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Some Thoughts on Cost Accounting
Developments in the United States

*H. Peter Holzer
Hanne Norreklit*

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November 1990

Some Thoughts on Cost Accounting Developments
in the United States

H. Peter Holzer
Deloitte Haskins & Sells Professor of Accountancy
University of Illinois at Urbana-Champaign


Hanne Norreklit
Associate Professor of Accountancy
Aarhus School of Business

Abstract

This article examines the claim that current deficiencies in some cost accounting practices are due to a predominance of financial accounting requirements in both teaching and practice.

We have reviewed textbooks and Bulletins of the National Association of Cost Accountants (1920-59) to find whether the criticisms of cost accounting are well founded.

Our review showed that if cost accounting practices had been driven by financial accounting requirements, it happened despite the concepts and suggestions advocated in the textbooks on cost accounting throughout the period in question. The ideas on more accurate product costing for managerial purposes, which have recently been re-popularized under the name of activity costing, have long been present in cost theory and writings on cost accounting. Many of these ideas can also be found in articles on costing practices in the bulletins of the National Association of Cost Accountants and in the textbooks of the '20s, '30s, '40s and '50s.



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SOME THOUGHTS ON COST ACCOUNTING DEVELOPMENTS
IN THE UNITED STATES

Introduction

During the past ten years many criticisms of current cost accounting practices could be found in the American professional and academic accounting literature. The following quote is perhaps typical, "Half of the nation's corporate controllers believe that their company's cost accounting systems are out of date, according to a survey by the National Association for Accountants."¹

The principal criticisms of current cost accounting practices can be summarized under the following headings:

- A. Cost accounting has financial accounting as its primary driver.
- B. Cost accounting uses simplistic methods for cost allocation, especially in the measurement of product cost in multi-product companies.
- C. Traditional cost accounting does not meet the needs of today's high technology environment.

We will discuss these criticisms and analyze their justifications by briefly reviewing the evolution of cost accounting during the last seven decades.

¹Journal of Accountancy; October, 1989, p. 108.

Cost Accounting and Financial Accounting

Here are some typical allegations with regard to this relationship between cost accounting and financial accounting:

"The classical model of cost accounting has inventory evaluation as its primary driver of financial information."²

"The disappearance of managerial product costing at the same time that auditor-oriented inventory costing developed was without consequence. Filling the vacuum left by the disappearance of managerial product costing, inventory costing became the only form of 'cost accounting' in manufacturing establishments."³

"Today's management accounting information, driven by the procedures and cycle of the organization's financial reporting system, is too late, too aggregated, and too distorted to be relevant for managers' planning and control decisions. With increased emphasis on meeting quarterly or annual earnings targets, internal accounting systems focus narrowly on producing a monthly earnings report."⁴

²Howell, Robert A. and Saucy, Stephen R.: "Cost Accounting in the New Manufacturing Environment," Management Accounting; August, 1987, p. 43.

³Johnson, H.T. & Kaplan, R.S., Relevance Lost; Harvard Business School Press, Massachusetts, 1987, p. 135.

⁴Johnson, H.T. & Kaplan, R.S., Relevance Lost; Harvard Business School Press, Massachusetts, 1987, p. 1.

These criticisms came as a surprise to the writers. It contradicted their practical experience with costing systems in the American Midwest and their familiarity with the academic aspects of the discipline. To check the validity of the criticisms we first reviewed some of the leading current cost accounting textbooks. We found that all textbooks, and especially the more advanced ones, underline that fact that financial and management accounting have totally different orientations.⁵

By reviewing older texts we found that this distinction in the information needs of management accounting and financial accounting goes back to Clark⁶ and other authors in the 1920's. Clark stressed the difference between the concept of "cost" in cost accounting and the concept of "cost" used in what he referred to as "general accounting." He argued that the different problems ask for different information:

"We have seen that cost accounting conceptions of cost do not agree with cost as used by the general accountant, and that they disagree because they are wanted for different purposes... Most of this controversy will disappear if we carry our study far enough to recognize that there are

⁵ For example, Horngren, Charles T. & Sunden, Gary L., Introduction to Management Accounting; Englewood Cliffs, New Jersey, 1987, p. 3-4.

Schillinglaw & Meyer, Accounting: A Management Approach; Irwin, Homewood, IL, 1986.

⁶ Clark, J. Maurice, Studies in the Economics of Overhead Costs; The University of Chicago Press, Chicago 1923.

different kinds of problems for which we need information about costs, and that the particular information we need differs from one problem to another."⁷

To check the allegation that cost accounting textbooks published from the '20s to the '60s emphasized cost determination for financial accounting, we reviewed some textbooks published in the U.S. during the period in question.

The Jordan and Harris text of 1922 goes to great length in stressing the difference between cost accounting and general accounting, especially the insufficiency of the latter.⁸ Later in their book they state the objects of cost accounting as follows:

- To enable the businessman to ascertain his manufacturing costs so that he may establish a selling price high enough to cover costs and to allow the desired profit.
- To eliminate the waste incident to production.
- To guide the businessman in deciding what products he should make.⁹

A cost accounting text by Schlatter published in 1927 devotes a whole chapter to the discussion of the "purposes and advantages

⁷ Clark, J. Maurice, Studies in the Economics of Overhead Costs; University of Chicago, 1923, p. 36.

⁸Jordan, J.P. and Harris, G.L., Cost Accounting, Principles and Practice; Ronald Press, 1922, p. 4.

⁹Jordan, J.P. and Harris, G.L., Cost Accounting, Principles and Practice; The Ronald Press, NY, 1922, p. 428.

of costs accounting."¹⁰ After expounding the idea that unit costs determined for general accounting are insufficient for managerial purposes, the author lists five "things" that a good cost system will accomplish. Only one deals with keeping track of inventory investment. Even here the author only stresses inventory control. The other four "things" deal with economy and efficiency, equipment utilization, and quality control. In Schlatter's 1939 book there is a discussion of price level accounting and the inclusion of imputed costs in the accounts. Neither book makes specific mention of producing numbers for financial statements.

Another text, published in 1933 by Charles Reitell,¹¹ stresses in its preface six aspects of cost accounting considered particularly important.

- (1) measuring and evaluating plant performance
- (2) control of overhead expenses
- (3) standard cost and budgets
- (4) managerial foremanship
- (5) distribution costs
- (6) cost reporting

Again we note an emphasis on managerial topics. At best, inventory costing is for financial accounting a by-product of this cost accounting text.

A text by Devine published in 1950 defines cost accounting as

¹⁰Schlatter, Charles F., Elementary Cost Accounting; Wiley, New York, 1927, p. 85.

¹¹Reitell, Charles, Cost Accounting, Principles and Methods; International Textbook Co., Scranton, 1933, p. 2.

follows: "...cost accounting, especially in manufacturing concerns, has become the servant of management and, except for a comparatively minor role in the determination of periodic income, now consists of those procedures and practices which were thought to be useful to management."¹²

In Nickerson's 1954 text we find the following statement: "Cost accounting provides the information which is useful for the following purposes:

- Profit determination and inventory valuation
- Inventory control
- Budgetary planning
- Cost control
- Cost reduction
- Pricing
- Cost determination in a variety of managerial problems involving alternate choice
- Effort control"¹³

Although income determination is mentioned first on the list, no reader would claim that the book was "driven by financial accounting."

We found only one textbook on cost accounting to which the charge of being "financially accounting driven" can be applied with justification. The text by Dohr defines the determination of cost

¹²Devine, C.T., Cost Accounting and Analysis; The MacMillan Co., New York, 1950, p. 4.

¹³Nickerson, C.B., Cost Accounting, McGraw-Hill, 1954, p. 1-2.

of goods manufactured and sold and the cost inventory as primary goals.¹⁴ But even he states that in addition to the "basic" purpose, cost accounting also serves the following objectives:

- The determination of accurate unit costs for pricing and evaluation of product lines.
- The improvement of factory administration through timely and adequate cost and financial reports.
- The reduction of cost and elimination of factory waste.
- The measurement of operating efficiency through the establishment of cost standards.
- The development of uniformity in the cost methods of various manufacturers in given industries.

From this we may conclude that if cost accounting practices has been driven by financial accounting requirements, it must have happened despite the concepts and suggestions advocated in the textbooks on cost accounting we reviewed.

Cost Allocation Methodologies

The following is a typical statement concerning the shortcomings of current practices with regard to product costing:

¹⁴Dohr, J.L., Cost Accounting Theory and Practice; The Toman Press Company, 1924, p. 48-49.

"Costs get distributed to products by simplistic measures, usually direct labor based, that do not represent the demands made by each product on the firm's resources."¹⁵

"However overhead cost were distributed to cost centers, virtually all companies, in a second allocation step, allocated cost center costs to products based on direct labor. That is, after all overhead costs were allocated to each cost center, the costs were then divided by the direct labor hours expected to be worked in the cost center during the next year -- based on a forecast of estimated production -- to derive a cost rate per direct labor hour. Typically, this fully burdened cost center labor rate was at least four times the actual direct labor rate paid to workers. In some highly automated cost centers, it was not unusual for the rate to be ten or even fifteen and twenty times the hourly labor rate."¹⁶

Berliner & Brimson stated that cost accounting treats costs of product and process development as period costs and make life cycle costing impossible:

".... The practice of treating product and process-development activities as period operating expenses should be altered;

¹⁵T. Johnson and R.S. Kaplan, "The Rise and Fall of Management Accounting.", *Management Accounting*; January, 1987, page 22.

¹⁶Johnson, H.T. and Kaplan, R.S., Relevance Lost; Harvard Business School Press, Massachusetts, 1987, p. 184.

that major activities should be viewed as capital investments and ultimately charged to products that benefit from these investments.

Life cycle costing is necessary to provide a better picture of long-term profitability; to show the effectiveness of life-cycle planning; to quantify the cost impact of alternatives chosen during the engineering design phase; and to assign the costs of technology to products that use the technology."¹⁷

Again, we reviewed some textbooks to check on the charge that cost accounting advocates simplistic allocation methods.

Here is an example of recommended allocation methods in textbooks:

" . . . Before the final selection of the basis for proration or application is determined, it is necessary to consider the nature of the indirect costs and their relationship to the possible basis. If the indirect costs to be prorated vary with the value of the material, such as insurance premiums on raw material, then the costs of the direct materials might be considered. If they vary with the size of the materials, such as material handling, then the units of material might be considered. If the indirect costs have a direct relationship to the payroll dollar, such as FICA tax and unemployment tax, then payroll dollars should be

¹⁷ Berliner, C. & Brimson, J.A., Cost Management for Today's Advanced Manufacturing; Harvard Business School Press, Boston, p. 140-141.

considered. If the indirect costs have a closer relationship with the time to make the product, such as depreciation, than with any other possible basis, then direct hours must be considered."¹⁸

Other authors also stress the importance of sound cost allocations. Schlatter writes, "The selection of the correct method of the distribution of costs is very important . . . Reliable cost of products are necessary as the foundation for correct manufacturing and selling policies; and reliable costs of functions are essential to the control of costs."¹⁹

George Staubus in his 1971 book on activity costing deserves credit for reemphasizing the importance of accurate costing and for restating ideas and concepts that are the basis of what today is called "activity costing."²⁰ We particularly recommend his discussion of ten principles of activity costing.²¹

We found authors greatly concerned with the determination of product cost in all the texts we reviewed. They often mentioned managerial uses, such as setting or evaluating selling prices, as

¹⁸Lawrence, W.B., Cost Accounting; Prentice Hall, 1954, p. 156.

¹⁹Schlatter, Charles F., Advanced Cost Accounting; John Wiley & Sons, U.S., 1939, p. 5.

²⁰Staubus, George J., Activity Costing and Input - Output Accounting; Irwin, IL, 1971.

²¹Staubus, George J., Activity Costing and Input - Output Accounting; Irwin, IL, 1971, pp. 138-44.

the purpose of product costing. We found no specific express reference to product costing for inventory valuation purposes.

The ideas on more accurate product costing for managerial purposes which have recently been re-popularized under the name of activity costing, have long been present in cost theory and writings on cost accounting, particularly in those of Church²² and Clark²³. Many of these ideas can be found in articles on costing in the bulletins in the National Association of Cost Accountants and in the textbooks of the '30s, '40s and '50s.

Nobody would claim that the allocation ideas and concepts in activity costing are new to anyone familiar with cost accounting. What is perhaps new is the increased interest of practitioners in more precise cost accounting. We think this is due to new information technologies and a changed competitive climate. Cooper²⁴ certainly should be complimented for the reawakening of interest in more precise product costing. In particular, his thoughts on the theoretical cost functions that determine the need for a new costing system are a contribution to management accounting thinking.

²² Church, Hamilton, Overhead Expense in relation to Costs, Sales and Profits; McGraw-Hill Book Company, Inc., New York, 1930.

²³ Clark, J. Maurice, Studies in the Economics of Overhead Costs; The University of Chicago Press, Chicago 1923.

²⁴ Cooper, Robin, "Cost Management Concepts and Principles," Journal of Cost Management; Summer 1988, Fall 1988, Winter 1989, Spring 1989.

With regard to the frequently heard call for product cycle costing²⁵ or long-term product costing we would like to point out that Shillinglaw advocated, many years ago, practically identical ideas under his concept of attributable costs.²⁶

Cost Accounting Practices

Cost accounting practices in industry are difficult to verify since no reliable survey data are available. The National Association of Cost Accountants (NACA), however, has encouraged its members to report on costing practices of their firm in their bi-monthly NACA Bulletin. We reviewed NACA Bulletin from 1920 to 1959 and found a number of such reports. Below we discuss some that we thought particularly relevant.

As shown by an article published in August, 1951 in the NACA Bulletin, W.H. Franklin describes an elaborate costing system that had been in use by the Caterpillar tractor company for many years.²⁷ For our purpose, this system is interesting for two reasons. First, it describes an indirect cost allocation based on

²⁵ See Berliner, C. & Brimson, J.A., Cost Management for Today's Advanced Manufacturing; Harvard Business School Press, Boston, p. 140-141.

²⁶ For a more detailed discussion of Shillinglaw's concept see Shillinglaw, Gordon, Cost Accounting, Analysis and Control; revised edition, Irwin, 1967, p. 715ff.

²⁷ Franklin, W.H., "Allocation of Overhead Costs - A Short Cut," NACA Bulletin; National Association of Cost Accountants, August, 1951.

two totally different burden pools: indirect cost related to labor and indirect cost related to machines. The machine pool was further divided into five separate categories. So we have one example of where a company goes to great lengths to come up with accurate product costs unrelated to financial accounting. This is proven by the fact that they were using replacement costs for arriving at burden rates and they stressed that product costs were never used for what the article refers to as bookkeeping (financial accounting) purposes. For bookkeeping purposes they used a simplified standard cost. Here is an example where a company clearly had a separate costing system for financial accounting and another system for managerial purposes.

Hatch, in reporting on forge cost accounting describes a costing system that develops predetermined overhead rates for thirty cost centers applied to products on a multitude of different bases. It should be noted that the system also allocated selling and administrative costs to products, hardly a practice driven by financial accounting.²⁸

H. Maynard describes the introduction of a standard cost system at the Gillette Razor Company. After stressing the advantages of the standard cost system for planning and control he gives a detailed description of the disposal of variances for financial accounting purposes. This example shows that in 1927,

²⁸ Hatch, Frank S., "Forge Shop Production - Cost Accounting," NACA Bulletin; National Association of Cost Accountants, January 15, 1928, pp. 541-42.

accountants were quite willing to modify their systems to make them more responsive to managerial needs.²⁹

A 1930 article by Grover³⁰ describes a system of product line costing that allocates not only manufacturing costs (on three different bases), but also distribution costs, permitting a realistic assessment of product line profitability.

A 1938 article by Reitel³¹ dealing with the use of standard costs in distributions costing shows that cost accountants concerns went far beyond the costing of inventories and cost of sales.

In a 1952 article, Charles Chambers³² describes the introduction of a variable standard costing system for a machinery manufacturing system. The new system was introduced because it provided better information in terms of profit by orders and product lines. The new system was introduced even though adjustments were now required for annual reporting and tax purposes. We cite this as yet another example where a company's cost system refused to be subordinated to financial reporting requirements.

²⁹Maynard, Henry W., "The Accounting Technique for Standard Costs," NACA Bulletin; National Association of Cost Accountants, February, 1927, p. 542.

³⁰Grover, Albert E., "Some Important Points in Burden Distribution," NACA Bulletin; National Association of Cost Accountants, September 1, 1930, p. 1653.

³¹Reitel, Charles, "Standard Cost in the Field of Distribution," NACA Bulletin; National Association of Cost Accountants, October 1, 1938, page 159- .

³²Chambers, Charles R., "A Conversion to Direct Cost," NACA Bulletin; National Association of Accountants, March, 1952, p. 791.

In 1953 the NACA published the results of a survey on "Product Costs for Pricing Purposes."³³ The study revealed that a cost for prices need to have the following characteristics:

- Costs should be stated in terms of product units.
- Manufacturing and non-manufacturing costs are equally important in pricing and both should be assigned to products to obtain a complete unit cost to make and sell.
- Current or anticipated costs are wanted for pricing because pricing decisions deal with sales to be made in the future. Historical costs and standard costs are significant only insofar as they provide a guide to current or future costs. When costs of material, labor, facilities and services change, costs previously recorded in the books may need to be restated in dollars having the same purchasing power as the dollars in which selling prices are being quoted.

The survey shows that at least some cost accountants in the 1950's were fully aware of the fact that routine historical cost information was not adequate for pricing purposes.

An article by Sapega advocates multiple indirect cost rates. He states, "Several different rates in a departmental basis are necessary if the indirect cost rates and their applications are to be accurate enough so that executives can rely upon the resulting

³³"Product Costs for Pricing Purposes," NACA Bulletin; National Association of Cost Accountants, August, 1953, p. 167.

figures in making decisions."³⁴

Raeder describes a multiple base burden allocation procedure in the Trencor Manufacturing Co. He views the product cost emerging from the new system as a valuable tool to assist in bidding for large scale low priced business, " . . . it will now be possible to obtain a much more accurate determination of profits by product line."³⁵

The articles we mention here show that at least some industrial accountants were concerned with sound costing practices. We have no evidence that others were not as concerned. It seems to us that companies using poor costing practices that consistently lead to dysfunctional decisions would not survive in a competitive economy. Recent reports in the literature seem to indicate that whenever dysfunctional decisions resulted or threatened to result, improvements in the costing systems were introduced.

In this context it is interesting to refer to a 1952 report published by the OEEC, "Cost Accounting and Productivity--the use and practice of cost accounting in the USA". The report was made by a group of European experts, who studied cost accounting practices in the U.S. under the auspices of the Marshall plan. The study-

³⁴Sapega, A.S., "More Managerial Accounting for Indirect Costs," NACA Bulletin; National Association of Accountants, September, 1951, p. 17.

³⁵Raeder, J. Richard, "Multiple Base-Burden Allocation in a Paint Company," NACA Bulletin; National Association of Accountants, September, 1952, p. 59.

group visited 75 leading U.S. corporations including companies such as IBM, General Motors and Monsanto. According to their report³⁶, the primary purpose of cost accounting in the United States is to assist management in the control of cost and to create and stimulate cost consciousness. The ascertainment of product unit cost, although not disregarded, is of secondary importance. They also report that some companies ascertain their product cost by use of an incomplete system, that is by a system that is not integrated with financial accounting. Many others, however, find a complete system reconciled with the financial accounts more suitable. The group reported widespread application of the standard cost for the control of operations. One major criticism concerned the absence of replacement costing, which they found surprising in view of the then prevailing inflation rate.

We mention this report because it does indicate that in the early 1950's European experts visiting 75 of the leading manufacturing companies in the U.S. came to the conclusion that the primary purpose of cost accounting is cost control. They make no reference to any dominance of costing by financial accounting.

³⁶"Cost Accounting and Productivity - the use and practice of cost accounting in the U.S.A.", report by a group of European experts; Organisation for European Economic Co-operation, Paris 1952, p.p. 30-33.

The Impact of Technological Change on Cost Accounting

The greatest environmental impact on cost accounting in recent years has come about through rapid advances in manufacturing technology and the adoption of a "just in time (JIT)" management philosophy. This adoption of a "just in time" philosophy brings with it a fundamental change in the way manufacturing processes are organized. In many organizations, this introduction of a new philosophy goes hand in hand with the introduction of high technology methods of manufacturing. Quite often these technological and organizational structures are of a very fundamental nature. It is said that the changes manufacturing has experienced over the preceding fifty years, from approximately 1920 to the early 1980's, were mainly of a marginal nature that did increase productivity but did not change the basic structure of manufacturing processes.

Traditional manufacturing was and still is characterized by a functional plant organization. Products are routed sometimes over very complex paths and the cost accounting system traces the products. If the system is labor-intensive, a lot of record keeping, labor reporting, move tickets, and various data collection points, is needed. Whenever a product moves in a plant, data needs to be collected. This is particularly true in so called "intermittent processing situations," less so in continuous processing operations.

In modern manufacturing situations employing high technology

(often referred to many times as Computer Integrated Manufacturing or CIM), products are grouped into product families and, more importantly, the factory floor is completely rearranged. The basic goal is to achieve a completely synchronized flow over the shortest possible distance. In this process, between process inventories are eliminated in process inventories, and materials movement and storage are minimized. Under the JIT system, the timely arrival of materials and parts at the line eliminates the need for storing large inventories. The cost of labor, especially direct labor, is drastically reduced in importance so that many companies do not even consider direct labor as a separate cost category any more. Vendors and suppliers under the JIT philosophy are no longer viewed as adversaries; in many cases they become partners of what is viewed as a value-line chain.

Receiving and shipping are no longer segregated from the production process. Receiving procedures are drastically simplified when vendors deliver products of an absolutely reliable quality.

With JIT, many characteristics of manufacturing will change drastically. The most important changes include significantly reduced inventory levels, significantly increased fixed cost of production, decreased variable costs (in many cases variable costs are limited to the costs of raw materials), and, for all practical purposes, an elimination of the direct/indirect product conversion cost designations.

Of course traditional cost accounting methods were designed

for a different kind of manufacturing. Many of the traditional systems still allocate indirect costs to products on the basis of labor hours or dollars. Earlier in our paper, we pointed out that many companies have used far more elaborate systems for many years. However, there is no doubt that many companies still use labor as a basis for allocating cost. Cost determination may also have many shortcomings. Even when we develop a more sophisticated allocation basis, say using three or four cost pools such as machine hours, material usage, and labor, the system may still produce unreliable costs if they are all incorrectly based on the same volume basis.³⁷

Some people claim that traditional costing systems encourage dysfunctional behavior because they motivate people to accumulate inventories by allocating period costs to products, thus preventing period costs from becoming charges on the income statement. Large accumulated finished goods inventories, even inventories that might have been accumulated because of management errors, thus impact upon the income statement only in a subsequent period. Some of the older systems also concentrate on measuring labor efficiency which of course becomes irrelevant in a high technology environment.

When this new technology is introduced it does not take very long for companies to find that their old cost system has become obsolete. In the new environment, completely new, many times on line measures, are needed for the control operations. The

³⁷ See Cooper, R., "Cost Management Concepts and Principles," *Journal of Cost Management*; U.S., summer, fall 1988 and winter, spring 1989.

traditional periodic cost reporting is no longer very useful. For these indirect conversion costs, which are mostly fixed in nature, effective controls must be instituted. These new costs now include engineering, other high technology costs, and increased maintenance costs. There will be very little use for cost allocations for control purposes.

There will be far less variance reporting. It will be important to identify and control those costs that do not add value to the product. Such costs include material handling, engineering change orders, wasted space, scrap, rework and waiting.

New important performance criteria need to be measured. They include set-up time, production to schedule, inventory levels, inventory turns and cycle times. One also needs performance measures for important and indirect functions such as engineering. Some of these may include:

- Lead time from a product's conception to the start of production.
- Percentage of products that meet target objectives after a given period of production, average number of engineering change notices in the initial period of production, average days to process an engineering change notice from request to production implementation, and so forth.
- Product copies will almost certainly be done outside the production cost control system. All the concepts referred to earlier on activity costing and life-cycle costing will be relevant in many situations.

Commentaries and Conclusions

That the so called "fall" of management accounting is due to the growing dominance of financial accounting sounds like a reasonable hypothesis. There is no question that financial accounting came into its own and became more important since the turn of the century. This increasing importance of financial accounting is not necessarily responsible for the so called "fall" of management accounting. The writers tend to agree with Professor Anthony, who in a recent article makes the following statement:

"A number of recent articles and books have criticized the current state of cost accounting. This literature puzzles me. In the first place, it doesn't seem to relate to cost accounting in general, but only to job order costing and only in a manufacturing environment. Within this limited domain part of the criticism is that some companies don't use up-to-date techniques. Such a criticism is and always will be valid. No improvement is universally adopted as soon as it becomes known. This is why consulting firms prosper."³⁸

Another quote by Anthony concerning the contention that most companies allocate overhead on the basis of direct labor.

"Aside from the fact that many companies should allocate overhead on this basis, there is no statistically satisfactory evidence as to how many companies (and in what industries)

³⁸Anthony, R.N., "Reminiscences About Management Accounting," Journal of Management Accounting Research; U.S., Fall 1989, p. 16.

actually do this. There is very little information on new techniques--those that were tried and worked, those that were tried and didn't work. Almost all of the information is anecdotal."³⁹

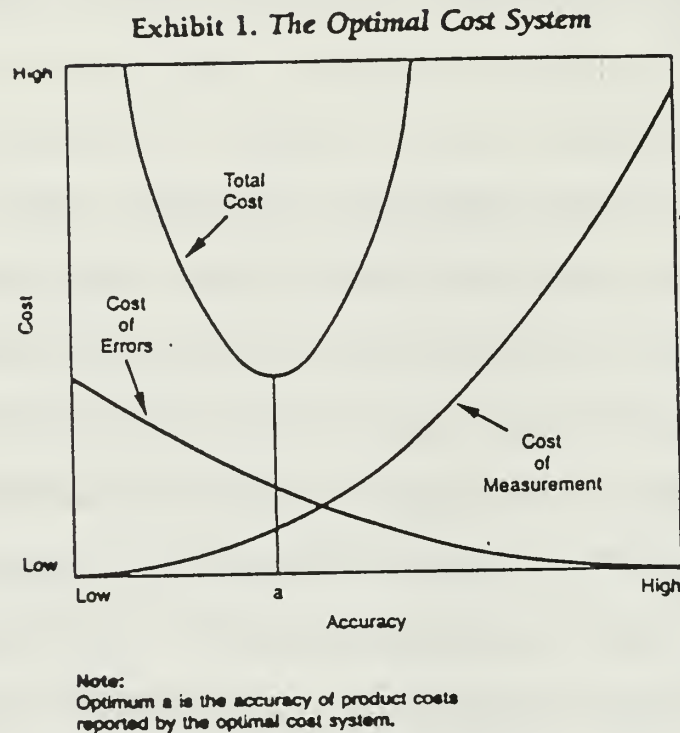
Lacking any strong empirical evidence, therefore, the Kaplan-Johnson hypothesis cannot be accepted as generally valid.

It is equally difficult to accept the hypothesis that the teaching of cost accounting was dominated by financial accounting needs and the needs of inventory costing for financial accounting purposes. Kaplan and Johnson agree that Church's and Clark's writings on cost accounting in the 1920's include practically all the concepts and techniques that are advocated today as guidelines for modern costing systems. The assumption that none of these ideas had been put into practice is hard to accept without any solid empirical evidence. A further contention is that these sound cost accounting concepts completely disappeared from management accounting textbooks also lacks solid proof as pointed out earlier.

To us, the more supportable hypothesis for the absence of sophisticated cost systems in many companies may be one that Kaplan and Johnson mention, but do not accept. It is that many companies did not consider the benefits of sophisticated cost systems sufficient to outweigh their additional cost. Cooper in his series of articles on activity costing makes an interesting observation.

³⁹Anthony, R.N., "Reminiscences About Management Accounting," Journal of Management Accounting Research; U.S., Fall 1989, p. 18.

He presents the following graphs concerning the costs and benefits of a cost system.⁴⁰



Even a brief review of these systems related cost functions shows that they are both extremely difficult to quantify. Indeed, lucky is the company that would start improving its cost system at precisely the right time. As pointed out by Cooper, both cost functions change over time. The declining opportunity cost function will change in the competitive climate. An increase in the competitive climate will make decision errors due to poor cost information more probable and more costly. On the other hand, the arrival of the computer has made measurement costs considerably cheaper so that the operation of a sophisticated cost system today

⁴⁰Cooper, R., "Cost Management Concepts and Principles," *Journal of Cost Management*: US, Fall, 1988, page 42.

is much less costly than it was even fifteen years ago. It is very likely that the change in both these functions, the increased opportunity cost of having poor cost information and the decreased cost of operating sophisticated cost systems, has changed or increased the demand for cost accounting. John Deere, which many view as one of the first companies to rediscover and publicize the so called activity based cost system, is a good example of a company that felt the need for a new cost system precisely because of a change in its competitive environment.⁴¹

Another example of how a system is adapted to changed conditions is in a report on accounting changes at Hewlett-Packard published in Management Accounting.⁴² Chalos and Tishlias describe in a case study how the costing system at a division of Borg-Warner was changed due to major technological changes.⁴³

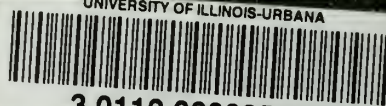
That systems change whenever there is a need for more accurate information seems to us a reasonable hypothesis. If companies have simplistic cost systems it may well be that there is either no need for a better system or that an existing need has not yet been recognized. In most cases systems will be improved before poor cost information leads to consistently poor decisions.

⁴¹John Deere, "Component Works," Harvard Business School Case; Series 9-187, p. 108.

⁴²Hunt, R., L. Garrett, and C.M. Merz, "Direct Labor Cost Not Always Relevant at H-P," Management Accounting; February, 1985, page 58.

⁴³Tishlias D. and P. Chalos, "Focus on Industry," Journal of Accountancy, November, 1986, p. 158.

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