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THE CLASSICAL MODEL OF CONTROL IN THE ACCOUNTING LITERATURE

Abstract: This paper outlines a classical management model of control based upon concepts identified in the writings of Frederick Taylor and Henry Fayol. The classical model's constituent concepts are found to be replicated in early accounting literature. The accounting model persisted right through the 1970s with only one conceptual change that reflected a concept discussed by Fayol. A number of factors which may have influenced the accounting model's replication of the classical management model are then considered. These include the linguistic derivation of the term "budget", historical approaches to budgeting by governments, the scientific and efficiency orientation of accountants in the past and their perception of the corporate budget.

In 1964 Luneski [p. 592] published a paper on the meaning of control and pointed out that there is a lack of "universal agreement as to the precise meaning of the word." In analysing various definitions he concluded that the meaning and scope of the term depended on the particular structure of management functions involved. This paper sheds further light on the classical concepts of control in accounting by tracing their historical development and by showing that their foundation was the work of Frederick Taylor and Henri Fayol.

After outlining the classical management model of control and documenting its influence on accounting, an accounting model is constructed and its replication of the management model is demonstrated. The centrality of the budget to the accounting control model is established and factors which appear to have influenced this development in the accounting literature are discussed.

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THE CLASSICAL MANAGEMENT MODEL

The classical management control model is based on ideas introduced by both Taylor and Fayol. Taylor strove for minutely specified total control of the individual worker including every aspect of a worker's job,[1] from methods to final results through orders and obedience [Taylor, 1916; 1947a,b]. Planning was a higher management function while lower levels were required only to perform specific routine tasks [Taylor 1947a; 1916]. Taylor's belief that workers were to be treated as children is central to his concept of authority-based control. Fayol's notion of control was also authority-based. Fayol [1949, p. 21] defined authority as "the right to give orders and the power to extract obedience" and he argued that good management required the "application of sanction to acts of authority."

The classical management concept of coordinative control[2] sprang largely from Fayol's writing. He argued that an identifiable relationship existed between control and a group of principles known as Unity of Command, Unity of Direction and Subordination of Individual Interest to General Interest [Fayol, 1949]. As a virtual prerequisite to these, Fayol placed great emphasis upon coordination in order to establish harmony, maintain equilibrium between organizational forces, ensure unity of effort and to promote collaboration of department heads.

The concept of exception control was subscribed to by both Taylor and Fayol. Taylor argued that through the assignment of daily tasks to workers:

> "The success of a good workman or the failure of a poor one is thereby daily and prominently called to the attention of the management."
>
> [Taylor 1947a, p. 70]

Management was therefore to receive condensed, summarized reports of operating results in which significant variations of actual performance from controls (e.g., standards) only were highlighted. That Fayol took the same view is clearly shown in his well-known definition:

> "In an undertaking, control consists in verifying whether everything occurs in conformity with the plan adopted, the instructions issued and the principles established. It has for object to point out weaknesses and errors in order to

> rectify them and prevent recurrence. It operates on everything, things, people, actions."
>
> [Fayol, 1949, p. 107]

"Controls"[3] developed as a control concept largely to facilitate the identification of exceptions and in the main resulted from Taylor's [1947a,b] notion that control must be information-based. Information about all aspects of the workplace was to be tabulated and reduced to laws, principles, and records of working methods, timing of operations, pace of production etc. These legalized "controls" were the benchmark against which actual performance was to be measured and as the trigger for activating sanctions.

Disciplinary control was strongly advocated by both Taylor and Fayol. In effect emphasising the need for direction and close supervision, Taylor argued:

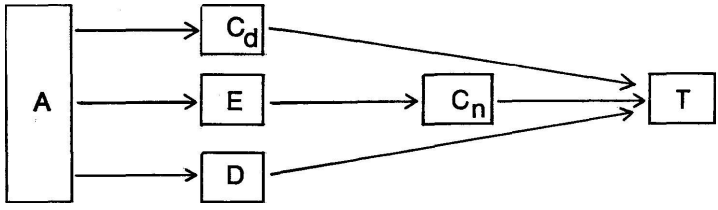
> "It is only through *enforced* adoption of the best implements and working conditions, and *enforced* co-operation that this faster work can be assured. And the duty of enforcing the adoption of standards and of enforcing this co-operation rests with *management* alone."
>
> (emphasis in original)
> [Taylor, 1916, p. 83]

This control through enforced worker co-operation was to be secured through the "carrot" of differential piece rates and the ultimate "stick" of dismissal [Taylor 1947a; 1916]. Fayol defined discipline as "obedience, application, energy, behaviour and outward marks of respect observed in accordance with the standing agreements between the firm and its employees" [Fayol, 1949, p. 22]. He argued that discipline was essential to the smooth running of a business, and was to be secured through good superiors, clean and fair agreements and judiciously applied sanctions.

These concepts allow the construction of a composite classical management model of control as represented in Figure 1. The composite classical model of control was focussed upon the concept of total control and had its source in the concept of authority-based control, which operated through the agency of coordinative control, exception control and disciplinary control in order to achieve total control. In turn, the concept of exception control operated through the agency of "controls". These concepts were then reiterated and embellished by such management writers as Urwick [1937, 1942], Brech [1948], Rose [1948] and Werolin [1947].

Figure 1

The Classical Management Model of Control



A = authority-based control
C_d = co-ordinative control
E = exception control
D = disciplinary control
C_n = "controls"
T = total control

THE CLASSICAL ACCOUNTING MODEL

In common with their scientific management forebears accountants specified principles of control, sought simple step-by-step processes, attached responsibility in terms of the hierarchy of authority, focussed upon measures of performance and efficiency, and reported according to the principle of exception [Hill, 1945; Matz, 1945]. Indeed, accounting writers closely followed classical management thinking.

Authority-Based Control

For accountants centralized control required clearly laid down lines of authority and classification of responsibility at each point of the organizational hierarchy. Budgetary authority and responsibility were to be specifically assigned to individuals or departments through a centralized accounting system [Tobey, 1925; Davis, 1932; Theiss, 1932; 1935]. This authority-based concept of control was further expressed in terms of "responsibility budgeting" [Matz, 1945] through which cost-centre budgets were set up for each department head. This supplied top management with information about planned versus actual performance of subordinates and thus fixed responsibility [Muth, 1947; Kassander, 1942].

Disciplinary Control

By the 1930s accountants advocated the enforcement of control, initiated by directives, to keep department heads "on their toes" [Hovey, 1931; Perry, 1938; Rose, 1948]. Budgeting was considered to be vital to this exercise [Gessner, 1936, p. 261]. Direction and discipline alone was insufficient. Such an approach to control also relied upon restriction and even prohibition. This often took the form of budgetary regulation and affected areas of activity such as production, sales and administration expenses [Coonley, 1925; Hecox, 1929]. In this way materials, labour and overhead expenditures were to be restricted much in the manner of a motoring speed limit [Kassander, 1942]. As early as 1922 "proper control of expenditures" was seen as a desired product of budgetary control, to be achieved by the prohibition of expenditures in excess of departmental estimates [National Association of Cost Accountants, 1922; McGladrey, 1934].

Coordinative Control

Coordination was also part of accountants' conception of control [N.A.C.A., 1922]. McKinsey [1919] for instance saw accounting as promoting control through coordinating the functions of sales, purchasing, stock control, production planning, plant maintenance and funding of credit. It also was argued that the control function of accounts connected and unified technological operations with the business administration that controlled and directed production [Scott, 1973]. In both views control was partly a coordinating activity which some referred to specifically as "control by the coordinated budget" [Hovey, 1931, p. 105].

"Controls"

While the management control model emphasized the importance of "controls"[4] as tools for the achievement of control, the accounting model relied at least as heavily on "controls", particularly in the form of budgetary standards. To accountants the budget became the best method of controlling costs and virtually synonymous with their classical control model [Davis, 1932]. As Theiss [1932, p. 13] argued:

> "For example, it is quite clear that the modern budget must be more than a restricting and restraining device for cash outlays, a few unusual expenses, and production costs;

> it can and should provide also a control of sales and selling expenses and we may add, it can and may, before many years, provide a means of measuring and controlling the costs of management. This last mentioned objective would mean a control of the administration by the owners of the business."

This is further evidenced by the widely held view of the budget and its component standards as mechanism for orderly attainment of effective control of operations and costs, particularly in large firms where it could provide a substitute for sole owner-manager control in a small business [McKinsey, 1921; Hawkins, 1935; Werolin, 1947]. This emphasis upon "controls" in the form of budgets and standards paved the way for accounting writers' emphasis upon the concept of control by exception.

Exception Control

Great importance was conventionally attached to checking for expenditure excesses. As early as the 1920s budgeting was regarded as a venue for providing results against estimates [N.A.C.A., 1922]. Check-ups on policy execution, checks for unfavourable trends, and so-called scientific checks on salaries were widely advocated [Coonley, 1925; Drucker, 1930]. Thus the budget was seen as an alarm system which would automatically sound when predetermined figures were exceeded [Hawkins, 1935]. The notion of checking up on subordinate performance via the budget persisted as an integral part of accounting thought on control into the 1950s and beyond [Edey, 1959; Barrett,[5] 1959]. In the U.K. the Institute of Cost and Works Accountants defined budgetary control:

> "Budgetary control is the systematic control of business operations by means of predetermined statements prepared in minute detail and assembled into a comprehensive programme, in order to provide a basis of comparison with actual performance and costs, with the object of obtaining the final results indicated in the programme."
>
> [Makin, 1940, p. 229]

The statements of minute detail, in effect, were budgetary standards, the key means of preparing statements of planned performance for comparison with actual results and a key tool of budgetary control [Davis, 1932; Ashworth, 1935; Peden, 1937]. Exceptions were meas-

ured by variances of actual operating results from standards and in the main were held to denote inefficiency and weakness.

Accountants saw it as their prime concern to identify and correct inefficiency and organizational weaknesses [Baker, 1918; Holden, Fish and Smith, 1951]. Accompanying corrective action was not forgotten:

> "The subject of control takes on a significance that should not be minimized, if corrective influences are to be set in motion . . ."
>
> [Peck, 1938, p. 471]

Indeed exception-based control was pursued through the budget with such vigour that the onus for unfavourable variances was all too easily placed upon managers and supervisors personally.

> "If the allowance on a job is two hours and the machinist requires three, the foreman knows at once that he has exceeded his standard and that he has failed in his control."
>
> [Kassander, 1942, p. 4]

A Classical Management Model Replica

From early in the 20th Century, accountants adopted a replica of the classical management control model. Authority-based control, disciplinary control, co-ordinative control, "controls", and exception control formed the foundation components of both management and accounting models. While the control model as originally developed by Taylor and Fayol also included the concept of total control, this aspect received less attention in subsequent accounting and management literature. Thus, prior to 1960 the classical accounting control model was identical to its management counterpart, as already shown in Figure 1.

PERSISTENT MODEL: CHANGING ENVIRONMENT

By the 1960s, alternatives to the classical control model had begun to emerge. Behaviouralists developed concepts of self-control, social control, power-based control and expectancy control. Systems theorists pioneered concepts of the control cycle, open and closed control systems, control timing and contingent control. Nevertheless many organizations continued with classical (Weberian) bureaucratic structures and (Taylor-Fayol derived)

classical control concepts. Indeed the classical control model continued to be predominant in accounting and many definitions of control closely approximated Fayol's early definition [Morris, 1974; Dew and Gee, 1973; Lowe, 1970]. The concepts of authority-based control [Dew and Gee, 1973; Benninger, 1973] disciplinary control [Anderson, 1963; Matheson, 1970], "controls" [Lowe, 1970; Dew and Gee, 1973; Searfoss, 1976] and exception control [Taylor and Palmer, 1969; Jarvis and Skidmore, 1978; Welsch, 1976] also were reiterated by accounting writers.

Criticism of the classical control model began in the early 1960s. Management writers discussed the importance of individual aspirations, the obsolescence of force-based authority, the difficulty of achieving coordination and the dysfunctional effects of control [McGregor, 1967; Machin, 1973; Lawler, 1976]. Accountants began to adopt a similarly critical stance with behavioral accounting writers studying self-control, dysfunctional effects of "controls", the impact of performance evaluation and the importance of motivation [Hopwood, 1972, 1973; Ronen and Livingstone, 1975; Searfoss, 1976; Otley, 1978].

Such critiques and new directions of conceptualizing control reflected to a large degree a basic change in the industrial environment since Taylor and Fayol's time, particularly with respect to employee types, education and expectations, relationships between managers and subordinates, and employee attitudes to work, profit and authority. As the decades passed, firms employed both men and women, people of increasing basic education standard and a growing proportion of qualified professionals.

The resurging power of trade unions, new technology and improved living standards prompted higher employee expectations of economic reward and personal satisfaction in the workplace. Subordinates began to seek equal opportunity, merit-based rewards, participation in management decision-making, and greater self-control in their immediate daily tasks. The role of managers changed from expecting automatic obedience to their instructions, to consulting subordinates, mediating between demands of competing interests, allowing degrees of autonomy to workgroups and taking account of the rights of disadvantaged or minority group employees. Employees no longer automatically subscribed to officially tested authority and the need to work unreservedly for profit. Many began to regard authority as vested in a range of informal groups within the organization and placed high priority upon stability, security

and leisure [Roebuck, 1973; Murphy, 1973; Handlin, 1973; Wren, 1979].

From Coordinative to Congruent Control

The early classical concept of coordinative control was subsequently modified by accountants to become a concept of congruent control. After the early 1960s accounting writers became concerned that managers should not work at cross purposes and advocated a control system to suit an organization's formally specified objectives [Horngren, 1967; Jarvis and Skidmore, 1978]. A personal commitment to formally stated organization objectives was to be required of and secured from all personnel. This concept of congruent control relied upon an accounting system to motivate individuals to act in the best interests of the whole organization and contribute to the achievement of organizational goals [Buckley, 1973]. Top management's task was to create harmony of efforts by trying to reconcile intra-organizational differences and conflicts in the allocation of resources, policies, effort and time [Welsch, 1976, p. 19].

From this viewpoint controls were "devices designed to motivate action toward the attainment of stipulated goals" [Benninger, 1973, p. 20] and the manifestation of organizational goals (imposed by top management) was the budget. It was argued that a budget target represented a goal imposed on an individual by higher levels of management and that control was introduced to ensure that those goals were attained [Stedry, 1960; Welsch, 1971].

The congruent control concept was unique and different to coordinative control because it extended down the organizational hierarchy to include the personal goals and aspirations of all organization members. The stated object of control was to ensure a congruence between personal and organizational goals so that each individual, in attempting to satisfy his own personal goals, would be making the maximum possible contribution to the attainment of organizational goals [Jarvis and Skidmore, 1978; Welsch, 1976; Searfoss, 1976].[6]

Congruent control was also expressed in terms of goal and subgoal consistency. When subunits operated according to specified subgoals which were consistent with overall performance criteria, they were said to be collectively performing in the best interests of the organization as a whole [Lowe, 1970; Baumler, 1972]. Within this perspective, two strands of control for goal congruence were

evident. They were consistency of subgoals with organizational goals and consistency of behaviour with goals and subgoals.

This accounting sponsored concept of congruent control was not an entirely new concept. Fayol [1949] had largely anticipated it in his combination of principles known as Unity of Command, Unity of Direction and Subordination of Individual Interest to General Interest. He saw these three principles as prerequisites to command which in turn influenced his concept of control. Unity of Command required each employee to receive orders from only one superior, Unity of Direction required a related group of activities to have one head and one plan, and Subordination of Individual to General Interest held that individual or group employee interests should not prevail over the interests of the organization.

In accounting, congruent control was distinguished from mere co-ordinative control by its concern about aligning personal goals and motivation with formal organization goals set by top management. Fayol had also introduced a quite separate concept of co-ordination into his control model, leaving his principles of Unity of Command, Unity of Direction and Subordination of Individual Interest to General Interest as likely predecessors in many respects to the accounting concept of congruent control. However Fayol's principles were more strongly authority-based in the management tradition of his day. The later accounting notion of aligning personal with organizational goals allowed for a wider range of methods (such as discussion, persuasion and consultation) than authoritarian orders that were more typically used in Fayol's time. Thus accountants' discussions of goal congruence have more often referred to reconciliation rather than enforcement of goals. Nevertheless this classical concept persists today even though organization theorists and industrial sociologists have pointed out [Parker, 1976] that factors such as the distribution of informal power throughout the organization, the variety, strength and changeability of individual and group objectives, and the divergent motivations underpinning any one operation, make goal congruence an unattainable ideal.

FACTORS INFLUENCING ACCOUNTING REPLICATION

The relatively detailed matching of classical management control model components by the classical accounting model suggests that accounting writers derived their model from the work of their management counterparts. It is therefore important to consider what factors appear to have predisposed accountants towards

adoption of the classical management control model. These were, in the main, budget-related, and concern the historical evolution of the budget, the scientific and efficiency orientation of accountants as well as their perception of the budget.

Historical Evolution of Budgets

The notion of control through limitation and restriction by those in higher authority is found in the origins of the term "budget". The Gallic word "sack" was Latinised as "bulga", and appears to have been first used in Romanised France. Subsequently the old French term of "boge" or "bouge" became "bougette", meaning "little bag". This appeared as the terms "bogett" or "bougett" in Middle English from which the Modern English term "budget" appeared [Theiss, 1937; Rautenstrauch and Villers, 1968]. Subsequently the term "budget" was used to include not only the container but also its contents (in a restrictive sense).

As early as 1760 the Chancellor of the Exchequer presented the national budget to the English parliament at the commencement of each fiscal year. Indeed government first used budgets for expenditure control [Theiss, 1937; Rautenstrauch and Villers, 1968]. The budget was a restrictive device adopted to check or limit the king's power to levy taxes and to limit the expenditures of public officials [Theiss, 1937]. In spite of its early British origins, a national budget was not adopted in the U.S.A. until 1921 and business budgeting did not achieve prominence until the late 1920s [Rautenstrauch and Villers, 1968]. When business use of the budget did become commonplace, emphasis was on the same restrictive and authority-based concepts of control as government budgets, restricting and limiting expenditures for advertising, welfare, research, personnel and plant extension [Theiss, 1937; Potts, 1977].

The development of business budgets in U.S.A. owed much to the work of engineers in the period 1880-1920. These included Towne, Halsey, Church and Taylor [Tsuji, 1975; Wells, 1977] and their work focussed upon standardising factory operations and securing operational efficiency. This concern for efficiency and cost reduction in turn drew attention to the need for accurate cost finding and restrictive cost control [Theiss, 1937; Wells, 1977]. To that end, engineers dominated the early development of business budgeting in orienting their measurements of efficiency to measuring the difference between actual and standard performance in physical input/output terms. From this viewpoint the role of the accounting

system was limited to recording, in money terms, the engineer's progress in moving towards the ideal 100 percent efficient state [Sutcliffe, 1976]. Thus the classical management and accounting models of control shared the common ancestry of engineering thought, in part expressed through their work in costing and budgeting.

Scientific Orientation

That engineers influenced the accounting control model is further evidenced by the frequency of accounting references to the "scientific management" approach. While accountants were in favour of classical concepts such as "centralised control of the highest type" [Coonley, 1925, p. 64], they also identified information as a basis of control and called for scientific administration through the proper application of correctly interpreted information [McKinsey, 1919; Ashworth, 1935]. Most of these references arose in connection with the budget. For example, Theiss [1937] claimed that accountants' interpretation of budgetary estimates, results and variances only became commonplace in the late 1930s.

> "Budgeting has merely aided business management to realize its profit objective by providing a scientific technique for forecasting business operations and establishing standards."
>
> [Theiss, 1937, p. 48]

The budget quantified in financial terms the benefits of scientific management [Frazer, 1922], and provided a scientific basis for centralised authority and adequate control [Rightor, 1917]. Businesses also required "scientifically recorded" cost information as a foundation for future estimates [Frazer, 1922; Harrison, 1924]. While writers like Theiss [1935, p. 158] considered scientific method to be "generously applied, both in the preparation and enforcement of the budget," Weger [1926] claimed that scientific management contemplated and embraced a budgetary system of control as one of its component strategies. Later, Urwick and Brech [1957] similarly argued that the post-World War I development of budget standards was a refinement of scientific management techniques rather than a pioneering stage in itself.

Scientific standard setting appealed to accountants as a substitute for nebulous ideals, with the engineer determining the standards and the accountant measuring performance. Thus standard

costs and budgeting were advocated by numerous accounting writers as a natural corollary to scientific management [Scovell, 1914; Harrison, 1924]. Since much of their discussions of control took place in the budgeting context, accountants were again predisposed to adopt a scientific (and eventually classical) management control model.

Efficiency Orientation

Accountants also shared the scientific management concern for efficiency. "The modern cost-accounting fundamentals are Standards, Efficiencies, Equivalents" [Emerson, 1913, p. 389]. Advocates of scientific management argued that in the ideal form of organization for industrial efficiency, specialists would first formulate principles of efficiency and then their observance and neglect would be revealed. Gantt [1916] called for a cost system that would reduce to a financial expression the difference between efficient and inefficient operations. Just as Taylor had sought daily reports on operations, so writers such as Peden [1937] began to argue for daily rather than monthly reports to foremen on their production efficiency, labour control and economy in use of materials. Thus, efficiency became a key concern of accountants as a scientifically inspired object of control:

> "Finally, a word to Cost Accountants in particular. Do not be scared of the term 'budgetary control', forget 'budgetary' if you like and only remember 'control', 'standard', 'estimate' or any other term you like. Go out after the main idea, 'efficiency' — efficiency in selling, efficiency in manufacture."
>
> [Hawkins, 1935, p. 227]

Accounting records were seen as an agent of control in the pursuit of efficiency, fighting the tendency towards waste and counteracting the insidious factory disease of expense [Scovell, 1914; Franklin 1912a,b]. Efficiency was to be attained only by striving for high standards which had been worked out scientifically [Franklin 1912c]. By the mid-to-late 1930s the budget was being "sold" to accountants and managers as a mechanism for keeping departments operating at maximum efficiency with budgetary control causing departmental managers to discover errors and correct inefficiencies [Banks, 1937; Hawkins, 1935; Dunkerley, 1935].[7] This scientific management concern to control for efficiency appears to

have influenced the adoption of the exception control concept in accounting. Through the budget, control was to be "effected by a system of variations which disclose inefficiencies, and operates on the principle of exception, whereby normals may be neglected and attention focussed on the exceptional cases" [Morris 1936b, p. 925]. This view continued through the 1950s and recorded the efficiency of individuals, groups and departments, detected inefficient production, measured idle capacity and encouraged waste avoidance [Matz, 1945; Barrett, 1959].[8]

Accountants' allegiance to the classical management control model was attributable to the adoption of the scientific management philosophy, including its pursuit of efficiency.[9] Makin [1940, p. 228] put it this way:

> "Just as scientific factory management is instituted to bring about full economic efficiency of the manufacturing unit, so is budgetary control operated to ensure that the business as a whole is controlled by sound and precise methods as opposed to rule of thumb."

Accounting Perceptions of the Budget

Since most of the analysis of control took place within the budgeting context, further understanding of the accounting control model's replication of the classical management model can be gained by considering how the budget was perceived by accountants. While planning for profitability was seen as one budgetary advantage [Rose, 1948], control of expenditure through budgeting and other restrictive practices, like reductions in personnel, expansion of supervisory workloads and cost reduction programs were emphasised even more [Banks, 1937; Loncar, 1956]. The budget was seen to be a counter measure to economic uncertainties [Lazarus, 1924], and expense control helped reduce the likelihood of business catastrophies [Vieh, 1925; Hensel, 1937]. Few attempts, however, were made at specific definition of budgetary control, because as Dunkerley [1935, p. 26] argued:

> "It does not seem possible to lay down a general ruling on the literal interpretation of the term 'Budgetary Control."

Budgeting was variously defined as foreseeing problems [Coonley, 1925], accomplishing planned results [McGladrey, 1934], developing a business program and then assisting management to control operations [Perry, 1938].

Accountants considered the budget to be a means of projecting desired profit and controlling activities. Control was required to ensure that capital and labour were utilized in the most profitable manner [Dunkerley, 1935; Morris 1936a; Perry, 1938]. Centralized control of costs and expenses was exercised by higher management [Tobey, 1925; Colgan, 1928] who ultimately controlled subordinates, activities and expenditures through the budget [Theiss, 1932; Ashworth, 1935]. Indeed many saw the purpose of budgeting as control [Hawkins, 1935] so that they tended to concentrate upon the control function to the exclusion of all else (e.g. planning) [Theiss, 1937]. This pronounced emphasis upon control continued in the accounting literature into the 1950s [Hensel, 1937; Morrow, 1948; Rose, 1952].

The emphasis upon control in the budgeting literature was reflected in budgeting practice. Coonley [1923] described the production and inventory control practices of the Walworth Manufacturing Company and found that control via the budget emerged as a key focus of that company's management system. In 1932 Theiss extensively surveyed budget practices in the USA and classified budgetary systems into five categories: cost control, sales promotion, financial, executive and analytical accounting control. With the exception of sales promotion, these categories were concerned largely with securing a centralized and authoritarian concept of control. Although most accountants perceived the budget as an instrument of control [Dunkerley, 1935], a minority did recognize a more balanced role for both planning and control in the budget [McGladrey, 1934; Perry, 1938; Makin, 1940; Stone, 1952; Loncar, 1956].

In July 1930 the International Conference on Budgetary Control sponsored by the International Management Institute was held in Geneva, Switzerland [Dunkerley, 1935; Theiss, 1937] and adopted the following definition of budgetary control:

> "Budgeting is not merely control: it is not merely forecasting: it is an exact rigorous analysis of the past the probable and desired future experience with a view to substituting considered intentions for opportunism in management'."
>
> [Stone, 1952, p. 31]

Giving equal importance to the budget's planning and control functions represented a significant departure from the control emphasis in the literature of the period. However most budget-

ing literature published after the conference continued to concentrate largely on the control function. Even the Geneva definition itself suffered from reinterpretation when Hawkins [1935] argued that it covered any system of *general control*[10] of a business activity by predetermined yardstick or budget. Nevertheless it was little more than a momentary aberration from accountants' control-oriented perception of budgeting,[11] based upon limitation, restriction, co-ordination and cost reduction [Tobey, 1925; Ashworth, 1935; Dunkerley, 1935; Hensel, 1937].

CONCLUSION

The classical accounting view of control developed within the budgeting literature and reflected the earlier involvement of engineers who had given budgeting a scientific framework. These factors had a strong influence upon the emerging accounting control model. In addition this control model reflected the early governmental use of budgeting, the efficiency orientation of the scientific management school and accountants' preoccupation with budgets as a principal instrument of management control. At the same time, these also appear to have predisposed the accounting control model to replicate the Taylor-Fayol based classical management control model. Thus the accounting control model became authority-based, having total control as its objective. The intervening concepts designed to contribute towards total control were coordinative control, disciplinary control and exception control (which operated through the agency of controls).

These findings stand in marked contrast to those of Luneski [1964]. His study was founded in the classical management tradition but did not recognise its influence. While attempting to draw inferences for accounting from management approaches to control, Luneski considered a range of definitions and attempted to link them to management functions while lamenting the difficulty of capturing all dimensions of control in one definition. This study has explored the foundations of the classical approach to control, set the resulting accounting control concepts within their classical management framework, recognised the emergence of other schools of thought and offered some explanations for the accounting replication of the classical management model.

The accounting replication of the classical management control model exhibited only a brief time lag and retained strong support from accounting writers for many years. This may be attributed to

a number of factors. Before the 1930s, the classical model was the only control model available to accountants (behavioural and systems models emerging later) and presented itself as a set of all-purpose general principles to be readily applied in practice. Furthermore the publicity given by Taylor's followers and the model's compatibility with a restrictive budgeting tradition reinforced the classical model's aura of certainty and time-saving simplicity. Hence the classical control model has continued to attract accountants right up to the present.

The results of this research clearly demonstrate that the conceptual dimensions of the classical accounting concept of control are more complex than is commonly realized. Accordingly use, development and criticism of the classical accounting control model should first take account of the historical environment that accompanied its emergence. In this way the model's suitability to present-day industrial conditions and management practices may be better judged.

FOOTNOTES

[1]The oft-quoted example of the retraining of the Dutch worker, Schmidt, in pig iron handling [Taylor, 1916, pp. 40-48, 59-64] demonstrates this point.

[2]Essentially the retention of centralised top management control by coordinating subordinates' activities through the authority of their superiors.

[3]The term "controls" is used here as a generally accepted short form expression for control tools such as cost standards, production targets, expenditure limits, quotas etc.

[4]Refer again to footnote 3.

[5]Barrett defined control (through accounting) in terms of selective checking of an organization's personnel more for dishonesty than for error!

[6]Few accounting writers in the 1960s and 1970s questioned the validity or appropriateness of the goal congruence concept. An exception is Parker [1976; 1979].

[7]Later, Holden, Fish and Smith's [1951, p. 11] empirical survey revealed that all companies studied stressed the importance of cost reduction and control but few were particularly well organized for achieving it.

[8]For many accounting writers, cost control for efficiency included the pursuit (not unlike F. W. Taylor) of cost reduction [Matz, 1945; Fiske, 1947; Muth, 1947].

[9]Of management writers contributing to the classical management control model, some also contributed to the classical accounting model of control (e.g. Brech, Coonley, Davis, McKinsey, Rose, Urwick and Werolin). This too would have strengthened the likelihood of the two models of control being very similar.

[10]Nevertheless Hawkins [1935, p. 271] demonstrated a laissez-faire attitude to the question of budget nature in stating "for so long as we all understand what is meant by the term 'budgetary control', it does not matter what people call it."

[11]Fiske [1947, p. 66] claimed that by 1938 budgets had been extended from their original planning orientation to include a control orientation. Alternatively, Loncar [1956, p. 950] argued that the advent of World War II brought a major

transition in budget philosophy, with government-sponsored defense programs shifting emphasis away from control towards planning with individual company budgets following suit. This study has been unable to detect any significant evidence in the literature to support such assertions.

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