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Emporium of glamour and sanctum of scientific management

The early twentieth century department store

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Abstract *The early decades of the twentieth century witnessed a significant transformation in managerial control practices within the US department store. New principles of scientific management, already employed on the factory floor, were now implemented on the retail "shop floor". The purpose of this paper is to provide insights into this transition by examining three such scientific management initiatives introduced by store management during this era. The paper draws on a number of sources in its historical examination of early department store scientific management initiatives. These include archival records, published literature of the era, and particularly the proceedings of meetings of the annual Controllers Congress of the National Retail Dry Goods Association (US). The paper finds how notions of the rationality of science reined over such store operations as inventory valuation, credit control and overhead expense allocation. Traditional positions of power were recast and new managerial roles created in the name of science. The paper illustrates the insights that can be gained from an examination of scientific management practices in an alternative arena to the factory floor. Further historical research in the area of retail management may prove productive not only for our understanding of this site but also our knowledge of the process by which new managerial initiatives become assimilated. The study of the managerial practices of such vast organizational forms proves fruitful not only for the history scholar. Given the centrality of the department store in the creation of a contemporary culture of consumption, such examination becomes all the more insightful.*

Introduction

At the turn of the twentieth century the department store, both in Europe and the US, was not only a dominant mode of retailing but was also amongst the largest organizational forms of the period. These vast stores such as Macy's (New York), Filene's (Boston), Marshall Fields (Chicago) and Harrods (London), held premier property locations and employed thousands of workers in distributing commodity goods to the masses. Their innovative marketing practices such as freedom to browse, clear marking of the price of a product, use of window display and promotional events profoundly altered retail practice (Leach, 1984; Moss and Turton, 1989; Klassen, 1992). Zola's (1992) classic novel set in a French department store, at the turn of the twentieth century, provides a fascinating insight into the profusion of goods stunningly displayed to tempt the Parisian shopper. Lavish store facilities sought to transform shopping from a necessity into a pleasurable leisure activity (Leach, 1993; Nava, 1997). Indeed, many social scientists herald the early department store as a key site in the creation of a consumer society (Chaney, 1983; Miller, 1989; Laermans, 1993; Glennie, 1995). Yet a review of the literature on these institutions reveals an important gap. Historians have comprehensively narrated the story of many famous stores, and



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sociologists have explored the linkages between the department store and the origins of Western consumer culture. However, with the exception of Chandler (1977), there has been scant attention to the managerial practices of these global emporiums. How, for example, in the absence of contemporary sophisticated information technology packages, did the managerial elite of such organizations oversee staff practices, manage a vast inventory of goods, allocate customer credit and control store overheads?

This paper is an attempt to redress past neglect. The paper explores managerial practices in US department stores during the 1920s and 1930s. As will be further developed within the paper, this is a period of significant transformation in managerial practice. The paper is divided into four sections. In order to provide some backdrop to the subsequent discussion of the deployment of scientific management practices within the retail trades, the first section offers a brief insight into the scientific management movement itself. The second section then shifts attention from the factory floor to the department store, the setting into which new managerial practices of retailing emerged during the early decades of the twentieth century. The perceived advantages of these new methods and possible rationales for their adoption are explored. The third section examines three specific managerial innovations which occurred during this period, involving inventory control, credit control and expense control. The fourth and final section considers the repercussions arising from the implementation of the new practices on existing store relations. It also attempts to formulate some concluding thoughts on the paper's contribution to an understanding both of management history and contemporary managerial practice.

The scientific management movement

The early decades of the twentieth century witnessed an unparalleled discourse in national efficiency in the US (Haber, 1964). Foremost among the proponents of efficiency was the engineer Frederick Taylor (1911), whose seminal publication *The Principles of Scientific Management* has been one of the most influential managerial works of that century. At the core of Taylor's thesis was the fundamental belief in efficiency as a key to enhanced profitability. His objective was to advance national efficiency through the elimination of waste:

We can see our forests vanishing, our water-powers going to waste, our soil being carried by floods into the sea. We can see and feel the waste of material things. Awkward, inefficient, or ill-directed movements of men, however, leave nothing visible or tangible behind them. Their appreciation calls for an act of memory, an effort of the imagination. And for this reason, even though our daily loss from this source is greater than from our waste of material things, the one has stirred us deeply, while the other has moved us but little (Taylor, 1911, pp. 5-6).

Taylor's principles of scientific management sought both to confirm the exact extent of such waste and to introduce procedures to ensure its systematic elimination on the factory floor. His principles incorporated the use of job analysis, norm-based standards, differential piece rates and an array of measuring techniques (Aitken, 1960). As Merkle (1980, p. 2) aptly comments, scientific management was "not a single invention, but a series of tools, methods, and organizational arrangements". Taylor's own work as an engineer at the Midvale Steel Company, where his time studies sought to increase the productivity of the machine shop, was obviously instrumental in the accumulation of these scientific management principles. However, the contributions of

his colleagues, Henry Laurence Gantt and Frank and Lillian Gilbreth, were also a significant component of the overall assemblage. Indeed, these three parties formed “the triangular foundation on which the full science of management was built” (Urwick, 1945, p. 126). Gantt had met Taylor while also working at the Midvale Steel Company. His most acclaimed work is the Gantt Chart for planning work output (Clark, 1952). He also worked on bonus systems for rewarding labour (Alford, 1972). The Gilbreths, on the other hand, are renowned for their motion studies (Yost, 1949). This involves the detailed analysis of all motions involved in any job in order to identify any possible inefficiencies. This science is defined by Frank Gilbreth himself as “the science of eliminating wastefulness resulting from using unnecessary, ill-directed, and inefficient motions” (Gilbreth, 1914, p. 8). Gilbreth carried out his practical research in this regard at the New England Butt Company.

Of course, the work of Taylor and his collaborators did not emerge out of a vacuum. It had been influenced by the initiatives of earlier scientists and engineers, such as the pioneering study in the 1830s, *On the Economy of Machinery and Manufactures*, by British mathematician Charles Babbage (Babbage, 1832). H.R. Towne, a president of the American Society of Mechanical Engineers, was another significant mentor to Taylor during the 1880s. In particular, Towne realized the importance of measuring efficiency in money terms and consequently highlighted the economic role of the engineer. However, it is generally Taylor who is accorded the title of “father” of scientific management, and in 1911 his ideas were rather dramatically catapulted into the popular public domain in the form of the Eastern Rates case (Barkley, 1969). This case concerned the legitimacy of an increase in freight rates sought by the Eastern Railroads from the US Interstate Commerce Commission. The grounds for opposing the increase were based on inefficiencies at the railroads, with Taylor’s scientific management principles providing the appropriate evidence. “In this manner, the Eastern Rates case was converted from a trial of the railroads to a showcase for scientific management” (Merkle, 1980, p. 59).

One of the witnesses for the scientific management side in the above case was Harrington Emerson. Although not an immediate disciple of Taylor in the form of Gantt and Gilbreth, he was nonetheless an important player in the scientific management movement and his publication, *Efficiency as a Basis for Operation and Wages* (Emerson, 1919) echoed Towne’s earlier ideas on the importance of collaboration between engineers and accountants/economists. Another significant commentator of the era was Morris Cooke, who did much to extend scientific management principles beyond the factory to inform governmental reform, and perhaps more importantly, educational reform in the guise of his 1909 report to the Carnegie Foundation for the Advancement of Teaching (Cooke, 1910). This leads neatly to an important and pertinent point to this particular paper. Taylor (1911, p. 8) himself had stressed the importance of his principles beyond the factory floor:

It is hoped, however, that it will be clear [...] that the same principles can be applied with equal force to all social activities: to the management of our homes; the management of our farms; the management of the business our tradesmen, large and small; of our churches, our philanthropic institutions, our universities, and our governmental departments.

The remainder of this paper attempts to chronicle a burgeoning interest in scientific management principles in one such new arena. Department store management during

the early decades of the twentieth century eagerly embraced these new managerial practices and rigorously implemented them on their own "shop floor".

The emergence of scientific principles of retail management

By the turn of the twentieth century the department store had, architecturally, grown to vast proportions. With its enormous range of internal departments, ranging from linens to haberdashery, and expansive workforce, the department store had become a complex organizational form. The hierarchical structure consisted of store owner, then departmental heads (buyers) and finally selling staff. Store owners invested a great deal of power in the hands of their buyers. Buyers not only made all of their department's inventory purchases, they also set selling prices, hired their own staff, directed window displays and generally ruled over all departmental issues. Essentially, each buyer managed his department as if it was an independent unit (Appel, 1930; Hower, 1943; Emmet and Jeuck, 1950). Rivalry between departments, often to the detriment of the store overall, was not uncommon (Benson, 1986). Such was the power of the departmental buyer that any injustices arising from his/her dictatorial rule were dismissed by store owners as a natural consequence of the temperamental nature of a true artist (Benson, 1986).

However, this situation began to change in the US during the early decades of the twentieth century. Commentators of the period remark on a transformation in merchandising methods.

We are now going through a period of change in methods of merchandising that is to distribution much the same thing the industrial revolution was to production (Filene, 1930, preface).

Henry Dennison, a leading advocate of the scientific management movement, similarly captures this transition in his 1929 Report of the Committee on Recent Economic Changes in the US: "The past ten years have witnessed a definite trend toward great functionalization in department store organization" (Dennison, 1929, p. 539). Indeed, Pasdermajian (1954, pp. 69-70), suggests that department stores of this era were among the leading exponents of scientific principles within the retail trades generally:

All these developments have given to department stores, in comparison with other lines of retailing, a real lead in the application of scientific principles to the solution of business problems. They may be said to have undertaken the work of scientific research and the application of scientific principles on a larger scale than any other form of distribution, and to have been more hospitable to new organization ideas than their competitors.

Store management began to adapt Taylor's (1911) scientific management practices, which had already been initiated on the factory floor, for their own purposes:

Undoubtedly you have all heard of scientific management and have fairly well in mind what is meant by that term. At the same time, however, you have probably associated the term with the manufacturing industry rather than with the retail trade; in other words, with manufacturing rather than with merchandising or retailing. It is the purpose of my paper to show that the principles of scientific management can and should be applied to a retail store. (Osgood, 1925, p. 130).

Slowly the traditional power of the buyer began to crumble in the face of new principles of retail management. In general, there was a perceptible movement away

from the autocratic and often idiosyncratic rule of the store buyer toward a seemingly more rational and standardized system of management. As Schacter (1930, p. 2) observes:

We have seen haphazard methods of merchandising and operating replaced by scientific research and planning. In short, we have seen "guessing" replaced by "knowing".

Similarly, McNair (1925, pp. 30-1) remarks:

There has taken place during the last ten years a remarkable growth of what might be crudely termed scientific methods in distributive business [...] the recognition that the old-time rule-of-thumb methods no longer are adequate to meet the problems of an increasingly complex distributive system.

The buyer gradually became divested of his numerous responsibilities with the rise to prominence of new managerial positions such as that of financial controller, credit controller, merchandise manager, marketing manager and human resource manager.

What was the rationale behind this transition in managerial practice? Some of the factors which may have played a role in the creation of an environment conducive to such a shift include:

- the dissemination of managerial knowledge from the business schools of US universities;
- the co-operation amongst store owners generated via common membership of national retail associations;
- poor store operating results; and
- the threat of competition from the new chain stores.

Each of these strands will be briefly considered.

A number of the top US business schools were established with sponsorship from department store owners. For example, Macy's funded business programmes at New York University, and Filene's sponsored chairs at Harvard Business School. Prior to this, management science had not been formally taught in a university setting (Leach, 1993). This new forum not only provided taught business programs but also facilitated research into all aspects of management. The graduates of such schools, particularly those with retail management specialisms, were readily recruited by the larger department stores (Mahoney, 1955). These students created new managerial hierarchies within the traditional department store structure and provided the perfect vessels for the circulation of fresh approaches to store organization.

Dissemination of management knowledge was also greatly facilitated by membership of an association of retailers. One of the largest and most influential of these was the US National Retail Dry Goods Association (NRDGA). Founded in 1911, it boasted member stores such as Macy's (New York), Filene's (Boston) and Marshall Fields (Chicago) (Pasdermadjian, 1954). The association provided an excellent forum for an exchange of knowledge on new management practices. Special interest groups were established within the NRDGA. The Controllers Congress was one such grouping. Consisting of the controllers (accountants) of member stores, it met on an annual basis to discuss and debate retail accounting innovations. Another important association during this period was the Retail Research Association. Founded in 1916 by the owner of Filene's department store (Boston), it was an international association devoted to

research into all areas of retail practice (Mahoney, 1955). Members of this association regularly travelled around the world visiting member stores in their efforts to spread innovations in management. On the opposite side of the Atlantic, the International Association of Department Stores was established in Paris in 1928 (Pasdermadjian, 1950). These associations played an important role in the department store's adoption of new principles of managerial control.

In addition to feeling the impact from the knowledge created and disseminated within the new sites of business school and trade association, department store management was facing a very real crisis in terms of poor financial performance. The golden age of the department store, experienced at the turn of the twentieth century, had lost its hue. The 1910s and 1920s, especially the late 1920s during the US economic depression, witnessed a number of arduous conditions for the department store. The wholesale side of the department store trade had gone into terminal decline (Twyman, 1954; Ferry, 1960). On the retail side, operating costs were rising (Emmet, 1930), and perhaps most importantly the department store was exposed to sustained competition for the first time. The new chain stores (such as Woolworth's and Penney's) operated on a much lower cost structure and therefore proved to be highly price efficient (Dennison, 1929; Dartnell Corporation, 1931). The department store appeared as a slow and cumbersome animal in contrast to the flexibility of its young rival.

Taken together, the above conditions led to a questioning amongst store management of traditional modes of control. If a crisis appeared to exist in the form of poor operating results and increased competition, then one potential solution suggested itself in the new scientific principles of retailing promulgated in US business schools and disseminated through national associations. There was a concentrated shift toward what was commonly perceived as a more rational mode of retail management. The following section of the paper examines three such instances of this transformation in managerial control.

Three managerial innovations

The retail price inventory method

One of the defining characteristics of the department store is the extent of its numerous and varied departments. A department store seeks to house the maximum range of possible consumer goods under one roof. An obvious consequence of this marketing strategy is vast inventory holding. Control over inventory is therefore an essential ingredient of efficient store management. Chandler and Daems (1979) identified the stock turnover ratio as the core measure of departmental performance. However, the calculation of such a performance ratio cannot be achieved without knowledge of the inventory figure itself. In an era prior to computer automated inventory systems, calculation of a complete store inventory depended on a manual inventory count. This long and tedious operation yielded the final inventory figure necessary for the determination of the store's gross profit. Consequently, store management was unable to assess the operating performance of an individual department, nor the store as a whole, until the annual or semi-annual inventory count had taken place. During the 1920s a new method of inventory valuation became widely adopted by US department stores (Friedman, 1929)[1]. This new method valued inventory at its retail price rather than the traditional cost price. Its followers enthusiastically proclaimed the merits of the new management innovation:

It is safe to say that in the next ten years not only will the retail method of stock control be adopted almost universally in department stores, but also that all other factors of retail distribution will be influenced by it and will very largely adopt it (Lazarus, 1925, p. 12).

Using the retail price inventory method (RPIM) allowed management to quickly and easily estimate a department's inventory at any point in time and hence to determine a department's gross profitability (Ernst, 1913; Katz, 1920; Greene, 1924; Madden, 1927). This was a great advantage to management: they now had the tools to assess a department's performance, and hence the department buyer's effectiveness, in advance of the annual inventory count (Godley and Kaylin, 1930; Vogt, 1932).

The RPIM also bestowed a number of other advantages on its adopters. The actual taking of inventory became a more efficient process when using retail rather than cost price. The retail price had only to be listed on the inventory sheets during the count. In comparison, if inventory was recorded at cost price, it was necessary to trace back the original cost price of every item of inventory (Eggleston, 1931). This was a more time-consuming process, requiring skilled staff and often giving rise to inaccuracies in inventory valuation (Steinhauser, 1926; Kleinhaus, 1932).

Another important benefit of the RPIM was its identification of a buyer's markdowns. Markdown (price reduction) of inventory is generally indicative of a poor buying decision. Under the cost price method of inventory valuation, a buyer could simply offset losses on markdown inventory against his profits on other goods (Katz, 1923). Unfortunately for the buyer, this was not an option with the RPIM. The implementation of the RPIM required the establishment of a separate and independent marking room (Ruffner, 1921; Brisco and Wingate, 1925). This was necessary to ensure that all price changes (markups and markdowns) were recorded and book inventory figures were adjusted accordingly. An obvious consequence of this system was that a buyer's erroneous buying was tabulated and highlighted to management for the first time (Vogt, 1932).

A final convenience of the RPIM for store management was its estimation of inventory loss due to theft (shrinkage). Once a reliable record of a department's price changes (markups and markdowns) was kept, then the inventory figure yielded by the new method was a reasonable estimate of actual inventory (Freudenthal, 1925). Any difference between the office book figure and the actual figure, arising from a physical count, was due to theft.

The RPIM allowed management a control over inventory, a key asset in the retail trade, which had previously been exclusive to the departmental buyer. The method granted insights into core areas of operational performance. It provided management with timely information on a department's profitability and greatly facilitated managerial understanding of each buyer's actions. Perhaps most importantly, however, the perceived scientific properties of the method, in comparison with the buyer's unsound practices, granted the store owner a viable rationale to take control over inventory.

Credit control

A mass credit boom erupted in the US during the early decades of the twentieth century (Clark, 1930; Grant, 1992). Hire purchase facilities, in particular, increased at a dramatic rate (Noah, 1926; Seidman, 1957). Originally used for the purchase of the sewing machine (Harris and Seldon, 1958) and automobile (Zelch, 1934), instalment

selling rapidly expanded to cater for the increasing availability of other consumer durables (Olney, 1991). Changing social attitudes to hire purchase also encouraged its speedy adoption (Clarke, 1939).

However, mass credit posed a potential problem for department store management. Department stores had traditionally operated on a cash-only basis. For example, Macy's reply to one customer, wishing to open a store credit account in 1902, was as follows:

We constantly make the statement that we sell goods for cash only, and as you can readily see, we could not, in any instance, violate this rule[2].

However, competition amongst stores eventually restricted this practice and credit facilities were extended to the masses (Hotchkin, 1925).

Credit originally was given as a matter of service, but it has fast developed into a selling force, and the fact that extended terms are now given by almost all the large stores of the country proves to you that it is a selling force. The fact that stores who formerly did a cash business have gone into the credit business and have increased their volume double and triple shows you that it is a selling force (Woodlock, 1925, p. 60).

Managing a growing credit business nevertheless presented its own dilemmas. Established modes of granting credit, based on trust and knowledge of character (Nugent, 1939; Coleman, 1974), were impractical in a store with a vast and unknown customer base. Management initially tried to circumvent such difficulties by gathering impressions of a credit applicant's character in a number of ways. In-house interviews with new credit customers was one setting in which moral constitution could be appraised (Hagerty, 1913; Walter, 1922; Greene, 1924; Phelps, 1938). Information from other stores and from a growing army of local credit bureaus was similarly employed (Hanes, 1915; Truesdale, 1927).

Gradually, however, store management moved toward a seemingly, more scientific and rational form of credit management. This involved a key shift in thought: managing the credit customer on the basis of knowledge of their payment behaviour rather than knowledge of their trustworthy character. Two initiatives facilitated this transition. First, a credit card (or coin) was issued to all credit customers. The customer presented this to the sales assistant as a form of identification when making a credit purchase (Comstock, 1925). The Farrington charge-plate was one such card (Ferry, 1960) with Filene's (Boston store) being an early adopter (Bitner, 1934; Mahoney, 1955). It was embossed with the customer's name and address which was then printed onto the sales invoice. This removed any risk of manual error from hand writing a customer's details. Each charge card was numbered and therefore allowed management to classify every credit customer. The number of the card corresponded with a numbered account for each customer in the debtors ledger (Leach, 1993).

Control of the debtors ledger was the second management initiative. A credit control function was established to observe the length of time each customer took to pay off their debts, i.e. an aged analysis of debtors was implemented (Zinser, 1933). All customer credit actions were documented and examined. Any deviance, such as purchasing beyond the credit limit, was quickly and easily identified. Coloured index cards[3], containing summarized debtor ledger information, greatly speeded up this process (Holmes, 1923; Gayton, 1929; Butz, 1932). Slow paying customers were sent letters of payment demand and often lost their credit facility (Weinhold, 1930).

Monitoring of the credit customer's actions eventually created an archive of knowledge for each customer account (Bassett, 1928; Goodwin, 1935). Consultation of the debtors ledger record became the foundation for all credit authorisation decisions. Management control over store credit therefore evolved from a situation where knowledge of each individual's character was superseded by knowledge of their credit behaviour. The latter was gleaned in a manner perceived as rational and scientific, examination of the written record, in contrast with previously ambiguous practice (Gayton, 1929).

Store overhead control

The department store offered a lavish range of complimentary services to its customers which was unavailable in the new chain stores. This was a significant factor in the higher operating costs of the department store relative to its competitors. An annual study into department store expenses carried out by Malcom McNair at the Bureau of Business Research at Harvard during the 1910s and 1920s emphasised the problem (Copeland, 1921; Guernsey, 1929). Control over costs became a common topic of discussion at the annual meeting of store controller members of the NRDGA (e.g. Holiner, 1920; Katz, 1929). Costs were broadly classified as either direct departmental costs, and therefore under the control of the department buyer, or general store overheads. As a buyer was responsible for the profitability of his department, he had a strong incentive to manage his departmental costs efficiently. However, no one was directly liable for the control of a general store overhead.

One such store overhead was the cost of running the garment alteration workroom. The department store is acknowledged as an important forum in the introduction of cheap, ready-to-wear clothing to the masses (Kidwell and Christman, 1974; Sennett, 1976). However, this was a period prior to the publication of government statistics on standardised clothes sizing[4]. Garments generally required alteration before a good fit was achieved (O'Brien and Shelton, 1941). Department stores therefore generally offered a garment alteration service. Yet the costs associated with running such a service appeared to remain a mystery to store management (Libbey, 1926). Were the high costs of running a large garment alteration workroom due to the supply of badly fitting clothes from the manufacturer or the purchase of poorly fitting garments by the store buyer?

Management suspected that department buyers were attempting to charge unnecessary costs to the general workroom overhead rather than incur the cost within their own department (Libbey, 1926). For example, a buyer could purchase cheap (but poorly fitting) garments from a supplier. S/he could then use the services of the alteration workroom to alter the garments, sell them at a profit in her/his department, whilst incurring none of the costs associated with the alteration. Alternatively, a buyer holding an incomplete range of garment sizes could sell the incorrect size, in order to make a sale, and then let the alteration workroom incur the expense of fitting the garment to the customer's size (Men's and Boy's Wear Group of the Merchandising Division of the National Retail Dry Goods Association, 1950). In an effort to understand the composition of the alteration workroom overhead, management resolved to allocate the total workroom cost back to all departments based on each department's usage of the workroom's services (Hart, 1936). Unwilling to see their departmental profits reduced by a charge from the alteration workroom, the buyers were prompted to curb

their exploitation of the workroom's services and to reconsider their garment purchasing strategy (Nystrom, 1925). By holding those who used the services of the workroom directly accountable for its costs, rigorous managerial control was exercised (Godley and Kaylin, 1930).

In order to discover a supplier's share of the responsibility, management introduced new controls to identify those garments requiring extensive alteration. Incoming garments were measured against a store's own in-house sizing system. Any poorly fitting clothes were then returned to the manufacturer (Store Management Group of the National Retail Dry Goods Association, 1949). In addition, an alteration cost per supplier was calculated. Manufacturers supplying garments requiring subsequent alteration costs were encouraged to improve their garment fitting or lose business (Abbott, 1929).

In this manner, department store management gradually removed the mystery from alteration workroom operations. A more standardized approach to cost control than had previously existed was advocated. A buyer's attempts to manipulate the costs incurred by his department to the detriment of the store as a whole, and a supplier's efforts to dump poorly fitting merchandise, were pre-empted by simple but effective management interventions.

Repercussions of new managerial practice and concluding remarks

Perhaps one obvious consequence of the adoption of scientific principles of retail management was the changing role of the department buyer. Previously invested with far reaching powers, s/he witnessed a gradual limitation in the scope of her/his empire. New managerial positions emerged within the store which laid claim on buyers' territory.

A few years ago, the buyer was his own copy writer, his own educational director, his own stylist, and pretty much his own controller and merchandiser. Now his efforts are supplemented by specialists in each of these divisions (Merchandise Managers' Division of the National Retail Dry Goods Association, 1931, p. 20).

The buyer was stripped bare of the functions which s/he had heretofore monopolised. Benson (1986, p. 48) cleverly refers to the process as "taming the buyers through functional organization". The new store specialists appeared to offer an exact knowledge in contrast to the erratic conjectures of the buyer. As Godley and Kaylin (1930, p. 6) observe:

Guesswork has been taken out of operations and exact knowledge substituted. There are specialists today in every division of the progressive department store – stylists, research operatives, comparison workers, budget advisors, economists, psychologists, and even psychiatrists – whose duties are to furnish the management and the merchandising staff with the facts it needs to do a successful job.

In the context of the managerial innovations explored in this paper, the store controller (financial controller) rose to prominence alongside the demotion of the buyer (Brown, 1922; Dibrell, 1925; Mazur, 1927). No longer occupying the lowly position of bookkeeper, the controller emerged as a valuable source of technical knowledge on all financial matters, including inventory and store expenses. Together with the credit control specialist, who actively sought professional status (Gamlen, 1926, Guernsey,

1932), the store controller furnished the vital statistics necessary to manage a credit business.

Not only did the new specialists contribute expert wisdom on their fields of expertise, they also helped to unify the individual store departments. Formerly, each buyer had freely managed his department as an independent unit. A conflict in the marketing strategies employed by departments was often a natural consequence. In contrast, the new managers were concerned with the broader perspective. The success, for example, of the advertising policy, window display, and financial position of the *entire* store was their ultimate goal. They performed these tasks to the detriment of the status of the buyer. No longer charged with such duties, the buyer was coerced into directing his attentions to the activities of the selling floor – the most inferior position in the store (Twyman, 1954; Nystrom, 1978). As Tedlow (1990, p. 203) remarks, the influence of scientific management principles in retailing was significantly more far-reaching than the confines of the counting house:

The advantages of “scientific management” extended beyond accounting [...] It comprehended store layout and design, skilled professional buying based on the best information, better communication with the consumer through research and advertising, and more astute management of human resources in general.

This paper has sought to contribute to our understanding of management practice by exploring a significant period in retail management transformation. The changes which occurred in US department store organization during the 1920s and 1930s are revolutionary. At the turn of the twentieth century, the department store was ruled rather than managed. It survived this golden age due to the sheer innovativeness of its marketing practices. However, when new competitors emerged, which copied the successful features of the store without its inefficiencies, a real crisis loomed. The new knowledge claims emanating from US business schools and disseminated through trade associations offered department store owners a powerful means of reclaiming managerial control. New scientific practices, seemingly rational and logical in character, were implemented within every aspect of operations: the innovations in inventory control, credit control and overhead control examined here are only three examples of an array of such interventions. Indeed, it is intriguing to contemplate whether the fate of some of these grand emporiums of commerce would have been any different if they had not so ardently embraced the new managerial principles. Would, for instance, Macy’s of New York and Filene’s of Boston, still household names in departmental shopping in the new millennium, have survived the twentieth century if they had not been guided by the hand of science?

The above question in turn posits another interesting query: what insights does this study have for the contemporary manager? This is not an attempt to justify scholarly historical inquiry by locating its value in an illumination of some evolutionary path to the present day. This researcher ascribes to the inherent contribution of history in its own right. Nonetheless, this stance does not prevent a gentle teasing out of the potential ways in which we view the world as a result of such investigations. From this perspective, therefore, scientific management in many ways is another example of a management “fad”, albeit a remarkably far-reaching one. It became the management “fashion” of the early twentieth century in a somewhat similar manner to the way in which Kaplan and Norton’s Balanced Scorecard has dominated the latter years of that century. The influence of scientific management spread across arenas to invest

programs, not just of production efficiency, but also educational, governmental and retail reform. Application of its principles resulted in a restructuring, radical in some instances, of operations and an accompanying impact on traditional modes of control. As revealed in this study, for example, its initiation in the department store fundamentally reshaped existing power relations between buyers and bookkeepers. Over time, of course, these new practices are assimilated into the organizational infrastructure to become a taken for granted *modus operandi*. Artistic flair is still a valued attribute in contemporary retail buying, but it does not replace the crucial authority invested in budgetary forecasts and inventory tracking systems. One lesson perhaps for contemporary organizations, therefore, is that the manner in which practices are currently executed, often unconsciously, is inherently located in past actions.

In conclusion, the department store story has been narrated from many and varied angles. The histories of several famous stores, still flourishing in today's retail sector, have been recounted. The role of the department store alongside the shopping mall and other icons of twenty-first century consumer culture is a constant inspiration to the sociologist. Yet detailed analyses of managerial innovation within this temple of consumption have been rare. This is all the more regrettable when it is considered that the new principles of scientific management adopted by stores were not unique to the retail forum, but were similarly employed within the production arena. Indeed, it is possible to argue that these methods have been a dominant mode of managerial control, to some degree, in every Western organizational form of the twentieth century.

Notes

1. The origins of this method are the focus of another research project by the author. In particular the German origins of the method are under investigation, although archival evidence from Macy's department store (New York) suggests that the method was in use in the US from as early as 1904. Source: the Historical Collections Department, Baker Library, Harvard Business School, R.H. Macy Files, Box 4, Folder 3, pp. 3137, 3139, 3140.
2. Letter dated 12 August 1902, Box 2, Folder 1, 1050, Macy's Archives, Historical Collections, Baker Library, Harvard Business School.
3. Commercially available for example from Kardex.
4. US statistics on standard clothes sizing were published in 1941 (O'Brien and Shelton, 1941).

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