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CONTENTS

Main Articles

Verification Procedures Used in Two Inventory Counts in New Spain, 1596-1597 — David Baron ................. 1

Accounting for Idle Capacity: Its Place in the Historical Cost Literature and Conjecture About Its Disappearance— Gloria Vollmers .................. 25


Warren W. Nissley: A Crusader for Collegiate Education — Elliott Slocum, Al Roberts .................. 89

Retrospective

A Tribute to Andy Barr — Gary Previts, Dale Flesher ....... 117

Hall of Fame

Citation for William W. Cooper — Thomas J. Burns ....... 127

Research and Practice in Contemporary Accounting — W. W. Cooper .................. 130

Review of Books and Other Publications

Review Essay: Biblioteca Storica di Ragioneria ed Economia Aziendale — Prof. A. Amaduzzi and Prof. G. Cavazzoni .......................... 137

Edwards, Editor, *Twentieth-Century Accounting Thinkers* — Maureen Berry .......................... 145

Mattessich, *Critique of Accounting: Examination of the Foundations and Normative Structure of an Applied Discipline*—Thomas N. Tyson ....................... 148


**Contents of Research Journals** .......................... 157
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viii
VERIFICATION PROCEDURES USED IN TWO INVENTORY COUNTS IN NEW SPAIN, 1596-1597

Abstract. This is a report on an examination of translated official documents from two inspections of the Oñate expedition conducted in 1596 and 1597 in New Spain—present-day Mexico. Its principal objective is to describe the purpose, the nature, and the quality of verification practices used in the Spanish-Americas at that time. The findings include: (1) verification of contract compliance was an established practice in sixteenth century New Spain, (2) the two inspections differed substantially in the care and thoroughness of the work done, and (3) generally, the practices showed rapid adoption of Spanish methods in the frontiers of its empire.

INTRODUCTION

Purpose of the Study

This article reports on a study of translated official records of two inspections—inventory counts—conducted in 1596 and 1597 in New Spain, present-day Mexico. The two separate inspections, known by the surnames of their chief inspectors, Ulloa and Salazar, were of the Oñate expedition prior to its departure on a long overland journey to establish a colony in present New Mexico.

The article has three main purposes. One purpose is to underscore the role of such inspections, or audits, in enforcing contract compliance in the Spanish legal system. A second purpose is to describe the verification procedures applied in the inspections, which serve as examples of established practices used in the Spanish colonies in the sixteenth century. A third purpose is to evaluate the relative quality of these particular inspections by comparing one with the other. Such a comparison is useful because the two separate inspections had identical objectives, took place only one year apart, were conducted in the same locale, and were directed at the same subject—Oñate.
Context of the Study

The motivation for the study was influenced by three factors. First, the groundwork laid in recent published works has shown the importance of, and increasing interest in, the study of Spanish accounting practices. Second is the scarcity of published work on accounting practices in the Spanish colonies. Third is Oñate himself, a controversial but historically important individual, the 400th anniversary of whose colonization efforts are to be observed in 1998.

Until recently, there have been relatively few published works in English on the history of Spanish accounting practices. An especially noteworthy contribution to this literature is the work of Mills [Fall, 1986; Spring, 1987]. Mills' explanation of the interplay between Spanish legal requirements and the functions of accounting, record keeping, and verification provided the contextual foundations for this study.

Hernández Esteve et al [1981, p. VII/2-1], quoting de Roover, reminds us of the importance of studying Spanish accounting history. “Because Spain had global power (in the sixteenth century), Spanish state and commercial accounting had wide influence in the Pacific, Africa and the Americas. This should prompt the study (of accounting) in each country Spain controlled” [Hernández Esteve et al, 1981, p. VII/1-2]. Nevertheless, little published work has dealt specifically with accounting practices in the Spanish colonies in the Americas.¹

For these reasons, this article describes and analyzes certain “auditing” procedures used in 1596 and 1597 during two different visitas, or inspections, of the Oñate expedition. These inspections are a small part of a much larger and more important story, the story of a man whose name is scarcely a household word—Don Juan de Oñate. As one historian put it

Known or not, Oñate's pioneering work set the stage for the development of vast sections of what is now the southwestern United States. In 1598, he led a formidable party of soldiers and settlers, wives and children, with wagons and livestock, on an epic trip from Mexico

¹Since accounting data represent historical artifacts, accounting records are often used as a source of information for professional historians who are not interested directly in the accounting practices themselves. For example, see Scholes's [1975] analysis of the Spanish royal treasury records for New Mexico, including references to other published works that demonstrate the historical research potential of ledger accounts.
to the upper reaches of the Rio Grande valley (in the vicinity of present-day Santa Fe), there to establish the first permanent European settlement west of the Mississippi. [Simmons, 1991, p. xiii]

The inspections of the Oñate expedition are examples of practices one can presume were widely employed in the Spanish colonies in the New World in the sixteenth century. An analysis of these practices will add to our general understanding of the Spanish influence on accounting and auditing in the Americas.

This research can also provide a starting point for other studies. For example, one could more directly link the practices described herein (1) back to European Spain as evidence of the importation of these practices into the New World, and (2) forward to practices used in those sections of the United States where Spanish influence remains strong today.

Sources

While the small but important general literature on Oñate was used in the research, the chief source and foundation for this study is the monumental work of George P. Hammond and Agapito Rey [1953] who collected, translated, and edited all available reports, letters, decrees, contracts and other official documents dealing with the New Mexico phase of Oñate's life. These translated documents, drawn from the voluminous records preserved in the Archives of the Indies in Seville, Spain, are rich in detail, representing verbatim records of the royal notary's reports on what was said and what was done at the time of the inspections. We are thus able to examine the "working papers" of an audit conducted almost 400 years ago.

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2 For a perspective on the importance of the Spanish colonial experience in United States history, see Udall [1987]. For a major interpretation of the scholarship tradition and current controversies within the historical community concerning Spanish influence and Southwest history, see Weber [1988]. Today Oñate remains an underappreciated and controversial figure. In New Mexico, where he would be best known, public recognition of his name and exploits are very limited.

3 For evidence that traces of the Spanish legal system remain in those sections of the United States under Spain's colonization influence, see Remacha [1994].

4 One of Oñate's own captains on the expedition, Gaspar Perez de Villagrá, wrote an epic poem of the Oñate expedition. See Villagrá [1933]. For a superb biography of Oñate, rich with detail and personal interpretation by a nationally recognized historian see Simmons [1991].
BACKGROUND AND EVENTS LEADING UP TO THE INSPECTIONS

In order to understand the objectives and scope of the Ulloa and Salazar inspections described below, it is necessary to review events in the colonies of New Spain prior to 1596. Spanish colonization of Mexico began in 1519 with the arrival of Hernán Cortés and expanded steadily northward from Mexico City over the next 50 years. Soon enormously rich silver deposits were discovered in Zacatecas, where Don Juan de Oñate was born in 1550 into a wealthy and ambitious family.\(^5\)

During this time, interest intensified in the lands to the far north, known as the Tierra Nueva (New Land), but, by Oñate’s time, usually referred to as “the new Mexico” [Kessell, 1987, p. 38]. This interest was fueled by several factors: (1) encouragement from the king of Spain, Phillip II, consistent with the mercantilist, expansionist policies of European powers, and as a defensive strategy, a buffer, to protect the vital silver trade routes, (2) tales of wealth in the north from previous expeditions like that of Coronado in 1540 and the four expeditions of Chamuscado, Espejo, de Sosa, and Bonilla between 1581 and 1593, (3) the drive to spread Christianity to the native peoples, and (4) the energy and adventuresome spirit of the rich and powerful families of New Spain, such as the Oñates.

In 1573, the king of Spain issued a set of Royal Orders on Colonization. Three provisions of this important document are relevant to the story at hand. First, there were to be no more freelancing expeditions of conquest. Expeditions to the north would now have to be authorized by the Crown. Second, expeditions were to be colonizing projects rather than mere explorations; that is, they were to be sufficient in size and makeup to establish permanent, self-sustaining settlements. Third, expeditions were to be entrepreneurial enterprises, requiring a private expedition leader and his principal associates to provide the private financing needed for a successful venture, under contract.

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\(^5\)Don Juan’s father, Cristóbal, was a founding partner in the rich Zacatecas silver mine, La Búfa. It is interesting to note that Cristóbal traveled from Spain at the age of 20 on a Spanish ship peopled largely by newly appointed royal treasury officials. Treasury officers of the Spanish empire had a lofty status and broad powers. Apparently this fact did not escape the notice of ambitious Cristóbal, for he was soon appointed an assistant to the accountant of the royal treasurer in Mexico City and later married the daughter of the royal factor or business manager of the royal treasury in New Spain [Simmons, 1991, p. 17].
Financial assistance from the Crown was to be limited to certain controlled military hardware, such as artillery and gunpowder, plus the financial means for the support of the missionary programs.

Over the next 20 years, there were a few small forays into New Mexico, some authorized and some not, but none were sufficient in scale and scope to meet the intent of the Colonization Laws. In the meantime, negotiations were taking place between Don Juan de Oñate and the king's chief representative in New Spain, Viceroy de Velasco, beginning perhaps as early as 1592 [Hammond and Rey, 1953, p. 5]. These negotiations culminated in the "Contract of Don Juan De Oñate for the Discovery and Conquest of New Mexico," signed on September 15, 1595.

Oñate's contract is an interesting document. It details not only the general terms and conditions of the expedition, but also Oñate's specific obligations. The section on Oñate's obligations specifies 23 categories of items he promises to provide for the expedition, such as the number of soldiers, the types of livestock, and the quantities of supplies, medicines, and equipment that he promises to supply.

From the Crown's point of view, Oñate's obligations under the contract were of vital importance. If Oñate fulfilled these obligations, the colonization project stood a good chance of success. If he did not, the project would likely fail, and the political and economic implications, not to speak of the impact on the royal treasury, might be serious. For this reason, Viceroy Velasco wrote the following on the contract:

Let his offer be accepted, provided there is written testimony that he has complied with it [Hammond and Rey, 1953, p. 46].

Here in this statement lies the principal motivation to conduct an inspection of the expedition—to determine if Oñate was indeed complying with his obligations and promises. In today's language, Oñate's compliance with the "list of representations" needed to be verified. In fact, two separate inspections were conducted—the Ulloa and the Salazar inspections.

AN OVERVIEW OF THE TWO INSPECTIONS

The Ulloa Inspection

After the contract was signed the newly appointed Viceroy Monterrey appointed Don Lope de Ulloa y Lemos (Ulloa) as
"inspector judge" to oversee the examination of Oñate's expedition. Little is known about Ulloa, other than that he was a member of Monterrey's inner circle, a soldier by profession, and a captain in the Viceregal Guard. He was to be well paid—eleven pesos per day for an indefinite period of time. The inspection team that was named in the reports included a royal notary (secretary and scribe), responsible for recording all that was done and said during the inspection, and three lesser officials, constables to enforce the inspector's instructions.

There were two phases to the Ulloa inspection. The first phase, in June 1596, referred to as "the appraisal," consisted of office paperwork in Mexico City. Because 12 of the 23 items listed in the Oñate contract were expressed in their promised money value (e.g., "I offer to take five hundred pesos in medicines."), it was necessary to determine the approximate value of items Oñate was most likely to take so that later the inspectors in the field could determine if a sufficient quantity was being taken. Two individuals were appointed to carry out this pricing—a contador, or accountant, to represent the Crown, and another person to represent the interests of Oñate. They did their work quickly, in four days producing a list of 125 prices, "adjusting the current prices (in Mexico City) to those Oñate would need to pay in the locations where he would need to purchase them." This price list was a basic working document used extensively in the field-counts that would follow.

The second phase of the Ulloa inspection took place in the field, approximately 700 miles north of Mexico city, where the actual inspecting, counting and recording were done. In his charge to the inspection team, Viceroy Monterrey said:

You will leave this city and examine what the governor (Oñate) and his people are taking, both in people and supplies. You will make an inventory and record of everything before a notary, recording everything in detail. You shall make whatever inspections and investigations you may think are necessary [Hammond and Rey, 1953, p. 96].

Although Ulloa left Mexico City in June 1596 to conduct the inspection, the counting and recording did not officially begin until six months later, in early December. After catching up with Oñate at Zacatecas, Ulloa traveled with the caravan as Oñate slowly worked his way north, recruiting volunteers and purchasing supplies along the way. Finally, the convoy halted and made
camp at Caxco, about 280 miles north of Zacatecas, where the inspection began on December 9, 1596.

The Ulloa inspection was spread over 71 days, the final count occurring on February 17, 1597. The counts took place in two general locations, Caxco, Oñate's main encampment, and at Santa Bárbara, approximately 85 miles north. Other smaller counts were scattered over nine locations in the general vicinity. Ulloa himself was present for only part of this time; on January 31, 1597, he returned to Mexico City to accept a new appointment as captain of the annual fleet about to set sail for the Phillipine Islands. A deputy was appointed to complete the inspection in his absence.

The inspection apparently went smoothly. Surpluses, over and above the amounts Oñate promised in his contract, were recorded for every item. For the money-valued items alone, a surplus was calculated of approximately 4,600 pesos, an excess of 60% above the 7,900 peso-valued items Oñate promised in his contract. The final report by the deputy inspector said:

I examined the contract and everything presented and did not find anything lacking. On the contrary, the governor had a surplus, as has been recorded [Hammond and Rey, 1953, p. 148].

Finally, it has been estimated from royal treasury records that the Ulloa inspection cost the Crown 4,865 pesos, all charged to the expenses of colonization [Scholes, Vol. L, No. 1, p. 9]. This is a significant amount, representing 13% of total Crown expenditures for colonization for the eighty year period, 1596-1683 (although "colonization expenses" accounted for only 2% of the total Crown expenditures for all purposes during that time) [Scholes, Vol. L, No. 2, p. 152].

The Salazar Inspection

While all of this was going on, consultations were taking place in Mexico City and at King Phillip II's court in Spain concerning the wisdom of authorizing Oñate to proceed with the expedition. This caution was due in part to bureaucratic politics, and in part to serious doubts about Oñate. As a result, Oñate still had not received authorization to proceed.

By the spring of 1597, the king was again in favor of the project and ordered Viceroy Monterrey to find out if Oñate still had everything necessary for the expedition. In Monterrey's reply to the king he said:
He (Oñate) replied with much assurance and confidence in his ability to make the expedition at once, and quickly. He spoke with such extreme earnestness that I found myself obliged to send a person there to conduct a review, inspection and inventory, even though he was under no obligation to submit to one for a second time [Hammond and Rey, 1953, p. 197].

Monterrey appointed Juan de Frías Salazar (Salazar) to head the second inspection. Here is Monterrey's explanation of his choice:

As the case demanded uprightness and integrity, I chose Juan de Frías Salazar, native, resident and mine operator at Pachuca. Being both rich and well along in years, he possesses the intelligence and qualifications which the case requires. Here he is considered a very reliable and dependable man, free from personal considerations and ambitions. I believe he will carry out this inspection properly, and this will determine whether or not Oñate should proceed with the expedition [Hammond and Rey, 1953, p. 198].

Salazar assembled a team similar to Ulloa's—a deputy, a royal notary, and several constables. All were paid slightly less than the members of the Ulloa team. Start of the inspection was delayed because Salazar insisted that Oñate move his entire expedition about 40 miles north of its encampment in Santa Bárbara to an isolated place on the San Gerónimo river, so that all might be assembled in one place. Beginning on December 22, 1597, and continuing rapidly over the next nineteen days, the counts were completed on January 9, 1598. All the counts but one were taken at the San Gerónimo location. Only the muster of soldiers was held about three miles north, in a church at Todos Santos.

Results of the Salazar inspection were quite different from Ulloa's, conducted one year earlier. Although there was no single final report, a tabulation of the inspections and counts shows there were deficiencies in 17 of the 23 categories of items that had been promised in the Oñate contract. The most serious shortage was in soldiers—a deficiency of 71 soldiers from the 200 promised. Estimates from royal treasury records place the cost of the Salazar inspection at 3,465 pesos [Scholes, Vol. L, No. 1, p. 9].

Although far short of his contract promises, Oñate was allowed to proceed with the expedition, but only after a wealthy
cousin signed a bond guaranteeing that the deficiencies uncovered by Salazar would be made good in a reinforcing expedition to follow as soon as possible. In March 1598, two years behind schedule, the colonizing expedition of Oñate moved out.

**Conjecture On the Differences in the Inventory Counts**

Although the objectives and scope of the two inspections were identical, their results were quite different—Ulloa reported a surplus of Oñate goods whereas Salazar reported a deficiency. What might explain the sizeable differences in the inventory counts taken one year apart? The explanation provided by historians, particularly Simmons [1991], is that attrition occurred because of the protracted delay in Oñate’s departure. The waiting and uncertainty caused many of the soldiers to depart—discipline eroded, the organization began to crumble, and deserters took with them supplies and equipment. Those who did remain would be forced to consume the expedition’s provisions. Oñate, in his self-serving letters to the viceroy and king, never missed an opportunity to make this argument.

While certainly some attrition would have occurred, why was Oñate unable to make up any losses in men and equipment? He seems to have had ample time to do so, from early spring to December 1597, when the second inspection began. He retained his important financial backers throughout, such as Juan Guerra de Resa, who posted bond for his deficiencies from the Salazar inspection. Also, he kept his inner circle of ten devoted captains, who surely had considerable skill in obtaining replacements and finding new provisions.

Competition from other enterprises in recruiting men and replenishing provisions might explain the decline in the inventory counts. For example, the Mixtón and Chichimeca Indian wars had been consuming Spanish energy and wealth since 1540 (Oñate himself had spent 20 years in these wars). On the other hand, by the time of the Oñate expedition these conflicts were winding down as a result of a major change in Spain’s military strategy in 1584 from “fire and blood” to “peace settlements” [Naylor and Polzer, p. 39].

Competition in recruiting men and supplies might also have come from two expeditions forming at the same time as Oñate’s—one to “the Californias” and one to the Phillipines (Ulloa, the Phillipine fleet’s leader, would have had the opportunity to entice some of Oñate’s men and would have had the
incentive to do so since the Phillipines was not a popular trip). But surely the charismatic and well-connected Oñate could have held his own in the face of such competition for men and materials.

An alternative explanation for the differences in the inventory counts is asserted in this article. It is contended that the first inspection by Ulloa was not well done. As a result the reported surpluses in men and provisions were most likely illusory. On the other hand, the second inspection by Salazar was relatively well done, and the shortages reported were most likely accurate. In support of this argument, the verification procedures applied in the separate Ulloa and Salazar inspections will be examined next.

THE ULLOA AND SALAZAR INSPECTIONS COMPARED

Analysis of the relative quality of the Ulloa and Salazar inspection is organized as follows: the independence and mental attitude of the chief inspectors, the overall approach and organization of the inspection, the willingness of the inspectors to accept testimonial and documentary evidence as substitutes for actual physical inspection and count, the independence of the counting-and-weighing teams, and the thoroughness, care, and attention to detail used throughout each inspection.

Independence and Mental Attitude

As with most endeavors, the "tone at the top" is critical in influencing the outcome of an audit. In this regard, there were interesting differences in the personalities, attitudes and apparent independence of Ulloa and Salazar.

Ulloa was apparently adept at carrying out whatever duties were assigned in a manner that pleased the viceroy. In his instructions, Monterrey directed Ulloa "to defer to Oñate's authority", and at the same time Monterrey "took pains to reassure Oñate that the inspection was a mere formality ordered as a matter of course to fulfill the letter of his contract" [Simmons, 1991, p. 71]. Surely, Ulloa would have approached his assignment with this firmly in mind. Furthermore, by this time Ulloa knew about the new appointment he was about to undertake—captain of the annual fleet preparing to sail for the Philippine Islands. This would likely have diverted much of his attention from his Oñate inspection duties.
Baron: Verification Procedures Used in Two Inventory Counts in New Spain

The relationship between Ulloa and Oñate was cordial throughout the inspection. When they first met “Oñate was wary, but the inspector went out of his way to be both courteous and accommodating, and displayed a friendliness toward Oñate and his endeavor” [Simmons, 1991, p. 71]. In a letter to the viceroy after the inspection had been completed, “Oñate praised Ulloa, saying that without his help the expedition might have fallen apart” [Simmons, 1991, p. 80].

Salazar’s attitude and personality presented a quite different picture. He was not a soldier, but an elderly mine operator—a businessman, likely to be familiar with the objectives and proper methods of inspections. As a businessman, he would have a natural skepticism in commercial dealings, an attitude that Ulloa lacked. He is characterized by Simmons [1991, p. 85] as “not as accommodating as his predecessor, for Salazar proved to be arrogant, pompous, willful, and petty.”

Whether Simmons’ characterization is accurate or not, Salazar’s behavior during the inspection did show that he was aloof, business-like, and apparently skeptical of Oñate’s motives and honesty. For whatever reason, he had a penchant for using threatening language in his written orders. Salazar’s relationship with Oñate was strained throughout the inspection. In fact, after his return from New Mexico a decade later, Oñate was convicted of 12 misdeeds while on the expedition, including “mocking and insulting Juan de Frías Salazar, the royal inspector of his forces” [Hammond & Rey, 1953, p. 35].

Although his adversarial approach to Oñate may have been excessive and unnecessary, Salazar came nearer to having the proper independent attitude expected of an auditor than did Ulloa. In any case, Salazar was fully supported by viceroy Monterrey. In a letter to the king at the completion of the inspection Monterrey wrote:

I sent Salazar because he is a disinterested person, without commitments to relatives that could be a hindrance in such an important matter. He proceeded satisfactorily, although Don Juan’s complaints have indeed been numerous, but I have concluded that the commissary (Salazar) was too liberal with him. Were we not so certain of Salazar’s integrity, honor, and impartiality, we might have considered him favorable to Don Juan. [Hammond and Rey, 1953, pp. 390-392].
Overall Approach and Organization

The two inspectors organized their work in different ways. Ulloa chose to travel along with the expedition on its slow four-month, four-hundred-mile journey northward, before stopping to conduct the inspection. The purpose of this delay is not clear, for during this time Oñate pleaded in four different letters to Ulloa and to Monterrey for the inspection to begin.

Once Ulloa’s inspection began, it took place in scattered locations spread over 71 calendar-days, during which only 13 work days were used to count and record the inventoried items. The counts took place at several locations—two main locations 80 miles apart, and seven minor locations on farms and warehouses in the general vicinity. Thus the Ulloa inspection appears to have been poorly organized, making it more difficult to control the authenticity of the counts.

Salazar, on the other hand, insisted that Oñate move his entire expedition away from the familiar confines of Santa Barbara, so that the inspection could be conducted in one isolated location about 40 miles north. At this location, everyone stopped and everything was counted during 12 work days spread over a 19 calendar days. On the whole, Salazar’s inspection appears to have been well organized and focused. This would have enhanced his ability to control the accuracy and authenticity of the counts.

Also suggestive of his orderliness and strong leadership, Salazar issued approximately 21 written instructions for the conduct of the counts. Many of these were “publicly proclaimed with a trumpet and crier” to make sure everyone got the message. In contrast, Ulloa issued only four written instructions for his counts.

Finally, from the notary records, it seems that Ulloa was often absent during an inspection or count—at least his name was not mentioned in the notary’s report. Furthermore, Ulloa left the field-work entirely and returned to Mexico City about halfway through his inspection in order to assume his new position.

In contrast, Salazar’s notary usually indicated that an inspection or count was held “in the presence of the commissary,” whose name was appended to the report. Thus Salazar appeared to be much more actively involved than Ulloa in supervising, carrying out, and signing off on all phases of the inventory procedures.
The Use of Testimonial and Documentary Evidence

As a general rule in verification work the auditors should personally examine and count the items, or should at least closely supervise others doing so. In the Oñate case, it was also important to establish Oñate's ownership of the items and his intent to take them on the expedition.

Ulloa's inspectors were frequently satisfied with merely the oral testimony of individuals vouching for the items recorded against the contract obligations. A count of instances from the notary's reports showed that Ulloa accepted testimonial evidence in lieu of examination from ten different individuals on 13 different occasions. Salazar, on the other hand, used testimony and documentary support as verification methods infrequently—one individual on four different occasions.

In many instances the carelessness of Ulloa was compounded by his acceptance of testimony from members of Oñate's own expedition—his inner circle of captains. In the notary's reports, the name of the individual vouching for items was included. The names of these individuals were checked against the lists of soldiers accompanying Oñate, and in almost every instance these individuals were captains of Oñate's expedition. A similar check of the Salazar documents showed only one individual providing unverified testimonial evidence, an individual not found on any of the soldiers' muster rolls. Some egregious examples from the inspection reports illustrate.

Ulloa's acceptance of unsubstantiated testimony from one individual, Diego de Zubía, appeared several times in the inspection reports. On one occasion, while inspecting wheat in a large granary at a local farm, Zubía swore under oath that a part of the wheat under view, 200 fanegas (about 300 bushels), belonged to Oñate and, presenting a bill of sale, he swore he had sold it to Oñate himself [Hammond and Rey, 1953, p. 142]. On another occasion, this same Zubía satisfied the inspectors that Oñate had met his requirements for supplying corn by swearing that he was storing it for Oñate at a different location. There was no evidence in the notary's report that this was verified by other means [Hammond and Rey, 1953, p. 144]. And in another place, a shortage of 45 unaccounted for "black cattle" was explained by this same Zubía, saying that Oñate had purchased the cattle from him, but "because of the present haste they had been unable to deliver them yet" [Hammond and Rey, 1953, p. 146].
It was discovered from other documents in Hammond and Rey [1953] that Diego de Zubía was a local government official, the alcalde mayor, chief administrative officer, of the province of Santa Bárbara. A check of the soldiers’ muster rolls reveals that Zubía was married to the daughter of Captain Francisco de Sosa Penalosa, an important member of Oñate’s officer corps. Furthermore, Zubía was later appointed to Oñate’s expedition as Purveyor General or supply officer. Thus, Zubía had a conflict of interest that would make his vouching for items a questionable practice.

Other instances of Ulloa’s readiness to accept the word of individuals with a conflict of interest are revealed in the inspection reports. For example, Oñate’s ownership of certain wheat was explained by a complicated debt and letter of credit arrangement between four parties, including a person living in Durango 225 miles away. The party guaranteeing the debt and supposedly purchasing the wheat for Oñate was Captain Juan Guerra de Resa of Oñate’s expedition [Hammond and Rey, 1953, p. 143]. De Resa, a cousin of Oñate and an important financial backer, was later to “make bond” for the shortages in Oñate’s contract promises discovered by Salazar. In a similar instance:

Oñate brought before the commissary ten bullhide bags. He said they contained ten quintals of mercury (a total of about sixty two pounds). He was asked to have it opened for examination, but replied that it would spoil, and it was not customary to open it except in his majesty’s warehouses. He swore it contained mercury, and the same declaration was made by witnesses Juan Pérez de Donís and Gregorio de Céssar (both captains on the list of soldiers) [Hammond and Rey, 1953, p. 147].

Salazar’s attitude toward testimony in lieu of his personal examination was quite different. On one occasion, a Pedro Sánchez de Chaves declared that he had sold Oñate eighteen fanegas of wheat but it had not yet been delivered. The wheat was not immediately recorded in the counts until it “was later delivered by Oñate in the presence of the notary” [Hammond and Rey, 1953, p. 215].

On another occasion, Salazar was skeptical even when receiving testimony from very important members of the Oñate expedition. While inspecting wine in barrels, a “Captain Villagrá (the same Villagrá who later wrote the famous epic poem of Oñate’s expedition), the one who had bought it, swore that each
barrel contained four arrobas of wine, which was affirmed by the expedition's contador (accountant), Alonso Sánchez. (Nevertheless) to make sure that it was wine, the commissary general ordered the barrels tapped” [Hammond and Rey, 1953, p. 218].

Independence of the Count Teams

Ulloa frequently used Oñate's soldiers to weigh, count or appraise the value of items rather than using his own independent inspection team. Twenty-one instances were noticed in the Ulloa inspection reports where 11 different Oñate soldiers were used to count items. It also appears their work was often unsupervised. Some examples illustrate this:

Gregorio Céssar and Francisco Gómez (both on the soldier lists) were appointed by Ulloa to sort and weigh and report on the iron in rods and plates and the iron tools [Hammond and Rey, 1953, p. 130].

Ulloa was informed that Francisco del Palacio and Hernán Vázquez Durán, soldiers in the expedition, had been merchants and dealers in such goods in the city of Mexico, and he ordered them to make the appraisal [Hammond and Rey, 1953, p. 134].

186 bags of wheat were examined and appraised under oath by Captains Juan Moreno de le Rua and Alonso Gómez Montesinos [Hammond and Rey, 1953, p. 141].

Captains Juan Ruiz and Cristóbal Sánchez where ordered by the commissary to appraise the worth of 226 head of cattle [Hammond and Rey, 1953, p. 145].

In contrast, Salazar used persons with a conflict of interest to conduct the counting in only two instances. On both occasions he was prudent and watchful. For example:

The commissary general inspected and listed cattle (presented) by contador Alonso Sánchez. In order that the inventory might be made with the detail that was desired, he appointed as inspectors Juan Sánchez de Ulloa and Bartolomé Delgado who (were instructed) to declare accurately the brands and markings of the cattle (Hammond and Rey, 1953, p. 224).

Establishing the tare at eight pounds per bag, the flour was weighed by Captain Gerónimo Márquez (one of Oñate's soldiers), in the presence of the commissary general, who helped with the weighing, and in my presence [Hammond and Rey, 1953, p. 223].
The Thoroughness and Care of the Inspections

In studying the notaries' reports other instances were noticed where Ulloa was careless, whereas Salazar showed thoroughness. Several examples will illustrate.

Counting of the soldiers. The most important promise included in Oñate's contract was his pledge to take at least 200 men. In verifying if Oñate was doing so, Ulloa's count of soldiers was carried out by a deputy, after Ulloa himself had returned to Mexico City. The count of soldiers was conducted piecemeal, at three different locations, as much as 80 miles apart, on three different dates, separated by one week and four weeks respectively. Records did not suggest any particular precautions were taken by Ulloa to minimize double counting, wrong identification of soldiers, or counting persons having no intention of going on the expedition. Ulloa oversaw what appears to have been a military parade, during which the notary recorded each individual's name and other pertinent information.

A count of the names of soldiers Ulloa listed shows that 204 individuals were accepted by the inspectors—more than Oñate promised. However, a closer examination of these names reveals that several are open to question. For example, 13 had titles suggesting other than soldiery duties, such as lord of the bedchamber, master of ceremonies, or chief waiter. One name was that of Don Juan's eight-year-old son, Cristóbal de Oñate. Five of the names were listed twice on the Ulloa records. Another 11 persons counted on the lists were absent from the review, but a stand-in was substituted and accepted by Ulloa, viz. "Captain Don Antonio De las Cadena appeared for Miguel de Villacicos, he said was absent with permission of the governor" [Hammond and Rey, 1953, p. 160].

Salazar's count of the soldiers was much more thorough. First of all, it was held at only two locations only three miles apart, and divided into two phases. The first phase, the Declaration of the Soldiers, was designed to inventory their equipment and personal belongings. It was held at the main encampment day-in and day-out, between December 7, 1597 and January 6, 1598. Each officer and soldier presented himself to Salazar, along with everything that was being taken on the expedition. The notary recorded each soldier's name, title, goods, and oath of honesty. The recorded information was then signed by the soldier if he was able to write his name.

The second phase, called the Muster Roll of Soldiers, took
place immediately afterwards on January 8, 1597, in a church building, three miles north of the main camp. Here “Salazar held the review and drew up a list of the people Oñate presented” [Hammond and Rey, 1953, p. 289]. For each soldier, the notary recorded his name, title, native city, father’s name, and a brief description of the individual, presumably so he could not be counted more than once. This detailed description included the soldier’s age, body type (e.g., “well built,” “small of stature”), the soldier’s facial hair (e.g., “smooth-skinned,” “red bearded”), and any distinguishing facial marks (e.g., “a scar on his forehead,” “a wart on the right cheek,” “upper teeth broken”) [Hammond and Rey, 1953, pp. 289-300].

Salazar, unlike Ulloa, considered the possibility that some of the persons Oñate had passing in review had no intention of going on the expedition. To guard against this possibility, Salazar issued two strongly worded decrees ordering that anyone counted “must not turn back but must go on the expedition, under penalty of death” [Hammond and Rey, 1953, p. 305].

Salazar’s counts of soldiers were considerably lower than Ulloa’s. Salazar recorded a total of 129 soldiers, a shortage of 71 from the promised 200. Approximately 68 of the original names on the Ulloa lists were also on the Salazar lists. Salazar did not include the servants, Don Juan’s son, or the other questionable names discussed previously.

Other examples of the degree of thoroughness. Additional examples of differences in the care used by Ulloa and Salazar include their willingness to accept substitutes for items promised in Oñate’s contract and their concern for quality as well as quantity of the items counted.

Oñate’s contract called for 500 pesos in jerked beef. During the Ulloa inspection, dried beef, as such, was never presented to the inspectors. Rather, Oñate requested that live “meat on the hoof” be substituted, because “for many reasons it would be more practical and less cumbersome.” Ulloa agreed to this substitution, and “after consultation with some captains, soldiers, and other persons, he allowed substitution of 226 head of cattle...
for the 500 pesos of jerked beef” [Hammond and Rey, 1953, p. 145].

Salazar’s response to the same request one year later was quite different, as evidenced by the notary's report on what happened on January 2, 1598:

The governor stated that he had no jerked beef but that he wished to replace this item by some of the livestock as he thought it would be more desirable. The commis­sary general answered that jerked beef was a better form of food, since it could be transported more easily, whereas livestock could be taken only where it could go on foot, with much labor. (Besides), the governor was under obligation to provide 500 pesos' worth of jerked beef (not cattle) [Hammond and Rey, 1953, p. 223].

On substitutions for medicines, during the Ulloa inspection Oñate was short of his promise to provide 150 pesos worth of certain medicines, so “the governor asked the inspector if he could substitute oil, wine, sugar, syringes, and lancets for the shortage, since these things were necessary to cure the sick.” Ulloa agreed and included these substitutes in the counts [Hammond and Rey, p. 133].

This same request was handled differently by Salazar, who did not allow substitutions for the promised medicines. The oil and wine were counted, and their estimated value noted, but the notary indicated that “they were not listed in the contract,” and Oñate was not given credit for taking them [Hammond and Rey, 1953, p. 218].

The only instance noted where Salazar permitted substitu­tion was referred to in the notary's report as “the greta dispute” [Hammond and Rey, 1953, p. 306]. During the examination, Salazar agreed to allow Oñate to substitute greta, a very hard clay, in place of lead for ammunition he was to provide. Ironi­cally, while on his return trip to Mexico City after the inspec­tion, Salazar came upon persons transporting a cart of greta. When questioned, they explained that it belonged to Oñate, and by his order, they were taking it to Pedro de la Cruz, to whom he had sold it. This seemed to confirm Salazar's suspicions that Oñate would present items for inspection and recording against his obligations, but then fail to take them on the expedition. Salazar made a thorough report of this incident to the viceroy upon his return [Hammond and Rey, 1953, p. 307].

The two inspections also differed in giving consideration to the quality of the items counted. In the Ulloa inspection, the
quality issue never seemed to arise; there was never any mention of it, directly or indirectly. Salazar, on the other hand, seemed always conscious of its importance. Two examples demonstrate this point.

On one occasion, Oñate's declaration of 119 military horses was reduced to 81 by Salazar because

They were not considered army horses, for, among all of them, there was not a single one that looked like it, according to the commissary general, and a mere glance showed that they were old nags [Hammond and Rey, 1953, p. 228].

At another time, while counting cattle to be taken, Oñate declared 1,215 head, including 500 calves from four to ten months old that he said should be counted, but Salazar would not allow it. [Hammond and Rey, 1953, p. 224].

In summary, all these examples illustrate important differences in the thoroughness and care exercised in the two inventory counts. The deficiency in Oñate's contract-promises reported in the second inspection is more likely the result of Salazar's greater diligence than of the "attrition" explanation usually provided in historical works.⁷

OBSERVATIONS ON ACCOUNTING-RELATED PRACTICES IN NEW SPAIN

The records of the Oñate inspections provide evidence of the verification and recordkeeping practices used in sixteenth century New Spain. The historical interpretations of accounting practices in European Spain by Mills [1986; 1987] are especially useful for understanding sixteenth century accounting practices in New Spain. Mills draws from several legal treatises or text-

⁷An anonymous reviewer suggested the Salazar inspection was exhaustive because Ulloa's was so slipshod. There is some evidence to support this contention. Newly appointed Viceroy Monterrey had just arrived in New Spain at the time Oñate's contract was signed by the previous viceroy—Velasco. Hammond and Rey characterize Monterrey's early approach to his viceregal duties as "cautious" [1953, p. 9]. Since viceroy Velasco and the King supported Oñate at that time, Monterrey would be inclined to appoint an inspector friendly to Oñate, i.e., Ulloa. Subsequently, however, doubts about Oñate, coupled with political intrigue, began to surface in the courts of both the viceroy and the king in early 1596, leading to a suspension of Oñate's authority to proceed with the expedition. In 1597, when the authorization was again granted to Oñate, Viceroy Monterrey chose a hard-boiled individual in Salazar to conduct the second inspection. As Hammond and Rey expressed it, "Perhaps the Count would not be sorry if Oñate still should fail" [1953, p. 14].
books written in sixteenth century Spain, notably that by Del Castillo written in 1522, rather than from actual business or legal documents produced by practitioners. Evidence from the Oñate inspections, representing documents prepared by practitioners in the rough and tumble frontiers of the Spanish empire, generally confirms Mills' interpretations.

For example, Mills describes the profound influence of Spanish law and contracts on the stewardship functions of accounting (record keeping) and its close relative, auditing (verification). This close linkage was evident in the Oñate contract and the consequent inspections. From this story, it is clear that contadores (accountants) and inspectors (auditors) played a key role in the administration of public and private affairs in New Spain.

It is not clear from just the Oñate records whether the inspections were required "by law or by contract" [Mills, 1990]. A requirement for an inspection was not stipulated in the Oñate contract itself, nor in its accompanying annotations, modifications and instructions supplied by viceroys Velasco and Monterrey. However, there is evidence suggesting its absence in the contract might have been an oversight. In Viceroy Monterrey's letter to the king on April 17, 1596, he said:

I do not know whether this inspection can be carried out without giving Don Juan reasons to complain because the contract made with him was less demanding in these matters than is usual (Emphasis added) [Hammond and Rey, 1953, p. 88].

That same letter to the king contains the suggestion that inspections are required by law.

I am searching for a person ... to hold a review ... as prescribed. (Emphasis added) [Hammond and Rey, 1953, p. 88].

From whatever cause, inspections were apparently well established and a normal part of the administrative fabric of New Spain, as shown by the following description of Viceroy Monterrey's decision to appoint Ulloa.

I proposed, at a financial meeting of the audiencia (court cabinet) to hold an inspection of the entire expedition, as was done in the case of the people going to the Californias. ... authorized and attested copies of the inventory will be sent to His Majesty and the Council of the Indies [Hammond and Rey, 1953, p. 95].
It also seems clear from the importance given to the written Oñate contract, and in the care exercised in the notaries' reports, that Mills' observation that "the transition from oral to written business procedures" in Spain had been made "by the sixteenth century" is accurate [Mills, 1987, p. 100]. The extensive reports and recordings prepared during the two inspections show with little doubt that "the written instrument commanded wide respect in the Castilian legal system" [Mills, 1987, p. 100].

Mills also observes that in Spain the oath was an important juridical device [1987, p. 101-102]. In the Oñate inspections, the notary frequently recorded that a person "took their oath in due legal manner." For example, in the Ulloa inspection 27 instances of oaths were recorded—24 single oaths, two accompanied by named but unsworn witnesses, and one instance with compurgators These included frequent references to divine authority, as Mills indicated was the practice in Spain.

In European Spain, the use of public notaries provided a high degree of probative capacity to recorded business transactions [Mills, 1987, p. 105]. In the Oñate inspections, the appointment and use of a royal notary was a very important part of the inspection procedures. All counts and reports were attended, recorded and signed by a royal notary.

Recording Procedures Used in the Inspections

Given the nature of the engagements, the recording procedures used in the inspections were essentially scribal, where the notary wrote down what was done, what was said, and what was counted during the inspection. The proper method for recording business transactions recommended by Del Castillo in his 1522 treatise was found throughout the two inspections [Mills, 1986, p. 70]. Adapting Del Castillo's prescription to the recording of inventory counts, this included the date of the count, the amount of goods inspected, the names of the parties involved (those presenting the goods and those inspecting), the place or location of the count, and any other details to lend credence to the records. Each recording included a listing of the results of the counting/weighing procedures, usually in relation to what Oñate had promised in his contract, a copy of which must have been on hand in the field. For example, the following is a typical notation from the Ulloa records for footgear expressed in money-value.
The Accounting Historians Journal, June 1996

The governor offered to take 500 pesos' worth. The amounts from these six entries total 589 pesos and 7 tomines. There is thus a surplus of 89 pesos and 7 tomines [Hammond and Rey, 1953, p. 132].

In the Ulloa records, the “priced items” were apparently recorded in columns, but the columns themselves were not shown. It appears that these columns could then be totaled. The following are three examples of references to columns:

So of the 600 pesos that the governor promised to take in iron to make into goods, he had a surplus of 52 1/2 pesos; this sum was entered in the margin opposite the column of his offer of 600 pesos [Hammond and Rey, 1953, p. 130].

This he takes as surplus, since he did not contract to take any steel, so it must be entered in the surplus column [Hammond and Rey, 1953, p. 132].

He is taking a surplus of 96 pesos, 2 tomines, 3 grains. Each sum is entered in the appropriate column [Hammond and Rey, 1953, p. 141]

When recording the unpriced items, items measured in units only, columns were not used for entering the counts. No evidence was found of any double-entry recording or double-entry logic in what was essentially a register and listing procedure.

Although questions have been raised in previous sections of this article about the accuracy of Ulloa’s counts, no errors were discovered in the formal recordings of the notaries. In other words, while Ulloa may have been careless in his conduct of the inspections, the notaries’ recordings of what they were told to record appeared to be well done throughout. After examining many pages of recorded counts of supplies, equipment, livestock, soldiers, and the like, no arithmetic errors or careless entries were noticed. Indeed, three instances were noticed where the notary corrected himself after a notation mistake, viz. “a shortage of six arrobas and ten pounds—I mean five arrobas and ten pounds” [Hammond and Rey, p.217].

CONCLUDING REMARKS

This article reports on a study of the translated official records of two inspections or inventory counts, conducted in 1596 and 1597, of the Oñate expedition before it left Mexico City to establish a colony in present-day New Mexico. The study had
three purposes: (1) to underscore the role of such inspections in the Spanish legal system, (2) to describe the practices used by the inspectors in the Spanish colonies in the sixteenth century, and (3) to compare and contrast the methods used in two different inspections of Oñate, in order to assess their respective quality.

A number of findings are reported.

1. Great importance was accorded by all parties to Oñate's obligations contained in a written contract. As a consequence, the authorities commissioned two lengthy and expensive inspections to determine whether he had complied with his promises. This evidence supports Mills' [1987] contention that, in preindustrial Spanish society, legal and contractual requirements were influential in determining the need for and the form of accounting and accounting-related practices. This observation can now be extended to practices in northern regions of the Spanish empire in the Americas.

2. The inspection and recording procedures performed in an isolated frontier of the Spanish empire in the sixteenth century, within 50 years of its initial European discovery, are, taken as a whole, of reasonably high quality, and are evidence of a moderately rapid transfer of such technologies from Spain to its colonies.

3. Substantive differences were found between the two inspections in their organization, the independence of the inspectors, the types of evidence each judged to be appropriate, and the degree of thoroughness and care exercised. These differences reflect the nature of verification work in any age, where the methods used are driven as much or more by the attitudes and decisions made by the verifiers as by any notion of a set of accepted practices.

4. The record keeping procedures used in the inspections were largely narrative. There was some evidence of using a columnar format for recording money-valued items, but no evidence was found of any double-entry thinking in the recorded counts.

5. Differences in the quality of the two inspections—one judged to be of high quality, the other less so—raise historical questions about (1) Oñate's readiness for the expedition at any time, and (2) previous explanations for his contract shortfalls in men and materials. Such ques-
tions go beyond the technical accounting issues of record keeping and verification.

Finally, there are two additional results from this study. It should encourage others to study the history of Spanish accounting and related practices in its colonies. Since Spain at that time was the preeminent world power, its influence on accounting and business practices in the new world would have been substantial. Also, the study shows how technical accounting practices, such as verification procedures, can shed light on historically important individuals and events like the Oñate expedition.

LIST OF REFERENCES

Hammond, George P. and Rey, Agapito, Don Juan de Oñate: Colonizer of New Mexico 1595-1628, Published as Volumes 5 and 6 of the Coronado Historical Series, Albuquerque: University of New Mexico Press (1953).


ACCOUNTING FOR IDLE CAPACITY: ITS PLACE IN THE HISTORICAL COST LITERATURE AND CONJECTURE ABOUT ITS DISAPPEARANCE

Abstract: How best to provide management with useful information about the underutilization of factory and machinery are old cost accounting questions. The literature from the turn of the century up through the 1950s reveals that the topic interested many. This paper resurrects those historical discussions. The objective is twofold, to demonstrate the sophistication and innovation of early writers emphasizing why they thought the topic important, and, to explore some theories about why this interest dissipated within the accounting literature. The possibilities include the effect of the great depression, wartime regulations, the withdrawal of the industrial engineer from costing and the growing importance of income measurement. This research ends in the 1960s, by which time idle capacity as an independent topic has largely disappeared.

Accounting for and providing management with information about idle time and idle capacity was a subject that occupied cost accountants primarily in the first half of this century. Garner's (1976) review of the literature from 1900 to 1925 showed that the topic appeared frequently and regularly. The economist, J.M. Clark, thought understanding and controlling capacity to be of such importance that he made it the central theme of his landmark 1923 book, *The Economics of Overhead Costs*. While some of Clark's topics, such as his exploration of differential analysis, remains in modern texts, his particular interest in the isolation and interpretation of idle capacity disappeared. Many authors of cost textbooks before 1950 gave substantial space to the problem of idle capacity, but its coverage declined and it has only been in recent years that capacity issues have reappeared in the cost literature.

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1 The subject of idle time includes the idle time of labor, the idle time of specific machines and the idle time of the factory, more commonly called idle capacity. In the literature and in this paper, the terms are used interchangeably.
Of the idle time of labor, of machinery and of the factory, the latter two dominate the literature. Writers in the cost literature from 1900 to 1960 seldom address the topic of idle labor. Garner’s (1976) work shows only the technical, that is, the bookkeeping, aspect of labor accounting. There are no later articles illustrating how accounting measurements might be used to provide information for management control purposes (examples of the technical type include: Brown 1927, Peden 1934, Totten 1941). Managers undoubtedly observed and controlled labor outside of or tangentially to the accounting system. The consistency with which the literature treats labor as a pure variable cost suggests that it was either easily managed or was subject to other controls. For these reasons, labor issues will not be covered here.

This paper resurrects historical discussions of idle capacity. The objective is twofold, first to demonstrate the sophistication and innovation of early writers emphasizing why they thought the topic important, and second to explore some theories about why this interest dissipated within the accounting literature. This research ends in the 1960s, by which time idle capacity as an independent topic has largely disappeared.

This paper is divided into five sections. The first describes broadly why idle capacity was important to early cost accountants and, briefly, why it lost its importance. The second reviews a variety of writings on the subject from 1900 through 1960. The third presents evidence of the disappearance of the subject from the literature. The fourth examines reasons why the subject disappeared. The fifth is the conclusion.

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2Labor variances are found throughout the literature. However, these presentations are not accompanied by lengthy discussions about the importance of the issue beyond the technical aspects of accounting.

3A few writers suggest situations where some labor costs might be recorded as fixed rather than variable (Alden 1924). One instance would be when highly skilled workers are retained despite lack of work in order to preserve their skills for the firm. The other possibility is to record as fixed, the wages of the minimum personnel needed to operate.

4The few references to idle labor in the cost literature treat it casually by remarking that “labor can be discharged or put on fewer hours when output declines” (Dohr, Inghram and Love 1935). Fiske (1931, 355) said that “losses arising from idle labor are less significant than those arising from idle plant since in most cases labor costs are at least partially controllable through layoff.”
INTRODUCTION

The cost literature contains many references to and articles about factory and machine capacity through the 1950s. While overhead in general was always the literature's dominant topic, the particular interest in idle capacity was a consequence of substantial investments in plant and machinery and the influence of the industrial engineer. The early decades of the century were ones in which the engineer and the cost accountant focused on the productive or operational efficiency of the plant.

The beginning of the century witnessed an explosion of machinery in manufacturing and a fascination on the part of society as a whole with science, efficiency and standardization (Chase, 1929a & b; Boorstin, 1973). Accompanying the heavy capital investments in plant and machinery was a rise in mass production techniques best symbolized by Henry Ford's automotive operations (Garner, 1976).5

Mass production was both a result of the capabilities of machines and a reaction to them. "The large investment in the machinery and equipment of an industrial plant necessitates getting the utmost use out of this equipment. Proper planning . . . and regulation . . . constitute one of the greatest problems in industrial management" (Jordan and Harris, 1920, p. 402). "After all, the measurement of a business is not its capitalization or the magnitude of its physical equipment, but the net return on the capital employed" (Peden, 1924, p. 121). Large capital investments seemed to mandate mass production and a drive to make that production efficient.

To meet the needs of this newly developing industrial society, a new kind of engineer evolved. Mechanical engineers began to discuss efficiency at the end of the 19th century — how to measure it and how to increase it. Interested in the efficiency of the production process and the maximization of the output of both people and machines, these engineers were the genesis of what was later called the Scientific Management movement.6

5See particularly extensive quotes by Alfred Sloan regarding the necessity of mass production at Ford Motor and Hyatt Roller Bearing Company in Garner (1976, 210-212).

6The term, Scientific Management, was coined by Louis Brandeis who popularized it when he testified in 1910 against the request for rate increases by the eastern railroads in front of the Interstate Commerce Commission. He claimed (having read Frederick Taylor's works) that the railroads were poorly managed and that if they were more scientifically managed they would profit more than by increasing their rates (Boorstin 1974).
Their descendants are today’s industrial engineers. Their interest in efficient production processes linked up early with cost accounting. It is from their work that time studies, standardization and wage incentive plans derived—all methods employed to increase efficiency. Many of them contributed heavily to the cost literature.

The depressions of 1920-1921 and the 1930s brought into stark relief the devastation of deep undercapacity usage. Factory and machinery were large investments that could not be laid off or ignored. Under these conditions, thoughtful accountants and engineers warned that failure to understand and communicate the implications of undercapacity usage would lead to dysfunctional decisions.

In a period of declining output the manufacturer is likely to conclude that selling prices must be increased in order to cover the increased costs whereas an increase in selling prices leads only to further decline in demand and in output (Dohr et al., 422, p. 1935).

In later decades, although references to capacity and efficiency issues appear periodically in the literature, there was a clear decline. One reason for this was a shift in emphasis from the production function to the sales function. It became more important to anticipate sales and plan production to meet sales requirements than it was to measure whether machinery was producing as efficiently as possible. Identifying the reasons for this shift is one of the purposes of this work. Major upheavals in the economy, the great depression and World War II, certainly contributed. Another appears to have been the emergence of income measurement, dominated by financial accounting’s matching principle. The matching principle helped to move the definition of efficiency away from the capacity of factory and machine to how closely production could be tied to sales. The cost accounting system was no longer used to identify the underutilization of facilities.

ACCOUNTING FOR IDLE TIME

Operational Efficiency

Early in the century, Alexander H. Church (1901), an engineer, published a series of articles describing a method of accounting for factory overhead costs. His influential but controversial ideas included isolating the cost of idle machinery.
Although others also tackled the idle time problem, his work is particularly memorable. His contemporaries cited, argued about and praised his prolific writings for three decades and his work is still remembered.\

Critical of the common practice of applying overhead using a single, factory-wide rate, he insisted that multiple rates were needed in order to generate useful information. He proposed that the factory be divided into 'tiny shops'—small work areas or work benches—departments usually composed of a single machine operated by one man. Overhead costs were to be carefully apportioned among these tiny shops and then applied to products using a machine hour rate calculated for each individual shop.

In the denominator of the application rate was the normal number of hours the machine should be used. 'Normal' hours were those during which the machine could operate less an allowance for usual downtime such as repairs. If the machine were idle, the overhead for those hours would be entered into an idle time account. Church (1901) said that the sum of the dollars spent to maintain capacity was analogous to water dripping—dripping from as many faucets as there were tiny shops. Either the water dripped into a job or it dripped into a pool of waste. Fixed costs, already sunk into the factory, could only be recovered through useful production. Idle time, therefore, was money lost and its segregation would show management just how expensive operational inefficiency was.

Church was not alone in his concerns. Gantt (1917, 370), another engineer, wrote that "the expense of maintaining machinery in idleness is far greater than most people realize . . . and all who wish to operate efficiently will begin at once to see how it may be minimized." Harrison (1919, 443), a cost accountant, in a critique of contemporary cost accounting wrote:

Cost systems do not show the cost of non-production but ingeniously saddle the machine which works with the cost of the machine which is idle . . . (T)he merging of the cost of idleness with the cost of production absolutely kills the value of cost statements considered as indices of operating efficiency.

\[7\]Richard Vangermeersch's work on Alexander Church, engineer and accountant, is important to those interested in the development of cost accounting in the first third of this century—see bibliography.
He predicted that engineers would take over cost accounting unless cost accountants improved their information producing capabilities. Engineers and accountants in the literature agreed that managing facilities in order to maximize the productive output of machines was of prime importance. The question was how the cost system could highlight areas of inefficiency. Although the answer did not always come exclusively from formal accounting records, the primary source of information was over- or underapplied overhead as measured in each department. However, this measured efficiency only if the denominator volume of the overhead rate calculation was carefully calculated.

**Normal Capacity**

To separate productive hours from idle hours most authors, including Church (1901) and Jordan and Harris (1920), used 'normal capacity.' The term itself, 'normal capacity,' was not applied universally so a reader must read texts closely to discover how each author defined the denominator volume. Nevertheless, most described a production-linked denominator which was commonly called 'normal capacity.' Normal capacity was the number of hours machinery should be operating (usually reduced by an allowance for average downtime). It was to remain stable over a period of years so that costs could be meaningfully compared over time. (Normal could also be applied to labor hours if machine rates were not used.)

The 1921 NACA-Yearbook contains the papers and discussions of a conference devoted largely to the subject of overhead distribution under abnormal conditions (the 1920-21 depression). The participants discussed terminology at some length.

What is a normal overhead rate? Is a rate which during a period of normal production and normal expense will absorb all the overhead expense of that period...The most difficult thing to determine will be the normal volume of production. Normal production does not mean possible production (Williams, 1921, p. 203).

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8The literature implies that most companies did want to use a predetermined overhead rate as opposed to waiting until the end of the year to gather actual overhead costs and apply them at that point. No doubt some companies did wait for actual costs but the literature reflects a clear preference for anticipated costs.
One essential element has been neglected in developing this normal rate... In predetermining a burden or expense rate to be applied to costs, a sufficient period should be reviewed to include a cycle of both good and bad business years (Merrifield, 1921, p. 212).

Using normal capacity to allocate overhead would produce idle time losses if machinery were underutilized. It could also generate an over-capacity gain but such an occurrence was rarely considered in the literature. Clapp (1921, p. 223) said that a cost system that did not measure idle time failed to provide critical information about the efficiency of production. Normal rates were needed to "to supply information to the executive department to enable it to gauge the operations of the factory." The participants finally voted on a definition.

'Normal capacity basis' is the total possible time (that means any kind of work, machine or other), less reasonable allowance for break-downs, repairs, inefficiency, reasonable lack of operators, and all other regular normal delays outside of lack of orders to run on (NACA-Yearbook, 1921, p. 241).

The definition was based on productive output. Anticipated sales volume did not enter into overhead rate because managing the equipment in order to coax as much production out of it as possible had nothing to do with the availability of or lack of sales. Most important, since overhead costs were applied at the departmental level, productive inefficiencies could be identified at a micro level.

The definition of what constituted a 'department' in the cost literature was unique. Briefly, a department was a machine or group of similar machines that produced a single product (or similar group of products) under the supervision of a single manager (Lawrence, 1925, p. 24-25; Dohr, Inghram and Love, 1935, p. 66; Blocker, 1950, p. 22). The numerator of the overhead rate was calculated for each department. Direct overhead costs (e.g. departmental depreciation) were included as well as joint overhead costs that had been allocated using a base that had, if possible, a causal relationship to the costs (e.g. janitorial costs based on square footage). Dividing this total by normal

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9 Of the 11 people contributing articles or entering into the discussion, none were academics—all were employed by companies as either accountants or engineers.
capacity for the individual department produced a departmental overhead rate. This permitted managers to observe the proportional demands on elements of overhead of different departments and product lines. In none of the texts or articles used for this paper did any author recommend factory-wide overhead application rates.

With unearned burden (idle time) eliminated, the unit cost of lots produced may be fairly compared from one period to another, and made the basis for a satisfactory measure of the operating efficiency of the department. These costs may also be compared with the standards of efficiency which have been established, thereby giving a true conception of the value of the results obtained, regardless of any variation in the volume of production. The actual expenses are compared with the budget, and the actual production or operating time compared with the standard, thus giving us two very effective checks on the efficiency of each department (Crockett, 1921, p. 218-219).

It is very significant that the definition of normal capacity excluded sales. This productive or operational efficiency view of costing emphasized the manufacturing function over the sales or marketing function of a business. It was not until the 1930s that one finds denominator volumes based on budgeted sales in the cost literature. It was the change in the denominator volume that signaled a movement away from measurement of productive efficiency.

**Idle Time And Product Cost**

Productive efficiency was not the only reason for tracking idle time—determining product costs was another. Church (1901) said that since the factory existed to produce goods, all costs were product costs. The idle time charges generated by his method were reallocated over production by means of a supplementary rate. This would allow management to see, on a full cost basis, how much each good actually cost (Vangermeersch, 1986; Garner, 1976). This aspect of his method was controversial because it resulted in dramatic changes in per unit cost under volatile business conditions. Few viewed an idle time loss as a product cost. Church (1930) later abandoned the supplementary rate and instead adopted, as did the majority of other authors, the practice of expensing the idle time account as a line item to profit and loss.
Jordan and Harris (1920) joined many writers concerned by the effect on per unit cost of changes in factory capacity and in the volume of production. Production volume has a large effect on per unit total cost if the fixed overhead rate is calculated based on different yearly volume estimates or if the idle time of a particular year is redistributed back over that year's production. In periods of high production, costs appear to decrease and in periods of low production, costs appear to increase.

Concerned that these variations could be misunderstood and lead to dysfunctional managerial choices, Jordan and Harris (1920) and Clapp (1921) wanted to distinguish between idleness due to manageable problems and those due to economic conditions. The use of a normal capacity denominator was the means to this end. It stabilized the fixed overhead portion of product cost over a period of years so that the unmanageable variations in the economy were smoothed out and allowed managers to make meaningful comparisons of costs from period to period.

According to Williams (1921, 210), the advantages of using a normal rate included the ease with which management could assign selling prices, calculate total cost per unit and avoid burdening monthly inventories with excessive overhead. He doubted that managers could wisely interpret data that had not been calculated using a normal rate:

The advantages of using a constant, normal, or average overhead are largely psychological. (It) ... does not make costs lower, sell goods more quickly, or miraculously start factories working again. Such a policy, however, does permit the management to go ahead and figure their list prices and future profits without the upsetting factor of this excessively high overhead staring them in the face in such a way as to disturb their equilibrium and cause their reasoning faculties to become warped, because of the apparently panicky or impossible conditions confronting them (Williams, 1921, p. 208).

Dohr et al. (1935) agreed with Williams (1921). Unit costs inflated by idle time losses in times of low volume production encouraged managers to raise prices—the worst possible policy in periods of depression. Dohr et al. (1935) preferred to expense underabsorbed overhead charges as idle capacity losses and

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10See Garner (1976) for a comprehensive discussion of early approaches to idle time problems, from the end of the 19th century until 1925.
overabsorbed charges as gains on intensive use. They viewed as an abuse the practice of taking under- or overabsorbed overhead amounts to a reserve account to smooth out profits.

Idle Time and Pricing

Although a cornerstone of classical economic theory is that prices are determined by supply and demand, there are numerous references in the cost literature to the practice of setting prices based on cost or, at a minimum, using cost information as an input into the pricing decision (Williams, 1921; Clark, 1923; Lawrence, 1945; Clark, 1965 (1947 reprint); Devine, 1950; Rushton, 1954). A 1963 NAA Research Report (#39) reported that firms relied heavily on product costs for pricing purposes. Many claimed that managers often based prices on the total unit cost of a product (Jordan and Harris, 1920; Randleman, 1956).

Just recently I learned of a large producer of malleable castings who quoted on an order for castings and who, when told that his price was too high, explained that he could make them at a lower price under normal conditions, but that at present his foundry was operating to only 30% of capacity and therefore he must obtain a higher price in order to avoid loss. He went so far as to refuse the order at a price which he admitted would be satisfactory if he were operating at normal capacity (Williams, 1921, p. 201).

(Cost accounting) . . . offers great possibilities in the way of developing a standard of sound or conservative practice in fixing prices, which will act as a check on cutthroat competition . . . And of course the critical point is, after all, what the management does with the figures after it gets them; what use it makes of them in the actual fixing of prices (Clark, 1923, p. 14).

By using normal volume . . . we enable industry to establish and maintain a sound price structure. This will tend to eliminate cutthroat and ignorant competition . . . Normal burden rates should not include any expense of inefficient operation of any nature, including equipment not required for the business. Otherwise, such inefficiency may gradually force quotations beyond market possibilities (Downie, 1944, p. 7-8).

11 There is a substantial bibliography of articles on cost accounting and its relationship to pricing decisions in this NAA study and in #24, “Product Costs for Pricing Purposes” (August 1953).
The value of a cost structure based on a measure of normal capacity included keeping management attuned to a long-term vision. This vision would encourage a reasonable approach to product pricing. Prices over the long run had to cover all costs, but there was general agreement that allowing prices to follow short-term cost fluctuations was not only dangerous for the individual business but for whole industries as well.

**Accounting For Idle Time—Two Presentations**

Alden (1924, p. 115) illustrated how idle time was measured and how those measurements were used in his company. Normal capacity was approximated at 80% of the possible production of individual, but related, machine groups. Each month productive hours were gathered from job tickets. Some slack time was added to cover repairs and waiting for tools and supplies. The percentage of productive hours to normal hours was called the measure of degree of operation. The difference between the degree of operation and normal was the percentage of idleness. The percentage of idleness was then applied to each overhead item for each machine group and the sum of all of these calculations was idle expense. For service departments, the degree of idleness was figured on the basis of the factory as a whole. The expenses of the service departments were allocated to productive departments only after the idleness portion had been subtracted and expensed.

Alden (1924, p. 120) explained that this procedure isolated idle time losses at the departmental level. Foremen could see where inefficiencies existed, how much they cost and received feedback on the measures taken in the past to increase efficiency. Additionally, because idle time charges were not included, inventory values were conservatively stated. This simplified the preparation of federal tax returns. The tax code required that inventories be stated in accordance with the best accounting practice and Alden (1924) and Cornell (1930) agreed that conservative valuations were representative of the best practice. Additionally, creditors, who relied on inventory figures for their lending decisions, benefitted from these lower valuations.

Fiske's (1931) analysis of idle time was comprehensive and detailed. He divided its causes into three separate areas: productive, administrative and economic. Productive causes included breakdowns and powerdowns. Administrative causes included building a factory larger than needed and retaining highly skilled workers when not needed in order not to lose them.
Economic causes included seasonal businesses, cyclical business cycles and broad changes in demand that created conditions of over- or under-capacity. He believed that management made poor decisions when they were not aware of the varied causes of idle time losses which were usually aggregated into a single number.

The ultimate purpose of all accounting is to provide management with the necessary facts upon which action may be taken to increase profits by decreasing expense, and to provide management with the basis for evaluating the results produced by the various department heads ... If management were interested in total costs alone, there would be no need of keeping records of cost of idle time since it could be included by neglect, but if the management is interested in information as a basis for control, it is necessary to accumulate information regarding the cost of idle time (Fiske 1931, p. 360-1).

Fiske (1931) suggested that idle time losses caused by normal seasonal idleness be charged to the product while those attributable to excess capacity arising from equipment purchased for future use be currently expensed. As for other causes of idle time, he was not concerned with technical accounting per se, but with using accounting to illuminate the sources and causes of idleness. He recommended keeping statistical records separate from the ledger to track the various causes of idle time losses and to assess responsibility where possible.

Idle Time and Supplementary Records

Brummet (1957, p. 11) criticized the early advocates of tracking idle time from 1890-1930 for believing that one cost measurement would suffice for all purposes. However, there is evidence that at least some writers during that period recognized that supplementary information was needed.

Jordan and Harris (1920), in their cost textbook, reported that managers failed to get the most out of their equipment because information about problems was not timely. They suggested that multicolored cards representing the status of each piece of equipment be placed on a dispatch board to flag those

12An entire chapter of their book is devoted to the problem of idle machinery.
responsible for keeping the machines running. Feedback was important so cumulative reports should be kept for each machine showing productive and nonproductive hours and the reasons why the machines had been idle. "This report reflects every week the running conditions of the equipment and shows up both successes and failures of the effort to eliminate idle time of equipment" (417).

Sanders (1923, p. 17) said that the cost department should produce a variety of useful data. Some "... control records need to be expressed in terms of money, and incorporated in the accounting system ... (other needs) ... may be adequately served by keeping only quantitative statistics, such as quantity of materials used, amount of time taken on operations, quantity of goods produced and the like."

Randleman (1956) also recognized the necessity of supplementary information. He discussed the differential information arising from the use of alternate definitions of normal capacity. One, average capacity, was based on expected future sales over a period of years. The other, practical capacity, was the volume at which the plant was equipped to operate or the maximum capacity attainable (the later has often been called 'theoretical capacity'). Each had advantages and disadvantages. Average capacity produced higher unit costs and hid idle capacity losses but was preferred for long-term pricing decisions. Practical capacity highlighted idle capacity, providing information for control purposes, but was misleading for pricing decisions.

Randleman (1956) said that no single method of assigning costs to inventory could fulfil all needs—additional statistical records were necessary. These records would include: estimates of average commercial demand, factory capacity that will remain unused in meeting average commercial demand, expected long-term product costs, a long-range predetermined price setting policy, schedules of production levels and employment levels. All of these cost records would provide realistic short-term product costs, reveal the inefficient use of facilities through the analysis of unabsorbed burden, and state inventories and profits at conservative levels. Vance's (1958) textbook also recom-

13The primary causes of idleness were: no operator, no material, no orders, machine breakdown or under repair, no power, waiting for set-up, waiting for tools and waiting for instructions (Jordan and Harris 1920, 406).

14Note that when Randleman (1956) calls the 'volume at which the plant was equipped to operate,' 'practical capacity,' the use of that term is similar to the earlier usage of the term 'normal capacity.'
mended that statistical records be kept to illuminate idle machinery.

Churchill (1958) echoed Randleman (1956). Management needed a variety of information to meet different decision needs. He did not recommend any single method of accounting because the choice of denominator volume and whether idle capacity costs were charged to inventory or to the period was not as important as understanding and analyzing the information embodied in the costs. "Data in which too much has been merged will be meaningless ... the proper determination of the costs attributable to idle capacity is important" (Churchill, 1958, p. 87).

From the beginning of the century, until approximately 1960, there was a strong interest in operational efficiency, and in how cost accounting, by highlighting facilities usage, could contribute to these efficiencies. Many recognized that accounting methods could lead to dysfunctional decisions. At the same time, some practitioners and academics warned that the use of any single measure was insufficient for management needs.

IDLE CAPACITY MEASUREMENT BEGINS TO DISSIPATE

New ideas in cost and financial accounting were developing in parallel with these older notions of operational efficiency and were soon to come to prominence. Idle capacity measurement, a function of engineering or productive efficiency, began to disappear when financial accounting began to measure sales or marketing efficiency. This is not meant to be an absolute statement. Interest in capacity never completely disappeared and much of the modern cost literature, including The Goal (Goldratt and Cox, 1984) and The Profit Potential (McNair, 1994) explore capacity issues in detail. However, the 1963 NAA Research Study #39 showed that while capacity continued to interest the NAA, few of the surveyed firms at that time tracked idle capacity in their books. Formal measurement of idle capacity had largely disappeared. In its place were measures of sales or selling capacity and income measurement.

Earlier, a NACA research study (Bulletin, 4/1/38, p. 925) surveyed the overhead practices of its members. The definition of 'normal' had already changed since the 1921 vote. 'Normal capacity' in this 1938 study usually meant (bearing in mind that the study found much variety in terminology) "the expected utilization of the plant over a period of years in the future, taking
into consideration both expected sales for the period and the capacity available." Of 194 firms that reported using normal capacity, only 39 based it solely on the ability to produce while 138 considered both the ability to produce and sell.

This survey marks a major break in the presentation of capacity themes in the literature. There had been movement away from an engineering-oriented view of 'normal' toward a marketing or sales-orientation. The implications of this shift are profound. If budgeted production based on expected sales volume is used in the denominator of the overhead rate, then the volume variance does not measure operational efficiency. It measures whether production did or did not exceed a budget and not the extent to which machines and factory were productive.

Of the 224 firms surveyed, 69 isolated fixed charges on idle plant and equipment from overhead and 55 of those charged that amount to profit and loss. That is to say, fixed charges on completely idle assets were not added into the overhead rate calculation. It was implied that partial idleness was not considered. Of the 90 companies that did accumulate idle charges arising from underused capacity, only 26 of them expensed them as a line item—the remainder charged them back to cost of goods sold—precisely the choice that earlier writers had condemned as misleading.

DeCoster (1966) recognized this change in orientation. He argued that contemporary accounting literature was confused about idle capacity losses saying that most authors of articles and texts mistook the variance generated by the difference between actual and expected sales as a measurement of productive efficiency. That is, while the terminology of productive efficiency, that of idle capacity, had survived, the computed variance was not measuring it.

Evidence supporting DeCoster's (1966) observation can be found in two articles by Horngren (1967, 1969). He analyzed the capacity variance that was then commonly computed. The variance, expected idle capacity, was calculated as the difference between possible production and estimated sales. Other variances included in the articles included: budgeted sales less actual sales, budgeted sales less sales orders received and sales orders received less actual sales. The older measurement of idle capacity—the difference between normal and actual production—never appeared. In fact, his definition of 'normal' was "the rate of activity needed to meet average sales demand over a period long enough to encompass seasonal and cyclical fluctua-
tions" (255). Horngren (1967, p. 260) maintained that information about idle facilities was needed "at the master budget planning stage, not the evaluation of performance stage." He ignored the informational value of interim capacity changes. None of his variances provided information about capacity opportunities. Analysis of capacity, an operational measure, bowed to sales measures.

The final evidence that change occurred lies in modern cost textbooks. The majority of these texts use annual budgeted production generated from annual expected sales in the denominator of the overhead rate calculation (Usry and Hammer, 1991; Barfield, Raiborn and Kinney, 1994). "Under a normal cost system ... The rate is developed by predicting total overhead costs for the coming year and dividing them by the predicted total activity for the coming year" (Morse and Roth, 1986, p. 69) The same definition appears in Moriarty and Allen (1991, p. 581) and in Horngren, Foster and Datar (1994, p. 537). While many of these books touch on alternative capacity measures and spend a page or two on capacity problems in general, in no way could the discussions be viewed as comprehensive. This contrasts, for example, with 20 pages of text in Dohr, Inghram and Love (1935) and a full chapter on the subject in Jordan and Harris (1920). The overhead rate used throughout each modern text is based on a yearly budgeted number and linked to income measurement. Because the rate changes with different annual budget expectations, product costs cannot be compared from year to year. For the same reason, no variance provides information on capacity usage.

It is impossible to pinpoint this change in focus since it was clearly evolutionary but this work attempts to trace some of the paths leaving to others the opportunity to research them further. At this point then, we return to the past to search for sources of these changes and to suggest reasons for them.

THE SHIFT TO SALES EFFICIENCY—
A TENTATIVE EXPLORATION

The Great Depression

What factors may account for the shift from operational to sales efficiency? During the depression of the 1930s, companies operated well under capacity for many years. Tracking idle capacity may have become superfluous. It was far more important to search for sales opportunities.
Fligstein (1990) noted this transformation although his research interest was in methods of corporate control, not accounting. He distinguished between the manufacturing and the sales and marketing conceptions of control exercised by large firms. The manufacturing conception (operational efficiency) was one corporate response to competition.

Managers embraced tactics to promote price stability. They viewed stable pricing as attainable through attention to the production process. This caused them to focus on what they could control as a counterthreat: the flow of goods through the production process (117).

In contrast, managers at other firms began early in the 1920s to compete by searching for new markets, by differentiating their products, by advertising and establishing brand names rather than by controlling production and prices. His thesis was that the firms that embraced the manufacturing conception did poorly, as a whole, during the depression while those that had shifted to a sales and marketing conception survived. While Fligstein (1990) looked primarily at competitive forces and the drive to eliminate or minimize competition, his ideas appear to be reflected in this cost literature. Accounting for efficiency might disappear if economic conditions made productive efficiency irrelevant. That is, if products cannot be sold, there is little purpose in measuring whether machinery had been utilized to its fullest capabilities.

A related factor that deserves extended study was the influence of trade associations. Under New Deal regulations, a trade associations was allowed to gather costing information from firms in its industry and establish industry-wide minimum product costs. These minimums became floors below which firms in that industry could not reduce prices. The purpose was to eliminate cutthroat competition and thereby minimize bankruptcies. Although not particularly successful, there may have been long-term effects on cost structure (Galambos, 1966). Given this legal authority, there was an incentive to set product costs high enough to include idle capacity losses in order to ensure profit. One can also imagine the incentive going the other direction. If the trade associations were dominated by the larger firms in an industry, they might want to set minimum costs low so that they could continue to charge low prices and force competitors out of business.

15One can also imagine the incentive going the other direction. If the trade associations were dominated by the larger firms in an industry, they might want to set minimum costs low so that they could continue to charge low prices and force competitors out of business.
World War II and Government Regulation

It is highly conjectural to draw conclusions about the long-term effects of World War II regulations on cost accounting. However, it would not be appropriate to ignore possible effects for lack of solid evidence for there may well be links to the capacity issue. For the larger firm (and it is from relatively large firms that most of the contributions to the cost literature arise), the acquisition of government contracts meant the end of undercapacity for a sustained period of time. The government wanted output quickly no matter the cost.

Most government contracts were on a cost plus a fixed fee basis. Nonreimbursable costs were spelled out. One of these was “expenses, maintenance, and depreciation of excess facilities vacated or abandoned, or not adaptable for future use in performing contract or subcontracts (including idle land and building, idle parts of a building and excess machinery and equipment)” (Miller, 1942, p. 98). It was not necessary to track and exclude the idle capacity costs of active facilities. Reimbursement was based on the contract, not the product, so the cost of individual products became irrelevant. With cost recovery and profit guaranteed, there was little or no incentive to be cost efficient. The issue is one of institutional memory. Did firms that operated with war contracts for many years return to measuring idle capacity after the war or was this measurement forgotten?

Income Measurement—Direct Costing

Direct costing was first introduced in the 1930s. From two articles in the NACA-Bulletin in the 1930s to over 40 in the 1950s, it became a major topic in the accounting literature. Direct costing treats all fixed overhead costs as period expenses, not as costs of inventory. The logic of marginal revenue or contribution margin analysis (unit sales price less unit direct cost) impressed many. Today it is covered in virtually all cost and managerial textbooks as a decision tool, but, at that time, many wanted to use it for inventory valuation as well.

The 1953 NAA Research Series #23 on direct costing discovered only 18 companies using this method in their financial records and both the Internal Revenue Service and professional accounting bodies were opposed to it on theoretical grounds. The 1957 revision of the 1948 “Accounting Concepts and Standards Underlying Corporate Financial Statements” by the American Accounting Association said that omitting any ele-
ment of manufacturing cost from a product was unacceptable (539). Mssrs Hill and Vatter, in that publication, dissented from the majority view saying that direct costing was acceptable and "will, in many cases, yield results more useful to investors as well as to management" (545). For the purposes of this study, the important point is that while the information arising from a direct cost system is useful, it does not generate any data on idle capacity. Idle capacity was not an issue in that literature and that literature was pervasive for a long time. While direct costing was being discussed, productive efficiency was not.

Income Measurement—the Matching Principle

Perhaps the most important trend was the increasing interest in the calculation of financial accounting income for reporting purposes. Prior to approximately 1938-1940, the balance sheet was not only the predominant published financial statement, it was often the only financial statement. The components of income, such as 'Sales' and 'Cost of Sales,' had long been considered proprietary. Rather than an income statement there might have been a single line, called ‘earnings,’ or, perhaps ‘earnings before depreciation,’ ‘depreciation’ and ‘net earnings.’ Often there was no reference to income at all.

The Securities and Exchange Commission began to insist on sales and cost of sales disclosures and, despite the reservations of the business community and the accounting profession, income measurement quickly commanded attention. Theories of income measurement took on increased importance. Soon, one theory came to dominance in the financial community and it governed accounting for cost of goods sold and the valuation of ending inventory. It was the matching principle.

Paton and Littleton's classic monograph, An Introduction of Corporate Accounting Standards (1940), made the matching principle, which linked economic benefits with economic sacrifice, the standard for accounting.

16A 1935 JOA editorial shows the profession's antipathy to disclosure. The following is in reference to new SEC requirements.

Here it is provided that the profit and loss statement shall disclose the amount of gross sales, cost of sales and gross profits...If we were to have a full disclosure of every item of the accounts of a corporation engaged in competitive endeavor there soon would be no competition...(They object to the disclosure of confidential information because) it would be detrimental to the interest of investors and therefore contrary to the purpose of the law; and the information itself might be misleading (162-163).
fices, preeminent. Sales were to be matched with the costs incurred to produce them. In order to match production with sales, the denominator volume of the overhead rate had to be based on sales. This matching process precluded any measurement of idle capacity. Horngren’s (1967, 1969) articles cited earlier are excellent examples of financial accounting’s adoption of the matching principle.

Ferrara (1960, 1961a&b) took the matching principle to the extreme. He argued that there was no such thing as an idle capacity loss for income measurement purposes. He proposed a unit of production method for allocating fixed costs, one that could not generate an idle capacity variance. He focused on financial income measurement—not on the operational needs of the firm. Ferrara wanted to match economic benefits (sales) with economic sacrifices (production costs) in order to produce the most theoretically correct measurement of income.

Weinwurm (1961) responded heatedly to Ferrara (1961b). He argued that accounting had a duty to provide information, information that included data on capacity usage. Allowing theories of income measurement to dominate risked damaging company operations. Despite Weinwurm’s arguments, income measurement played an increasingly large role in financial accounting and had a substantial influence on cost accounting.

This focus on income measurement had consequences. If idle capacity were not measured, it may well have been ignored. Indeed, there is virtually no literature on idle capacity after this until decades later. Just as Brummet (1957) accused early writers of ignoring different costs for different purposes, so too can those of the 1960s be accused—they were interested in income measurement to the exclusion of other accounting purposes. While supplementary records outside of the formal accounting records could provide information on capacity usage, the silence of the literature suggests that the topic was no longer of interest and that firms were not measuring it.

The Disappearance of the Engineer

The final component of the diminishing interest in operational efficiency may have been the gradual withdrawal of the industrial engineer from cost accounting venues. From 1900 - 1930, engineers maintained a presence in cost accounting. There was a substantial amount of contact among engineers and cost accountants interested in disseminating cost information
through conferences and articles. Many cost textbooks were co-authored with engineers and engineers contributed regularly to the *NACA-Bulletin* and other publications of the National Association of Cost Accountants.

The engineering contribution to the *NACA-Bulletin* declined from 20% in the 1920s to 13% in the 1930s and 7% in the 1940s. Vangermeersch (1984) presented evidence of the decline of engineers in costing without offering any explanation for that decline. Armstrong (1985, p. 136) was interested in the power relationships between the accounting, engineering and personnel professions within the corporation. He took the disappearance of the engineer as given and asserted that "accountants displaced engineers because decisions of allocation between dissimilar operations could only be made on a common abstract—and therefore financial—basis." He contended that since management responds most strongly to financial information, in the long-term struggle for power, the accountant would displace the engineer. With the accounting profession focused on income measurement, and with their production-oriented colleagues gone, it is not illogical that production-oriented measures would fall by the wayside.

**CONCLUSIONS**

The purpose of this paper was, in part, to remember those who measured operational efficiency earlier in the century. They accomplished this by spotlighting the idle time of machines and the idle capacity of the factory through a cost accounting system linked to production. Beginning in the 1930s, although interest in capacity never disappears entirely, there was a withdrawal from this topic. It was replaced by sales or marketing efficiency measures. Some of the possible reasons for this change were presented for future research. They included: the great depression, during which idle capacity was so prevalent that it hardly needed emphasis; the growth of trade associations which were given incentives to set price minimums; war contracts which reimbursed all costs and eliminated for many years the benefits of tracking idle capacity; an increasing interest in income measurement for financial accounting purposes which washed over management accounting and its literature; and the disap-

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17 This information was gathered by count. During these years, each article in the *NACA-Bulletin* was preceded by a short biography of the author which included his or her professional background.
pearance of the engineer from cost accounting which removed
the party most interested in production.

Except for selected references, no attempt has been made to
study the capacity issue past the 1960s. By then, enough of a
transition had been made from operational to sales efficiency to
substantiate this major change. Much of the literature at that
time was appearing in _The Accounting Review_ written by
academics. Whether this academic influence might also have
had a long-term effect on cost accounting practice is another
topic for research.

While idle capacity as an independent topic may not be
overwhelmingly appealing to many readers, this research finds
that it opens a window on periods of accounting history that
have been insufficiently studied, particularly the 1930s and
1940s. There was a major shift in the profession's understanding
of overhead costing and the purpose of its allocations. That shift
appears to have been generated by a variety of forces from
within and without the profession.

Losing idle capacity measurements meant that information
on machine usage and production opportunities as well as the
location of bottlenecks in the production process was lost. The
modern attention placed on minimizing non-value adding activi-
ties has revived interest in capacity issues. It is possible that
guidance on how to approach these problems might be found in
the solutions posed by early cost accountants and their peers,
the industrial engineers.

**BIBLIOGRAPHY**

"Accounting and Reporting Standards for Corporate Financial Statements - 1957
Revision." _Accounting Review_ XXXII (October 1957): 536-546.

Alden, W. "Handling the Expense of Idle Facilities." _NACA - Yearbook_ (1924):
115-120.

Armstrong, P. "Changing Management Control Strategies: The Role of Competi-
tion Between Accountancy and Other Organizational Professions." _Account-

Barfield, J.T., C.A. Raiborn, M.R. Kinney. _Cost Accounting: Traditions and Inno-


Brown, C.F., "Labor Classification and Payroll Analysis," _NACA - Bulletin_ (May 1,
1927).

Brummet, R.L. _Overhead Costing - The Costing of Manufactured
Products_. Ann Arbor: Bureau of Business Research, School of Business Adminis-
tration, University of Michigan, 1957.


Lawrence, W.B. Cost Accounting. New York: Prentice Hall, 1925.


Abstract: This paper presents an analysis of author productivity in The Accounting Review for the period 1967 through 1993. The stratification observed in other disciplines is evident and is associated with a set of "elite" schools. The most productive authors in TAR are dominated by graduates of these schools. It is also the case that these elite authors increasingly rely on other social science disciplines, notably financial economics and cognitive psychology, for producing accounting knowledge. Evidence is also provided which indicates that the process of elite formation at TAR is more consistent with the use of particularistic rather than universal criteria. There is a paradigm consensus in the U.S. academic community, which is contrary to what would be expected in a low-paradigm consensus field like accounting. The possible contribution of the AAA in forcing this consensus is discussed.

INTRODUCTION

Accounts of the American Accounting Association's (AAA) history by both Zeff [1966] and Flesher [1991] provide documentation of the central importance of accounting research to the mission of the (AAA). Like all business disciplines in the academy, accounting has become quite autonomous from practice over the last 30-40 years [Whitley, 1988]. With autonomy has come a notable change in the form of accounting research. Stephen Zeff, a former editor of The Accounting Review (TAR), commenting with concern about this change in the form of accounting knowledge, observed that the increasing rigor of accounting research methods (which began in the 1960s) was directing attention to narrower questions leaving the big, important questions largely ignored [Zeff, 1978, p. 133].
From a contemporary vantage point, the denouement of this change in the form of academic accounting knowledge seems paradoxical. Recently, a group of elite, U.S. accounting researchers issued a white paper entitled "A Statement on the State of Academic Accounting" in which they declared, "There is a widespread sense among accounting researchers and practitioners that academic accounting, particularly on the research level, currently faces a serious crisis" [Demski, et. al, 1991, p. 1]. This sentiment was reflected in Gary Sundem's presidential message calling for a Copernican revolution in accounting theory [Sundem, 1993], and Andy Bailey's presidential message a year later reflecting the "crisis" in his appeal for tolerance of the editorial process of the AAA's journals [Bailey, 1994]. There seems to be an acknowledged problem with the process of knowledge creation in the accounting academy, but there has yet been little systematic analysis of that knowledge process and how it may be contributing to the alleged crisis.

Much research under the rubric of the sociology of science has revealed that a characteristic of the knowledge production processes of virtually every academic field is stratification. That is, the great bulk of knowledge created, primarily in the form of scholarly texts, is done by a small proportion of the scholars in the field. Fields are hierarchical, controlled by an elite whose reputations are established by virtue of the quantity and quality of scholarly output they produce. Elite status affords individuals the power to control the access of others to the media through which a field's knowledge is disseminated; elites control reputations and the ability to participate in the knowledge production process of the field.

In the United States, the AAA is the most visible and significant way in which the accounting academy is organized. It publishes *The Accounting Review* (TAR), which is the oldest and most widely circulated academic accounting journal in the United States. According to Hargens [1988, p. 139], scholarly...
journals are critical to any field because they are "... a means by which a community certifies additions to its body of accepted knowledge and means through which individual scientists compete for priority and recognition." TAR is a uniquely important medium because it is widely recognized as a barometer of the best accounting scholarship [see, e.g., Bazley and Nikolai, 1975; Coe and Weinstock, 1983; Bublitz and Kee, 1984; Brown and Gardner, 1985; Heck and Bremser, 1986; Jacobs, et. al., 1986; Beattie and Ryan, 1989].

TAR is also unique in that it is not a proprietary journal. It is published by an association whose membership is the U.S. accounting professoriate. TAR is situated to receive and publish articles that represent the best examples of all varieties of accounting knowledge and also to identify those elite scholars granted the power to decide which claims of accounting knowledge are validated [Williams and Rodgers, 1995]. Thus, TAR is a particularly good manifestation of the stratification process of the accounting field in the U.S. since it is regarded as prestigious and, being nonproprietary, is in theory less subject to the prejudices of any particular group of scholars.

The purpose of this paper is to provide a partial historical account of the stratification process in the U.S. accounting academy through an analysis of the patterns of research productivity in TAR from 1967 through 1993. Corresponding nearly to the onset of the autonomous era of academic accounting was the creation of an editorial board at TAR in 1967, which publicly signaled the use of a review process like that at most scholarly journals. It is still in place today. Because 1967 has these two useful qualities—correspondence with the autonomous era and a public review process—it was selected as the beginning point of the analyses.

The remainder of the paper is divided into four main sections. The following section provides a theoretical framework, taken from both the philosophy and sociology of science literature, and a review of relevant studies of productivity in accounting and related disciplines. Two sections are devoted to presenting the analyses: the first to general institutional characteristics
of productivity in TAR and the second to institutional and methodological characteristics of the "elite". The final section contains our summary and conclusions.

SOCIOLOGY OF SCIENCE AND THE PRODUCTION OF SCIENTIFIC KNOWLEDGE

Among philosophers and historians of science there is virtually universal acknowledgement that scientific rationality and knowledge production is a social activity. Disagreements among persons concerned with the nature of scientific knowledge are largely over the extent of its social construction and whether it really represents a privileged type of understanding [e.g., Popper, 1966; Lakatos, 1970; Kuhn, 1970; Feyerabend, 1975; Rorty, 1979; Fuller, 1988; Longino, 1990; Putnam, 1978; Mulkay, 1979]. Longino [1990, pp. 75-76] describes the nature of scientific knowledge as follows:

Scientific knowledge is therefore, social knowledge. It is produced by processes that are intrinsically social, and once a theory, hypothesis, or set of data has been accepted by a community, it becomes a public resource. It is available to use in support of other theories and hypotheses and as a basis of action. Scientific knowledge is social both in the ways it is created and in the uses it serves.

Because academic fields are organized differently, they have different forms of knowledge. Whitley [1977, 1984] and Martin [1978] have noted that the manner in which scientific work is organized accounts for some of the variation in scientific knowledges [see also Fuchs and Turner, 1986; Knorr-Cetina, 1981; Hagstrom, 1965]. According to Whitley [1977, p. 28]:

Changes in the structure of scientific production can be expected to affect the structure of knowledge produced just as the organizational arrangements in a science are linked to the organization of knowledge. The structure of scientific production here includes the day-to-day organization of work, the intellectual background to research and processes of recruitment, training and elite formation (emphasis added).

Accounting in the academy should be viewed as a distinct field among other academic fields which are "... distinct social organizations which control and direct the conduct of research on particular topics in different ways through the ability of their
leaders to allocate rewards according to the merits of intellectual contributions [Whitley, 1984, p. 7]." Blissett [1972, p. 107] likewise attributes differences in knowledge content to differences in "configurations of power" or "patterns of 'authoritative' decision making".

There has been much sociological and philosophical investigation of how social settings and resources affect the products of both the natural and social sciences. Much of the early, American research in the sociology of science was by Robert Merton [1973] and his associates [Blume, 1977; Mulkay, 1980; Glover and Strawbridge, 1985]. These researchers investigated the reward systems of various scientific fields to determine if they conformed to a normative scientific ethos that assured the reliability of scientific knowledge. A most persistent result of the studies of structure of scientific fields is that they are stratified. They produce an elite whose status is most consistently related to the number of research publications and to the prestige of the department from which they received their doctorates [Merton and Zuckerman, 1973; Crane, 1965, 1967, 1970, 1972; Hargens and Hagstrom, 1967; Hagstrom, 1971; Cole and Cole, 1973; Allison, 1980; Long, 1978; McGinnis, et. al., 1982]. A primary concern is whether movement into the elite, which affords an individual power to assert and judge knowledge claims, is a "fair game", i.e., whether universal or particularistic norms govern ascension into the elite.

Longino, [1990, p. 76] concluded that the claim to objectivity of any field's knowledge depends on its structure, specifically, whether that structure permits "transformative criticism". Objectivity of knowledge depends on the extent to which the

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4The scientific ethos is comprised of four institutional imperatives [Merton, 1973]: universalism, communism, disinterestedness, and organized skepticism. Research within the Mertonian functionalist tradition has effectively demonstrated that these norms are largely irrelevant in the conduct and recognition of scientific achievement [see, e.g., Blume, 1977, Mulkay, 1976a, b].

5Stratification by number of publications has been shown in a number of fields to follow an inverse square law or Lotka's law after the man who first proposed it [Lotka, 1926; Price, 1963]. See Chung and Cox [1990] who demonstrated the effect for the finance literature and Chung, et. al. [1992] who observed the same effect for the accounting literature.

6Turner [1960] characterized means of movement into the elite as either sponsored or contest mobility. Sponsored mobility refers to movement into the elite being largely determined by social relationships with an existing elite, which is a criterion not open to all. Contest mobility refers to movement into the elite being determined by satisfying universal norms, theoretically a criterion open to all.
organization of a scientific community permits satisfying the following four criteria:

1. there must be recognized avenues for the criticism of evidence, of methods, and of assumptions and reasoning;
2. there must exist shared standards that critics can evoke;
3. the community as a whole must be responsive to such criticism;
4. intellectual authority must be shared equally among qualified practitioners [Longino, 1990, p. 76].

A field whose norms are universalistic meets these four criteria more fully than a field whose norms for deciding eliteness are more particularistic.

Indeed, within the U.S. field of accounting, for some time, there has been much controversy involving the extent to which Longino's criteria of objective knowledge are met. Many critics of U.S. accounting scholarship, particularly of principal/agent research have contended that a restrictive orthodoxy plagues the knowledge production process in the U.S. [Tinker, et.al., 1982; Christenson, 1983; Chua, 1986; Hines, 1988; Tinker, 1988; Whitley, 1988; Arrington and Francis, 1989; Williams, 1989, 1992; Arrington, 1990; Sterling, 1990; Cooper and Zeff, 1992; Arrington and Schweiker, 1992]. Responding to the criticisms, Watts and Zimmerman evoke the “marketplace” metaphor to argue that positive accounting theory meets the Longino criteria writing that

Despite what critics think methodology should be, the methodologies that survive are the ones that produce useful theories. Competition in the market place of ideas will produce future research that uncover the errors of the present ways [Watts and Zimmerman, 1990, p. 948].

Further, apparently believing tellingly, they add

The methodology criticisms have failed the market test because they have had little influence on accounting research. Researchers have not changed their approach. **Referees and editors of journals have not asked researchers to alter their methodology based on these published critiques** [Watts and Zimmerman, 1990, p. 149] (emphasis added).

Of course, this defense rests entirely on the extent to which there is actually a “marketplace” in accounting in which the
value of ideas and methods is based on their capacity to enlarge the field as opposed merely to enlarging reputations.\textsuperscript{7} The incongruity between there being simultaneously a genuine "marketplace" and a "crisis" in the U.S. accounting academy should not escape notice.

Assessing whether universalistic or particularistic norms are more characteristic of the stratification process at TAR requires consideration of two notable features of the field. The first is the significant growth in number of institutions offering Ph.D. instruction and the consequent increase in the number of doctorally educated accountants. During the time covered by this study the compound growth rate in the number of U.S. Ph.D.s was approximately seven percent. From 1966 through 1993, fifty-five new PhD programs were created at U.S. universities to meet the demand that was capable of sustaining such a significant rate of growth. The rapid increase in the number of persons vying for space in academic journals would lead to the expectation that there might be some dilution in the concentration of academic productivity by institutional origins. There is evidence that this has happened in the field of finance [Heck and Cooley, 1988; Heck, et.al., 1986]. Since the barriers to entry into accounting research are not nearly so great as for many of the physical sciences, which require costly equipment and laboratories, some dilution of productivity by institutional origins should be expected in accounting, too.

The second characteristic that must be considered is that accounting is a low paradigm consensus field [AAA, 1977]. This means that standards of good scholarship are not universally agreed upon. Research indicates that eliteness connotes particularism to a much greater extent in low paradigm than in high paradigm fields. High paradigm consensus fields, which are the natural sciences, are characterized by a presumption in favor of publishing articles and, thus, have very high journal acceptance rates [Merton and Zuckerman, 1973; Hargens, 1988]. Low paradigm consensus fields, which are the social sciences, are characterized by a presumption in favor of not publishing scholarly texts and, thus, have very low journal acceptance rates [Merton

\textsuperscript{7}Strassman [1993] has argued that in the field of economics there is not a free market, but instead a method of explanation acting as a disciplinary discourse. Recently, Tinker and Puxty [1995] published a book length study of the "policing" of the discussion surrounding Watts and Zimmerman's [1979] market for excuses paper.
The Accounting Historians Journal, June 1996

and Zuckerman, 1973; Hargens, 1988]. Accounting journals have low acceptance rates [Vargo and Agudelo, 1991].

A consequence of low consensus in a field is that:

... when there is dissensus, uncertainty, and the absence of such commonly shared standards, it is also inevitable that particularistic standards, deriving from the decision - maker's position in the social network and status characteristics (emphasis added), will affect the decision outcome [Pfeffer et al, 1977, p. 940].

Pfeffer, et al. [1977] tested this proposition and found no evidence of particularism in chemistry but strong evidence for particularism in sociology and political science. Stewart [1983] also concluded that characteristics of decision makers had little effect on which articles are published in geology and plate tectonics.

Fields with low paradigm consensus are typically populated by "schools." Harvey [1987, p. 248, referring to Crane] states

A school is characterized by the uncritical acceptance on the part of disciples of a leader's idea system. It rejects external influence and validation of its works. By creating a journal of its own, such a group can "by-pass the criticism of referees from other areas" [Crane, 1972, p. 87].

In school situations, two author characteristics have been demonstrated to be influential in publication decisions: degree school [Pfeffer, et al., 1977; Beyer, 1978] and manuscript characteristics, i.e., theory and method employed [Ritzer, 1975; Snizek, 1975, 1976; Snizek, et al., 1981; Yoels, 1971, 1974].

TAR is not, in theory, a "school" journal. Being an association journal in a low paradigm consensus field, the expectation would be that articles published in it would reflect a variety of methods, perspectives, or "paradigms" if it is acting indeed as a "marketplace" for ideas in which objective knowledge is produced and exchanged. Whether TAR acts in a universalistic or particularistic way in creating a scholarly elite probably can't be definitively decided. Nor is it likely that TAR can be shown to be a "school" journal. The analyses of productivity at TAR reported in this paper do provide some insights into the process of elite formation and knowledge production by TAR.

The next section contains an analysis of productivity at TAR in terms of doctoral institutions. Most disciplines are stratified into elite schools, i.e., those whose students outperform ones
from other institutions in terms of both the quality and quantity of research output. Other business disciplines are so stratified [Schweser, 1977; Klemkosky and Tuttle, 1977; Ederington, 1979; Hogan, 1986; Gibbons and Fish, 1988; Davis and Papanek, 1984; Cleary and Edwards, 1960; Graves et al., 1982; Williams, 1987; Stahl et al., 1988; Sa-Aadir and Shilling, 1988; Petry and Settle, 1988]. The next section identifies which were the elite schools in TAR during the modern period (1967-1993), which were persistent, and what changes did or did not occur among the elite in reaction to the dramatic increase in doctoral education in the U.S..

The section following that contains analyses of the individual elites. The questions addressed are (1) who were the persons designated the elite by TAR and (2) at what schools did they study and what research did they do to become successful. Such information about the elite will provide some indication about the nature of the stratification process represented by TAR.

INSTITUTIONAL CHARACTER OF THE TAR AUTHORS

Eliteness is directly associated with productivity. The measure of productivity employed in this study is the number of appearances of each person who authored or coauthored a main article or note published in TAR during the period 1967 through 1993. Adjustments for coauthorship were not made since our concern in the institutional analysis is with "publicity" of various schools, i.e., how many of a school’s graduates published in TAR; using an equivalent article measure adds no more information for that purpose than a simple count of appearances. Only main articles and notes were counted under the assumption that these were most representative of academic accounting knowledge. So, for example, articles that appeared in the education or comments sections of TAR were not counted.

Table 1 contains a list of the twenty degree schools most often appearing, accompanied by the number of times graduates of each school appeared in TAR over the entire time period 1967 through 1993. The results reported in the table are for those authors with degree schools reported in Hasselback [1995].

8 The schools added to the list to comprise a first 30, accompanied by appearances in parentheses, are: Columbia (22), UNC (22), Kansas (20), UCLA (17), Missouri (16), Oregon (16), Arizona (16), Arizona St. (15), Pennsylvania (15), Washington U. (14).
Many authors appeared in TAR who had no graduate degree or whose graduate degree was not in accounting; these authors are excluded from all analyses, except for the analyses of the works of individual elites reported later.

**TABLE 1**

**Appearances in TAR: 1967 - 1993**

by School of Author's Degree

<table>
<thead>
<tr>
<th>School</th>
<th>Start of Degree Program</th>
<th>Total Appearances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Illinois</td>
<td>1939</td>
<td>137</td>
</tr>
<tr>
<td>2. Chicago</td>
<td>1922</td>
<td>87</td>
</tr>
<tr>
<td>3. Ohio State</td>
<td>1950</td>
<td>85</td>
</tr>
<tr>
<td>4. Stanford</td>
<td>1939</td>
<td>84</td>
</tr>
<tr>
<td>5. Texas</td>
<td>1934</td>
<td>72</td>
</tr>
<tr>
<td>6. Michigan</td>
<td>1939</td>
<td>66</td>
</tr>
<tr>
<td>7. Michigan State</td>
<td>1959</td>
<td>64</td>
</tr>
<tr>
<td>8. U. of Wash.</td>
<td>1956</td>
<td>53</td>
</tr>
<tr>
<td>9. Minnesota</td>
<td>1936</td>
<td>50</td>
</tr>
<tr>
<td>10. Berkeley</td>
<td>1929</td>
<td>49</td>
</tr>
<tr>
<td>12. Florida</td>
<td>1956</td>
<td>38</td>
</tr>
<tr>
<td>13. Cornell</td>
<td>1968</td>
<td>36</td>
</tr>
<tr>
<td>14. Wisconsin</td>
<td>1953</td>
<td>36</td>
</tr>
<tr>
<td>15. NYU</td>
<td>1944</td>
<td>35</td>
</tr>
<tr>
<td>16. Iowa</td>
<td>1951</td>
<td>29</td>
</tr>
<tr>
<td>17. Northwestern</td>
<td>1956</td>
<td>28</td>
</tr>
<tr>
<td>18. Penn State</td>
<td>1967</td>
<td>26</td>
</tr>
<tr>
<td>19. Indiana</td>
<td>1950</td>
<td>25</td>
</tr>
<tr>
<td>20. Purdue</td>
<td>1969</td>
<td>23</td>
</tr>
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</table>

An easily notable feature of the schools listed in the table is that they have been providing PhD instruction in accounting in the United States for the longest period of time. Many of these schools are historically significant since it was their faculties who were instrumental in the founding of the AAA [Zeff, 1966; Flesher, 1991]. During the period covered by the results in Table 1, approximately 70 percent of the membership of the editorial board of TAR and 80 percent of AAA presidents (including all of the last ten) received degrees from these 20 schools. This shows that these schools are politically significant as well since few AAA presidents are among the most frequently appearing TAR authors.

A comparison of the results in Table 1 with Heck and Bremser's [1986, p. 742] comprehensive study of publishing in...
TAR indicates the institutional persistence in accounting that has been observed in many other disciplines [Caplow and McGee, 1965; Berelson, 1960; Crane, 1970]. Of the twenty schools in Table 1, seventeen appear as leading degree schools in either the first, second, or both of the two periods preceding the period corresponding most closely to the period of this study (i.e., 1926-1945 and 1946-1965). Only Purdue, Florida, and Carnegie Mellon have emerged in the past thirty years and of these three only Carnegie Mellon has produced graduates who have become significant as decision-makers in the editorial process at TAR [Williams and Rodgers, 1995]. However, as was noted in the previous section, significant growth in the number of other PhD granting institutions in the US could result in a dilution of the dominance of TAR by the top schools, particularly if TAR acts as a marketplace for the exchange of the best ideas and methods.

To gain some insight into whether such dilution occurred, the 1967 through 1993 period was broken into thirds and separate lists of first twenty for each period were prepared. The results are reported in Table 2.

At the bottom of the Table are the proportion of articles for each period for the twenty schools and for those fourteen schools among the overall first twenty that persist on each list. The proportion of graduates in the U.S. PhD population at the midpoint of each period for each group of schools is also provided [taken from Hasselback, 1982, 1991, 1993, 1995].

Dilution of the dominance by the elite schools appears to have occurred. The proportion of appearances in TAR accounted for by the first twenty schools has declined through time as their representation in the population has declined.

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9 Twenty-three of the first 30 schools are on the two lists.
10 These schools are: Illinois, Chicago, Ohio State, Stanford, Texas, Michigan, Michigan St., Univ. of Washington, Minnesota, Berkeley, Florida, Carnegie Mellon, NYU, and Cornell. Williams and Rodgers [1995] found that twelve of the persistent fourteen were also significant in controlling the TAR editorial board.
11 These percentages overstate the proportion of first-twenty and persistent fourteen graduates in the relevant population. Since most of these programs are the oldest, many of their graduates are included who are deceased or well past the time when they are likely to contribute to TAR.
### TABLE 2

First Twenty Degree Schools for Each Third of the Period 1967 - 1993
(appearances in parentheses)

<table>
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<tr>
<td>1. Illinois</td>
<td>Texas</td>
<td>Illinois</td>
</tr>
<tr>
<td>2. Chicago</td>
<td>(73)</td>
<td>(30)</td>
</tr>
<tr>
<td>3. Stanford</td>
<td>(42)</td>
<td>(26)</td>
</tr>
<tr>
<td>4. Ohio State</td>
<td>Stanford</td>
<td>(24)</td>
</tr>
<tr>
<td>5. Michigan</td>
<td>Michigan St.</td>
<td>(24)</td>
</tr>
<tr>
<td>7. Berkeley</td>
<td>Cornell</td>
<td>(15)</td>
</tr>
<tr>
<td>8. Minnesota</td>
<td>(20)</td>
<td>(15)</td>
</tr>
<tr>
<td>9. Texas</td>
<td>(16)</td>
<td>(15)</td>
</tr>
<tr>
<td>10. U. of Wash.</td>
<td>(20)</td>
<td>(15)</td>
</tr>
<tr>
<td>11. Wisconsin</td>
<td>Michigan</td>
<td>(14)</td>
</tr>
<tr>
<td>12. Penn St.</td>
<td>Oregon</td>
<td>(13)</td>
</tr>
<tr>
<td>13. Florida</td>
<td>Nthwest.</td>
<td>(11)</td>
</tr>
<tr>
<td>14. Purdue</td>
<td>NYU</td>
<td>(11)</td>
</tr>
<tr>
<td>15. Car. Mel.</td>
<td>Purdue</td>
<td>(10)</td>
</tr>
<tr>
<td>16. NYU</td>
<td>Oregon</td>
<td>(9)</td>
</tr>
<tr>
<td>17. Indiana</td>
<td>Kansas</td>
<td>(9)</td>
</tr>
<tr>
<td>18. Cornell</td>
<td>Florida</td>
<td>(8)</td>
</tr>
<tr>
<td>19. Columbia</td>
<td>UCLA</td>
<td>(8)</td>
</tr>
<tr>
<td>20. Nthwest.</td>
<td>Columbia</td>
<td>(7)</td>
</tr>
<tr>
<td></td>
<td>UNC</td>
<td>(7)</td>
</tr>
</tbody>
</table>

First twenty:
- % article: 83.3% 72.7% 66.8%
- % graduates: 61.0% 48.6% 43.4%

Persistent 14:
- % articles: 70.1% 57.9% 52.5%
- % graduates: 49.0% 39.9% 33.0%
The spread between appearance and proportion of Ph.D.s has remained nearly constant for each group for each period. This pattern is consistent with a kind of functionalist argument that the top schools are the best at producing scholars and that they are superior by a constant factor through time, i.e., they don’t get better or worse relative to all other programs.

Further analysis reveals, however, that this interpretation is too facile. When we focus on the persistent fourteen, which is a more definitive elite, the spread is now actually increasing. When we make comparisons by editor, the results are more consistent with an interpretation of the stratification process at TAR being one of particularism.

Table 3 contains an analysis, by editor, of the relationship between appearances in TAR by graduates of the persistent 14 and their representation in the population of U.S. Ph.D.s at the beginning of each editor’s term.

TABLE 3
Appearances by Persistent 14 Graduates by TAR Editor

<table>
<thead>
<tr>
<th>Editor</th>
<th>Proportion of Appearances</th>
<th>Proportion of Degrees at Beginning of Editor’s Term</th>
<th>Difference in Proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trumbull</td>
<td>63.6%</td>
<td>63.5%</td>
<td>.1</td>
</tr>
<tr>
<td>Griffin</td>
<td>71.3</td>
<td>59.6</td>
<td>11.7</td>
</tr>
<tr>
<td>Hendrickson</td>
<td>75.0</td>
<td>53.7</td>
<td>21.3</td>
</tr>
<tr>
<td>Keller</td>
<td>61.1</td>
<td>50.3</td>
<td>10.8</td>
</tr>
<tr>
<td>DeCoster</td>
<td>63.0</td>
<td>45.2</td>
<td>17.8</td>
</tr>
<tr>
<td>Zeff</td>
<td>51.9</td>
<td>43.1</td>
<td>8.8</td>
</tr>
<tr>
<td>Sundem</td>
<td>47.1</td>
<td>38.0</td>
<td>9.1</td>
</tr>
<tr>
<td>Kinney</td>
<td>50.6</td>
<td>34.7</td>
<td>15.9</td>
</tr>
<tr>
<td>Abdel-khalik</td>
<td>56.6</td>
<td>33.0</td>
<td>23.6</td>
</tr>
<tr>
<td>Magee</td>
<td>?</td>
<td>31.1</td>
<td></td>
</tr>
</tbody>
</table>

The tremendous expansion in Ph.D. output occurred just prior to Stephen Zeff’s term as editor. Between 1966 and his first year as editor, 1978, there were 37 doctoral programs started at U.S. universities. Increased output of nonpersistent 14 scholars, who apparently were capable of producing quality work because it was published in TAR, is reflected in the narrowing of the differences between persistent 14 appearances and their proportion in the population during the editorships of Zeff and Sundem.
However, this trend toward less domination of TAR by a definite elite began to reverse during the term of William Kinney and continued apace during that of Rashad Abdel-khalik. By the end of the period of this study, relative domination of TAR by an elite was the greatest for any time during the entire period. This is a pattern clearly more consistent with particularistic success criteria than universal ones. The next section of this paper, which deals with the elite persons, will provide more information about what the particular criteria might be.

It could be that dominance by the first twenty programs is still partially attributable to the fact that most of these programs produced scholars for many years prior to 1967. Comparing them to newer schools is the old apple and orange problem. In order to compare programs with different dates of origin, we prepared an analysis of program success for only those graduates who received their Ph.D.s in the years 1966 through 1993. Rather than focus on the raw number of appearances, the metrics used in this analysis are the proportion of persons receiving their degrees during this period who appeared in TAR at least once and the proportion who appeared more than once. These provide measures of the probability of a graduate successfully publishing in TAR given the school from which he or she received the Ph.D. degree.

Table 4 presents the measures of success for post-1965 PhDs for the first twenty programs. The number of degrees awarded during the period was taken from Hasselback (1982, 1993, 1995).

---

12Though beyond the scope of the issue addressed in this paper, it should be noted that the last ten AAA presidents (through Katherine Schipper) were graduates of persistent 14 schools. Never in the AAA's history has there been such a long succession of presidents from elite schools. This raises the intriguing question of whether the historically powerful institutions took explicit steps to reverse the dilution of their authority.

13Numbers of graduates for each program provided by Hasselback are occasionally revised, so the numbers presented in Table 4 are probably subject to some small error.
TABLE 4

Publication Success Measures for First Twenty Doctoral Programs

<table>
<thead>
<tr>
<th>School</th>
<th>Degrees Awarded During the Period</th>
<th>Proportion of Graduates Appearing in TAR</th>
<th>Proportion Appearing More than Once</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>216</td>
<td>.250</td>
<td>.088</td>
</tr>
<tr>
<td>Chicago</td>
<td>41</td>
<td>.610</td>
<td>.220</td>
</tr>
<tr>
<td>Ohio St.</td>
<td>84</td>
<td>.476</td>
<td>.202</td>
</tr>
<tr>
<td>Stanford</td>
<td>54</td>
<td>.556</td>
<td>.389</td>
</tr>
<tr>
<td>Texas</td>
<td>156</td>
<td>.218</td>
<td>.096</td>
</tr>
<tr>
<td>Michigan</td>
<td>57</td>
<td>.526</td>
<td>.175</td>
</tr>
<tr>
<td>Michigan St.</td>
<td>136</td>
<td>.199</td>
<td>.096</td>
</tr>
<tr>
<td>U. of Wash.</td>
<td>90</td>
<td>.289</td>
<td>.167</td>
</tr>
<tr>
<td>Minnesota</td>
<td>75</td>
<td>.307</td>
<td>.107</td>
</tr>
<tr>
<td>Berkeley</td>
<td>62</td>
<td>.339</td>
<td>.161</td>
</tr>
<tr>
<td>Car. Mel.</td>
<td>19</td>
<td>.789</td>
<td>.316</td>
</tr>
<tr>
<td>Florida</td>
<td>82</td>
<td>.244</td>
<td>.098</td>
</tr>
<tr>
<td>Cornell</td>
<td>32</td>
<td>.563</td>
<td>.188</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>113</td>
<td>.212</td>
<td>.053</td>
</tr>
<tr>
<td>NYU</td>
<td>67</td>
<td>.254</td>
<td>.090</td>
</tr>
<tr>
<td>Iowa</td>
<td>45</td>
<td>.422</td>
<td>.133</td>
</tr>
<tr>
<td>Northwestern</td>
<td>46</td>
<td>.261</td>
<td>.109</td>
</tr>
<tr>
<td>Penn St.</td>
<td>91</td>
<td>.187</td>
<td>.066</td>
</tr>
<tr>
<td>Indiana</td>
<td>92</td>
<td>.141</td>
<td>.043</td>
</tr>
<tr>
<td>Purdue</td>
<td>21</td>
<td>.429</td>
<td>.190</td>
</tr>
</tbody>
</table>

Even for the elite programs, publishing success in TAR is restricted to a relatively small proportion of graduates.

The probability of appearing in TAR more than once is rather small even for graduates of the dominant programs. The probability of success is related to the size of the programs. When the probability of more than one appearance is regressed against number of degrees and type of program (public or private school), the resulting model is significant at \( p < .05 \) with R-square of .37. However, there is a high correlation between number of degrees and whether a school is private or public. Small programs, which tend to be private schools, have a larger proportion of their graduates appearing multiple times. But in absolute terms, state schools produce as many highly productive scholars as the private ones. For example, Illinois had nineteen graduates appear more than once while Stanford, with the highest proportion, had twenty-one. On the other hand, it is also the case that even those most elite programs have fairly substantial numbers of their graduates who have yet to appear in TAR.
The relative success of recent graduates of the elite schools is quite apparent when we compare them to the remainder of the U.S. Ph.D. programs. Ninety-one U.S. programs were in existence by 1993. The weighted average probability of appearing at least once in TAR for the first twenty schools is .306; more than once it is .125. For the first thirty, these same probabilities are .276 and .111, respectively. But for the remaining sixty-one programs these probabilities are .058 and .017. Productivity, measured as appearances in TAR, is concentrated among the first thirty schools; on average, it seems not graduating from one of these schools substantially reduces the chances for a scholar to participate in the knowledge production process through publishing in TAR.

We conducted a final analysis by institution to determine if there is indication that there are schools, not in the elite, poised to become elite programs. Some programs created after 1966 have had substantial numbers of their graduates be productive. Table 5 contains the probabilities of success in TAR for graduates of all programs that, according to Hasselback [1995], came into existence from 1966 through 1993. Three of these programs are among the first twenty and two are among the next ten. But, for the most part, programs created during the period of great expansion in the capacity to educate Ph.D.s have not educated enough successful scholars to affect the domination of TAR by the historically elite schools. Indeed, among those programs whose origins as trainers of accounting scholars are genuinely post-1966, only Florida State, Maryland, and Syracuse begin to approach the levels of success of the elite schools. That becoming one of the elite strongly depends on the particularistic criterion of degree school becomes more apparent when the characteristics of the individuals who make up the elite are analyzed. That will be accomplished in the section to follow.
### TABLE 5

**Publication Success Measures for Graduates of All U.S. Doctoral Programs Started after 1965**
(year of program inception in parentheses)

<table>
<thead>
<tr>
<th>School</th>
<th>Degrees Awarded During the Period</th>
<th>Proportion of Graduates Appearing in TAR</th>
<th>Proportion Appearing More than Once</th>
</tr>
</thead>
<tbody>
<tr>
<td>American (1966)</td>
<td>12</td>
<td>.083</td>
<td>0</td>
</tr>
<tr>
<td>Arizona (1970)</td>
<td>47</td>
<td>.299</td>
<td>.021</td>
</tr>
<tr>
<td>Ariz. St. (1968)</td>
<td>79</td>
<td>.127</td>
<td>.051</td>
</tr>
<tr>
<td>Boston U. (1986)</td>
<td>18</td>
<td>.111</td>
<td>0</td>
</tr>
<tr>
<td>Case/W.Res (1966)</td>
<td>13</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Central Fla. (1991)</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cincinnati (1970)</td>
<td>35</td>
<td>.114</td>
<td>.029</td>
</tr>
<tr>
<td>Baruch (1975)</td>
<td>30</td>
<td>.133</td>
<td>0</td>
</tr>
<tr>
<td>Colorado (1966)</td>
<td>53</td>
<td>.151</td>
<td>.038</td>
</tr>
<tr>
<td>Connecticut (1992)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cornell (1968)</td>
<td>32</td>
<td>.563</td>
<td>.188</td>
</tr>
<tr>
<td>Drexel (1985)</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Duke (1986)</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fla. St. (1970)</td>
<td>48</td>
<td>.146</td>
<td>.063</td>
</tr>
<tr>
<td>Ga. Wash. (1969)</td>
<td>36</td>
<td>.028</td>
<td>0</td>
</tr>
<tr>
<td>Georgia (1970)</td>
<td>89</td>
<td>.034</td>
<td>0</td>
</tr>
<tr>
<td>Ga. Tech (1986)</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hawaii (1983)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Houston (1973)</td>
<td>63</td>
<td>.127</td>
<td>.016</td>
</tr>
<tr>
<td>Kansas (1970)</td>
<td>26</td>
<td>.308</td>
<td>.231</td>
</tr>
<tr>
<td>Kent St. (1970)</td>
<td>44</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kentucky (1973)</td>
<td>93</td>
<td>.022</td>
<td>.011</td>
</tr>
<tr>
<td>Lehigh (1978)</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>La. Tech. (1973)</td>
<td>45</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maryland (1969)</td>
<td>30</td>
<td>.133</td>
<td>.067</td>
</tr>
<tr>
<td>Mass. (1971)</td>
<td>26</td>
<td>.269</td>
<td>.038</td>
</tr>
<tr>
<td>Memphis St. (1982)</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miss. St. (1968)</td>
<td>56</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N. Texas (1969)</td>
<td>86</td>
<td>.035</td>
<td>.012</td>
</tr>
<tr>
<td>Oklahoma (1967)</td>
<td>43</td>
<td>.093</td>
<td>.093</td>
</tr>
<tr>
<td>OK State (1971)</td>
<td>85</td>
<td>.071</td>
<td>0</td>
</tr>
<tr>
<td>Penn (1973)</td>
<td>17</td>
<td>.353</td>
<td>.294</td>
</tr>
<tr>
<td>Penn St. (1967)</td>
<td>91</td>
<td>.187</td>
<td>.066</td>
</tr>
<tr>
<td>Purdue (1969)</td>
<td>21</td>
<td>.429</td>
<td>.190</td>
</tr>
<tr>
<td>Rice (1989)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rensselaer (1973)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rochester (1972)</td>
<td>18</td>
<td>.389</td>
<td>.111</td>
</tr>
<tr>
<td>Rutgers (?)</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>St. Louis (1966)</td>
<td>31</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Santa Clara (1972)</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>S. Carolina (1976)</td>
<td>66</td>
<td>.061</td>
<td>0</td>
</tr>
<tr>
<td>S. Fla. (1992)</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
In the theoretical development of this paper we noted that most scientific fields are characterized by having most of the published research done by a relatively small number of highly successful individuals. Individual elites shape the nature of the discipline since they acquire the power to evaluate the contributions of others who aspire to be one of the elite [Whitley, 1984; Williams and Rodgers 1995; Lee, 1995a, 1995b]. Scholarly output in most disciplines behaves in a law-like manner, referred to as Lotka’s law, by following an inverse square (see footnote five). That is, research productivity relative to individual scholars is exponential with a relatively small number of individuals producing the great bulk of a field’s scholarly texts. This small cadre of highly successful scholars are the field’s elite who receive the awards, the accolades, and the power to direct the efforts of other scholars. The pattern of individual elites at TAR parallels that of many other disciplines—individual success follows an inverse square law.

Table 6 contains a breakdown of individuals by number of appearances in TAR for the period 1967 through 1993. We compare the actual percentages in each category to the theoretical percentages predicted by the inverse square or Lotka’s law. The results in the table are perfectly consistent with those Chung,

### TABLE 5

(continued)

<table>
<thead>
<tr>
<th>School</th>
<th>Degrees Awarded During the Period</th>
<th>Proportion of Graduates Appearing in TAR</th>
<th>Proportion Appearing More than Once</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Illinois (1988)</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Syracuse (1970)</td>
<td>28</td>
<td>.179</td>
<td>.036</td>
</tr>
<tr>
<td>Temple (1981)</td>
<td>24</td>
<td>.042</td>
<td>0</td>
</tr>
<tr>
<td>Tenn. (1976)</td>
<td>46</td>
<td>.022</td>
<td>.022</td>
</tr>
<tr>
<td>Tx-Arlington (1980)</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tx A&amp;M (1972)</td>
<td>93</td>
<td>.054</td>
<td>0</td>
</tr>
<tr>
<td>Tx Tech. (1969)</td>
<td>57</td>
<td>.053</td>
<td>.018</td>
</tr>
<tr>
<td>Tulane (1976)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Union (1989)</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Utah (1967)</td>
<td>21</td>
<td>.048</td>
<td>0</td>
</tr>
<tr>
<td>Vanderbilt (1990)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Va. Comm. (1987)</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wash. St. (1989)</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
et al. [1992] obtained in their study of publication patterns in the leading accounting journals. Individual success in TAR tends to follow an inverse square, but with a notable difference.

**TABLE 6**

Proportions of Authors of Known Degree by Number of Appearances in TAR

<table>
<thead>
<tr>
<th>Number of Appearances</th>
<th>Number of Authors</th>
<th>Actual Proportion</th>
<th>Theoretical Proportion by Inverse Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>541</td>
<td>63.2%</td>
<td>60.8%</td>
</tr>
<tr>
<td>Two</td>
<td>166</td>
<td>19.4</td>
<td>15.2</td>
</tr>
<tr>
<td>Three</td>
<td>73</td>
<td>8.5</td>
<td>6.8</td>
</tr>
<tr>
<td>Four</td>
<td>31</td>
<td>3.6</td>
<td>3.8</td>
</tr>
<tr>
<td>Five</td>
<td>20</td>
<td>2.3</td>
<td>2.4</td>
</tr>
<tr>
<td>&gt; Five</td>
<td>25</td>
<td>2.9</td>
<td>11.0</td>
</tr>
</tbody>
</table>

The number of persons with known degrees who appear in TAR three or fewer times is greater than the theoretical prediction. Given 856 persons with accounting degrees appeared in TAR during the period (1106 persons appeared, in total), Lotka's law would predict only 709 of them to appear one, two and three times. The actual number exceeded this expectation by 71 persons. For four and five appearances the expected and actual numbers are nearly the same. At the “elite” end, however, the actual number is much lower than the theoretically expected one: 25 compared to 94. The apparent effect of the stratification process at TAR is to restrict access to elite status. Of the persons capable of publishing in TAR, a much smaller number achieve elite status than a theoretically expected number.

When we classified the groups of authors by degree school and school of employment at time of first appearance, the extent to which school is related to ascension into the elite is apparent. Table 7 contains a series of contingency tables prepared for each grouping of authors, i.e., those that appeared once, twice, etc.
TABLE 7

Number of Authors by Degree School by Resident School by Number of Appearances

<table>
<thead>
<tr>
<th>One Appearance</th>
<th>Started at First 20</th>
<th>Started at Nonfirst 20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First 20 Degree</td>
<td>129</td>
<td>215</td>
<td>344 (64%)</td>
</tr>
<tr>
<td>Nonfirst 20 Degree</td>
<td>26</td>
<td>171</td>
<td>197 (36%)</td>
</tr>
<tr>
<td>Total</td>
<td>155 (29%)</td>
<td>386 (71%)</td>
<td>541</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Two Appearances</th>
<th>Started at First 20</th>
<th>Started at Nonfirst 20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 20 Degree</td>
<td>58</td>
<td>56</td>
<td>114 (69%)</td>
</tr>
<tr>
<td>Nonfirst 20 Degree</td>
<td>13</td>
<td>39</td>
<td>52 (29%)</td>
</tr>
<tr>
<td>Total</td>
<td>71 (43%)</td>
<td>95 (57%)</td>
<td>166</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Three Appearances</th>
<th>Started at First 20</th>
<th>Started at Nonfirst 20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 20 Degree</td>
<td>24</td>
<td>23</td>
<td>47 (64%)</td>
</tr>
<tr>
<td>Nonfirst 20 Degree</td>
<td>18</td>
<td>18</td>
<td>26 (36%)</td>
</tr>
<tr>
<td>Total</td>
<td>32 (44%)</td>
<td>41 (56%)</td>
<td>73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Four Appearances</th>
<th>Started at First 20</th>
<th>Started at Nonfirst 20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 20 Degree</td>
<td>14</td>
<td>9</td>
<td>23 (74%)</td>
</tr>
<tr>
<td>Nonfirst 20 Degree</td>
<td>2</td>
<td>6</td>
<td>8 (26%)</td>
</tr>
<tr>
<td>Total</td>
<td>16 (52%)</td>
<td>15 (48%)</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Five or More Appearances</th>
<th>Started at First 20</th>
<th>Started at Nonfirst 20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 20 Degree</td>
<td>29</td>
<td>11</td>
<td>40 (89%)</td>
</tr>
<tr>
<td>Nonfirst 20 Degree</td>
<td>2</td>
<td>3</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>Total</td>
<td>31 (69%)</td>
<td>14 (31%)</td>
<td>45</td>
</tr>
</tbody>
</table>

For each author for which it was possible, we identified his or her degree school as to whether it was a first twenty or not and we did likewise for the school at which they resided when they first appeared in TAR. It is quite clear that as authors become more successful, i.e., appear more often in TAR, the more likely they are to have a degree from a first 20 school and/or to have started their careers at one. Eighty-nine percent of those with five or more appearances have first 20 degrees; seventy-eight percent have persistent 14 degrees. Only two individuals in the five or more category had non-first 30 degrees.\(^\text{15}\) The prevalence of inbreeding is also evident: there were only 51 people with degrees from other than a first 20 school who started their ca-

\(^\text{15}\)There are 46 persons with five or more appearances. One of them is not listed in Hasselback, thus, he is excluded from Tables 6 and 7.
Reers at one. Elite schools recruit faculty from other elite schools. One who is not a product of an elite school has a much smaller chance of joining the elite and becoming a highly successful publisher in TAR.

When these results are viewed in the context of the results of editor effect which appear in Table 3, it strongly suggests that there exists a social network within the academic accounting community in the U.S. that provides a significant element of sponsorship to the elite formation process at TAR. To speak often in TAR appears to depend to a rather significant extent on whether a person is a part of this social network.

The other significant characteristic beside degree school that is indicative of particularism in low paradigm consensus fields like accounting is the prevalence of "schools," which adhere to particular methods, theories, perspectives, assumptions, etc. In other words, how knowledge is constructed will vary more in low paradigm consensus fields than high consensus ones. If TAR creates elites through a process that approximately satisfies Longino's [1990] four criteria for objective knowledge, elites at TAR should tend to cluster, i.e., produce knowledge in different ways. To determine how the elite at TAR created knowledge during the 1967 through 1993 period, we conducted two analyses of the articles produced by the individual elite. The first describes their work in terms of the classification scheme developed by Brown, et. al. [1989], the second in terms of the texts upon which they relied for producing their work. The elite were defined as all those persons appearing five or more times. Since degree school is not relevant to the analyses that follow, the individual excluded from Tables 6 and 7 was included in the subsequent analyses, making the number of elite, 46.

Classifications of Elites' Articles in TAR


---

16 Publishing in TAR gives these individuals substantial influence since other accounting scholars must acknowledge them when producing other knowledge claims. According to Merton and Zuckerman [1973], Price [1963] and Ravetz [1971], the history of the scientific journal indicates that its primary function is to establish property rights over knowledge claims. The practice of citation is merely acknowledging the claim of knowledge possessed by another scholar.
the individual elite included in Table 6 were classified in the Directory since it did not classify "Notes" and did not include the years 1989 through 1993. In order to insure that the same classification process was applied to all articles, we decided not to classify the elites' articles and notes not included in the Directory. The tradeoff was between losing some information and confounding the comparability of texts with different classifiers. Since so few articles of the elite were not included in the Directory, the information lost was small and any classification bias was avoided. Thus, the following analysis is based only on elite texts classified by Brown, et. al. The classification scheme is instructive in itself since the categories for all but "Treatment" are rather limited yet, apparently, sufficient to classify all accounting literature.

We provide two descriptions of articles produced by the elite. One is in terms of when the authors received their Ph.D. degrees; this result appears in Table 8.

### TABLE 8

<table>
<thead>
<tr>
<th>Mode</th>
<th>Method</th>
<th>School</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre 1970</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anal.</td>
<td>(47%)</td>
<td>Int. Log. (75%)</td>
<td>Theory (35%)</td>
</tr>
<tr>
<td>Qual.</td>
<td>(33%)</td>
<td>Primary (13%)</td>
<td>Math. Pgm. (13%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Info. Ec. (11%)</td>
<td>N/A (11%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other SM (11%)</td>
<td></td>
</tr>
</tbody>
</table>

| 1970's |        |        |           |
| Anal. | (26%)  | Int. Log. (39%) | Other SM (18%) | Fin. Acc. Meth. (11%) |
| Reg.  | (24%)  | Prim. (26%) | Theory (18%) | Inv. (9%) |
| Qual. | (13%)  | Lab (20%) | EMH (15%) | Oil & Gas (5%) |
| Des. Stat | (12%) | Info. Ec. (11%) | HIPS (10%) | Sampling (5%) |
| ANOVA | (12%)  | HIPS | Other SM (11%) | Cost Alloc. (5%) |
|       |        |           | Other Fin. ACC (5%) | Other Fin. ACC (5%) |

| 1980's |        |        |           |
| Reg.  | (67%)  | Lab (58%) | Other Behav. (33%) | Bud & Plan (33%) |
| Des. Stat | (17%) | Primary (42%) | HIPS (17%) | Fin. Act. Meth. (17%) |
| ANOVA | (17%)  | Info. Ec. (17%) | Judgment (17%) | Exec. Comp. (17%) |

Legend:
The second is in terms of when the articles were published; this result is in Table 9.

**TABLE 9**

Proportions of Articles Classified in Each Dimension by Decade of Publication

<table>
<thead>
<tr>
<th>Mode</th>
<th>1960's</th>
<th>1970's</th>
<th>1980's</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(56%)</td>
<td>(34%)</td>
<td>(9%)</td>
</tr>
<tr>
<td>Method</td>
<td>Int. Log. (90%)</td>
<td>Primary (19%)</td>
<td>Int. Log. (32%)</td>
</tr>
<tr>
<td>School</td>
<td>Theory (44%)</td>
<td>Other Stat. (16%)</td>
<td>EMH (17%)</td>
</tr>
<tr>
<td>Treatment</td>
<td>Fin. Act. Meth. (14%)</td>
<td>Val./Infl. (11%)</td>
<td>N/A (7%)</td>
</tr>
</tbody>
</table>

Legend: See legend Table 8

There have been some notable changes in the texts produced by elite scholars through time. To avoid unwieldiness, Tables 8 and 9 contain for each of the four dimensions the proportion of articles falling into each category that exceeded 10 percent for the first three dimensions and 5 percent for “Treatment”. Men who received their Ph.D.s prior to 1970 relied on an analytical mode, a method of internal logic, and concerned themselves heavily with accounting theory. This is shown in Table 9 because the articles published in the late 1960s and 1970s reflected these same modes, methods, and schools.

The change in accounting knowledge production noted by...
Zeff [1978] and Flesher [1991] is reflected in the changes that occurred with those authors receiving their Ph.D.s during the 1970s. Preferred modes for these men included a substantial representation of statistical models that were of minor importance to the generation before. Lab experiments and data tapes rose in importance; accounting theory diminished in importance. These changes in epistemological preferences of authors are reflected in the changes in articles between the 1970s and 1980s. Scholarly accounting texts in the 1980s reflected the general positivist methodology characteristic of most of the modern social sciences.

The changes reflected in Tables 8 and 9 indicate that elite who received their education early produced accounting knowledge that was more eclectic than those elite who received their degrees during the 1980s. Only two types of elite were created during the 1980s: those whose work was based in behavioral theory and those whose work was based in economic and finance theory. However, as a subsequent analysis will indicate, there has been a further narrowing in the approach to textual production by the elite at TAR.

Since virtually all of the producers of the texts were educated at the same set of elite schools, these changes in accounting knowledge production occurred within the same set of institutions. Though these changes could have been brought about by competition between different “schools” of thought (social networks of like-minded scholars), it seems clear that these schools were not geographically different. The transition to a modern way of accounting scholarship occurred within universities, not between them.

Another interesting characteristic of accounting knowledge production is suggested by the average for each of the dimensions. Table 10 presents averages for each dimension by appearance and by author. The average by appearance was determined by dividing the total counts for each dimension by total appearances; the average by author was determined by dividing the total counts for each dimension by the total number of authors. Accounting knowledge production by the elite is driven more by method than by topic. The .78 average for treatment indicates that nearly each time an author appeared, he dealt with a different topic. But the .40 average for method indicates the same method was used to produce multiple articles.
TABLE 10

Average Number of Different Dimensions
Per Appearance and Per Author

<table>
<thead>
<tr>
<th></th>
<th>Mode</th>
<th>Method</th>
<th>School</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Appearance</td>
<td>.55</td>
<td>.40</td>
<td>.58</td>
<td>.78</td>
</tr>
<tr>
<td>Per Author</td>
<td>2.98</td>
<td>2.17</td>
<td>3.17</td>
<td>4.26</td>
</tr>
</tbody>
</table>

No one became elite by researching a particular accounting problem, e.g., pensions, in great depth. The elite, on average, don’t investigate one problem with many methods, but investigate many problems with just a few methods.

The Brown, et. al. [1989] dimensions are only one way, and, perhaps, a rather limited way to describe accounting knowledge. A characteristic of accounting knowledge production in the academy is the utilization of theories, methods, etc. from other disciplines. For example, efficient market theory and research has its origins in financial economics, not accounting. Indeed, most academic ways of understanding accounting are ways of understanding created elsewhere in the academic universe and imported into accounting. Thus, another useful method for describing the accounting knowledge produced by the elite is through citation analysis of the various texts they used in creating their work (see, e.g., Snowball’s [1986] study of behavioral accounting research). In the next section the results of an analysis of the bibliographies of all the articles produced by the individual elite will be presented. We focus particularly on the types of scientific journals upon which accounting scholars relied.

Citations by the Individual Elite in TAR

Bibliographies of all notes and articles produced by the individual elite were used to identify the scholarly journals that have been the most important in helping the elite construct accounting knowledge. Table 11 presents the proportions of citations to scholarly journals by discipline for the entire period 1967 through 1993. “Books” was the largest non-serialized
### TABLE 11

**Proportion of Citations by Elite to Scholarly Journals in TAR by Discipline for the Period 1967 - 1993**

<table>
<thead>
<tr>
<th>Non-Journal Citations:</th>
<th>Total Citations</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>1413</td>
<td>25.4%</td>
</tr>
<tr>
<td>Other</td>
<td>804</td>
<td>14.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Journal Citations:</th>
<th>Total Citations</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAR</td>
<td>782</td>
<td>14.1</td>
</tr>
<tr>
<td>JAR</td>
<td>576</td>
<td>10.4</td>
</tr>
<tr>
<td>JoA</td>
<td>128</td>
<td>2.3</td>
</tr>
<tr>
<td>All other Acctg.</td>
<td>366</td>
<td>6.6</td>
</tr>
<tr>
<td>Statistics</td>
<td>136</td>
<td>2.4</td>
</tr>
<tr>
<td>OR/Eng./Math</td>
<td>103</td>
<td>1.9</td>
</tr>
<tr>
<td>Economics</td>
<td>264</td>
<td>4.8</td>
</tr>
<tr>
<td>Psychology</td>
<td>218</td>
<td>3.9</td>
</tr>
<tr>
<td>Sociology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Business/Mgt.</td>
<td>336</td>
<td>6.0</td>
</tr>
<tr>
<td>Finance/Banking</td>
<td>277</td>
<td>5.0</td>
</tr>
<tr>
<td>Law</td>
<td>35</td>
<td>.6</td>
</tr>
<tr>
<td>Tax</td>
<td>12</td>
<td>.2</td>
</tr>
<tr>
<td>Others</td>
<td>102</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source for these authors; “other”, which included dissertations, working papers, monographs, research reports, and standards, (e.g. FASB Standards, APB Opinions, SEC regulations, tax codes, etc) was second.

Of scholarly journals, TAR and the *Journal of Accounting Research* (JAR) are the most often cited, combining for nearly 25 percent of all citations. Sources closely allied to accounting within business are management and finance. From the social sciences, economics and psychology are the principal disciplines from which sources are cited. This is consistent with our analysis that employed the Brown, et. al. [1989] framework, since that revealed that the two contemporary groups of elite were behavior and economics based.

Equally revealing about the nature of knowledge production at TAR is what isn't represented. Accounting is a profession, yet there are no references to ethics literature. Accounting is done to and by organizations, yet there are virtually no references to sociology literature. Accounting makes rules affecting a wide diversity of people, yet there are few references to law literature and none to political science. Accounting is an old activity, yet there are no references to history literature. Accounting, mun-
danely, is about levying and paying taxes, yet there are remark-
ably few references to tax literature. A considerable amount of
what accounting is, is simply missing from TAR. As discussed in
the theoretical development, this is contrary to expectations for
a low paradigm consensus field like accounting if TAR acts as a
genuine "marketplace" for ideas.

In order to provide more specificity to the citation analysis,
we analyzed the various journals cited to determine which ones
were most frequently cited and whether there were changes oc-
curring over time. During the 27 year period of this study, elite
authors introduced 290 different scholarly journals into the ac-
counting literature through citations. Sixty percent of them were
never cited beyond the year in which they appeared in a bibliog-
raphy. Another 28 percent were cited in less than 30 percent of
the years after their first introduction. The scholarly journals
that are significant, continuing sources of knowledge for the
production of TAR articles are quite few in number. Exhibit 1
contains a listing of those journals that appeared in thirty or
more percent of the years after the year of their first introdudi-
tion. These are the journals that have had more than an ephem-
eral effect on the production of accounting knowledge at TAR.
The two groupings of economics and behavioral based research
are reflected in the Exhibit. Finance and economics journals are
more persistent than behavioral journals. Recently, elite authors
appearing in TAR have not included those relying on behavioral
literature (e.g. Psychological Review, Psychological Bulletin).
EXHIBIT 1
Lists of Journals by Percentage of Years Cited After First Appearance

<table>
<thead>
<tr>
<th>Percent of Years</th>
<th>Journal</th>
<th>First Cite</th>
<th>Last Cite</th>
</tr>
</thead>
<tbody>
<tr>
<td>30%</td>
<td>Operations Research</td>
<td>1967</td>
<td>1984</td>
</tr>
<tr>
<td></td>
<td>Psychological Review</td>
<td>1970</td>
<td>1988</td>
</tr>
<tr>
<td></td>
<td>Biometrika</td>
<td>1971</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>J. of Law &amp; Econ.</td>
<td>1976</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Decision Sciences</td>
<td>1976</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>J. of Econometrics</td>
<td>1977</td>
<td>1989</td>
</tr>
<tr>
<td></td>
<td>Financial Mgt.</td>
<td>1983</td>
<td>1989</td>
</tr>
<tr>
<td></td>
<td>Public Choice</td>
<td>1990</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Management Accounting</td>
<td>1967</td>
<td>1984</td>
</tr>
<tr>
<td></td>
<td>JFQA</td>
<td>1968</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>Org.. Behav. &amp; Hum. Perf.</td>
<td>1974</td>
<td>1988</td>
</tr>
<tr>
<td>50%</td>
<td>JASA</td>
<td>1967</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Psychological Bulletin</td>
<td>1974</td>
<td>1988</td>
</tr>
<tr>
<td></td>
<td>JAPP</td>
<td>1989</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Accounting Horizons</td>
<td>1991</td>
<td>1992</td>
</tr>
<tr>
<td>60%</td>
<td>Econometrica</td>
<td>1968</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>AOS</td>
<td>1979</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>JAAF</td>
<td>1980</td>
<td>1993</td>
</tr>
<tr>
<td>70%</td>
<td>Management Science</td>
<td>1967</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>J. of Business</td>
<td>1967</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Amer. Econ. Rev.</td>
<td>1967</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>AJPT</td>
<td>1982</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>JAL</td>
<td>1983</td>
<td>1991</td>
</tr>
<tr>
<td>80%</td>
<td>Journal of Accountancy</td>
<td>1967</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>Journal of Finance</td>
<td>1968</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>Bell J.</td>
<td>1973</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>CAR</td>
<td>1988</td>
<td>1993</td>
</tr>
<tr>
<td>90%</td>
<td>JAE</td>
<td>1979</td>
<td>1993</td>
</tr>
<tr>
<td>100%</td>
<td>JAR</td>
<td>1967</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>TAR</td>
<td>1967</td>
<td>1993</td>
</tr>
</tbody>
</table>

https://egrove.olemiss.edu/aah_journal/vol23/iss1/10
Figure 1 is a bar graph of citations to psychology journals by members of the elite 46 for each year 1967 through 1993. Psychology literature appears for the first time during the period in 1970 and fluctuates from year to year thereafter, peaking on a regular four-year cycle. However, during the last five years, there have been no references to any psychology literature by elite scholars appearing in TAR. This is particularly strong evidence for TAR employing particularistic criteria. For eighteen years one could become one of the accounting elite relying upon the psychology literature to produce accounting knowledge. That appears to have come to a rather sudden end and appears to have coincided with the arrival of the two most recent TAR editors. That a leading association journal could eliminate from its content elite discourses of one of its already limited "paradigms" is not as consistent with universalistic criteria and a free market for ideas as it is with the application of some particularistic criteria.

FIGURE 1

Citations to Psychology Journals by Elite 1967-1993

In the theoretical development of this paper we indicated that in low paradigm consensus fields manuscript characteristics, i.e., theory and method, are important particularistic crite-
ria. The listings in Exhibit 1 are based only on the number of years a journal appeared in any article; they may not be representative of the manuscript characteristics of the elite since total citations to some of them could be relatively small.

To determine the most significant journals in terms of manuscript characteristics and to evaluate their changing significance through time, we determined total citations to all journals for each of three periods. These results for the first ten journals in each period are presented in Table 12. Beside each entry are the average citations per article and a normalization index showing the average citations of each journal relative to TAR. Below each column is the information about what happened to those journals during those periods when they were not a first ten journal.

**TABLE 12**

**Ten Most Frequently Cited Journals by Elite for Each Third of the Period 1967 - 1990**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TAR</td>
<td>2.79 (1.00)</td>
<td>3.43 (1.00)</td>
<td>3.17 (1.09)</td>
</tr>
<tr>
<td>JAR</td>
<td>1.40 (0.50)</td>
<td>2.74 (0.80)</td>
<td>2.91 (1.00)</td>
</tr>
<tr>
<td>Mgt. Sci.</td>
<td>.60 (0.22)</td>
<td>.92 (0.27)</td>
<td>.72 (0.25)</td>
</tr>
<tr>
<td>Op. Res.</td>
<td>.31 (0.11)</td>
<td>.68 (0.20)</td>
<td>.62 (0.21)</td>
</tr>
<tr>
<td>JoB</td>
<td>.30 (0.11)</td>
<td>.42 (0.12)</td>
<td>.49 (0.17)</td>
</tr>
<tr>
<td>JJoA</td>
<td>.29 (0.10)</td>
<td>.34 (0.10)</td>
<td>.42 (0.14)</td>
</tr>
<tr>
<td>JJoF</td>
<td>.21 (0.08)</td>
<td>.33 (0.10)</td>
<td>.42 (0.14)</td>
</tr>
<tr>
<td>JASA</td>
<td>.20 (0.07)</td>
<td>.30 (0.09)</td>
<td>.40 (0.14)</td>
</tr>
<tr>
<td>Econometrica</td>
<td>.17 (0.06)</td>
<td>.28 (0.08)</td>
<td>.36 (0.12)</td>
</tr>
<tr>
<td>AER</td>
<td>.17 (0.06)</td>
<td>.28 (0.08)</td>
<td>.28 (0.10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JASA</th>
<th>.17 (0.05)</th>
<th>.28 (0.08)</th>
<th>.26 (0.09)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econometrica</td>
<td>.11 (0.03)</td>
<td>.17 (0.06)</td>
<td>.20 (0.06)</td>
</tr>
<tr>
<td>Mgt. Sci.</td>
<td>.20 (0.06)</td>
<td>.28 (0.08)</td>
<td>.28 (0.10)</td>
</tr>
</tbody>
</table>

| Op. Res. | .03 (0.01) | .02 (0.01) | .11 (0.02) |
| JASA    | .17 (0.05) | .11 (0.02) | .17 (0.06) |
| Econometrica | .11 (0.03) | .17 (0.06) | .26 (0.09) |

| Bell J. | .03 (0.01) | HBR | .28 (0.08) | .02 (0.01) |
| JFE     | 0 (0)      | AJPT | .01 (0.00) | .04 (0.01) |
| JAE     | 0 (0)      | JAL | .04 (0.01) | .04 (0.01) |
| HBR     | .28 (0.08) | AJPT | .01 (0.00) | .04 (0.01) |

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A number of important observations need to be made. The first is that the nature of scholarly accounting texts changed rather significantly from the first to last period. Average citations were smaller in the earliest period; bibliographies contained fewer entries. With each successive period, the average citations have grown. Bibliographies are larger now than in the earliest period. Producing articles now requires acknowledging a more extensive debt to other scholars.

A second important change is the increase in relative importance of other journals. In the earliest period, TAR was the most important journal. With perhaps the exception of JAR, other accounting journals were of generally less significance. Early TAR texts were constructed largely out of other TAR texts. Journals from non-accounting disciplines were relatively unimportant. In the last of the three periods, other accounting journals are relatively far more important, with JAR now more significant than TAR. The relative importance of non-accounting, economics journals is also greater.

The third important change is that a shift from a managerial emphasis to a financial economics emphasis has occurred. The early introduction of the more "scientific" form of text into TAR, i.e., those that used a quantitative discourse, was done through managerial applications to accounting. This is reflected in the importance of Management Science and Operations Research. But by the end of the third period, the relative importance of these journals has dropped substantially to be replaced by the Journal of Accounting and Economics and the Journal of Financial Economics.

The most notable change is that by the third period the three journals of most importance besides TAR are all acknowledged to rigidly adhere to a distinct economic and political orthodoxy. Two of the journals are published at Rochester, the other at Chicago. By 1993, TAR has taken on the characteristics of a journal largely dedicated to a single methodology.

A final, notable observation is that during the most recent period the accounting texts that are used to construct articles in TAR are the acknowledged top three U.S. journals. In a low paradigm consensus field like accounting, we would expect to see different prestigious journals representing different paradigms. But all of the prestigious accounting journals published in the U.S. are similar enough that the TAR elite rely most heavily on the other two in constructing their articles.
This suggests that accounting in the U.S. has managed to achieve the appearance of paradigm consensus even though none exists.

**SUMMARY AND CONCLUSIONS**

*The Accounting Review* is a significant medium through which accounting knowledge is disseminated. Its process of selection, therefore, affects what comes to be accepted as genuine accounting knowledge. TAR, like most social science journals, reflects the stratification phenomenon characteristic of academic disciplines. Just as in other academic disciplines, the strata or elites are related to graduate institutions and to types of discourse employed to construct knowledge claims.

Certain universities are historically important because their faculties were instrumental in the creation of the AAA. Graduates of these universities still dominate authorship in TAR. This is consistent with studies of other academic disciplines; power to control the knowledge production process in a discipline is not going to be voluntarily relinquished. The structure of the AAA, where the leadership is decided by those who have already led, makes the likelihood that the elite institutions will decline in significance very small. The most important practical implication of the persistence of elites is for many members of the accounting academic community to adopt a more realistic position on standards of scholarly productivity. A non-elite school should not demand that a non-elite graduate on its faculty publish in TAR before rewards like tenure are forthcoming. Institutional forces are strong; where a scholar went to school significantly affects chances for success in publishing in TAR.

Our results also suggest that TAR will not soon become a tool by which the crisis in the academy discussed in the introduction will be repaired. Through time, knowledge production at TAR has increasingly depended upon more extensive citing of scientific texts from other social sciences, most notably financial economics. TAR has acted through time to restrict, rather than enlarge, accounting’s intellectual potentialities. TAR’s purpose seems now to produce academic reputations. The problems of most teachers and practitioners of accounting are quite removed

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¹⁷For an excellent discussion of why academic discourses are seldom useful to practitioners for solving work-a-day problems see Abbot [1988]. For an extensive discussion of the reputational system in academia and the role of the journal in the process see Whitley [1984].
from such a process. This paper has demonstrated that TAR is characterized by an elite, but only faintly reveals the nature of the process that creates that elite. An important question in the sociology of accounting knowledge is how a low paradigm consensus field like accounting is able to create consensus. The typical situation with journals in other low paradigm consensus fields is that they are controlled by competing “schools” [Harvey 1987]. Such fields will have a number of prestigious journals that represent alternative discourses; very little cross-citation occurs between them. But the results of this study demonstrate that TAR, one of the three highest ranking U.S. journals, relies on the other two U.S. journals the most heavily. There is apparently paradigm consensus in the U.S. because the elite journals construct knowledge claims in the same way. Understanding how that consensus is created and enforced would add considerably to our understanding of the nature of accounting knowledge, and, perhaps, suggest strategies for extricating ourselves from the crisis in the academy.

A related issue is the question of how individual elites persistently come from the elite institutions. Barriers to entry in accounting research are quite low. Many of the natural sciences require costly investments in laboratories and equipment; being first creates a distinct advantage. But doing accounting research requires very little investment; virtually any U.S. university can provide the accounting academic with the material wherewithal to do accounting research. Yet almost no academics reach the level of greatest productivity in accounting unless they attend a certain set of universities. This is suggestive of a social network that acts partially as a system of sponsorship into the elite. Understanding more specifically the extent to which this system acts to create elites and how it does so would deepen understanding of the nature of accounting knowledge produced in the academy and help explain why the elite are so disenchanted with the products of a process of their own creation.

REFERENCES

Abbott, A., The System of Professions (Chicago, IL: University of Chicago Press,

Merton [1968] coined the term “Matthew effect” to describe this phenomenon. The term is an allusion to the parable of the talents in the book of Matthew, chapter 23, verse 29 (King James version): “For unto every one that hath shall be given, and he shall have abundance; but from him that hath not shall be taken away even that which he hath.”
1988).


Hargens, L.L., and Hagstrom, W.O., Sponsored and Contest Mobility of Ameri-
Lee, T., The Editorial Gatekeepers of the Accounting Academy, Unpublished manuscript (University of Alabama, 1995b).
Stewart, J.A., Achievement and Descriptive Processes in the Recognition of Scien-
The Accounting Historians Journal, June 1996

Sundem, G., President’s Message, Accounting Education News (March, 1993) pp. 1 and 3.
Abstract: Warren W. Nissley's intense dedication to public accounting led him to crusade for development of schools of accountancy and improvement of education of accountants. Nissley conceived and championed the Bureau for Placements, 1926-1932, which resulted in: public accounting firms recruiting college graduates and developing permanent professional staffs, publishing the first Institute career publication, academic and student awareness of public accounting, and improved quality of college programs and graduates. Nissley's campaign for independent schools of accountancy, 1928-1950, influenced the Institute's committee on education. Many elements of his recommendations may be recognized in the evolution and current developments of accounting education. However, Nissley would continue to express disappointment in the failure to establish separate professional, graduate level, schools of accountancy for public accounting.

Public accounting leadership in the United States traditionally supports the belief that the success and prosperity of public accounting depends on a force of educated professionals. Today, that support is for a professional with a broad-based education and who possesses the flexibility to adapt to rapid changes in global business, economic, and social environments.

In its 1887 Certificate of Incorporation, the American Association of Public Accountants (Association, AAPA) identified one of its purposes to be the achievement of a high standard of professional status "...through general education and knowledge and otherwise; ...." [1913, p. 10] While the Association did not define "general education," the inclusion of the phrase in its Certificate of Incorporation and subsequent activities did indicate concern for the education of public accountants.

The Association's board of trustees and the charter committee obtained from the New York Board of Regents a two-year provisional charter in December, 1892, to incorporate the New
York School of Accounts. Association President, James Yalden, expressed the belief that the School would be "... the foundation of our profession and be the means of putting it on the same basis as the professions of law and medicine. ..." [Webster, 1978, pp. 36-37] The School, though short-lived, helped to establish a mind-set concerning education for the profession.

After the close of the School of Accounts, several members of the Association began efforts to introduce accounting courses into college curricula. They faced a difficult task because classicalists dominated education, most of whom saw little academic value in accounting and business study. Accountancy had yet to achieve much sophistication, and its literature was sparse. However, the Association's pioneering efforts contributed to a growing interest in accounting education and the introduction of accounting courses in colleges and universities. [Carey, 1969, p. 42]

Several prestigious public accountants, including Charles W. Haskins, Robert H. Montgomery, J. E. Sterrett, and Arthur Andersen, were advocates of a formal education requirement for entry into public accounting. [Bruschi, 1969, p. 33] Their views and those of most public accounting leaders concerning the role of education generally conform to a fundamentalist theory of education. Although early in this century few practicing public accountants were college graduates, Bruschi suggests that leaders in the profession were "... mindful of the advantages of a college education. It may be assumed also that these leaders were motivated by a desire to emulate the medical, legal, and engineering professions in raising education standards." [1969, p. 33] Many viewed college education as a means by which accountancy would become a "learned profession."

From 1925-1950, Warren W. Nissley contributed much to the development of collegiate accounting education and the acceptance of such education as a prerequisite for entry into public accounting. Nissley displayed wide ranging professional interests, but "... his first love was education, selection, and training of accounting personnel." ["Warren W. Nissley," March 1950, p. 188] Nissley's vision and "dogged determination" influenced the establishment of the accounting education model, upon which the profession is continuing to build. His view of accounting education clearly reflected basic fundamentalism. He passionately believed that the future of public accountancy as a profession in the United States depended on hiring gradu-
ates of colleges and universities, rather than Chartered Accountants trained in Great Britain. [Higgins, 1965, p. 122] Of equal importance, he recognized the need for improvements in the selection and training of staff for the accounting profession. [Horn, Spring-Summer, 1969, p. 73] Yet, Warren W. Nissley and his contributions remain relatively unknown to most accountants and educators.

This paper, as part of a continuing study of Warren W. Nissley, assigns credit to a person who instigated a significant change in the direction of the accounting profession and the education of accountants. Thus, it is centered on a person and his contributions. A brief discussion of Nissley's personality and experiences provides some understanding of his strong-willed character and justifies reference to him as a "crusader." The main part of this study focuses on two of Nissley's major contributions in the development of professional accounting: the Bureau for Placements and the professional education process for public accounting. First, Nissley's crusade to establish and operate the Bureau for Placements, 1926-1932, and its impact on collegiate accounting education and the hiring practices of public accounting firms are described and analyzed. Second, Nissley's views and efforts regarding the process required to educate the professional, 1928-1950, are presented and evaluated. His unrelenting campaign to establish schools of accountancy and to require collegiate education at a graduate level for entry into the profession are of particular interest. A lesser known crusade, which led to the Institute's testing program, is mentioned briefly because this testing program dealt with personnel selection and validation of education which continues today as a testimony to Nissley's creativity and energy.

The paper provides some insights regarding the evolution of education standards for public accountancy and discusses many of the influences which shaped the evolution. Clearly, this paper contends that some of the progress in accounting education over the past seventy years is because of Nissley's ideas and efforts. One might suggest that some criticism of the current state of accounting may be related to the failure to completely implement Nissley's professional educational model.

The sources used are mostly limited to published articles and reports by Nissley, statements by contemporaries about him, and publications by the American Institute of Accountants or American Institute of Certified Public Accountants (AIA, Institute). Nissley wrote many of the Institute committee reports.
used from the AIA *Yearbooks*. These sources represent considerable information and provide support for the identification and analysis of Nissley's beliefs and actions.

**WARREN W. NISSLEY**

Warren W. Nissley was born in Middletown, Pennsylvania in 1893. He graduated from Princeton University in 1914 with a degree in civil engineering and began his career in management with the Concord (North Carolina) Gas Company. He later relocated to the Nassau and Suffolk Lighting Company on Long Island, New York, and then to the National City Bank of New York. In the latter part of 1916, Nissley served nine months in the military on the Mexican border as a private in Troop C, First New York Cavalry Regiment, New York National Guard. Upon return to New York, he applied for and was commissioned a second lieutenant. [Nissley, January 1935, p. 16] During World War I, Nissley served in France as a field artillery officer. As the war ended, he was commissioned a captain in the reserves. [*The New York Times*, January 19, 1950, p. 27]

Nissley returned to the National City Bank, and studied accounting in the evenings at Pace Institute. He became a staff accountant in the New York accounting firm of McArdle, Djorup & McArdle. [*The New York Times*, January 19, 1950, p. 27] Nissley [March 1928, p. 36] stated that he chose public accounting as a career over a number of other flattering offers and directions. After further study of accounting and a review course from Paul Esquerre, Nissley passed the CPA examination and received his New York State Certificate in 1923. [*The New York Times*, January 19, 1950, p. 27] Nissley's educational background probably determined his model concerning educational preparation for public accounting. He was college educated, a rarity for public accountants; he was an engineer, which had a higher professional and educational status than accounting; and, as was common, Nissley received his accounting training in a proprietary school at night, which for the time represented schools of accounting.

In July 1921, Nissley joined Arthur Young & Company, shortly after the firm was started. He was admitted as the ninth partner in 1929, becoming the first new partner since the firm's inception and the first educated in the United States. He was admitted to the Management Committee in 1940, and Higgins described Nissley as the firm's "crown prince." He became in-
volved in most of the important aspects of the firm and was in charge of a number of the firm's important clients in New York. In professional circles, Nissley was so well known that most people thought he was the managing partner of the firm. According to Higgins, it was generally expected within the firm that when James C. Burton retired at the end of 1951, Nissley would become the managing partner. [Higgins, 1965, pp. 121, 171, 211-212] At his untimely death on January 17, 1950, Warren W. Nissley had within his reach the pinnacle of success at Arthur Young & Company.

Higgins described Nissley as a serious-minded person whose most noticeable characteristic was his consuming interest in all things related to public accounting. He could not be silent or passive with regard to any issue affecting the profession or his firm. His often uncompromising and outspoken manner caused Nissley to be unpopular with a number of people. [Higgins, 1965, pp. 122-123, 208-209] An editorial in The Journal of Accountancy characterized Nissley as "... a remarkable man because he combined extraordinary physical vigor with intellectual depth and originality. He was no conformist. He did his own thinking and said what he thought." ["Warren W. Nissley," March 1950, p. 188] "When Warren Nissley was on a crusade, his tenacity was terrific." [Higgins, 1965, p. 161] During the mid-thirties when Nissley became concerned about the inadequacies of financial reporting practices and independence, "We in the New York office had accounting principles morning, noon, and night. A lunch with Warren in those days was a substantial mental exercise." [Higgins, 1965, p. 161]

As a perfectionist, Nissley found it difficult to delegate responsibility. He edited documents and looked into the details of any problem, regardless of importance. He willingly got involved in problems of others, and no personal sacrifice was too great where the firm or the profession was concerned. His zealous nature, which would not permit Nissley to moderate his workload, contributed to his early death. [Higgins, 1965, 208-209]

Throughout most of his career, Nissley participated in professional accounting organizations. He devoted a great deal of time and energy to major committees and various activities of the American Institute of Accountants and the New York State Society of Certified Public Accountants. There is substantial evidence that Nissley, due to his personality and activism, significantly influenced many of these committees during the three decades of his career.
THE BUREAU FOR PLACEMENTS

With rapid expansion during 1920-1925, public accounting firms could not find sufficient experienced, competent staff to do the work. The Institute had made some progress in convincing academics and businessmen that accounting was indeed worthy of consideration as an academic subject. However, college graduates showed little interest in public accounting. The Institute [AIA, February 15, 1926, p. 1] identified the problems to be: failure by academics and graduates to understand the professional status which public accounting had achieved, awareness by students of the "unsteadiness of employment, due to seasonal fluctuations in the volume of practice," and lack of a process to bring qualified college graduates into public accounting.

Nissley expressed concern that the public was not adequately aware of the dignity and value of the accounting profession and the high qualifications required to practice public accounting. [Higgins, 1965, p. 123] He knew that many professors and personnel directors advised students against public accounting as a career and that the larger businesses aggressively and directly appealed to the better college graduates. A survey, conducted by a group of college professors, confirmed that the percentage and quality of graduates entering public accounting had declined. Therefore, Nissley believed that something had to be done if public accounting firms wanted to compete in attracting the better college graduates. [Nissley, November 15, 1928, p. 6]

At the Tenth Annual Meeting of The American Association of University Instructors In Accounting in December 1925, Nissley presented a paper that detailed the need for public accounting to hire college graduates with a broad liberal education and some technical study of business and accounting. Training based only on college accounting courses or vocational school accounting courses limited a person's career opportunities. Nissley said that, when he first began to propose the need for a broader general education, some prominent accountants stated that accounting firms are not interested in people with this type of education. [March 1926, pp. 64-66] However, Nissley was not easily dissuaded.

Nissley outlined the characteristics required of persons entering public accounting if they were to be successful. In order of importance, the characteristics were: (1) sound judgment, (2)
honesty that is unflinching and unfailing, (3) imagination, (4) ability to express ideas in correct English in a concise and understandable manner, (5) ability to think clearly and straight and to make an accurate and rapid analysis of involved business problems, (6) willingness to work with diligence and to engage in detail work without loss of interest, (7) good appearance, agreeable personality, habits of orderliness and good deportment, and (8) speed in simple mathematical calculations and a great respect for accuracy. [March 1926, pp. 67-68] These characteristics apparently reflected those that he possessed and found necessary to succeed in public accounting. With an exception to the level of mathematics and the addition of needed computer skills, current literature would support these desired characteristics of accounting graduates outlined by Nissley in 1925.

Nissley remarked that college graduates, who did not progress in public accounting, could always find openings in private corporations. He said that five years experience in public accounting would better prepare a person for a position as office manager, cost accountant, auditor, or controller than five years experience in the company in which the position was sought. [March 1926, pp. 68-69] Thus, Nissley interposed public accounting as a part of a college graduate's career planning and acknowledged that such a view might appear to be very radical.

In 1925, Warren Nissley began one of his “crusades.” At this time, “he conceived, organized, and promoted the Institute Committee for Placements, which in 1926 made the first organized effort on behalf of the accounting profession to attract college graduates to its ranks, and published the first official Institute pamphlet on accounting as a career.” [“Warren W. Nissley,” March 1950, p. 188]

Nissley became the driving force which brought the firms in New York City together to consider the issues of employing college graduates, and he presented the plans for the Bureau for Placements to the executive committee of the Institute. [Carey, 1969, p. 276] After a series of committee hearings and recommendations, the executive committee authorized the appointment of the special committee for placements to administer the Bureau for Placements. Warren Nissley accepted chairmanship of the special committee, [AIA, 1926, p. 105, 127-128] and the Bureau was inaugurated in March, 1926. [AIA, 1929, p. 185] The Institute described these actions to be:
...a concrete attempt to help in one way to solve the problem with which the profession has been faced for several years, namely, that of building a permanent staff qualified to carry on in a field where the work has increased greatly in volume and has become increasingly exacting in its demand upon those who undertake the practice of accountancy. [AIA, February 15, 1926, p.2]

Nissley had outlined the basic process of employment in December, 1925: (1) a personal interview is conducted, (2) the graduate and firm agree to a minimum of three years of employment unless the person is found to be unsuited for the work, and (3) a minimum salary of $125 per month is paid in the first year, with prearranged advances in annual salary. [AIA, 1926, p. 187]

The special committee and Bureau established two main functions: publicity among students and placements among participating firms. The special committee decided to target graduates from regular four-year college programs as the most promising recruits. With the guaranty of year-round employment, firms wanted exceptional candidates with a broad education who could think and communicate. [AIA, 1926, p. 186] The special committee developed and published the Institute's first formal career brochure entitled "Accountancy is a Career for Educated Men." [Carey, 1969, p. 276] During 1926, the special committee distributed over five thousand copies of the brochure. By September 1926, mostly as a result of the brochure, the Bureau received 285 applications which represented 94 colleges. The special committee's close review produced 155 suitable applications. [AIA, 1926, pp. 185-186]

The Council, in its 1926 report, said of the Bureau:

...The success of this venture has been altogether satisfactory as the report of the committee will show. The intention to interest college students has been fulfilled and many more applications have been received than were sufficient to fill the vacancies reported. This, however, is the first year and the plan will doubtless proceed to greater accomplishments when members of the Institute are more familiar with its operations. [AIA, 1926, p. 155]

The Bureau expected to place 100-200 applicants annually when fully operational and to be financially self-sustaining. [Nissley, March 1928, p. 40] Several of the large firms made
contributions to cover the initial operations of the Bureau. [AIA, 1928, p. 173]

By 1927, Nissley [March 1928, p. 39] reported that five hundred applications had been received, which represented most of the colleges in the United States. Nissley, as was his wont, personally examined most of the applications. The special committee revised the career brochure during 1927 based on comments and recommendations of several academics. [AIA, 1927, p. 172]

The special committee and Bureau conducted a wide-spread educational campaign in American universities and colleges, and distributed more than 10,000 of the revised brochures by 1929. Institute members, through speeches and extensive correspondence, provided the Bureau a high profile and a great deal of support. However, the Bureau could not meet the demand of the participating firms with sufficient numbers of qualified applicants. [AIA, 1929, p. 186]

As the effects of the depression became felt in 1930, Nissley reported that a large number of highly qualified persons were unplaced “because of exceptionally quiet business conditions.” [AIA, 1930, p. 176] In 1931, the Bureau curtailed activity, and for the first time, the Bureau reported a deficit. The executive committee resolved to cover the deficit from general funds until the close of the year. [AIA, 1931, p. 216] The special committee for placements, of which Nissley served as chairman from its inception, and the Bureau ceased operations in 1932.

More than a decade later, Nissley [1946, p. 102] said that the Bureau brought a large number of college graduates into the profession and that its activity continued to impact on the profession. The special committee and the Bureau for Placements accomplished a great deal in meeting the problems of the time. Public accounting set into motion a commitment to hire the best college graduates available, and the Bureau provided the process needed to select and to hire qualified graduates. College educated, full-time professional staff replaced part-time, transient staff. The profession’s hiring of college graduates partially affirmed the personal characteristics and type of knowledge believed essential for success in the profession. Bureau activities complemented the work of the Institute’s committee on education. The first accounting career brochure helped to develop greater faculty and student interest in public accounting and made them aware of career opportunities. With improved channels of communication to colleges and professors, the Institute was in a better position to exert some influence on accounting
education and to help improve the quality of students in collegiate schools of business.

The special committee and Bureau started a trend which led progressive accounting firms to recruit on college campuses after the depression and greatly expand that effort after World War II. Several college graduates placed through the Bureau became partners in the firms which hired them. Accounting firms began to recognize that college graduates had more promise of success in public accounting than high-school graduates with bookkeeping experience, who had been the primary source for recruits before 1926. [Carey, 1969, p. 277] Carey stated that “If the bureau for placements did not single-handedly start this trend, it certainly dramatized and accelerated it.” [1969, p. 278]

Public accounting firms continued through the 1950s to hire personnel who did not have college degrees. Today, most large firms have policies which emphasize the hiring of personnel with graduate degrees, and the profession has established the 150-hour educational requirement as the standard for public accounting. Although the profession must contend with the issues of “workload compression,” competition, and perceived problems with current educational processes, public accounting is not likely to return to the predominance of part-time or seasonal employment of noncollege educated personnel which prevailed in 1925. Public accounting’s return to such conditions would invalidate it as a learned profession, result in a decline in prestige, and have significant economic consequences.

EDUCATION OF THE PROFESSIONAL

By 1933, the accounting profession achieved greater public acceptance, accounting was a more important subject in the curricula of the schools of business, and the major accounting firms had initiated policies of hiring college educated accountants. “New Deal” legislation, via the Securities Acts, increased accountants’ responsibilities. Also, “...Warren Nissley was making himself felt in the profession.” [Higgins, 1965, p. 164] Nissley campaigned even more vigorously for the profession’s hiring of people with higher levels of education. He made numerous speeches to influential groups concerning the need to raise educational requirements for CPA candidates and the need to develop professional schools. [Higgins, 1965, p. 164]

Nissley [November 15, 1928, pp. 6-8] believed the profession must hire college graduates who possessed higher levels of intel-
lectual ability and character. Thus, professional education for the accountant, like professional education for the lawyer, requires schools designed for that purpose. Nissley's views about the education of public accountants were consistent with other progressives in the profession who aspired for accountancy to become a "learned profession." For example, J. E. Sterrett [November 1905, p. 1] stated in 1905 that legal recognition and professional education were the two problems confronting the accounting profession. In regard to education, Sterrett said:

... The time has come, ... , for a broader view, and it is necessary that accountants should make a concerted movement to lift the standard of preliminary education of their profession. If accountancy is to rank among other learned professions, it must require of every applicant for admission, a standard of preliminary education equivalent to that which is required by law and medicine. ... [November 1905, p. 8]

In an address to the Institute in 1928, Nissley hoped that:

... in the near future there may be developed a technical school or schools operated independently or as a part of an existing institution which will provide a course of instruction designed solely to fit men for the professional practice of accountancy and will accept only students who have completed satisfactorily a so-called cultural course of at least two years, and preferably of three or four years, at a recognized college." [November 15, 1928, p. 8]

In a presentation to the State Boards of Accountancy, at the Institute's annual meeting on October 15, 1934, Nissley [January 1935, p. 12] recommended a college degree, but not necessarily with an accounting major, be required for applicants of the CPA examination. He emphasized the need for a liberal or culturally-based education, and believed that professional study of accounting should be at a graduate level.

In 1935, Nissley observed that education of public accountants had become noticeably better. However, since accounting continued to be part of the schools of business, he believed that education of accountants, particularly for public accounting careers, was little more than a by-product of general business education. To remedy this situation, he proposed a five-point program to develop collegiate training for public accounting:

1. Concentrate effort and limit professional schools to a
reasonable number--eight located geographically over the country.

2. Design curricula, text-books, and other teaching materials for public accountants.

3. Employ instructors in technical courses who have extensive practical experience in public accounting.

4. Select students for the professional schools who have promise of success in public accounting.

5. Support (by public accountants) the professional school in their area and develop a close spirit of cooperation and understanding. [August 1935, pp. 90-92]

Nissley considered the selection of students, with emphasis placed on character, scholarship, and mental aptitude for public accounting, to be a very important part of his proposed program. Neither time nor resources would be available for students who only wanted accounting as support for a business career. Nissley recommended that schools of accountancy be established as separate departments in colleges or universities and, logically, ones with strong accounting departments. He preferred the schools be located in large cities because opportunities for field work or internship programs would be facilitated. Nissley proposed a curricula that included cultural and technical studies. Although the proposed cultural studies would initially involve two years of study, Nissley believed that a four year liberal-arts degree should later become prerequisite to technical studies. His proposed technical studies would be taught only in a professional school and represent the work done by an assistant in a public accounting staff position. [August 1935, pp. 93-98]

Nissley began a two year term on the Institute's committee on education in 1934. These years were a period of great activity, in which the committee established an agenda which, in part, continues today. The agenda, which was radical for the time, included issues regarding the length and content of the educational program and elements which were equivalent to accreditation. Based on a survey of 123 colleges, the 1934-35 committee concluded that accounting education and the educational requirements for entry into the profession were inadequate to ensure that high quality personnel would be available or attracted to the profession. The committee assumed the task of identifying the type of applicant required by the profession and how schools might educate such people. It recommended that the Institute: (1) formulate a policy specifying standards of edu-
cational training for practice of public accounting, (2) encourage the strengthening of training available in various schools of business even to the extent of suggesting the organization of separate professional schools for this purpose, (3) encourage legislative actions to set up higher educational requirements for certification, and (4) strengthen the CPA examination. The Council expressed general approval and instructed the committee to formulate and present specific recommendations to the Council. [AIA, 1936, pp. 283-285]

The 1935-36 committee responded to the Council's instruction and recommended that four years of collegiate training be the minimum education for entry into public accounting. The committee's proposed four years of study included 120 semester hours: 60 semester hours of cultural subjects and 60 semester hours of professional subjects. Professional subjects consisted of 38 semester hours of accounting comprising principles of accounting, auditing, systems, financial reports and their interpretation, and related subjects; 8 semester hours in business law; 8 semester hours in finance; and 6 semester hours in economics. [AIA, 1937, p. 441]

The committee committed to attempt development, by 1937, of a set of standards covering at least: a) courses and content, b) faculty, c) library and laboratory equipment, and d) financial resources. The committee also undertook the rating of the schools offering professional training in accounting and recommended that the Institute seek to amend statutes in all states to establish higher educational requirements for certification. [AIA, 1937, p. 442]

Committee recommendations outlined the minimum needed for an adequate educational program, and the committee said that "... within the next few years the program should be extended to provide for three years of professional training for accountancy based on at least two years of cultural studies of collegiate grade." [AIA, 1937, p. 442] The committee was not yet willing to recommend that separate schools of accountancy be established or that a culturally-based undergraduate degree be a prerequisite to professional study as proposed by Nissley. However, the committee did support the need for a minimum of two years of cultural studies and recommended the expansion of the program to include an equivalent graduate-level study.

The Council [AIA, 1937, p. 407] approved collegiate education as preparation for the profession and authorized the committee to proceed with its efforts to establish standards for col-
lege and university courses. This action amounted to an informal accreditation of acceptable programs. The recommendations were radical, when one recognizes that a college degree was not as yet required for entrance into the profession.

Many elements proposed by the committee were consistent with views expressed by Nissley. Based on comments in published articles and reports, it is reasonable to conclude that Nissley and the other committee members generally agreed on issues such as: (1) the standards of educational preparation were inadequate, (2) education should be broad with a minimum of two years of cultural or liberal arts study plus a professional program of study, (3) the law school model provided a general guideline for accountancy, (4) and selection of quality students was important.

Nissley's contention that a school of accountancy be dedicated to the education of public accountants is probably the one issue which caused disagreement on the committee. Articles by Taylor [March 1932, pp. 42-43] and Kester [June 1936, p. 99] addressed the issue of the fifth-year or graduate study of accountancy. They would not support restricting such programs to only the study of public accounting and admitting only students qualified for careers in that field. In a response to Kester's views, Nissley said:

...When I speak of professional education, I will refer to training for that particular common occupation.... an occupation so limited that any one engaged in it at any time can, except for the inevitable differences in personal skill, readily perform the work of any other person engaged in it. This last feature is very important in my opinion, and is, in a nutshell, the reason I cannot subscribe to Professor Kester's opening sentence in which he says that, as used by him, professional accountancy means the vocation of accountancy whether practiced in the private or in the public field. [June 1936, p. 105]

Nissley concluded by stating:

..., I want to make one point very clear. While I believe we need a new type of professional school for the profession of public accounting, I think the present Schools of Business Administration do an exceedingly good job in preparing men for that other, and much larger, profession composed of men who have employment in the accounting departments of particular busi-
ness organizations. There is no reason why the program I am advocating, if it be adopted as I believe it will be, should detract in any way from the importance of the work now being done by you gentlemen in the present Schools of Business Administration. Moreover, such schools as I advocate should be established as separate departments granting distinctive degrees in certain of the existing institutions. [June 1936, p. 108]

Although Nissley rotated off the committee in 1936, the agenda was established. The committee [AIA, 1938, pp. 483-484], in 1937, reported that the American Accounting Association (AAA) reacted very favorably to the committee's overtures of cooperation. The committee restated the content of the 1936 report, and although the Council had approved its content, the committee requested formal sanction by the Council. The committee wanted the Council to adopt the recommendations put forth by the 1934-35 committee as official policy. Additionally, the Institute should take a leadership role in "formulating the lines which educational efforts shall follow and for counsel as to the methods of attaining the desired ends." [AIA, 1938, p. 483]

The Council responded with formal statements of policy which included several important resolutions. First, standards of preliminary education should be at the highest practical levels, similar to those of law or medicine. Second, the completion of a full liberal-arts program plus graduate study designed to train students for public accounting are the most desirable standards. Third, the suggested cultural and professional subjects are approved and the establishment of such collegiate courses required of students entering public accounting practice is favored. Fourth, the committee, cooperating with other educational bodies, is instructed to develop minimum standards of curricula, finances, library, faculty, and equipment in such a manner that the Council may judge whether the institution is acceptable. Fifth, educational requirements should not be rigid and prevent capable and experienced public accountants from becoming certified, i.e., apprenticeship remained an acceptable path to certification. [AIA, 1941, pp. 172-173] The Council's first and second resolutions clearly reflect Nissley's positions on education, and the other resolutions generally conform to his views.

The committee, during the several years which followed, focused its efforts along the lines of the Council's resolutions. Cooperation with the AAA steadily increased, and in 1940, the AAA committee recommended a program structure which basi-
cally agreed with that established in the 1936 report. The committee indicated some frustration when it stated:

The longer your committee wrestles with the problem of educational training for the profession, the more fully it is convinced that the profession and the educational institutions must prepare for the establishment in the not-far-distant future of separate colleges of accountancy of coordinate rank with colleges of law. Looking towards that development your committee has asked the cooperation of the American Accounting Association in formulation of a suitable curriculum and other desirable standards. [AIA, 1941, p. 174]

Thus, the 1940-41 committee, at least, was considering the recommendation of the separate schools of accountancy as proposed by Nissley.

By 1943, the committee acknowledged the difficulties of establishing minimum standards for accounting education. The committee decided that it could best achieve its ends by reporting employers' experiences with graduates from various types of programs [AIA, 1943, pp. 115-116] because “Other organizations, undoubtedly, are better qualified to consider the pedagogical problem of preparing and adjusting courses of study to meet these requirements.” [AIA, 1943, p. 116] Thus, the committee signaled a shift in approach away from the activism of the 1936 agenda.

Nissley's vision and influence were again evident in 1945, when the committee on education began the revision of the Institute's 1927 pamphlet, "Accountancy Is a Career for Educated Men." The revised pamphlet was retitled, "Public Accounting As a Career." [AIA, 1946, pp. 120-121]

By 1945, membership of the committee on education was drawn only from practicing accountants. These committee members proposed that joint cooperation with the AAA committee on education provided the best means of achieving its objectives. [AIA, 1946, p. 120] At a joint meeting in June 1945, members of the committees established some interesting positions. First, training of an accounting major should be undertaken with the view that he may become a partner in a professional accounting firm or a controller of an industrial organization. Second, separation of the training for public and industrial accounting careers at the undergraduate level is not practical. Special training for public accounting is only practical at the graduate level or in special courses in the senior year. Third, although
the training in accounting principles is satisfactory, additional collateral reading is needed to broaden knowledge and understanding of concepts. Fourth, technical training in auditing is weak and needs additional training in fundamental rules of evidence and use of practice-based materials and cases. Fifth, written and oral communication is weak, and it is recommended that students be required to submit more commentary work and that the use of English be graded in addition to the technical solutions. Sixth, students are particularly deficient in ability to read clearly and precisely and with comprehension. [AIA, 1946, p. 124]

The committee states in the following year, 1946, that a great need exists "... in college curricula for more cultural subjects; colleges should strive to develop students with inquiring minds and with ability to write and speak the English language." [AIA, 1947, pp. 134-135] These views regarding curricula and the state of education of accounting majors are as likely to be appropriate during any decade since the 1940s.

The Institute committee concluded that it was impractical to prescribe uniform curricula for all colleges, but a minimum program was desirable and feasible. Since the AAA had appointed a committee to establish such a minimum program, it was recommended that its results should be submitted to the joint Institute and AAA committee. Other issues, such as training of war veterans, internships for students, staff education, and promotion of public accounting as a career, were now part of the agenda. [AIA, 1947, pp. 135-136] By 1946, the committee stated clearly that its primary objective was "... effective cooperation with the American Accounting Association to the end of providing better education for accountants and attracting to the profession young men of intelligence and character." [AIA, 1947, p. 134]

SURVEYS, PERSONNEL SELECTION, AND OTHER ISSUES

Nissley made other contributions which affected accounting education. In 1936, he undertook Arthur Young & Company's first recruitment interviews on a college campus. Evidently, Nissley had changed his attitude about recruiting on campus. During the operations of the Bureau for Placements, Nissley had criticized the campus recruitment by large businesses. Nissley expanded recruiting trips to several universities in 1937 and thereafter. The recruiting techniques he used were much the
same as those used today. Nissley also believed that the time needed to bridge the gap between theory and practice and to advance from junior to senior level was too long. To facilitate the transition and to achieve more rapid career advancement, Nissley established the firm's first staff school. [Horn, Spring-Summer 1969, pp. 73-75]

Nissley's contention that graduates of American colleges should be the primary source of professionals for public accounting led him to conduct four surveys during his career to monitor the proportion of new Institute members who were college graduates. As he expected, firms were recruiting more college-educated accountants, and more schools were offering accounting programs. However, he considered this a mixed blessing and would have preferred the education be concentrated in a few institutions in order to reduce the amount of apprentice-type training offered by some schools. [Nissley, September 1942, pp. 250-253]

Nissley [March 1926, p. 65], as early as 1925, noted that some college graduates failed in public accounting, simply because they did not like public accounting. He said, "I don't know what the legal profession and the medical profession do to sift out the men who are taking training along these lines who are not going to like the work when they get out. If they have any system I think it might be a good idea if we could adopt it in the accounting profession." [March 1926, p. 65] Nissley expressed concern on a number of occasions that a need existed for a way to select entry level accountants who possessed interest in public accounting, as well as, ability to succeed. He believed that professional schools dedicated to accountancy, preferably at graduate level and requiring a liberal-arts undergraduate degree for entrance, would provide a means to sort out students who were not suitable for the profession of public accounting. Since such schools did not exist, Nissley knew that other means were needed to identify students who possessed qualities for success in public accounting. [1946, pp. 102-104]

In 1942, Nissley began a crusade to establish a program to test and select personnel which led to the inauguration on May 24, 1947, of the Institute's "Professional Accounting Testing Program." [AIA, 1948, p. 181] He chaired the committee on selection of personnel from 1942 to 1946. The Council, in its 1947 report, stated that the committee on selection of personnel provided a testing program "... designed to measure the capabilities of young men and women who aspire to enter the account-

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ing profession” [AIA, 1948, p. 41] and that the program can be of service to colleges and employers. In addition, the Council approved the organization of a new committee on placements. Nissley also inspired this action which led to the establishment of the committee on personnel reference service. [AIA, 1950, p. 20] The new committee was charged with the development of a practical means of “... bringing desirable college graduates into touch with members of the profession who may wish to employ them as staff assistants.” [AIA, 1948, p. 41] The resulting reference service was designed to inform prospective employers of the availability of college graduates. The service required the taking of the Institute personnel tests, and the scores were the principal part of the information supplied. The process was handled entirely through the mail. [AIA, 1949, p. 10]

Six years after Nissley’s death, The Commission on Standards of Education and Experience for Certified Public Accountants (Commission) appeared to echo and confirm the concerns of Nissley. The Commission, formed in 1952, was the culmination of efforts, during the prior twenty or more years, of the Institute committees and the Association of the Certified Public Accountant Examiners to achieve more uniform and realistic standards for the qualification of CPAs. The Commission acknowledged that a college degree with an accounting major is “a recognized formal educational process” [1956, p. 3] and that widespread recruitment of college graduates indicates that collegiate education is one of the principal ways of preparing for public accounting. A body of specialized knowledge in accounting exists which can be communicated through a recognized formal education process to an individual in preparing for a career in public accountancy. [1956, pp. 2-3]

... Today programs of study of collegiate grade in business administration, including accounting programs, are available throughout the United States. However, despite this great increase in educational facilities, it is doubtful that there have been any exclusively professional schools, designed to train individuals for public accountancy, which are comparable to the professional schools available in other fields. [1956, pp. xx-xxi]

The Commission noted that attempts to establish schools of accountancy within university frameworks during the late Nineteenth and early Twentieth Centuries have resulted in development of schools of business administration which do not have as
a primary objective training accountants for public accounting. This development differs from the experience of other professions, such as medicine and law, where professional schools are the normal path for preparation. [1956, p. 43]

The Commission also took the position that:

... Technical training and competence are essential, but the profession is gradually accepting the idea that, in addition, academic training in broad cultural areas is important to the development of thought, and moral integrity, which may be developed by these methods, . . . [1956, pp. 20-21]

A general cultural background is needed to prepare the CPA as an educated man capable of meeting members of other professions on an equal footing, economically and socially, as in civic and business affairs. The importance of this background is harder to defend in general than is technical training, yet a cultural background is probably more fundamental and more important. [1956, p. 51]

The Commission supported the traditional objective of public accounting becoming a learned profession. Of note also, the Commission acknowledged that the profession was only gradually recognizing the need for a cultural-based education. [1956, pp. 51-52] The Commission recognized, as had Nissley, that general and cultural studies are best provided by colleges.

The Commission concluded that the demands for variety, depth, and comprehensiveness of training exceed the capacity of the four-year accounting program, even in the best of the educational institutions. Four-year programs fail to focus on preparation for a particular profession, and in any event, insufficient time is available for such preparation. [1956, pp. 64-65] In words reminiscent of Warren Nissley, the Commission stated:

... adequate preparation for the profession of public accountancy requires additional academic study beyond present four-year undergraduate programs. Programs are needed to provide the aspiring CPA with professional training, which is a part of the formal educational process, and is designed specifically to prepare him for the practice of public accountancy. . . . envisages professional accounting programs, within the framework of collegiate schools of business administration, which will be comparable in approach and objec-
atives to those of the professional schools developed in other fields. [1956, p. 121]

... Such advanced training should not represent merely a continuation of the usual undergraduate study but should be designed specifically to train CPAs for public accounting. [1956, p. 66]

... which would be new in accounting but has been tested for generations in other professions—a professional program, with classroom materials drawn from public practice, with faculties experienced in public accountancy and maintaining close contact with changes in that profession, and with students directly and specifically interested in preparing for a career in public accountancy as a CPA. [1956, p. 130]

Clearly, the Commission proposed the additional year of study as a new curriculum drawn from professional practice rather than the completion of existing master's degree programs. It also recommended an internship of approximately three months as part of this new professional program. The Commission acknowledged the value of a "cultural and liberal" undergraduate curriculum. It recommended that a nation-wide examination be devised which would test the college graduate's intellectual capacity, academic achievements, and aptitude for public accounting. Such an examination would assist educational institutions in selecting students who possessed the ability and aptitude for professional education. [1956, pp. 127-135]

In *The Common Body of Knowledge for Certified Public Accountants*, Roy and MacNeil emphasized that the qualities that made the CPA a professional were dependent on the elusive terms of "wisdom, perception, imagination, circumspection, judgment, integrity." [1967, p. 1] They concluded that qualitative factors required in the preparation for public accounting "should come to include graduate study." [1967, p. 5] Their recognitions that "humanities are the hallmarks of cultivated men and women," and such educated individuals would "likely not only to have a livelier intellect but also to be a better practitioner" [1967, p. 14] are consistent with Nissley's views.

The Institute Committee on Education and Experience Requirements for CPAs (Beamer Committee) recommended that "At least five years of college study are needed to obtain the common body of knowledge for CPAs and should be the education requirement." [1969, p. 6] The Council adopted this recommendation. In addition, the Beamer Committee outlined a sug-
gested program of study and recommended that states adopt the five-year requirement. [1969, pp. 11, 43-59]

Subsequent studies by the Institute, American Accounting Association, Federation of Schools of Accountancy, and others have also recommended five-year programs, schools of accountancy, and other actions to improve the quality of students and programs of study. The law school model is commonly cited as a guide for graduate professional programs for accounting.

In 1989, the managing partners of the then largest public accounting firms (big eight) published Perspectives on Education: Capabilities for Success in the Accounting Profession (white paper). They prepared this document because of their concern for the “quality and number of accounting graduates available to the public accounting profession.” [1989, Foreword, p. 1] The “big eight white paper,” indicates that solutions to the problems of educating the college graduate for entry into public accounting, as discussed by Nissley from 1925-1950, have not been achieved. Warren W. Nissley’s crusade for high-quality professional schools of accountancy dedicated to the education of men and women for public accounting comparable to those of other learned professions has battles yet to be won.

SUMMARY AND CONCLUSIONS

The Institute’s Council passed a resolution from the executive committee regarding Warren W. Nissley which provides a fitting epitaph:

Mr. Nissley had served his profession to good effect for more than 25 years. His activities ... are too numerous to mention, but several contributions of outstanding importance will remain as a monument to his memory....

He was a man of tremendous energy, decisive thought and direct speech, with an unusual capacity for leadership and achievement. His death is a great loss to the accounting profession as a whole.... [AIA, 1950, p. 20]

Warren W. Nissley, a college educated civil engineer, became an influential partner in the public accounting firm of Arthur Young & Company. He entered the firm in 1921 as a staff accountant and was made a partner in 1929. His training as an accountant came about by working in a bank and taking courses in accounting in the evenings. His accomplishments during a
thirty year career in public accounting can be traced to his high level of ambition, tenacity, and absolute dedication to his profession. Nissley was a complete public accountant, who delved deeply into every aspect of the profession. Higgins described Nissley as a "crusader" because anything he undertook was done with zeal and enthusiasm.

For more than twenty-five years, Nissley served as a torch bearer to improve educational standards for public accountants. Continually, he expressed disappointment at what he believed to be a lack of progress when compared to other professions. He pointed out that the importance of the profession's service was not fully appreciated or understood by the public nor those charged with the responsibility of educating and training entrants to the profession. Further, Nissley did not believe the profession had received the help needed from academics in training personnel. He observed that law, medicine, engineering, and others had long had professional schools, and passionately stated "... we should have, and we must have, professional accountancy schools." [1944, p. 172] Nissley preferred that an undergraduate degree in cultural subjects (liberal arts or arts and sciences) precede the professional education, which should be practice-based to be relevant to business and public accounting.

Nissley's "crusades" in education were directed toward one goal: to secure the most capable and educated people possible to ensure the quality of service that is required to maintain and enhance the profession of public accounting. He recognized changing conditions and resulting political, social, and economic challenges to the profession, and with creativity and determination, he tried to deal with those conditions and to meet those challenges. He was pragmatic in his approach. When he believed a problem existed, he did not theorize about the problem. Nissley identified a solution and developed a means to deal with the problem.

Nissley considered the quality of personnel as critical if public accounting was to increase its status as a profession. Numerous others in public accounting and academics have also confirmed the importance of quality personnel. John L. Carey as secretary to the Institute, stated that "... a profession can be no stronger than its personnel. In the long run, the quality of men who practice public accounting will be decisive in determining the extent to which public confidence in the profession can be maintained." [AIA, 1948, p. 51] Harry Simons stated that the limiting factors to public accounting achieving its full potential
are related to personnel. Thus, "the degree to which the profession meets its personnel problems will determine its stature in tomorrow's society." [1960, p. 13]

When in the mid-1920s, it became apparent that seasonality of work and the use of temporary staff had resulted in insufficient competent staff and that college graduates were actually advised not to seek a career in public accounting, Nissley made it a personal crusade to deal with these problems afflicting his profession. Through his vision and energy, the Bureau for Placements established a means to attract college graduates into public accounting. The publicity engendered by the Bureau helped to dispel the notion that public accounting was "part-time work," advanced the potential for career opportunities in public accounting, and laid the foundation for major public accounting firms to recruit college graduates. Although, more than a quarter-century passed before public accounting firms would completely implement policies of hiring only college graduates, the Institute testified to the Bureau for Placement's success.

Nissley, as have numerous others, believed that public accounting should be a "learned profession." As a learned profession, public accounting would be accorded prestige and economic success. He believed that collegiate education was the way to achieve this objective and provide the quality of personnel required. Certainly, Nissley's views on education and its purpose regarding public accounting conformed to that of fundamentalism, which has been the prevalent theoretical basis of education this century.

For twenty-five years, Nissley crusaded to improve education programs, to establish professional schools of accountancy, to develop ways of selecting qualified college graduates, and to attract the "brightest and best" to public accounting. Nissley was never satisfied that the education in business schools adequately produced "true" professional accountants. He spoke and wrote on this subject often and as early as 1928 put forth the concept of a professional school of accountancy based upon the law school model. He advocated a broad-based, liberal undergraduate education with business and accounting study at a graduate level. Indeed, Nissley's efforts contributed much to the advancement of accounting education.

Nissley served on the committee on education, spoke at professional meetings, and published articles in working to raise the profession's education standards. He helped to set the agenda that has in many ways directed the Institute's efforts in
the area of professional education. Reports and studies by various commissions, committees, and projects have echoed positions advocated by Nissley. Obviously, much of the agenda proposed by Nissley was visionary and overly optimistic and could not be developed and implemented in the time-frame recommended because of political considerations and resource limitations. Institute committees found that establishing an educational program was not as easy as first thought, nor did they have enough political power to dictate to colleges and universities what should be taught.

Nissley's crusade for schools of accountancy had as its central objective educating men and women for public accounting, who possessed the prerequisite qualities for success in public accounting. This objective is not yet realized, and this circumstance is, perhaps, the root cause for much of the criticism of accounting education in recent years by representatives of public accounting and business.

Efforts in the first part of this century to provide specific education for public accounting evolved into or were absorbed by schools of business. The Institute committee on education partially abandoned its position regarding need for separate schools of accounting for preparing students for public accounting in 1945 [AIA, 1946, p. 124], accepting the view that such was not feasible at the undergraduate level. Most accounting programs continue to be products of the colleges of business administration. Although the Commission on Standards of Education and Experience for Certified Public Accountants (Commission) identified admission standards, selection of teachers, and standards of instruction as problems resulting when accounting programs are under the control of colleges of business administration, it believed these problems could be solved within this educational pattern without significant difficulty. [1956, pp. 62-63, 121] Administrators in colleges of business administration have shown little propensity to grant independent status or to change the overall missions associated with graduate programs in accountancy.

Additionally, since 1887, leaders in public accounting have generally accepted the law school model as appropriate for public accounting education. A law school has a clear objective regarding the "line of work" in which its graduates are to engage and the standard of achievement—passing the bar examination. What school of accountancy has as its mission to prepare young men and women for public accounting and would use the pass-
ing of the CPA examination as the principal measure of success? As observed by the Commission, the evolution of accountancy as part of a school of business administration has been “at variance with the experience of other professions.” [1956, p. 43] Schools of business administration, particularly those which are members of the AACSB, emphasize broad training in the important functional areas of business administration. [1956, pp. 43-45] Accounting is simply one of several core areas.

Regardless of the advancements during the past forty-four years in professional education, Nissley would continue to be disappointed that no professional schools are dedicated to public accounting. He would criticize the current state of professional education for public accountants, and likely express concern regarding the selection criteria used, or lack thereof, in selecting accounting majors. Nissley would support the need for a broad-based, liberal education, though he would recommend that an undergraduate degree in liberal arts or arts and sciences should be the prerequisite for professional graduate level study for public accounting.

REFERENCES

https://egrove.olemiss.edu/aah_journal/vol23/iss1/10


Perspectives on Education: Capabilities for Success in the Accounting Profession, Arthur Andersen & Co, Arthur Young, Coopers & Lybrand, Deloitte Haskins
& Sells, Ernst & Whinney, Peat Marwick Main & Co., Price Waterhouse, and Touche Ross (April, 1989)


RETROSPECTIVE:
ANDREW BARR: LONGEST SERVING
SEC CHIEF ACCOUNTANT

Andrew Barr, born in Urbana, Illinois, in 1901, was one of the earliest professional accounting executives to develop a career with the federal government. He died on November 29, 1995 at his Urbana home. Barr worked for the Securities and Exchange Commission (SEC) from 1938 to 1972—the last 16 years as chief accountant. This tenure made him the longest serving chief accountant to date. After living at the University Club in Washington, DC, for over 40 years, he returned after retirement to Urbana, a city where several generations of the Barr family had lived and worked as brick manufacturers [Barr, 1992].

In his later years, Andrew Barr was a respected senior statesman in accounting circles because of his role in shaping SEC policy and because he had served as government accounting's informal ambassador to the rest of the accounting profession. He began his SEC career as a research accountant investigating the McKesson & Robbins case, and went on to deal with many of the most fractious issues facing the accounting profession in the United States. Through his job and through his involvement with the Association of Government Accountants (AGA) (formerly known as the Federal Government Accountants Association), Barr became active in many aspects of the accounting profession. His contributions have been acknowledged with several awards including the President's Award for Distin-
guished Federal Civilian Service (the highest honor the federal
government can bestow on a career employee) (1960), AGA's
Distinguished Leadership Award in 1961, the AICPA's Gold
Medal Award in 1964, and AGA's Robert W. King Memorial
Award in 1968. Also, the AGA annually gives the Andrew Barr
Award to a distinguished contributor to government accounting
from the private sector. Barr was also inducted into the Ac­
counting Hall of Fame at Ohio State University in 1963 and was
a life member of the Academy of Accounting Historians (one of
only ten at the time of his death). George Washington University
and the University of Illinois honored Barr with honorary doc­
torates [Barr, 1992].

THE EARLY YEARS

After growing up in Urbana, Barr attended the University of
Illinois, where he received both bachelors (1923) and masters
(1924) degrees. He passed the CPA exam in 1924 and joined the
Chicago CPA firm of Reckitt, Benington, and LeClear as a staff
accountant. His Illinois professor Hiram T. Scovill was instru­
mental in assuring the young Barr that he would learn more by
going with a small firm than if he joined a national CPA firm.
Following two years in public accounting, Barr decided to enter
the academic field as he joined the accounting faculty at Yale
University. He spent 12 years at Yale (1926-1938) where he be­
came acquainted with such individuals as Ralph C. Jones, Will­
iam Werntz, and William O. Douglas.

Barr decided to enter government service because he valued
the opportunity to serve at a time when the country was at­
temning to restore itself from the devastating depression. Barr
saw the chance to get in on the ground floor at the SEC. He
initially earned about the same salary at the SEC as he earned at
Yale.

Although much of Barr's life was devoted to accounting, he
had at least one other avocation—military history—which
stemmed from his service in World War II. Barr had been a
member of the Reserve Officer Training Corp (ROTC) at the
University of Illinois. When called to duty in February 1941, he
entered as a cavalry major, but was soon promoted to Lieuten­
ant Colonel. He was the official historian for the 3rd Armored
Division for World War II and authored the volume entitled
Spearhead in the West—The Third Armored Division. He was dis­
charged as a colonel in 1946, but continued as a member of the
Army Reserve until 1961. Barr’s role in the military (G-2, intelligence) was related to his work with the SEC. His Army unit executive officer thought Barr’s experience on the McKesson & Robbins investigation was good training for an intelligence officer. Barr explained the reasoning behind this metamorphosis as follows:

(I)t is very easy to relate generally accepted auditing standards (general, field work, and reporting) to the work of an intelligence officer in combat. That officer must have adequate technical training and proficiency, have independence in his judgments and must exercise due professional care in his work. He must supervise his staff and lower-echelon personnel, evaluate procedures employed and secure sufficient evidential matter through inspection, observation, inquiries and confirmations to support the reports he submits to both lower and higher headquarters in the chain of command. He is required to express his view of enemy capabilities and should have adequate support for his conclusions, or if necessary qualify with reasons. He must be able to judge the importance of bits of evidence received, determine which require immediate attention by the commanding officer, and what should go in his late night report for delivery before orders are issued in lower units for the next morning's operations. It takes only a little imagination to compare the work of the intelligence officer in combat and the auditor on a complex assignment. McKesson & Robbins was good training [Barr, 1980, pp. 3-4].

ACTIVITY IN PROFESSIONAL ORGANIZATIONS

Andrew Barr worked in the late 1940s to get AGA founded to enable federal accountants to coordinate their work with colleagues in other agencies. Barr was the AGA’s fourth president (1953-54) and served on most committees of that era. He played a major role in getting governmental accounting service accepted for CPA exam experience requirements.

Because of Barr’s close working relationship with CPAs in public practice and with corporate accountants, he made an ideal ambassador from AGA to other organizations. In fact, Barr was active in the AICPA, serving on its Council, and the National Association of Cost Accountants (now Institute of Management Accountants), which he served as Washington Chapter president. He explained that he first joined the latter organization
because then chief accountant Earle King thought somebody from the SEC should be a member. It was decided that since Barr had no family, he would have more time to attend the meetings. Barr was also an active member of the American Accounting Association, which he served as a vice president in 1956. Barr was AGA's official delegate to the 8th and 9th International Congresses of Accountants in 1962 and 1967 (in New York and Paris). He attended the Congresses with the approval of the Commission, but did so at his own expense. Because of Barr's activities, the AGA became an accepted organization among other groups of accountants. The AGA leadership of the 1970s recognized this contribution when it asked Barr to write a chapter on "Relations With Other Organizations" for the AGA's 25th anniversary history volume.

**RESEARCH ACCOUNTANT—THE MCKESSON & ROBBINS CASE**

SEC chief accountant Carman Blough had interviewed Barr in 1938 when Andy decided to leave his academic post at Yale, but when Barr reported for work, Blough had decided to leave the SEC. As a result, Barr's first assignment was to be directed by W. W. Werntz, who served as chief accountant from May, 1938, until April, 1947. Werntz faced the issues of the McKesson & Robbins fraud, and the concerns presented in it about the adequacy of audit procedures and corporate financial reports. At a time when investor confidence was beginning to be restored in the stock market, this affair represented the first true test of the SEC's ability to address matters involving questionable activities which occurred under its jurisdiction.

Werntz assigned Barr to the McKesson case, to work as a Research Accountant. Barr's tasks included assembling the facts and materials which would provide the basis for the SEC's inquiry into the case. The challenge was arduous if only because there was no precedent for the proper process to follow in such a situation. The challenge which Werntz and Barr faced was how to obtain, for the records, a basis for understanding the state of the art of audit procedure and practice. Werntz decided to obtain testimony from noted practitioners. While individual accountants had testified from time to time in Congress on legislative matters, such evidence was not common for investigative matters involving regulatory agencies. For a regulatory agency to undertake such an inquiry of the profession itself was a mat-
term involving the need for diplomacy. Werntz succeeded at this—arranging for the appearance of top accounting professionals who provided expert testimony at the public hearings held in New York during early 1939 [United States, 1939]. Barr played a key role by preparing the questions to be asked of the witnesses. The witnesses included top accounting firm partners, one academician, and representatives from the Controller’s Institute (now Financial Executives Institute) and the American Institute of Consulting Engineers. These witnesses—reading like a who’s who of the profession—included:

   Samuel J. Broad; Peat, Marwick, Mitchell & Co.
   Charles O. Wellington; Scovell, Wellington & Co.
   Victor H. Stempf; Touche, Niven & Co.
   William H. Bell; Haskins & Sells
   Norman J. Lenhart; Lybrand, Ross Bros. & Montgomery
   John K. Mathieson; Mathieson, Aitken & Co.
   Henry A. Horne; Webster, Horne & Blanchard
   Charles B. Couchman; Barrow, Wade, Guthrie & Co.
   Hiram T. Scovill; University of Illinois
   Joseph J. Klein; Klein, Hinds & Finke
   George D. Bailey; Ernst & Ernst
   Charles W. Jones; Arthur Andersen & Co.
   Arthur Tucker; Controllers Institute
   George W. Burpee; American Institute of Consulting Engineers

The firm of Price Waterhouse & Co. was noticeably absent from the above list due to its involvement in the McKesson & Robbins case.²

By the time the SEC report on the case had been completed, the professional practice community had reacted to the concerns by extending audit procedures to require the confirmation of receivables and the observation of inventories. In addition, the American Institute had established a standing Committee on Auditing Procedure. The McKesson & Robbins case occupied Barr’s life from the time he joined the SEC until almost the time when he was called to active military duty in early 1941. As mentioned previously, his investigative duties with the SEC led to his being appointed an intelligence office in the Army.

BARR'S CHIEF ACCOUNTANT YEARS

Following his military service, Barr returned to the Commission in May 1946. Earle King became chief accountant in 1947 and Barr became assistant chief accountant. In 1950, Barr accepted a new duty as Chief Accountant of the Division of Corporation Finance, where the active review of registrant filings was the main responsibility. Interestingly, this was a period in Barr's life that has been little documented, and there is seemingly little to document. He had but one publication during this period (out of more than 60 papers during his career) and he rarely discussed his duties in the Division of Corporation Finance. He was kept quite busy these years because of the backlog of work that existed when he arrived and the small staff available.

Upon Earle King's departure from the SEC in November 1956, Barr was named SEC Chief Accountant. Barr became involved almost immediately in an attempt to reconcile differences between the American Institute's rules relating to auditor independence and those of the Commission. His arguments were carefully set forth in his 1959 paper "The Independent Accountant and the SEC," an address given at the Ohio State Accounting Institute and later published in the Journal of Accountancy [1959]. A major area of difference was with regard to the view of independence. The professional auditors argued that independence was a "state of mind" and was not necessarily impaired "in fact" by financial interests—such as in a client whose shares might be used to compensate the auditor for services involved in taking a small company public. It was Barr's, and the SEC's view, however, that these relationships cast doubts on such connections as conflicts of interest. At least in appearance these were conflicts and such interests should be avoided or prohibited when material. Barr used historical anecdotes to support his views on independence and used references to accounting history to support many of his writings and speeches [for example, see Barr, 1966].

The initial restriction on financial relationships later led to increased observation of other "appearance" rules as the basis for evaluating independence. The Commission continues to follow the precedents established by Barr in requiring that financial relationships be limited per se. Barr later stated that some accountants privately supported his interpretation of independence because it took the pressure off of them to provide audit
services to businesses with which they were in some way related. On one occasion a CPA came to Barr's office to thank him for the prohibition against auditing his family's business.

Among other issues faced by Barr during the 1960s was the stop order issued against Atlantic Research Corporation in 1963. The Atlantic Research case was significant because it showed how a company might use differences between Commission rules and the application of generally accepted accounting principles to show different results on the income statement filed with the SEC from those reported on the shareholders' annual report, both of which had been audited. By challenging this practice, Barr initiated a process which his successors would follow. Eventually, as a result of this and similar concerns over differential disclosures, the gap between 10-K and annual report contents was eliminated. Along with the differential disclosures, Barr also lamented the fact that annual reports had become public relations tools, with artists being just as important in their preparation, or more so, than financial accountants.

Accounting for the investment tax credit was another area of controversy involving Barr. The administration of President John F. Kennedy proposed, as a means of economic stimulation, to provide a seven percent credit against federal income taxes for most forms of capital investment. For corporate taxpayers, such a credit was the equivalent of a cash refund since the credit could be applied immediately.

The newly formed Accounting Principles Board (APB) favored a view which required, for financial statement purposes, a deferral of the credit's recognition, which resulted in little immediate effect on corporate income statements. The APB's position deferred the amount and allocated or matched it to revenues over the life of the eligible assets acquired. The deferral versus immediate flow-through controversy split the profession, with the major public accounting firms being about equally divided as to their positions.

The leadership of the profession, seeking to establish the authority of the APB, was concerned that the APB, in only its second authoritative opinion (and the first of any substance), needed to gain the support of the SEC to insure that the new organization would achieve its proper status. Barr's reasoning to allow either method is contained in a paper entitled "Accounting Treatment of Investment Tax Credit on Corporate Financial Statements" [Barr, 1980, pp. 286-289] which was published as a part of Barr's collected papers by the University of Illinois. In his
reasoning, Barr argued that the credit was "in substance a reduction in income taxes;" and not "a reduction in or offset against a cost otherwise chargeable . . . to future accounting periods."

By this reasoning Barr acknowledged, as well, that it was the intent of Congress to create immediate benefit from such an investment tax credit. Barr later liked to point out that in the 1970s when a version of the investment tax credit was again reinstated, Congress specified in the legislation that either method—deferred or flow-through—was acceptable for financial accounting purposes. The investment credit episode demonstrated the political significance of deciding an accounting treatment.

Andrew Barr was also involved in assisting the Commission in preparing for Congressional hearings which resulted in the 1964 amendments to the securities acts. These changes were necessary because the original securities acts, nearly 30 years old, had not anticipated changes in the market for publicly traded securities. Many large companies which traded on the over-the-counter market were often able to avoid SEC filing because they were not formally listed on a stock exchange even though they sought capital through public markets. The 1964 acts extended investor protection and the disclosure requirement process to over-the-counter stocks and to major transportation companies such as the Pennsylvania and New York Central railroads. Transportation companies had previously been exempted from SEC filing requirements because they were subject to Interstate Commerce Commission oversight.

SUMMARY AND CONCLUSION

When Andy Barr retired from the SEC in January 1972, he was 70 years of age—and had achieved international prominence as a leader of his profession. Two principles describe Barr's approach to his role as an important accounting executive in the federal government during the rapid period of economic growth in the 1950s and 1960s. First, he supported the view, which had become established in the SEC whereby corporate management had both the right to express its views in corporate annual reports and the responsibility to do so fairly. This view was tested in the Atlantic Research Corp. case where Barr felt that management's view as contained in the annual report departed materially from the results filed with the Commission.
under Reg. S-X rules. Second, Barr's actions were consistent with achieving the greatest possible cooperation with all elements of the practicing accounting community. He was an accessible chief accountant who was willing to pick up the telephone and talk about individual problems with practitioners as the problems arose.

Although Andy's formal academic career was relatively brief, 12 years at Yale, his lifelong scholarship is evidenced in his collection of papers published in 1980 by his alma mater, with more than 60 journal articles (including five or more each in the *Journal of Accountancy* and *The Accounting Review*), by his contribution to the authorship of the 3rd Armored Division's official history, and by his support of successful efforts to collect and publish the writings of his predecessors with the office of the Chief Accountant. Similarly, his activity in a variety of professional organizations extended his influence in the profession and broadened his horizons far beyond what would be expected of a person in his role.

Andrew Barr was a life-long bachelor. His family was the SEC, the AGA, and the Army's 3rd Armored Division. When asked to summarize his life, he stated that everything he did was related to his education at the University of Illinois—particularly his accounting and R.O.T.C. courses. Many people he dealt with in his career were similarly graduates or faculty members at Illinois. Thus, Barr concluded that an individual's life is dependent upon one's education. Barr used his education for a career in public service as an accountant. He will be remembered for his contributions and his counsel to a growing profession.

**REFERENCES**


Barr, Andrew, Interview by the Authors, Urbana, IL, July 16-18, 1992. A videotaped copy of the interview is available from the Academy of Accounting Historians' Accountancy Videotape Center at the University of Mississippi.


1995 ACCOUNTING HALL
FAME INDUCTION:

WILLIAM W. COOPER

CITATION FOR WILLIAM W. COOPER

By Thomas J. Burns
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He has been a catalyst of change on a world-wide basis for more than 50 years: in his research, with his inspired teaching, as an editor for many periodicals, and as a consultant to both private, governmental and public institutions. A prodigious author, his writings often focused on quantitative and creative approaches to management. Equally important have been his contributions to management education as noted in Ford and Carnegie Foundation reports. Working with others, he has authored 17 books and over 450 articles including ones with Hall of Fame members Robert Trueblood, Eric Kohler and Yuji Ijiri. With his long-time collaborator, the mathematician Abraham Charnes, he was known everywhere as "Mr. Linear Programming," partly because, together, they developed whole new areas of use and research such as "goal programming," "chance constrained programming," and more recently, "data envelopment analysis."

Born in Birmingham, Alabama in 1914, his father was a bookkeeper and later a distributor for Anheuser-Busch. When he was three years old, the family moved to Chicago where his father owned a chain of gasoline stations that he lost in the Great Depression. He continued in high school only until the end of his sophomore year. With his father in ill health and no family revenue, he had to work at whatever he could find. This included everything from professional boxing to spotting pins in bowling alleys and caddying at golf courses.
While hitchhiking to a golf course one day, he met Hall of Fame member Eric Kohler, who thereafter became his life-long mentor. This included a loan of funds which enabled him to start a nondegree track at the University of Chicago. He quickly learned to like the academic atmosphere and soon took the college entrance examinations, intending to become a physical chemist because that seemed to offer the best chance of a job. At about this time, Kohler, then a principal at Arthur Andersen, asked him to look over the mathematics used in a patent infringement suit in which Andersen had been retained by the defendant. He found errors in the mathematics used by the plaintiff's engineers and Andersen hired him full-time in the summer and part-time during the school year. This awakened his interest in accounting, and so he changed his major from chemistry to economics at the University of Chicago, and Kohler helped him to learn accounting. He graduated Phi Beta Kappa in economics in 1938.

Kohler had by then left Andersen and assumed the position of Controller for the Tennessee Valley Authority. Kohler brought him to the TVA to head up work on "procedural auditing" (what would now be called "performance auditing") as well as to advise Kohler on the mathematics of cost allocation and other disputed matters in which the TVA was involved. This included helping Kohler to prepare testimony on these and other matters to be investigated by a Joint House-Senate Investigation Committee. Most of the work was completed by mid-1940 so he left to become a Ph.D. candidate at Columbia University where he had been awarded a doctoral fellowship in the School of Business. After passing his "prelims" in 1942, he again left academia to join the Division of Statistical Standards at the U.S. Bureau of Budget (now the OMB) where, as part of the U.S. war effort, he was placed in charge of coordinating all of the Federal Government's accounting and accounting-related statistics programs. By late 1944, with the war coming to an end, he left to teach at the University of Chicago.

In 1946, he returned to Washington to chair a committee to decide the fate of various war-time programs in financial statistics. He then transferred to Carnegie Institute of Technology (now Carnegie-Mellon University) where he helped found, first, the Graduate School of Industrial Administration and, later, the School of Urban and Public Affairs. There was time out, however, to develop the "end-use" audits that Kohler wanted to institute as Comptroller of the Marshall Plan. In 1976, after 30 years...
at CMV, he went to the Harvard Business School to help reorient their doctoral programs while holding the chair in accounting named for Hall of Fame member Arthur Lowes Dickinson. This task completed, in 1980 he went to the University of Texas where he was initially appointed Professor of Management, Accounting and Management Science, and Information Systems, and is now the Foster Parker Professor of Finance and Management (Emeritus) and the Nadya Kozmetsky Scott Centennial Fellow in the IC² Institute.

He has been awarded honorary doctor of science degrees by Ohio State University, Carnegie-Mellon University, and will soon be awarded the degree of doctor honoris causa by the University of Alicante in Spain. In 1945, he received an award for the most valuable article on accounting, the first ever awarded by the American Institute of Accountants (now AICPA). A fellow of the Econometric Society, he was the founding president of the Institute of Management Sciences, and he was also president of the Accounting Researchers International Association. He was the Director of Publications for the American Accounting Association. In 1990, he was named an Outstanding Accounting Educator by the same organization. He was Visiting International Lecturer for the AAA, traveling abroad in 1986 to lecture on accounting topics and visit with scholars in Latin America. In 1982, he was co-recipient of the John Von Neumann Theory Medal, jointly awarded by the Operations Research Society of America and the Institute of Management Sciences. In 1988, he received the Distinguished Service to Auditing Award from the Auditing Section of the AAA as well as an award for serving as the founding editor of Auditing, A Journal of Practice and Theory. He has also received three McKinsey Foundation Awards for the most valuable article of the year on a management topic, and he has been a consultant to more than 200 institutions including the Marshall Plan, the U.S. General Accounting Office, UNESCO, and others. He believes that one of his greatest contributions was keeping his student, Hall of Fame member Yuji Ijiri, in accounting when he was almost ready to switch disciplines under the influence of Nobel Laureate in Economics, Herbert A. Simon. His wife Ruth, always his teammate, is a lawyer who practiced actively as a member of the bar for 30 years in Pittsburgh. Just back from serving as plenary speaker at the meetings of the European Operations Research Societies' research conference in Israel, he is the fifty-fifth member of the Accounting Hall of Fame: William Wager Cooper.
Mr. Chairman, Ladies and Gentlemen, Friends, Colleagues and Former Students: I greatly appreciate your attendance on this occasion when I am to be given the great honor — the very great honor! — of being inducted into the Accounting Hall of Fame. Among my many satisfactions, this will allow me to join the very distinguished company of Eric Kohler, my former teacher, and Yuji Ijiri, my former student — and, hopefully, others of my former students and colleagues will join us in the future.

I would now like to have you join me in some reflections on the current state of affairs with respect to research — especially academic research — and its relevance to the practice of accounting. Before entering into this topic, however, I would like to make some acknowledgments:

First to my parents. Bertrand Russell once remarked that one should exercise great care in choosing one’s parents since a good choice of parents is likely to ensure good genes, good character and a good start in life. This I owe to my parents, William Wager and Rae Rossman Cooper — now deceased so they cannot be here on this memorable occasion.

I have already mentioned my teacher, Eric Kohler, and my former student, Yuji Ijiri, and I would also like to add my other present and former students and colleagues to whom I am also indebted. These are persons from whom I have learned much and to whom I owe a great debt as a constant source of new problems and stimulating ideas in exchanges that I have experienced with them over these many years.

I also owe much to the schools and the professional societies — including the American Accounting Association — with which I have been associated, for they have provided me with a rich variety of opportunities and experiences over a period of many years. I should perhaps dwell on this for a moment since (again owing to Eric Kohler) I am probably the only person

1This talk, on the occasion of my being elected to the Accounting Hall of Fame, is dedicated to Ruth F. Cooper, my wife and companion, who has affected all phases of my life, my thoughts and my feelings for more than 50 years.
present who was in attendance at the 1935 founding meeting of the American Accounting Association — the society whose 1995 meeting we are all attending on this occasion here in Orlando, Florida. The then newly founded AAA was intended to have a new (double) orientation toward research and practice with strong interactions between academic research and accounting practice also intended. It is partly from this perspective that I am concerned by what I now perceive as an increasing tendency for the two of them to follow separate paths.

Of course a great deal has happened since 1935. For further perspective, I might add that my graduate and undergraduate education occurred on one side on World War II while much of my research and subsequent experience occurred on the other side of that great dividing event in world history. Only those who have seen both sides can appreciate how different the worlds were on the two sides of the divide provided by that war and the events that terminated and followed it.

The research in accounting that occurred on the pre-World War II side of this divide was largely application (practice) oriented and generally accorded the form of “textbook” presentations. This is one part of what the AAA undertook to change with its monographs and research programs. One should be careful, however, to avoid belittling the preceding record of accomplishments. In a chapter entitled “Early Development of Accounting Standards and Principles,” Carman Blough, the first Chief Accountant of the SEC, notes that these early texts and writings “provided the models that were subsequently used for reforms and standard setting.”

This “practice oriented” research, however, lacked the rigor that is needed to provide a foundation for scientific generalization and testing to determine how far and in what manner extensions might be affected beyond the realm of particular problems and practices. The contemporary research literature now supplies this kind of rigor, but in a way that often seems remote from practice. One way to summarize what is happening is to say that much of this contemporary research is pointed toward “pure science” whereas an “applied science” orientation is what is (or should be) wanted if our research is to interact with practice in a mutually beneficial way.
This is not to say that the contemporary research I am describing is bereft of interest in the problems of our profession. It is to say that this research often takes a form that can be described as “theory driven applications” rather than “applications driven theory.” The latter is needed — or at least it is needed in greater abundance — if we are to maintain fruitful contact with the rapidly changing scenarios of contemporary practice and, I might add, it is also needed if we are to serve as a vehicle for attracting contributions from other disciplines for added contributions to accounting. Indeed, an ability to formulate problems as well as solutions in general and rigorous terms is needed to obtain this type of inter-science cross-fertilization. This is what is intended by “applications driven theory”. The application is driven by problems of actual practice with a solution that is also extended and stated with sufficient rigor and generality to be understood by others (including persons in other disciplines).

In principle, at least in some cases, this kind of application driven research is best accomplished in collaboration with persons involved in decisions or policies directed to these problems. In this way we can ensure that the complex and sometimes elusive nature of the problems at issue are identified fully. En route to the desired solutions and generalizations one may also envision situations where team combinations may be used that also involve collaborative efforts with persons from other disciplines — such as statistics, operations research, and computer science.

An example of such “applications driven theory” is provided by the work of Louis Pasteur on the silkworm diseases that were ravaging the French silk industry in the early 19th century. We quote from Science (December, 1972) which notes that “at the conclusion of his research, [conducted in collaboration with practitioners] Pasteur found that he had not only solved the problems that were destroying sericulture in France, but he had also pointed out the importance of practical [sic!] experimental research on microorganisms for the sciences of microbiology and pathology.” Thus, as indicated, this research had the desired effects in (a) improved practice with (b) impacts on other sciences.

This was not an aberration. In similar activities, Pasteur helped to improve the production of wine, vinegar and beer, and his research on the anthrax that was harming the sheep in France laid the foundation for the modern germ theory of disease and the development of immunology as a whole new sci-
ence. Evidently, it is possible to be basic as well as applied in such research (depending on how it is conducted) and the impact on other disciplines provides one test of whether its achievements are fundamental.

Returning to accounting research and practice, I recall participating (in the early 1950's) in what Hall-of-Famer Robert M. Trueblood referred to as the "Monangahela Project" to study (and test) the possible use of statistics in accounting and auditing. This was done with very concrete applications, first at the National Supply Company (now a part of Armco Steel) and then at Kaufman's Department Store (now a part of the May chain of stores). This work was done on a fee-free basis in collaboration with researchers from the Carnegie Institute of Technology (now Carnegie-Mellon University) and controllers and staff from the companies where research was conducted. The work was then followed by write-ups and reviews some of which were submitted to W. Edwards Deming (from statistics) and Eric Kohler (from accounting) who were asked to appraise the work and its claimed generalizations from the standpoint of the discipline with which they were associated. All of these tests had to be passed in fully satisfactory form before Trueblood would allow his firm to offer these services to clients. Once these tests were passed, an abundance of publications followed and this work soon began to affect practice in accounting. It also affected research in statistics and, in fact, the use of statistics in accounting (now attended to by many others) has recently received recognition in the form of a full-blown National Academy of Sciences report entitled *Statistical Models and Analysis in Auditing* (Washington: 1988).

To this point, our focus has been on financial accounting, but one also needs to accord recognition to pre-World War II accomplishments in managerial and cost accounting. Here we may single out developments like standard costing, flexible budgets and differential and variable costing as major contributions to accounting and management practice. Standard costing, which has its roots in the work of F.W. Taylor and his associates, is the only one of these developments that exemplifies attempts at scientific rigor and generalization. The other developments are, of course, important to the topics we are addressing but, for the present, we simply note that it was only standard costing that made its way from internal management use — when it was argued that inventory should be reported at standard-cost values in financial statements with accompanying dis-
closures of "efficiency" and "inefficiency" gains and losses.

Financial statement disclosures in terms of efficiency gains and losses now seem to have fallen out of favor, both in practice and research. In some ways this is unfortunate, since efficiency evaluations are important topics for both public-policy and investor evaluations of management performance. In another way, however, the lack of contemporary research on these topics brings us to yet another facet which we explore in this postwar "pure science" emphasis in research.

If I may be permitted a personal experience, I can report that DEA (Data Envelopment Analysis) represents yet another attempt to develop better methods for evaluating managerial performance with special reference to activities using multiple inputs to produce multiple outputs with no easily identified "bottom-line". Now a part of the literature of operations research and economics, DEA is being used to evaluate activities of police forces, schools, hospitals, etc. in many different parts of the world.

Why was DEA not developed as a part of the accounting literature? At a very early stage, David Sherman and I submitted an article to one of our peer reviewed journals in accounting only to have it summarily rejected by the editor who refused even to send it to referees because, as I subsequently discovered, it had no "theory". What the editor had in mind was what I shall refer to as "substantive theory" as distinguished from the "methodological theory" on which DEA is based. The former i.e., "substantive theory", is exemplified by what is wanted in the search for regularities (or laws) based on ideas like the behavior of "homo economicus" in economics. The latter, i.e., "methodological theory," is exemplified by the kind of research and theory that underlies the statistical tools used in much of the "pure science" oriented research we are considering.

At this point, it seems fair to recall accounting's origin as a methodologically oriented discipline in Pacioli's book on mathematics and, for years, double-entry accounting was known as the "Italian method" of bookkeeping. The opportunities for methodologically oriented research are also far from exhausted in both financial and managerial accounting. Witness, for instance, the "triple-entry system" of Yuji Iijiri which can now provide integrated explanations of the income statement changes together with balance sheet changes in a manner that extends the classical "double-entry" use of income statements to "explain" changes in successive balance sheets. Recent activity in
areas such as "ABC costing" has also attracted research attention with needs now becoming apparent for more rigorous treatment of topics like complexity, flexibility, etc. — which are increasingly being encountered in dealing with accounting problems in high-tech industries.

Having addressed topics like financial and managerial accounting, I would be remiss if I did not also mention auditing in these all too brief comments. Here, too, I am struck by the fact that a major development like "performance auditing" has developed both in governmental and internal auditing with very little attention in the research literature that I am considering.

I should add, however, that I have no doubt that the abilities of contemporary researchers are up to supplying what is required to develop more fruitful and mutually beneficial interactions (a) with practice and (b) with other sciences. Some kind of shifting about and experimentation with present institutional arrangements might help to bring this about. The accounting profession has shown itself capable of responding to challenges in the past and the challenges here are certainly not beyond its capabilities. Here, however, the challenge is not so much a threat but rather a series of opportunities for improvements in both research and practice.

This drifting apart between research and practice has roots, I think, in the preparation provided by our current Ph.D. programs. This usually takes a form in which students are taught to draw their research problems from the literature in which they intend to publish. This is fine for theory development with "theory driven applications," perhaps, resulting at a later stage. It falls short of what is required, however, in research which is to take the form of "applications driven theory."

A few years ago, the "Bedford Committee" issued a report which has led to important changes in education for practice — at least in some institutions of higher learning. A similar committee might now begin to examine changes in the way we provide preparation for research. The trick in accomplishing what is required, I think, will involve effective arrangements to bring this type of education and research into focus on what is going on and needed to help improve professional practice without losing the rigor that is needed to maintain contact and influence what is going on in the sciences. The results could be large rewards for practice, for research and for science and society generally.
BOOK REVIEWS

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REVIEWS OF BOOKS AND OTHER PUBLICATIONS

REVIEW ESSAY

The development of the history of accounting thought in Italy and the Biblioteca Storica di Ragioneria ed Economia Aziendale by Prof. A. Amaduzzi and Prof. G. Cavazzoni

Italy is the country in which modern accounting originated, and in common with other European countries it possesses an immense wealth of written sources, which are indispensable for reconstructing the history of accounting from Medieval times to the present. However historical research in accounting has only recently been accorded its due status in Italy.

There are a number of factors that have both led to and accelerated the revival and development of accounting and business history research in Italy in recent years. Firstly, the need has arisen to rethink the past and to pause for reflection, after many years of scientific research oriented only to the present and future and to specialisation without any continuity with the past. Secondly, the establishment in Pisa in 1984 of the Società Italiana di Storia della Ragioneria, with the support of the international community, has brought together scholars with the common aim of continuing the historical studies which flourished briefly in Italy at the end of the nineteenth century.

In addition, in 1993, with important changes to the law governing the teaching of economic science in universities, both accounting history and comparative accounting have become recognised areas of study and are slowly entering the curriculum, with courses of 60 or 35 hours giving credits according to the options chosen by students on various diploma or degree courses.

At present, in Italy, the following areas of research can be identified: the history of accounting which has as its aim the...
study of the evolution of accounting as a means of recording transactions; business history including the history of firms and organisations of various types; history of accounting and economic thought—a particularly rich area of study in Italy in the last 150 years; and finally the history of the profession. Such classification however, as made clear in the Manifesto della Società Italiana della Storia della Ragioneria published in 1994 do not represent mutually separate fields, but are closely interconnected. In particular the history of accounting and the history of firms and organisation represent a single core of research since the interpretation of the numerical records is an indispensable prerequisite for understanding, with due level of accuracy, the processes and the activities of business whether near or remote in time. Furthermore the history of accounting thought overlaps with the history of accounting when the latter does not merely limit itself to the study and interpretation of methods of record-keeping but sees in these methods the instruments and means by which to understand the cycles of prosperity and the lives of men under particular economic systems, as well as the relationship that always exists between accounting theory and theories of economics and enterprise.

In the field of accounting, publications dealing with history first appeared in 1869 with a brief essay entitled Origini storiche della professione di ragionere by Ernesto Luchini and continued in the work of one of the great Italian thinkers, Fabio Besta (1845-1922) and his pupil Gino Zappa (1879-1960). With Fabio Besta, a golden age in the study of accounting history began. In 1894 the Società Storica Lombarda offered a prize for a work on accounting history; this was won by Plinio Bariola and led to the publication of several important, methodical works.

In the twentieth century, after these first steps towards establishing the discipline, the history of Italian accounting and accountants was included alongside the curriculum in university accounting courses. Authors of textbooks for courses on accounting and financial accounting devoted several chapters to history. However it is not until the middle of the twentieth century that we see major comprehensive works published again in Italy.

In 1950 Federigo Melis published a seminal work on the history of accounting covering the subject from the ancient up to the early twentieth century in 900 pages rich in analysis and information. In 1952 Tommaso Zerbi published a volume entitled Origini della partita doppia which is now a classic of ac-
counting history for the period prior to the *Summa* of Luca Pacioli.

Among the most important scholars of accounting history Tito Antoni, the first to hold a chair in accounting, must also be remembered for his works on ancient and modern history; Carlo Antinori who teaches at the University of Parma; and Luigi Serra who teaches at Cassino—a meticulous scholar who has published among other things an essay on Angelo Pietra, the sixteenth century monk and scholar who was the most important successor to Luca Pacioli.

In addition to the above, many studies have been produced during the twentieth century, which adopt a primarily biographical approach and investigate in depth the life and works of individual scholars, setting them in the context of their time and sphere of activity. These works constitute a great resource for the building of a comprehensive history of Italian accounting and accountants, including comparison with other countries.

It is well known that Italy is one of the countries that possesses the greatest quantity of surviving written records, early accounting documents and works essential to historic research, from the publication of Pacioli’s *Summa de arithmetica, geometria, proportione et proportionalità* in Venice in 1494 onwards.

For this reason the rediscovery and ordering of such sources, such as was done at the end of the nineteenth century by Giuseppe Cerboni, is now under way as a joint project by the members of the *Società Italiana di Storia della Ragioneria* at Pisa supported by the *Consiglio Nazionale dei Ragionieri* at Rome.

Against this background the *Biblioteca Storica di Ragioneria ed Economia Aziendale* may be seen. The *Biblioteca* was conceived and is edited by Antonio Amaduzzi and consists of numbered editions with reprints of works which are little known or no longer readily available. At the time of writing, nine volumes have been published, the first in 1987.

The publication of the first volume represented the start of a series of commentaries on the origins of *economia aziendale*—a branch of knowledge which is evolving rapidly. Returning to the roots of the discipline, which had become small pieces in a vast jigsaw, gives a reference point for our present evolution, as outlined in the introduction to the series.

This is also reflected in the selection of the first work presented, the inaugural lecture for the academic year 1880-1881 at the *R. Scuola Superiore di Commercio in Venezia*, Besta’s *La
Ragioneria. This choice was motivated by the desire to draw attention to the "minor" works of Besta, as a reminder to those who were already aware of them or to allow others to discover them for the first time and thereby enrich their knowledge.

The characteristic common to all works in the series is the publication of the text together with an introduction which summarises the contents and gives comments and reflections. These introductions have been written by the editor himself or other researchers with particular interest in this field.

The second volume contains Giuseppe Cerboni's *Elenco Cronologico delle opere di Computisteria e Ragioneria venute alla luce in Italia dal 1202 sino al 1888*. In its introduction it is underlined how a careful reading of history made possible by Cerboni's work enables us establish that *ragioneria* was the fore­runner of *economia aziendale* and that the relationship between the two can today be seen as one of inter-independence.

The third volume comprises the eleventh book of Pacioli' *Summa* edited by Vincenzo Gitti. The work is dedicated to Ernesto Lodovico Jäger who translated the *Summa* into "the language of Goethe" and to whom a debt is owed, as the translator of Pacioli, Manzoni and Pietra—the first proponents of the new science.

The fourth work included in the series is Plinio Bariola's *Storia della Ragioneria Italiana*, published in 1897. Described in the preface as a comprehensive history from its beginning to the end of the nineteenth century. This constitutes a source of invaluable information for the understanding of the history of accounting thought and of its protagonists, of the unfolding of accounting as the discipline underpinning economic control, in which are to be found the seeds of the more fully developed twentieth century theories of *economia aziendale*.

The fifth volume is dedicated to Giovanni Germani's *La ragioneria come scienza moderna*, which first appeared in 1913 at the centenary celebrations of the *Accademia Italiana di Economia Aziendale*. The introduction by Gilberto Mazza recalls the fierce competitiveness of Germani who, drawing support from foreign scholarship and his own personal ideas, did not spare any of his illustrious rivals including one of the stature of Besta. That Germani's work was subsequently "forgotten" in academic circles can be attributed to his attitude. As well as summarising the ideas put forward in the *Ragioneria come scienza moderna*—a work which Germani himself recognised as
being audacious in content—Mazza recalls the severe criticism levelled by Germani at Cerboni whom he accused of having placed the discipline outside any verifiable scientific understanding, at Besta who had provided a “limited understanding of the purpose of accounting”, at Luigi Brasca, at Giovanni Rossi, and above all at Léon Gomberg. Concerning Gomberg, Mazza believes that Germani had lost all sense of measure and had underestimated his complex theoretical system which is broadly comparable to our present day economia aziendale (as can be judged from the eighth volume in the series, on Gomberg’s work, and the introductory essay by Rosella Ferraris Franceschi).

The sixth volume deals with the Storia della Ragioneria Italiana by Ernesto Lucchini. Giuseppe Bruni, who has written the introduction, first recalls the “noticeable progress” made in business economic theory in the nineteenth century—that is, the century of the industrial revolution and the advent of capitalism—at the end of which Lucchini’s work was published. He then describes the “broad sweep” of the work, which starts from the eastern and middle eastern civilisations, proceeds to the ancient Greeks and Romans and then works through the Middle ages up to modern times, noting how the use of accounting had sustained, if not directly given rise to, the emergence of the banking and trading empires of Genoa, Venice and Florence which were the precursors of the Italian renaissance. In drawing conclusions on the work, Bruni emphasises that the book is a good example of Lucchini’s work, which without grand scientific pretensions nevertheless makes a considerable contribution to the understanding of Italian accounting history up to the end of the last century.

The seventh book, Luca Paciolo nella storia della ragioneria by Vincenzo Vianello, dated 1896, may be considered together with the third: Gitti’s Trattato. Amaduzzi’s introduction discusses the dual aim of Vianello’s work, which both deepens the knowledge of Pacioli as an historical figure and of his treatise and its place in the field of accounting history. It also sheds light on Vianello himself—a scholar living at the turn of the twentieth century, author of many publications which form part of the most traditional areas of accounting history, but in which one feels the wind of change blowing towards the most modern ideas of economia aziendale.

The work of Léon Gomberg, mentioned above, is to be found in the eight volume, entitled L’économologique (science
The Accounting Historians Journal, June 1996

comptable) et son histoire. Here, in his introduction, Amaduzzi notes the importance of the work, which offers a rich source of ideas to students of accounting history who wish to look outside Italy. There then follows an essay by Rosella Ferraris Franceschi. In this essay, after having analysed Gomberg's work, she discusses a theoretical system proposed for business economics: the three areas into which Einzelwirtschaftslehre may be divided, that is the technical aspect, the theories of organisation and administration of economic activities, and finally accounting—Verrechnungswissenschaft. The final part of the essay deals with the last of these three areas, Économologique, Ragioneria or Verrechnungswissenschaft, and here Franceschi seeks to outline Gomberg's contribution to the evolution of accounting and economia aziendale, as a scholar who recognised both the need for change and the weight of tradition.

The ninth volume contains the essay published in 1938 by Angelo Riera on Pacioli's Tractatus de Computis et Scripturis. This, taken together with other works in the series offers a further contribution to the understanding of Pacioli's accounting treatise. The essay was recently re-issued in memory of Professor Riera with an introduction by Gianfranco Cavazzoni. The introduction consists of two parts, the first dealing with Pacioli's life and writings, and the second giving an analysis of Riera's original essay, including the question of the attribution of the invention of double entry bookkeeping. Here it is found that Riera seems to accord to modern critics who attribute the invention of double entry to "no one", it being considered the outcome of a gradual development which evolved to satisfy the needs of enterprise.


Reviewed by
Jean E. Harris
Penn State University at Harrisburg

What is the relative importance of regulation and of market forces as means of explaining changes in the accountability of municipal corporations? In addressing this question, Coombs and Edwards postulate a gradualist theory of change. They argue that changes in accountability tend to results from appar-
ently unrelated events which on examination are part of a metamorphosis rather than from a single causal factor.

Consistent with a gradualist theory, Coombs and Edwards design a study of accounting change in municipal corporations which is broad in scope and thorough in detail. This study is recorded in Accounting Innovation: Municipal Corporations 1835-1935. It is motivated by the objective of understanding present practices as part of an evolution of developments. The scope of the study extends across five municipal corporations in the United Kingdom over a period of one hundred years. The municipal corporation in the United Kingdom is somewhat similar to the incorporated municipality in the United States. During the focal time period, it was distinguished by the growth of large public sector enterprises or trading services.

With a meticulous approach to detail, Coombs and Edwards retrieve and review archival data to trace developments in form and content of financial reports as well as developments in auditing requirements. Changes in practices are integrated into a background of competing and complimentary influences in a multifarious environment. Social context is viewed as a dominant variable which contributes to accounting change within municipal corporations and limited companies and to accounting differences between municipal corporations and limited companies.

Coombs and Edwards organize their study around eight topics each of which is addressed in a separate chapter. After discussing the design of the study in an introductory chapter, the next two chapters review the structure of local authorities and of regulatory frameworks. The study then moves to an examination of accounting practices: record keeping, framework of accounts and capital accounting. With this background, power struggles over the performance of audits are explored, and basic audit issues are described. Coombs and Edwards then extend their analysis of accounting change within municipal corporations to support an analysis of comparison of developments in municipal corporations and with development in private companies. The model of change which emanates from the study is summarized in concluding comments.

Ultimately, Coombs and Edwards abandon regulation and market forces as significant influences on accounting change in municipal corporations. Regulation cannot account for changes in municipal reporting practices because changes in regulation over the 100 year focal period were inconsequential. Market
forces cannot account for changes in municipal reporting practices because there is no evidence of external demand for information and no evidence of the use of reports by external parties. The rejection of these two factors, leads Coombs and Edwards to construct an alternative model of environment that fosters change. Important environmental factors include: the antecedent introduction of accounting change in private companies, the emergence of an accounting profession with avenues for transferring innovation from private companies to municipal corporations, the growth of municipal corporations fostering demand from internal management for new information for decision making purposes, and the desire of elected officials and appointed administrators to publicize the success of municipal corporations.

Strengths exhibited in this book are organization of analysis around a theory of change, exhaustive scholarship, and informative illustrations. Coombs and Edwards accept the challenges that a gradualist theory of change incorporates. Of necessity their study must focus on practices over decades. From the way this study is recorded and from their prior publications, it is apparent that Coombs and Edwards worked on this study for a number of years. Their patient, thorough and systematic approach demonstrates a level of scholarship which is rare. They collect and report extensive amounts of factual evidence from archival sources. Throughout the book, charts, tables and other illustrations aid the reader. Refreshingly, they are willing to acknowledge that the cause of change is problematic. Their contribution is to identify mechanisms which are associated with an environment in which change occurred.


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1The two prior books, Local Authority Accounting Methods, The Early Decade, 1884-1908 (New York: Garland, 1991) and Local Authority Accounting Methods, Problems and Solutions, 1909-1934 (New York: Garland, 1992), consist primarily of reproductions of period articles.
access to a wealth of archival data, it should be viewed as a basic acquisition for libraries along with the two prior books by Coombs and Edwards. Although the ability to access archival data is important, the most significant contribution of this book is its analysis of a theory of influences on accounting changes. Because of the strength of evidence that Coombs and Edwards develop for a gradualist theory of change, this book is suitable as a supplementary reading particularly in graduate courses.


Reviewed by
Maureen Berry
University of Illinois

The development of accounting thought around the world during the past century undoubtedly owes more to the endeavors of certain key players than, say, environmental reaction, in the transformation processes. Further, creative sparks originate with certain individuals who may or may not, working alone or collectively, build up schools of thought to develop particular paths of progress. Such rationales underlie this collection of nineteen essays which describe the achievements of leading individuals who have helped, in fundamental ways, to shape the direction of accounting theory and practice in the recent past. Certain scope limitations are inevitable when putting together an anthology which attempts to grasp the essence of its subject, as the editor points out in the introduction [p. xiii]. Thus, some criticisms of editorial choices are to be expected. In this case, however, a high level of satisfaction has already been expressed in the accolades of the Academy of Accounting Historians when honoring it with the 1994 Hourglass Award.

The essays cover seventeen individuals separately, and two grouped contributions: one dealing with a number of leading French theorists and the other with three at the London School of Economics. Presentation is in alphabetical order by, and within, country: Australia (Chambers); Canada (Mattessich); Finland (Saario); France (eleven plus others); Germany (Schmalenbach and Schmidt); Italy (Zappa); Japan (Iwata, Kurosawa, and Kimura); the Netherlands (Limpers); the United Kingdom (Dicksee; de Paula; the LSE triad of Baxter, Solomons, and Edey; and Stamp); and the United States (Hatfield, Paton,
Blough, and MacNeal). In summary, ten Anglo-American contributions, six European, and three Japanese.

The authors are, generally, compatriots with some special knowledge of their subjects. All followed a broad outline to provide a portrait of the person, dealing with family, background, and education; career details; professional links; the subject's ideas and theories; an assessment of their impact on accounting theory and practice; major influences on the 'thinker,' for example, from other writers; and their leading publications [p. xiv].

This approach worked well and, God being in the details, the chroniclers are to be commended for some interesting insights. For this reviewer at least, though, there were too few specifics about the pulses that drove the energies. While Chambers, Limperg, and Stamp, for example, come through as greatly energetic, forceful personalities with the courage of their convictions, it is Yamagata who offers the most rounded, personal comments. Professor Wasaburo Kimura, we learn, was a warm person with a sharp mind [p. 204]. With his witty and informative lecturing style and popular personality, he attracted overflow crowds of students to his lectures, but he was a tough grader. He liked to play tennis, enjoyed music and Rakugo (a story ending in a joke), delighted in trying varieties of gourmet food, and drank beer. His character was sorely tested when he went blind at the age of 50 but he was sustained, as a devout Buddhist, by his faith and his wife's assistance as he continued to research and teach for a further 13 years until retirement.

Turning to technical aspects, those of us without linguistic access to the Japanese literature may be surprised at Japanese understanding of western philosophies in original or translated versions. In the latter Taisho period (1912-26) Chiba informs [p. 184], us that German sociology dominated sociology and social thinking in Japanese imperial universities. Against the backdrop of the speed and direction with which Japan's modernization was influenced by the global strategies of western nations, and the conflicts this engendered with Japanese traditions, Kurosawa established a sociological method of accounting drawing heavily on the work of German and French sociologists. It is evident that Iwata was stimulated by Schmalenbach, as well as the cameralists, in his development of a dual structured income determination system. He was also familiar with the writings of other German theorists, including Walb, Schmidt, and
Mahlberg, and he must have been reading in the original judging from his use of German terminology. Kimura, who wrote his diary in English and German, stressed historical analysis and the importance of the prevailing social and economic background in accounting theory development. He, however, was more interested, in and critical of, some U.S. ideas, notably those of Paton and Littleton.

The survey of French accounting theorists of the period by Colasse and Durand [pp. 41-59] serve to remind us of the relatively late emergence of accounting in France as a legitimate academic and professional calling and the struggles it has undergone to attain intellectual status. Much of this delay, it would seem, may be attributed to subordination of the accounting function to the needs of economic planning, through the national charts of account, rather than serving investors as elsewhere. A French academic association was not formed until 1980 and there is still no French academic, as opposed to professional, journal. However, the French presence is now much more evident at professional, international conferences, and one may assume that French accounting is on the move forward, as evidenced by its growing influence in the transitional economies.

Remaining studies of the German, Dutch, and most of the U.K. and U.S. thinkers deal with approaches to income determination. With so much argument raised against historical cost accounting, in so many places, by so many rational minds, with such persuasion, one wonders that the traditional still prevails. The adamancy of the U.S. Securities and Exchange Commission in this regard is well brought out in the Blough study which is also particularly useful in tracing the working relationship between the SEC and the public accounting profession.

This international survey of accounting theorists was brought out as part of the Pacioli celebrations, sponsored by the Institute of Chartered Accountants in England and Wales. One of its main benefits is to illustrate the advantages to both academics and practitioners of understanding the processes of theory building and application in particular environments and the extent to which accounting thoughts may be transferred and take root. It lends itself very well to use in the classroom as a supplementary text in several accounting classes, such as intermediate accounting, accounting theory, and, in particular, international accounting. Assigning a particular chapter as required reading before studying accounting in a certain country, such
as, for example, Limperg and accounting in the Netherlands, provides the understanding necessary for students to grasp why accounting functions in that country as it does. It is also, one must add, well worth reading whatever its utilitarian function.


Reviewed by
Thomas N. Tyson
St. John Fisher College

*Critique of Accounting* is intended for scholars who are intrigued by the roots of their discipline and its interface with the other social sciences. The author, Richard Mattessich, attempts to integrate the historical, methodological, and moral aspects of accounting and describes the book's purpose as "a trumpet call to battle rather than a hymn of victory; it should incite academics to clarify the hierarchy of objectives and variety of means to achieve them" [p. xviii]. He is largely successful in these objectives.

Mattessich discusses the cultural significance of accounting and challenges his readers to broaden their perspective about our discipline's colorful tradition and substantial impact on society. He explains convincingly that the origins of accounting go back to prehistoric times and actually precede the invention of writing. In a fascinating story, he describes how hollow clay tokens were transferred in and out of a clay envelope. This practice originated over 8,000 years ago and evinces a form of double-entry recording.

The range of Mattessich's interests is truly impressive. They include ancient history, post-Kuhnian philosophy, measurement theory, information economics, current value models, and critical theory. The vast breadth of discourse may be discomforting to those readers who prefer more traditional accounting themes. Many others, however, will appreciate the opportunity to select topics that align with their particular interest. For the latter, thirty pages of over 500 bibliographic references will direct them to current and relevant literature.

On a practical level, the book can function as a helpful resource for instructors of graduate-level accounting theory courses or doctoral seminars on accounting history or current
academic issues. Many chapters provide supplementary information to lectures on accounting history or to current issues that benefit from a historical perspective. I particularly enjoyed Mattessich's discussion of the historical and cultural mission of accounting.

As mentioned, Critique of Accounting may be discomforting to readers who view accounting as a narrow field of practical discourse. In addition, the book is not fashioned for accounting students, except those attending Ph.D. programs. It is most suited for experienced, active scholars who conduct interdisciplinary investigations or who seek to expand their research in new directions. Mattessich provides a historical background to many of the recent debates among accounting scholars. The chapters on positive accounting theory and the critical-interpretive approach are especially even-handed and lucid in this regard.

Mattessich points out that the majority of chapters are based on his previous articles and papers. Notwithstanding, they have been carefully rewritten and updated to include many current references. Although the chapters stand alone and can be read selectively, they have been painstakingly and effectively integrated. A detailed summary chapter ties the topics together as well. Independence and integration are atypical of a book based on an anthology of prior papers, but Mattessich pulls the task off quite well.

In summary, this book reaffirms Professor Mattessich's reputation as a leading, perhaps the leading, eclectic academic accounting scholar of the second half of the twentieth century. It is noteworthy that Mattessich has been authoring creative accounting literature for over forty years. The energy, enthusiasm, and love of subject which emanated from his earlier books and articles are manifest throughout Critique of Accounting.


Reviewed by
Harold Q. Langenderfer
University of North Carolina at Chapel Hill

The main thrust of this book is to help readers understand how current educational policy in accounting came about. An
understanding of the opinions and philosophies of those organizations, committees, and individuals with past influence will provide perspectives on emerging directions in accounting educational policy. The author provides readers with fascinating forward and backward movements in the development of accounting curricula as the rise in higher education in accounting and the rise of accounting as a profession evolve over a hundred year period from the 1880s to the 1980s. Five stages of growth in professional education occurred over the most recent half century, including (1) the apprenticeship stage, (2) the proprietary school stage, (3) the university stage, (4) the pre-professional stage, and (3) the post graduate stage. A key issue in the development of accounting education was the focus in the curriculum design. Some key issues included (1) how to cover large quantities of information in the limited time available, (2) how to cover the expanding body of knowledge, and (3) dealing with the social problems of extending pre-employment education, deterring earnings, the effects on personal and family life, and the required capital investment. In developing a viable accounting curriculum a number of vexing problems had to be reconciled. These key problems included (1) the relative importance of theory and skill, (2) the significant number of professional schools that would (a) either move too far in the direction of accounting theory, or (b) have an overemphasis on practice which limits ability to adapt to change, and (3) what is the role of liberal arts in professional education for accountants and business majors.

Chapter 1: The Beginning of Collegiate Accounting Education

A basic question that surfaced at the beginning of the debate over the need for higher education in accounting was whether higher education should have a practical orientation or a liberal arts orientation. Students who wanted more practical business training went to commercial schools which frequently evolved into separate schools for business training only. Accounting education, which started at the Wharton School in 1883, began as a conceptual accounting theory course that was designed to please the liberal arts faculty. To complicate this issue, the state of New York created the concept of a CPA certificate based on passing the CPA exam. As more states passed CPA laws, the attention of the faculty focused on students passing the CPA exam, which became a measure of teaching success. By 1931 accounting was the strongest field in business schools, but
the tension between the theoretical and the practical approaches continued. As the accounting profession grew with the development of corporations and large scale production, management accounting was added to the collegiate curriculum as being indispensable to modern society and an important part of liberal arts education.

Chapter 2: Accounting Education in Early Post-War Years

A view developed that there was a need for highly trained accountants in companies just like the need for lawyers and engineers. This meant that a college education should have less emphasis on the CPA exam and more on management accounting, budgeting, cost analysis, human relations and writing. For private company accountants to gain the ranks of management there was a need for orientation to management concerns and how to deal with them. Public accountants would also benefit from this broader curriculum focus as they began to serve as consultants and add services to their clients besides auditing financial statements. In effect, general agreement developed that there should be no substantial difference in training for private and public accountants! Published reports by the Carnegie Foundation and the Ford Foundation complained that the beginning accounting course had too much emphasis on mechanics and techniques and on public accounting compared with what was emphasized in management accounting. In essence, by the mid 1950s, there continued to be disagreement on such issues as (1) the need for a qualifying exam, (2) the need for a new accreditation process, (3) the extent of descriptive vocational material, and (4) the relative balance between public accounting and management accounting education.

Chapter 3: In the Wake of Foundation Reports

By 1957 the need for a balanced curriculum to educate all professional accountants led to an AAA Committee to define management accounting. In effect, cost accounting should evolve into management accounting. By 1961 the focus shifted to the need to get public accounting to be recognized as a learned profession which required more than four years of college plus practical training. The 1960s became a boom time for business in which the demand for accountants exceeded the supply, so CPA firms were forced to hire nonaccounting grads and train them. These developments shelved the concept of
graduate education in accounting and resulted in a reduction in accounting hours in the curriculum.

Not only did boom times in business slow the push for a 5-year program, but so did the Vietnam War which increased the shortages of accountants available to CPA firms and forced accounting firms to hire more MBAs. In the process of hiring MBAs, a serious rift developed between practitioners and academicians. Some academicians resented the pressures which practitioners brought to bear on the academic community. The basic issue revolved around whether accounting was a social science or a profession. There appeared to be a compatibility of education and research, but not professional practice and research. The AAA reinforced the movement toward academic research in a 1954 report which stated that career accounting teachers should have doctoral degrees and research should be part of the requirements for promotion.

Chapter 4: The Professional School Movement

There was a general feeling in the accounting profession that the profession has always been beset by an inferiority complex and the developments in the 1960s aggravated the problem. Business education had little respect within the academic community and accounting had even less respect. Some in the accounting profession wanted to create separate professional schools of accounting to overcome the control of accounting by business administration and make accounting courses more relevant to the profession’s needs. There was a strong feeling that the accounting curriculum needed to be professionalized in order to reduce the confusion about what accounting is and to insure that teaching is placed ahead of a research atmosphere in which the “publish or perish” doctrine is too prevalent. From the public accounting view, there was much unhappiness with the direction of quantitative research. Many academicians also were dissatisfied with the direction of accounting education. The Accounting Review, for example, ignored the issues involved in the teaching of accounting. Researchers with no accounting experience were hired as educators at dominant schools, there was little interference with what they taught or researched, and they concentrated on intellectualism rather than professionalism.

In 1974 the AICPA created a Board on Standards for Programs and Schools of Accounting to identify those standards that would justify a professional accounting curriculum for rec-
ognition by the profession. This was an implied accreditation approach which the AACSB did not want the profession to undertake. The Board of Standards issued a report in 1977 calling for a professional education that included postgraduate education. Deans of business schools objected to a separate school of accounting. On the other hand, accounting faculty felt they would be able to develop better courses, have more control over student quality, and have more funds to carry out their mission. Practitioners felt there would be more prestige and more practitioner input. In effect, the proposal for a separate school of accounting pitted Deans and non-accounting faculty against accounting faculty and practitioners. The conflict among the AICPA, AACSB, AAA, etc. was resolved unexpectedly when the AACSB announced in 1978 that it would start to accredit accounting programs. In effect, the AICPA was outflanked so as to hinder their move toward separate schools of accounting and the accreditation process remained in the hands of the Deans of business schools.

Chapter 5: The Battle for the Five-Year Requirement

Even though the AICPA lost the battle for separate schools of accounting and failed in their accreditation efforts, they still held the licensure requirement for CPAs and wanted to push for state legislation that required five years of education to take the CPA exam. The AICPA recognized that the struggle to get the states to require the five-year program would not be easy. To expedite the five-year requirement, a committee was established to determine if the curriculum requirements previously established for a five-year program were still appropriate. This new "Albers" Committee agreed with the prior curriculum requirements, but chose to refer to the five-year requirement as the "150-hour requirement" which would lead to a Master's degree.

As might be expected there were some setbacks to these latest initiatives. Practitioners were not convinced that post graduation education was necessary. By 1993, 32 states had passed the 150-hour requirement, yet resistance began to build because of a negative view of the 150-hour requirement by practitioners who were concerned about education costs and the type of education being offered.

ADDENDUM AND CONCLUDING OBSERVATIONS

This book on the history of accounting education is comprehensive and intellectually stimulating. Most of the key initiatives
to change and improve the development of accounting education have been identified and explained in detail. However, two developments over the years have been overlooked. An action taken by the AACSB in 1968 that affected a few schools probably should have been mentioned. In that year the AACSB issued a ruling that no major area in a business school should allow more than four courses beyond the core course, i.e., a total of 5 courses. This rule apparently allowed exceptions, such as for accounting, which in many states required up to eight courses to sit for the CPA exam. Many universities made an exception for the accounting majors. For whatever reason, the business school faculty at UNC-Chapel Hill did not grant the accounting area an exception. Therefore, in order to continue to prepare students to sit for the CPA exam in North Carolina, the accounting area was forced to go to a 4 1/2 year program in 1968. In retrospect this turned out to be a blessing, although it did not seem that way at the time. By 1970 it was clear that the extra semester prepared the students better, they were more mature, and the CPA firms liked their improvement. Recognizing these benefits, the accounting faculty decided to go for another semester of education and give the students a master’s degree. This shift required the approval of the business school faculty and the university. It took six years for the formal appeal to be approved by the business school faculty and eight more years for university approval, a total of 14 years. A masters program was immediately installed in 1986 on a voluntary basis and operated for three years in that mode after which the program evolved into a complete five-year program with up to 120 graduates per year, up to half of whom are liberal arts undergraduates!

A second historical item not mentioned was the AAA Education Committee’s initiative to create a journal that would be an interface for faculty and practitioners. That journal, Accounting Horizons, along with Issues in Accounting Education were designed to overcome the major criticisms of the Accounting Review.

This reviewer is hopeful that readers will find this review of Van Wyhe’s book on accounting history to be a stimulus for reading the entire book. A fuller understanding of the forces contributing to the development of accounting education over a 50-year period should contribute a smoother transition and improvements in accounting education in the future.
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# Announcement

## ACCOUNTING AND BUSINESS RESEARCH

**Volume 26**  
**Number 2**  
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### CONTENTS

#### Articles

- **The Estimation of Monetary Gains and Losses in Diverse International Economic Environments**  
  Thomas W. Hall  
  Keith A. Shriver  
  Mark Tippett  
  Page: 91

- **A Corporate View of Research Needs in Corporate Finance**  
  Wilson E. Herbert  
  R. S. Olusegun Wallace  
  Page: 107

- **Configural Information Processing in Auditing: Further Evidence**  
  Cameron Hooper  
  Ken T. Trotman  
  Page: 125

- **An Empirical Analysis of Thomas’s Financial Accounting Allocation Fallacy Theory in a Financial Distress Context**  
  Terry J. Ward  
  Benjamin P. Foster  
  Page: 137

- **Venture Capitalists, Unquoted Equity Investment Appraisal and the Role of Accounting Information**  
  Mike Wright  
  Ken Robbie  
  Page: 153

#### Commentaries

- **Future Events—A Conceptual Study of their Significance for Recognition and Measurement: A Review Article**  
  W. T. Baxter  
  Page: 171

#### Book Review

- **I. Demirag and S. Goddard, Financial Management for International Business**  
  Clare B. Roberts  
  Page: 177

- **Malcolm Smith, New Tools for Management Accounting**  
  Mahmoud Ezzamel  
  Page: 178

- **Patrick Caughan (ed.), Readings in Mergers and Acquisitions**  
  William Forbes  
  Page: 179

- **John F. Wilson, British Business History, 1720-1994**  
  Trevor Boyns  
  Page: 179

- **T. Colwyn Jones, Accounting and the Enterprise: A Social Analysis**  
  Lee D. Parker  
  Page: 180

- **Robert Buckland and Edward W. Davis (eds.), Finance for Growing Enterprises**  
  Mike Dempsey  
  Page: 182

- **J. Blake and S. Gao, Perspectives on Accounting and Finance in China**  
  R. S. Olusegun Wallace  
  Page: 183
Announcement

CONTEMPORARY Vol 13 No 1—Spring/printemps 1996
ACCOUNTING RESEARCH / RECHERCHE COMPTABLE CONTEMPORAINE

Articles
Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC

PATRICIA DECHOW, RICHARD SLOAN, AND AMY SWEENEY

Discussion of "Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC"

JAMES JIAMBALVO

Tax Advise and Reporting Under Uncertainty: Theory and Experimental Evidence

PAUL BECK, JON DAVIS AND WOON-Oh JUNG

Discussion of "Tax Advise and Reporting Under Uncertainty: Theory and Experimental Evidence"

STEVEN KACHELMEIER

Regulatory Capital Tax, and Earnings Management Effects on Loan Loss Accruals in the Canadian Banking Industry

LANE DALEY AND PETER CHEN

Discussion of "Regulatory Capital Tax, and Earnings Management Effects on Loan Loss Accruals in the Canadian Banking Industry"

SANDRA CHAMBERLAIN

International Accounting Differences and their Relation to Share Prices: Evidence from U.K., Australian, and Canadian Firms

MARY BARTH AND GREG CLINCH

Discussion of "International Accounting Differences and their Relation to Share Prices: Evidence from U.K., Australian, and Canadian Firms"

SAIT P. BANDYOPADHYAY

Effect of Service Capability on Operating Costs: An Empirical Analysis of Ontario Hospitals

RAMJI BALAKRISHNAN, THOMAS GRUCA AND DEEPIKA NATH

Consensus, Dispersion, and Security Prices

JEAN-FRANÇOIS L'HER AND JEAN-MARC SURET

Consensus, Dispersion, et prix des titres

JEAN-FRANÇOIS L'HER ET JEAN-MARC SURET

Going Concern Status, Earnings Persistence, and Informativeness of Earnings

K.R. SUBRAMANYAM AND JOHN WILD

Legal Damages and Auditor Efforts

LYNDA THOMAN

Improvements and Updates
Reduction of Outcome Variance - Optimality and Incentives

BRACHA METH

Valuation and Clean Surplus Accounting: Some Implications of the Feltham and Ohlson Model for the Relative Information Content of Earnings and Cash Flows

COLIN CLIBB

The Value of Experimental Methods for Practice-Relevant Accounting Research

LINDA McDaniel AND JOHN Hand

The Association Between Auditor Changes and Reporting Lags

KENNETH SCHWARTZ AND BILLY SOO

Book Review/Compte rendu de livre

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VOLUNTARY DISCLOSURE OF SEGMENT INFORMATION; FURTHER AUSTRALIAN EVIDENCE
Jason D. Mitchell, Chris W. L. Chia and Andrew S. Loh

A DISCRETE-VALUED RISK FUNCTION FOR MODELLING FINANCIAL DISTRESS IN PRIVATE AUSTRALIAN COMPANIES
Patti J. Cybinski

AN EMPIRICAL ANALYSIS OF SOME DETERMINANTS OF THE TARGET SHAREHOLDER PREMIUM IN TAKEOVERS
Martin Bugeja and Terry Walter

THE JOINT EFFECTS OF BUDGETARY SLACK AND TASK UNCERTAINTY ON SUBUNIT PERFORMANCE
Alan S. Dunk

TIME VARYING RISK PREMIUM AND THE PREDICTIVE POWER OF THE AUSTRALIAN TERM STRUCTURE OF INTEREST RATES
Lakshman A. Alles

AN ANALYSIS OF SUBMISSIONS TO THE ASRB ON RELEASE 411 ‘FOREIGN CURRENCY TRANSLATION—QUESTIONNAIRE’
Tania Pacecca

AN EMPIRICAL INVESTIGATION OF THE EXTENT AND NATURE OF BRAND VALUATION ACTIVITY IN NEW ZEALAND
Chris Guilding and Andy Godfrey

AUDITOR PREFERENCES FOR LIABILITY LIMITATION
Ronald B. Johnson, Donald J. Stokes and David G. Watts

RESPONSE OF FINANCIAL MARKETS TO ANNOUNCEMENTS OF THE AUSTRALIAN CURRENT ACCOUNT BALANCE
Michele A. Sims and Kerrie L. Cullis

DO AUSTRALIAN SPOT FOREIGN EXCHANGE RATES STILL SHOW EVIDENCE OF Cointegration?
Ramaprasad Bhar

BOOK REVIEWS