they added another ten titles to IPC's six. The most successful of the new entrants was Bauer, whose three titles together accounted for 24 per cent of the market, including the market leader *Take a Break* (Mintel, 2002b). The market for women's monthly magazines, meanwhile, has expanded tremendously over the past twenty years, although its origins can be traced back to 1916 when the American *Vogue* magazine was first circulated in the UK. In 2000, IPC trailed National Magazines both in market share, 34 per cent to 26 per cent respectively, and number of titles, seven to six, with National Magazines' *Cosmopolitan* and *Prima* titles vying for leadership.³⁰ The monthly market displays many different characteristics to its weekly cousin. Circulation volume is significantly lower, and revenues generated by cover price are more important than advertising

sales. Moreover, it is a highly dynamic and innovative sector, with a higher level of new title launches compared to the weekly segment (Mintel, 2002a).

Publisher	Women's weekly Market share (%)	Women's monthly Market share (%)	Men's monthly Market share (%)
IPC Media	32	26	19
Bauer	24		
Northern & Shell	17		
Hello!	12		
EMAP Elan	3	24	32
DC Thomson	7		
National Magazines	5	34	3
The Lady	1		
Conde Nast		7	6
Attic Futura		6	
Dennis Publishing			15
Rodale Press			9
Cabal Communications			7
Others		3	10
Total	100	100	100

Table 1: Magazine publishers' market shares of women's and men's interest market, 2000 (Mintel, 2002a; 2002b).

Whilst the women's interest monthly segment has been developed from the basis of a small number of existing titles such as *Vogue*, *Good Housekeeping* and *Harper's Bazaar*, the men's monthly interest segment in its present form is quite new. In 2000, 14 titles were in circulation, all of which had been launched since the mid-1980s, with EMAP's FHM magazine the undisputed best seller. Whilst firms such as IPC and EMAP have emerged as market leaders, relatively new companies such as Dennis and Cabal Communications have also successfully established a strong presence in the sector, whilst a ten per cent fringe of the market is in the hands of a further nine producers.³¹ Thus, in many respects the monthly men's interest segment is a perfect example of the way in which innovative firms have been able to overcome barriers to entry in the magazine market. Since the mid-1980s, the dominant producer model of industry structure has therefore been effectively demolished by the emergence of low circulation/high value publications, which have been able to establish themselves using their attractiveness to advertisers who wish to appeal to a narrow market segment rather than a mass audience.

CONCLUSION: THE PRODUCTION OF MAGAZINES IN HISTORICAL PERSPECTIVE

Up until the 1980s, the process of magazine production was characterised by the close integration of the tasks of publishing and printing. Within this intimate relationship, it was the expediencies of the printing industry that in many respects dominated the rhythm of production. Printing schedules and demands cut across the creative process of editorial teams and to a large extent dictated the nature of the final product that the consumer received. Inflexibilities in the technology of printing itself – particularly letterpress – coupled with the restrictive working practices enforced by the printing unions, immensely reduced the potential for innovation.

The union-busting politics and computer-based production breakthroughs of the 1980s radically changed both the organisational culture of the magazine publishing industry in the UK and the technological imperatives to which this culture had been aligned. By disintegrating the tasks involved in producing a magazine from those of printing the final product, the DTP revolution gave editorial teams much greater control over the type of product they could produce. With DTP in place, and coupled with the emergence of commercially oriented contract printers free from union controls, a number of small, lightly funded, consumer-oriented start-up firms were able to produce magazine titles that attracted a narrowly-defined but often affluent audience. As a result, a group of firms were able challenge the grip that IPC had exerted on the market during the preceding two decades.

A rapid rise in the number, range and type of publications occurred during the 1990s. Although competition in the weekly segment tended to remain price-focused, the sales of monthly publications became increasingly important and innovative. In addition, publications which could be characterised as 'life-span' products began to emerge, whose rationale was based upon the need for consumers to enjoy and perhaps gain proficiency in transient technologies or were geared to the temporary cult of fashion personalities. Magazines such as *X-Box* and *Buffy the Vampire Slayer* were conceived at the outset as products that would carry limited appeal not only in terms of audience size but - in a way that was unprecedented - in relation to the life-span of the subject matter of the title itself.

For the conventional market leaders to recapture their influence, it became necessary for them to develop much sharper customer focus. Hence, during the 1990s, IPC re-engineered itself away from the earlier centralised, hierarchical structure, towards a more consumer-oriented approach in which editorial teams drew much more widely on sources of copy, editors became engaged in a variety of direct customer related activities such as themed events and exhibitions and developed the publication of market stretching spin-offs and special one-off editions. In short, change became a permanent feature of business operations in the industry. IPC successfully launched titles that enabled the company to retain its pre-eminence in the industry, although its days as a quasi-monopoly were a thing of the past as the competitive environment became more testing. In 2001, after a brief period of independence following its demerger from Reed Elsevier, IPC was acquired by the giant American media conglomerate AOL Time Warner. In contrast to the industrial logic of production economies and vertical integration that had characterised the Reed takeover thirty years earlier, horizontal networks based on knowledge and content sharing across diverse media now became the rationale of the size economies to be gained from merger.

In acknowledging the importance of horizontal networks that now typify the industry, Ekinsmyth (2002) has argued that modern magazine publishing features many of the hallmarks of a projectized industry. In doing this, she adopts an “actor” definition of a project-based activity focused on the role of the editor as project manager. Whilst at higher levels of magazine publishing company management, she argues, organising practices still resemble the flow-process operations and permanent employment practices of standard industrial companies, editorial teams producing a series of discrete and unique products utilise a project form of organisation featuring networks based around a shifting temporary coalition of actors. Such an approach to analysing the organisational structure of magazine publishing companies, however, leads to an ambiguous conclusion since it tends to view the companies partly as PBOs and partly as traditionally structured firms. The key, however, is to understand the organisational culture that provides the industry with its dominant form.

In the 1970s, publishing firms were industrial organisations producing a relatively constant flow of standardised products. Innovation was infrequent, costly and producer-led. Employment practices were inflexible and bound by tight rules. Within this organisational culture, editorial teams operated as project management systems, but within extremely constrained parameters and using little creative input that drew on resources beyond those owned by the firm itself. The network form of organisation was not prevalent and publishing companies could not at this time have been accurately characterised as PBOs. However, the shift in working practices and technologies of the 1980s has served to completely alter this situation.

As well as the “actor” definition of the PBO, the literature has also developed an “object” definition, focusing on the nature of the final product itself. Here, the uniqueness and customer-oriented approach of a project-based activity is the critical factor. In magazine publishing since the 1990s, it is clear that the final product has become far more consumer-driven than was previously the case. Of course, satisfying the demands of its readers has always provided the magazine publishing industry with its defining purpose. George Newnes, rather than treating the readership of *Tit-Bits* as a passive group of consumers, gained considerable success for his innovative publication in the 1880s by encouraging direct participation on behalf of his audience. Alfred Harmsworth, too, understood the need to engage in direct intercourse with his readership through the medium of his *Answers to Correspondents* publication. During the twentieth century, however, such forms of consumer-driven innovation seem to have become less prevalent within the industry, due largely to the operational rigidities surrounding the printing process. Under these conditions, competitive success increasingly appeared to rely on producing an acceptable, familiar product that was relatively cheap and which consumers purchased almost out of force of habit rather than by conscious desire. Thus from an object perspective of project-based forms, there is a good degree of scepticism that can be attached to the idea of popular magazines as having the individual, unique character that serves to define this aspect of the phenomenon. For most of the twentieth century, in fact, magazine publishing involved producing effectively the same product week after week with minimal variation in layout and little by way of genuine innovation.

Since the 1990s, however, consumer-driven innovation has become the principal form of competitive advantage across a large segment of the industry. It is in satisfying this new driving force of competition that the restructuring of magazine firms' organisational basis has occurred. The changing working practices and DTP technologies have allowed both the organisation of the project team and the nature of the final product to assume those forms that are consistent with the idea of the PBO as essentially a consumer-driven, innovative, network-based organisation. In its new guise, the UK magazine publishing industry has emerged during the last decade as one of the British economy's leading sources of value-enhancing product innovation.

ENDNOTES

¹ Between 1990 and 1999 circulation of magazines in the UK increased by 156 million, which represents growth of 13 per cent, and revenues grew by 113 per cent. Since the mid-1980s the number of titles published in the UK increased by well over one third. McKay (2000).

² This magazine segment was new in the sense that it targeted a previously unsatisfied demand for a particular mix of material and for which the BRAD classification system had no pre-existing category.

³ Another successful publication of the inter-war period was the listings magazine Radio Times which became the first title to sell more than two million copies (Reed, 1997: p.178).

⁴ In the 1960s, Women's weekly magazines accounted for between 21 and 25 per cent of all magazines sold in the UK Harry Henry, *The Dynamics of the British Press 1961-1984: Patterns of Circulation and Cover Prices* (London: Advertising Association, 1986). Table 3.5.3.1.

⁵ In 1961, 93.2% of magazines sold were weeklies, and in 1977 this was still 89% (Henry, 1986).

⁶ Book production in gives a good indication as to the scale of the industry: in 1890 there were 4,559 in print as opposed to 13,470 in 1910 (Harry and Schlesinger, 1967).

⁷ Where pictures and texts did co-exist on documents (such as in newspapers with photographs) the technology of printing the two together represented the outcome of two entirely different processes, one of setting the type and one of preparing the graphic. The method of using letterpress to print these simultaneously on the same paper was in itself a highly specialised and skilled task that resisted automation because of the sensitivity it required.

⁸ The dominant unions in the printing industry ensured this as they refused to print any material originating from outside of their recognised fraternal unions. Material was traced by the use of stamps (known as bugs in the US) on documents proving that work had been prepared by the union labour. This brake on the publishing industry was to remain well into the 1980s.

⁹ In the US the National Typographical Union (NTU) became the first national union in the printing industry, and was formed in 1852 around the New York Printers' Union (itself established in 1850 by New York journeymen printers). In 1869 the NTU became the International Typographical Union (ITU). Thus this early period saw the development and amalgamation of smaller local printing unions into larger regional, national and would-be international bodies of a generally all-encompassing nature. As specialisation increased more unions were formed and the NTU itself splintered into unions centred around more specialised tasks: the International Printing Pressmen Union of North America (IPPAU, 1889); the International Brotherhood of Bookbinders (1892, with the incorporation of Assistants in 1897); the International Stereotypers' and Electroplater's Union (ISEU, 1902); the International Photoengraver's Union (1904); the Amalgamated Lithographers of America (1915). In a parallel story to the UK these unions also found that the changes in technology introduced by early computerization forced them to reconsider the industrial logic defining their activities. In 1973 the IPPAU merged with the ISEU, creating the International Printing and Graphic Communications Union, which itself then merged with the Graphic Arts International Union to form the Graphic Communications

International Union. Facing similar realities the ITU merged with the Communication Workers of America in 1987 (Cushing, 2002).

¹⁰ For a more complete picture of labour unions within the UK industry the monographs on the main organisations are a good start: NATSOPA: Moran (1964); NUPBPW/SOGAT: Bundock, (1959); Gennard and Bain, (1995); SLADE/NGA: Gennard, (1990); TA: Musson, (1954). The records of most of these organisations are held at the Modern Records Centre at the University of Warwick. For a review of the position of unions in the UK magazine printing industry see Mowatt (2002).

¹¹ Printing reached its mass production potential with introduction of continuous rolls of paper (web printing), invented in 1865 and common in newspaper printing by the 1880s. (Kelber and Schlesinger, 1967). However, many small run productions and specialist magazines continued (and remain) to be printed on cut sheets

¹² The replication of images by dots of black on white (halftoning) created the illusion of shades in letterpress printing. This has inherent limitations of quality when founded on printing from metal plates rather than using the lithographic process.

¹³ Photoengraving allowed the letterpress to print graphics such as photographs from metal plates, but the process of preparing the plates was costly and letterpress could still only incorporate graphics and text together through the stereotype process, a much more complicated system of printing requiring extensive manual labour and expertise to produce balanced outputs.

¹⁴ Before the News International dispute at Wapping in 1986 the UK's top 4 national newspapers had every word set in hot metal (Littleton, 1992).

¹⁵ Although the review of union history is beyond the scope of this paper, the bare outline evolution of these unions is as follows: when NUPBW merged with NATSOPA to form SOGAT in 1966 it had absorbed many other unions (and been known by many names). Some of the notable inclusions were: the Amalgamated Society of Printers' warehousemen (1900); National Union of Paper Mill Workers (1914); National Union of Bookbinders and Machine Rulers (1921); the Platen Machine Minders' Society (1924); the Amalgamated Association of Pressmen and the London Society of Machine Rulers (1925); the Circulation Publishing Association (1931); the Amalgamated Society of Papermakers (1937); the Society of Women Employed in the Printing and Bookbinding Trade (Manchester) (1943); the Original Society of Papermakers (1948); the Card Edge Guilders (1961); the Monotype Casters and Typesetters' Society and the Paper Mould and Dandy Roll Makers' Society (1962); and the Pattern Card Makers' Society in 1963. However, the unions split again in 1972, the NUPBW becoming SOGAT 1975 (with the inclusion of the Scottish Graphical Association) whilst NATSOPA became the National Society of Operative Printers, Graphical and Media Personnel. Both unions remerged again as SOGAT 1982.

¹⁶ By 1982 when it was amalgamated into the NGA (henceforth NGA 1982) the SLADE had absorbed United Society of Engravers in 1972.

¹⁷ Rather than printing by direct transfer with the lithographic stone (or plate) the printing is handled by transfer from an intermediate 'blanket' to the paper. This preserves the fragile chemical plate and also has the great advantage of allowing true original printing – whilst letterpress originals print a reverse image.

¹⁸ For magazine printing the technology also required the perfection of drying ovens and cooling rollers for web-based printing (Bannard , 1990).

¹⁹ Automatic composition continued to improve in terms of speed and accuracy. The Monotype was the next development in 1896 introducing ribbon and paper composition (Child, 1967).

²⁰ This national union consolidated the Northern Typographical Association and the National Typographical Association formed in 1845. Originally this union grew from the Fleet Street associations of the 1680s (Littleton, 1992).

²¹ Punched card computerisation eventually was able to ease this process with regard to hyphenation over line-breaks, but the decisions had to be made manually, and human eye was still the only measure for type justification.

²² Especially when, as recently as the late 1960s, the installed base of Linotype machines in the US publishing industry outnumbered full-range photographic composing machines by nearly 200 to one. (Daly, Henry, and Ryder, 1997).

²³ The original remit of the Royal Commission on the Press was to restrict ownership concentration and foreign influence in the press (Royal Commission on the Press, 1949).

²⁴ The position of the individual unions was never clear as local chapters made local agreements which influenced the policy of the union. The convergence of tasks meant that members of different unions encroached on each others traditional activities in different firms. The NGA in particular found itself adopting composition work more usually undertaken by NATSOPA members as intermediate production stages disappeared, something which caused some bitterness (Anonymous, 1982).

²⁵ IPC actually threatened to close down their Odhams plant during 1974 in the face of demarcation disputes between the NGA and SLADE (Anonymous, 1974).

²⁶ Also the Amalgamated Union of Engineering Workers to a small extent in printing.

²⁷ That industrial relations were better in the magazine publishing industry was noted in the Royal Commission on the Press (1962) although they “left a lot to be desired” and were founded on the personal relationship and precarious economics within small firms. The magazine industry outside of the largest firms – IPC in particular – was one in which some degree of compromise could be reached between publishing houses looking at new technologies and unions. Bannard (1990) notes in the late 1980s that “previous industrial relations restrictions have been modified so that even unionised houses can involve their journalists in the type-setting and page-makeup of their magazines” (Royal Commission on the Press, 62:31,42; Bannard, 1990).

²⁸ Gruner+Jahr UK was acquired by National Magazines in July 2000 (Mintel, 2002b).

²⁹ Bunting (1997) identifies nine European publishing houses that have emerged as leading competitors in the 1990s: Axel Springer, Bauer, Burda, Gruner+Jahr, EMAP, IPC, Hachette Filipacchi, Mondadori and VNU.

³⁰ The best selling title in 2002 in this sector, however, was *Glamour* magazine that had been launched by Condé Nast as recently as April 2001 and provides a good illustration of the volatility of the sector.

³¹ By 2002 the market share of these “other” publishers was estimated to have reached 17 per cent (Mintel, 2002a; 2002b).

REFERENCES

- Anonymous (1974), "Odhams Workers Go Back to Work," *The Watford Observer*, 26 July, 1974
- Anonymous (1982), "The Historical Perspective on Print Union Amalgamation," *NATSOPA Journal & Graphical Review*, Vol 12, No 3
- Anonymous (1984), "Joint Initiative on Technology," *Lithoweek*, 29 February, p. 6
- Anonymous (1999a), "Analysis of EMAP," *The Times*, 17 May, p. 44
- Anonymous (1999b), "EMAP Reorganises around Markets, Emphasises Online Strategies," *Interactive Media International*, Vol 13, No 12, pp. 10-11
- Abernathy, F., Dunlop, J., Hammond, J. and Weil, D. (1999), *A Stitch in Time: Lean Retailing and the Transformation of Manufacturing: Lessons from the Apparel and Textile Industries*, Oxford University Press, New York
- Bannard, M. (1990) *Magazine and Journal Production*, Chapman and Hall, London
- Bundock, C. (1959), *The Story of the National Union of Printing, Bookbinding and Paper Workers*, Oxford University Press, Oxford
- Bunting, H. (1997), *European Consumer Magazine Publishing: Facing the Electronic Challenge*, FT Media and Telecoms, London
- Chandler, A. and Cortada, J. (Eds.) (2000), *A Nation Transformed by Information: How Information Has Shaped the United States from Colonial Times to the Present*, Oxford University Press, New York
- Child, J. (1967), *Industrial Relations in the British Printing Industry: The Quest for Security*, George Allen and Unwin, London
- Cohen, M. (2001), "EMAP plc," In: *International Directory of Company Histories*, (Ed, Tina Grant), St James Press, Detroit
- Cox, H., Mowatt, S. and Prevezer, M. (2002) "The Firm in the Information Age: Organizational Responses to Technological Change in the Processed Foods Sector", *Industrial and Corporate Change*, Vol 11, No 1, pp. 135-158
- Daly, P., Henry, P. and Ryder, E. (1997), *The Magazine Publishing Industry*, Allyn and Bacon, Boston, MA
- Delafons, A. (1965), *The Structure of the Printing Industry*, MacDonald, London, 1965
- Dunning, J. (1997) *Alliance Capitalism and Global Business*, Routledge, London
- Ebers, M. (Ed), (1997), *The Formation of Inter-Organizational Networks*, Oxford University Press, Oxford
- Ekinsmyth, C. (2002) "Project Organization, Embeddedness and Risk in Magazine Publishing", *Regional Studies*, Vol 36, No 3
- Faulkner, R. and Anderson, A. (1987), "Short-Term Projects and Emergent Careers: Evidence from Hollywood", *American Journal of Sociology*, Vol 4, pp. 879-909
- Ferris, P. (1971), *The House of Northcliffe: The Harmsworths of Fleet Street*, Weidenfeld and Nicolson, London
- Fraser, H. (1999), *A History of British Trade Unions 1700-1998*, St. Martin's Press Inc, London
- Gennard, J. and Bain, P. (1995), *SOGAT: A History of the Society of Graphical and Allied Trades*, Routledge, London
- Gennard, J. (1990), *History of the National Graphical Association*, Unwin Hyman, London
- Gereffi, G. (1994), "The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks", In: *Commodity*

- Chains and Global Capitalism*, (Eds, Gereffi G. and M. Korzeniewicz), Praeger, Westport, CN
- Goodman, R. and Goodman, L. (1976), "Some Management Issues in Temporary Systems: A Study of Professional Development and Manpower - the Theatre Case", *Administrative Science Quarterly*, Vol 21, pp. 494-501
- Grabher, G. (Ed), (1993) *The Embedded Firm: On the Socio-Economics of Industrial Networks*, Routledge, London
- Grabher, G. (2002), "Cool Projects, Boring Institutions: Temporary Collaboration in Social Context", *Regional Studies*, Vol 36, No. 3, pp. 205-214
- Guidone, L. (2000), "The Magazine at the Millennium: Integrating the Internet", *Publishing Research Quarterly*, Vol 16, No. 2, pp. 14-33
- Hennart, J. (1993), "Explaining the Swollen Middle: Why Most Transactions Are a Mix of 'Market' and 'Hierarchy'", *Organization Science*, Vol 4, pp. 529-547
- Henry, H. (1986), *The Dynamics of the British Press 1961-1984: Patterns of Circulation and Cover Prices*, Advertising Association, London
- Henry, J. (2002), "*The Story of the Strand Magazine*", (Available <http://www.jhenry.demon.co.uk/strand2.htm>) (Accessed 2003, May 1)
- Hobday, M. (2000), "The Project-Based Organisation: An Ideal Form for Managing Complex Products and Systems?", *Research Policy*, Vol 29, No. 7-8, pp. 871-893
- Jackson, K. (2001), *George Newnes and the New Journalism in Britain, 1880-1910*, Ashgate, Aldershot
- Kelber, H. and Schlesinger, C. (1967), *Union Printers and Controlled Automation*, Free Press, New York
- Lane, C. and Bachmann, R. (Eds.), (1998) *Trust Within and Between Organizations: Conceptual Issues and Empirical Applications*, Oxford University Press, Oxford
- Littleton, S. (1992), *The Wapping Dispute* Avebury Business School Library, Newcastle-upon-Tyne
- Low, J. (1992), *IPC Magazines: Europe's Largest Consumer Magazine Publisher*, IPC, London
- Lundin, R. and Soderholm, A. (1995), "A Theory of the Temporary Organization", *Scandinavian Journal of Management*, Vol 11, No. 4, pp. 437-455
- Martin, J. (1993), "Mirror Group Newspapers", In: *International Directory of Corporate Histories*, (Ed, Kepos, P.), St James Press, Detroit
- Martin, R. (1981), *New Technology and Industrial Relations in Fleet Street*, Clarendon Press, Oxford
- McKay, J. (2000), *The Magazines Handbook*, Routledge, London
- Mintel, (2002a), "Women's Magazines", Mintel International Group Limited, London
- Mintel, (2002b), "Men's Magazines", Mintel International Group Limited, London
- Mowatt, S. (2002), "Technological Change and Union Responses in the UK Magazine Print Publishing Industry 1950-2000", Paper presented at the 2003 Business and Economics Society International Conference, Quebec, Canada, July 22-26
- Moran, J. (1964), *NATSOPA: Seventy-Five Years*, Heinemann, London
- Musson, A. (1954), *The Typographical Association: Origins and History up to 1949*, Oxford University Press, London
- NGA '82, (1984), "'Prospect for Progress' - New Technology and Periodical Publishing", NGA Internal Report, NGA '82, Blackpool
- Nohria, N. and Eccles, R. (1992), *Networks and Organizations: Structure, Form, and Action*, Harvard Business School Press, Boston

- Norton, F. (1992), "IPC Magazines Limited", In: *International Company Histories*, (Ed. Kepos, P.), St James Press, Detroit
- Oliver, A. and Ebers, M. (1998), "Networking Network Studies: An Analysis of Conceptual Configurations in the Study of Inter-Organizational Relationships", *Organization Studies*, Vol 19, No 4, pp. 549-583
- Pira International, (2002), "Publishing in the Knowledge Economy: Competitiveness Analysis of the UK Publishing Media Sector," Report to the DTI, Pira/DTI, London
- Powell, W. (1990), "Neither Market nor Hierarchy: Network Forms of Organization", *Research in Organizational Behaviour* Vol 12, pp. 295-336
- Price Commission, (1978), "IPC Magazines Limited Increases in Cover Prices," Price Commission, London
- Reed, D. (1997), *The Popular Magazine in Britain and the United States of America, 1880-1960*, British Library, London
- Reed Elsevier, (2003), "Company History", (Available http://www.reed-elsevier.com/re/aboutus/au_history/), (Accessed 2003, May 8)
- Royal Commission on the Press, (1949), "Report, 1947/49", Royal Commission on the Press, London
- Royal Commission on the Press, (1962), "Report, 1961/62", Royal Commission on the Press, London
- Stanworth, C. and Stanworth, J. (1988), "Reluctant Entrepreneurs and Their Clients - the Case of Self-Employed Freelance Workers in the British Book Publishing Industry", *International Small Business Journal*, Vol 16, No 1, pp. 58-73
- Tebbel, J. and Zuckerman, M. (1991), *The Magazine in America, 1741-1990*, Oxford University Press, New York
- Tolliday, S. and Zeitlin, J. (1991), *The Power to Manage? Employers and Industrial Relations in Comparative-Historical Perspective*, Routledge, New York
- White, C. (1970), *Women's Magazines*, Michael Joseph, London

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