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Thought and Accounting Practice

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Authors may find the following guidelines helpful.

1. Authors should provide a clear specification of the research issue or problem addressed and the motivation for the study.

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3. Manuscripts that rely on primary sources should contain a statement specifying the original materials or data collected or analyzed and the rationale used in selection of those source materials. Authors should provide the reader information as to how these source materials may be accessed.

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3. A limited number of tables, figures, etc., appended at the conclusion of the text, but whose positioning in the narrative is indicated.
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2006 Vangermeersch Award Winner

S. Sian
CARDIFF UNIVERSITY

PATTERNS OF PREJUDICE: SOCIAL EXCLUSION AND RACIAL DEMARCATION IN PROFESSIONAL ACCOUNTANCY IN KENYA

Abstract: Racial demarcation and social exclusion were common features in the organization of racially diverse colonial societies. British settlement in colonial Kenya and the import of immigrant workers resulted in the creation of a hierarchical society in which the Europeans enjoyed privileges to the exclusion of the immigrant Asians and the indigenous Africans. This study sets out to show how changes in the organization of this society and commonly held prejudices within it were reflected and even amplified in the organization of the accountancy profession. Drawing from archival and oral history data, the study traces the patterns of participation in accountancy of all three races. The paper covers the period from the turn of the 20th century, which marked the arrival of the first British accountants, to 1970, the advent of Kenyan professional accountancy examinations. The growth of commercial activity in the colony and new legislation to regulate it in the early 20th century resulted in a demand for providers of accountancy services and a preponderance of British accountants. The entry of Asian participants in the formal profession in Kenya, through membership of British accountancy bodies, is recorded after World War II. However, it was the achievement of political independence in 1963 and the ensuing societal transformations that signaled African participation. Such changing patterns of participation reflect the increasingly permeable boundaries to be found in wider Kenyan society after independence despite the continuing manifestation of racial prejudice.

Acknowledgments: I am grateful to Professor Stephen Walker, Professor Clare Roberts, and the two anonymous reviewers of this journal for their helpful comments in the development of this paper. The financial support provided by the ICAEW's charitable trusts for this research is gratefully acknowledged, and gratitude is also due to the interviewees who so generously shared their stories.

INTRODUCTION

The accountancy literature suggests that "the concept of difference is an important part of the discourse of professionalisation" [Kirkham and Loft, 1993, p. 508]. Exclusionary practices have been employed to differentiate the skilled from the unskilled and in other episodes to operationalize exclusion or marginalization, informally at least, on the basis of class, gender, or race. In many of these cases, such exclusionary practices originate from long-standing societal precepts. For instance, in the late 19th and early 20th centuries, as accountants began to transform from an occupational group into a profession, the position of women, at least in the middle and upper classes, in British society was such that they were not expected to be in paid employment, let alone participate in the activities of professional associations. Such social exclusion is the result of a combination of factors which include not only outright prejudice but also other factors such as a denial of access to the standards of education required for membership of elitist organizations.

In more recent years, accounting research has addressed issues at the interface of accounting, accountability, and the plight of indigenous peoples [Chew and Greer, 1997; Davie, 2000; Gibson, 2000; Greer and Patel, 2000; Neu, 2000]. In many of these studies, there is recognition of the deleterious consequences of colonialism for these groups, such as the social exclusion of urbanized indigenous peoples as their communities face "cultural breakdown, racism and serious human rights violations" [Gallhofer and Chew, 2000, p. 260].

This study draws together these threads in the accounting literature – professions, exclusion, and the consequences of colonialism. It examines patterns of race-based exclusion, and conversely, participation of indigenous Africans and immigrant Asians from the accountancy profession in Kenya, an ex-British colony. It considers the application of social exclusion theory to this distinct case and presents new empirical evidence relating to the membership of professional accountancy associations in this country. Drawing on data collated from the membership records of accountancy bodies, archival records, and interviews with accountants working in the period under consideration,[1]

[1]Interviews were conducted in Nairobi between 1999 and 2004. All interviewees were guaranteed anonymity and, therefore, names have been replaced by letters accompanied by a short description of the position and racial descent of the interviewee. For a comprehensive discussion of methods used to gather data and selection of interviewees, see Sian [2006a, p. 299]. Archival data was

the study sets out to map shifting patterns of participation in the profession against a changing political, economic, and social backdrop. In doing so, it attempts to answer calls to "link accounting to the sufferings of indigenous peoples" [Gallhofer and Chew, 2000, p. 262].

Beginning with the colonial period, when race-based social exclusion was prevalent, the evidence presented will show how "scientific racism," common at the turn of the last century, and its subsequent incarnations, shaped the prejudicial[2] attitudes of the dominant white society towards non-whites throughout much of the 20th century. Colonial Kenya was a pluralistic society in which race lines constituted the deepest cleavage and divided the population into three main groups – European, Asian, and African.[3] Here, British expatriates dominated the elite professions as societal structure and racist attitudes combined to keep accountancy "white." It was not until after political independence was achieved in 1963, that the new government introduced anti-exclusionary social policies and new training initiatives aimed at creating opportunities for indigenous Africans. The data presented capture the consequences of the implementation of these policies in terms of corresponding changes in the participation rates of non-whites in the profession. The empirical evidence extends to 1970, when it first became possible for Africans to study for Kenyan professional accountancy examinations, and illustrates how political and social change in Kenya directly impacted upon patterns of participation in the profession.

STUDIES IN EXCLUSION AND MARGINALIZATION IN ACCOUNTANCY

A growing number of studies in the recent accounting literature have highlighted the marginalization and exclusion of cer-

sourced both in London and Nairobi (CO refers to documents held in the Colonial Office collection at the National Archive, London, and KNA refers to documents held at the Kenyan National Archive, Nairobi).

[2]Prejudice "is commonly regarded as a feeling of dislike against a specific group" [Levinson, quoted in Outlaw, 2001, p. 73].

[3]Although the three racial groups are characterized on the basis of skin color, in fact all three were anything but homogeneous. The expatriate European group consisted mainly of European, South African, and British elements, the latter itself subject to the class divisions that existed in early 20th century Britain. The Asian group consisted of Arabs and Indians (who belonged to one of the predominant religious groups: Hindus, Muslims, and Sikhs). Similarly, in the case of the indigenous Africans, internal divisions based on tribal allegiance existed. The two largest African tribal groups were the Luo and the Kikuyu.

tain sectors of society in different environments. Common bases for such exclusion include class, gender, and race, although colonized peoples and oppressed groups within dominant cultures can also fall within such categorization [Hammond, 2003]. Despite such variations, commonalities can be found, and prejudicial attitudes and exclusionary practices adopted by the dominant group against the excluded are replicated in the present study.

Many examples of exclusion from professional accountancy on the basis of class derive from late 19th and early 20th century Britain (Scotland, in particular) at a time when the country was distinctly a class-based society [Macdonald, 1984; Walker, 1986; Kedslie, 1990; Lee, 2000]. Exclusion from the profession and marginalization on the basis of gender[4] has also been a common theme within the sociology and accounting literature. There is much evidence in the literature that accountancy was, and some argue remains, a male-dominated profession [Silverstone and Williams, 1979; Hopwood, 1987; Lehman, 1992; McKeen and Richardson, 1998; Emery et al., 2002]. Historically, it has been a profession that has been subject to vertical segregation [Coutts and Roberts, 1995] wherein the participation of women was restricted to the lower echelons of the occupational hierarchy, such as clerks or bookkeepers [Kirkham and Loft, 1993; Cooke, 1997; McKeen and Richardson, 1998; Cooper and Taylor, 2000] and other "routine accounting work without much power and responsibility" [Emery et al., 2002, p. 31]. In Britain, the passage of the Sex Disqualification (Removal) Bill in 1919 was intended to rectify the discrimination faced by women, although in practice it had a limited impact [Cooke, 1997; Shackleton, 1999].[5]

[4]Although most studies on women and accountancy have concentrated on the experiences of white, middle-class women, more recent studies set out to examine marginalization within the profession at the intersection of gender and race [Knapp and Kwon, 1991; Mynatt et al., 1997; Kyriacou, 2000; McNicholas et al., 2004].

[5]Despite permitting the entry of women to the Institute of Chartered Accountants in England and Wales (ICAEW) and the Society of Incorporated Accountants and Auditors (SIAA), the period from 1920 to 1940 continued to be one in which women who had achieved the required educational qualifications faced marginalization, barriers, discrimination, and outright hostility. For instance, while their ability and skills were not questioned, clients often objected to women auditors representing accounting firms [Lehman, 1992]. *The Accountant* even went as far as to suggest that aspiring women accountants should establish their own association or society. In America, the American Woman's Society of Certified Public Accountants was formed in 1933 to advance the cause of women accountants.

The literature on race-based exclusion is more recent and is the principal focus of this study. Annisette [2003] identifies three 20th century trends that portend “the potential salience of race” in studies of the professions. The first is “massive immigration” which has altered the demographic balance in some developed countries (Britain, America, Australia, New Zealand, and Canada), and several authors have recently exposed the experiences of migrant ethnic minorities within the accounting profession in these countries [Mynatt et al., 1997; Kyriacou, 2000; Kim, 2004]. The second is granting full citizenship rights to previously excluded racial groups; e.g., the Maori in New Zealand [McNicholas et al., 2004], blacks in South Africa [Hammond et al., 2007], and African Americans [Hammond and Streeter, 1994; Hammond, 1997, 2002]. The experiences of these groups are particularly pertinent to the present study.[6]

The third site for this phenomenon has been the 20th century transfer of professional accountancy to racially diverse ex-colonies [Annisette, 2003; Bakre, 2004; Sian, 2006a]. For instance, Annisette’s work on Trinidad and Tobago focuses attention on the role played by race in the professional project in this ex-British colony, describing the complex racial stratification of society. Accountancy, in this country, was a profession closely associated with “whiteness” and “Britishness.” The author documents the European domination of the profession to the exclusion of other races.

In all of the cases represented here, the bases for exclusion manifested in the profession mirrored the much wider exclusion and marginalization of certain groups within society. In some of these cases, attempts to increase participation through legislation were successful in permitting entry to previously excluded groups, although attempts to change widely held prejudicial attitudes were less so. Although the literature has shown that exclusion can be operationalized on the basis of class, gender, or race, it is the latter that serves as the focus of this paper. The concepts of race and social exclusion are investigated further in the next section, in particular their application in colonial society, as a precursor to the study of the accounting profession in Kenya.

[6]Hammond [1997] notes that while the passage of the Civil Rights Act of 1964 outlawed racial discrimination and encouraged the big accounting firms to recruit African Americans, they continued to suffer under-representation and marginalization within the profession.

RACE-BASED SOCIAL EXCLUSION AND ITS APPLICATION IN COLONIAL SOCIETY

Understanding Race and Social Exclusion: Historically, rationalizations of race have been dominated by the observation of physical variations and attempts to explain human difference and behavior in terms of biological or inherited characteristics.[7] Many such theories emerged within a European context and coincided with the rise of European colonization, capitalism, and dominance [Rex, 1982; Bonilla-Silva, 1996; Forster et al., 2000; James, 2001]. In its simplest form, race may be regarded as an organizing and explanatory concept [Outlaw, 2001] founded on the human penchant for classification on the basis of observable phenotypical traits, such as skin pigmentation. However, biologically based notions of race were challenged by advances in anthropology and genetics and have subsequently been repudiated as being subjective and based on misconceptions about groups that share genetic homogeneity [Blackburn, 2000; Outlaw, 2001].

More recent sociological analyses of race have treated the concept as an epiphenomena of other social factors such as ethnicity and class[8] [Van den Berghe, 1970; Forster et al., 2000; Williams, 2000] and view race as a product of political conquest or a "social construct," an organizing principle of society and social relationships [Omi and Winant, 1994; Bonilla-Silva, 1996; James, 2001]. Thus, Williams [2000, p. 215] defines race "not as a natural or biological attribute but as a socially and historically constructed concept by which members of society endow human skin colour variations, which have no intrinsic meaning, with meanings that reinforce a hierarchy of privilege and power in society."

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[7]The political dangers of such biological reductionism have been much in evidence throughout the last century, as in the case of Nazi Germany and apartheid in South Africa. In some cases, such theories were justifications for certain actions and behavior; e.g., theoretical justifications for slavery only arose after it was already happening.

[8]Ethnic identity may be seen as being derived from "being born into a particular community, where an individual learns its religion and cultural values, customs and language" – a primordial bond [Geertz quoted in Forster et al., 2000, p. 21]. A discussion of the subtle differences between race and ethnicity can be found in Annisette [2003] and Forster et al. [2000, p. 20]. Class may be defined as "a system of stratification in which unequal allocation of resources and opportunity for social advancement is supported by cultural myths that naturalise inequality" [Williams, 2000, p. 215]. Although race and class are viewed as distinct concepts [Omi and Winant, 1994; Bonilla-Silva, 1996; Williams, 2000], there exist interpenetrations and thus possibilities for conflation of the two.

The concept of social exclusion, a more recent development[9] in the wider sociology literature, involves non-participation, which can arise through discrimination on the basis of class, gender, age, race, ill-health, geographical location, or cultural identification [Hills et al., 2002]. Although a contested term, the simplest variant of social exclusion presents society as dichotomized into those who are a part of "mainstream society" and those who are not [Ratcliffe, 1999]. Viewed as a state of detachment [Walker, 1995, p. 103], social exclusion is a multi-dimensional concept that involves polarization, a lack of integration, and multi-faceted discrimination.[10] A more dynamic approach extends the concept beyond economic and social inequality and, in the sociology literature, incorporates issues of the denial or non-realization of political rights and citizenship [Gore, 1995; Walker, 1997].

Participation is widely regarded as a central tenet of social exclusion, although participation rates of a particular group may vary with time, illustrating the dynamic nature of social exclusion [Burchardt et al., 2002]. It may be argued that individuals or groups are socially excluded if they are resident in a society but, for reasons beyond their control, cannot participate in the normal activities of citizens in that society even if they actually wish to do so [Hills et al., 2002].

The concept of social exclusion is "inherently dynamic" in that it occurs at a time in history and is about the development of social structures through which individuals and collectives

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[9]Contemporary use of the term "social exclusion" arose originally in France in the 1970s and referred to extremely marginalized groups, *"les exclus"* (e.g., refugees, lone parents, the unemployed, the disabled), who fell beyond the scope of the welfare net and had restricted citizenship rights [Hills et al., 2002].

[10]Here, socially excluded groups are referred to as the "underclass," a term credited to the sociologist Charles Murray (author of "The Emerging British Underclass" [1990], Institute of Economic Affairs, London). The ghettoization of African Americans and socio-spatial segregation observed in some American cities results in the "detachment" of these groups who do not share the same culture or values [Lee and Murie, 1999]. However, equating social exclusion with poverty has been discredited as here the poor are effectively blamed for their behavior as a result of perceived personality traits and moral values. In many cases as economic inequality between social groups disappears, so too does social exclusion, unless there are distinctive practices or a way of life that maintains social barriers; i.e., voluntary social exclusion [Hills et al., 2002]. An extension of this interpretation of social exclusion is the idea of voluntary exclusion, the defense of a unique culture and a refusal to integrate. In their study of Aboriginal Australians, Greer and Patel [2000, p. 315] note that "a majority of indigenous peoples either refuse assimilation into 'whitefella' ways or simply cannot adapt demands associated with 'whitefella' notions of work."

are excluded [Byrne, 1999]. An extension of this might suggest that "exclusion is the outcome of the system" where opportunities for certain social groups are constrained by civil and economic institutions. Here, responsibility for social exclusion rests firmly with the elite [Hills et al., 2002] and the focus is on structural pressures. This is particularly relevant in societies where a systemic racism is inherent either within the apparatus of the state and the structures of society or institutional racism [Sivanandan, 1976]. Although much of the social exclusion literature is focused upon internal exclusion[11] within post-industrial societies, when treated as an analytical concept, there are parallels to be drawn with the internal exclusion prevalent in the racially diverse societies of colonial East Africa.[12]

The Origins of Race-Based Social Exclusion in Colonial Societies: In his theorization, Osterhammel [1997, p. 15] suggests that the notion of colonialism[13] embodies three key elements. First, it is not just a relationship of domination and subjugation, but rather a relationship in which "an entire society is robbed of its historical line of development, externally manipulated and transformed according to the needs of the colonial rulers." Second, there are issues of cultural dissimilarity and enforced separation, resulting in the existence of race-based hierarchies. Third, the form of the relationship is open to interpretation; thus, a common legitimization of early colonial rule was the "moral" argument or its justification as a civilizing mission. In the history of European colonization, the latter has also been termed "bearing the white man's burden"; i.e. it is the moral duty of the "superior" race to protect the native populations from the tyranny of forced slavery and provide spiritual guid-

[11]External exclusion refers to "keeping other people out of a particular nation or block (Fortress Europe)" [Byrne, 1999, p. 11].

[12]Although indigenous African Kenyans suffered social exclusion in the colonial period, in the immediate post-colonial period, the focus was very much on "national integration and commercial (capitalist) penetration." In more recent years, there have also been references in the literature to African states as "an underclass of States in the global economic and political system" and to the continent as a "globally excluded underworld" [Gore, 1995, p. 104].

[13]Colonialism has been defined as "a relationship of domination between an indigenous (or forcibly imported) majority and a minority of foreign invaders. The colonized are ruled by laws made and implemented by the colonial rulers in the pursuit of interests often defined in a distant metropolis. Rejecting cultural compromises with the colonized population, the colonizers are convinced of their own superiority and of their ordained mandate to rule" [Osterhammel, 1997, p. 16].

ance [Hodgkin, 1972; Osterhammel, 1997].

The concept of difference and the idea that non-Europeans were alien and irredeemably different was a key cornerstone of colonialist thinking [Rex, 1982].[14] The "evidence" for such difference was sourced from a variety of disciplines: theology, as most of the colonized non-Europeans were initially at least not Christians; technologically, the Europeans considered themselves to be more advanced; environmentally, those resident in tropical regions were considered to have a climate that "weakened their bodily constitutions"; and biologically, non-European were considered to be mentally and physically inferior [Osterhammel, 1997]. These differences were generally accepted by Europeans and Americans of nearly all political persuasion up until at least World War I.

From a Eurocentric view, the attitude of superiority over non-white peoples made it difficult to contemplate close relationships with them, to comprehend their "alien culture" or to accept them into the "mainstream." Even after the abolition of slavery, racist thought persisted in less blatant but "scientifically legitimated forms" [Osterhammel, 1997, p. 86]. Although the "Age of Imperialism" was in decline by 1914 and the critique of biological reductionism and scientific racism was well established by the 1930s, in racially diverse colonies such events barely registered and colonial attitudes to race continued to flourish even after independence, albeit in different forms.

This theorization of race-based social exclusion and its application to the colonial context inform the remainder of this study. The next section looks at the specific context for this study and highlights the dynamic, multi-dimensional nature of social exclusion. It shows how British policy in East Africa resulted in the creation of a society characterized by racial demarcation [Rex, 1982] where the white settler community, the indigenous African community, and the immigrant Asian community were subject to spatial and social distancing.[15] Such social exclusion was reinforced by a colonial state that sought to perpetuate racial, economic, political, and cultural pluralism by promulgating laws that forbade non-whites from buying land in certain areas,

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[14]By the 1920s, biological determinism had fallen from grace among scholars. Instead, the period witnessed the rise of "orientalism" based on character generalizations where natives were said to be "lazy, shiftless, cruel…incapable of abstract thought, etc." [Osterhammel, 1997, p. 109].

[15]Spatial distancing involves physical segregation while social distancing includes etiquette and sumptuary regulations [Van den Berghe, 1970].

applying for certain jobs, and even entering certain buildings.[16] Social stratification in Kenya, like other plural societies which were the product of colonialism, gave rise to a hierarchy in which European hegemony was founded upon an amalgam of racial prejudice and paternalism.

CONSTRUCTION OF A RACIALLY SEGREGATED SOCIETY: THE SOCIALLY EXCLUED GROUPS

Although British involvement in Kenya can be traced to 1823, sovereignty over territories in East Africa was not declared until 1894, following the international conference held in Berlin in that year formalizing the partition of Africa [Oliver and Fage, 1995; Marshall, 1996].[17] Legislation passed by the British Parliament authorized the issue of "Orders in Council" to establish structures to administer the newly acquired territories[18] and initiate a deliberate imperialist policy of European settlement to "found a white colony" [Hazlewood, 1979]. The settlers exercised absolute political and economic power at the pinnacle of a clearly defined social hierarchy. The colonial "system was socially racist" [Ogot and Ochieng, 1995], driven by the theories that were popular at the time[19] and commonly held racist views

[16]"In some territories, Africans and Europeans used the same shops, but in others there were different entrances and Europeans would be served first. This was part of a wider form of etiquette that operated when colonial masters did interact with their subjects" [Forster et al., 2000, p. 24].

[17]Negotiations, led by Lord Salisbury, with the Germans to establish clearly the area of British influence resulted in the Heligoland Treaty of 1890. In the same year, the British Parliament passed the Foreign Jurisdictions Act, declaring sovereignty over Eastern and Central Africa. Two states were created in the area, the Protectorate of Uganda in 1894 and the British East Africa Protectorate in 1895,which later became the Colony and Protectorate of Kenya in 1920 [Odhiambo and Wanyande, 1989]. In 1905, the administration of the Protectorate was transferred from the Foreign Office to the Colonial Office and a Commander-in-Chief and Executive and Legislative Councils had been established by 1906 [RCS, Colonial Report 1962, held at Cambridge University Library, U.K.].

[18]About one hundred European settlers had settled in and around Nairobi by 1903 [CO544/52].

[19]Referring to an extract from the *British Medical Journal* (September 1936) on the examination of brain specimens from East African natives, by Gordon and Vint in Nairobi, the following quote gives some indication of the influences on the colonial attitude to the African Kenyans: "They came to the conclusion that the brain structure showed some differences from Europeans and also made remarks that the size of the brain being less than in Europeans, showed together with differences in structure, the essential inferiority of the African" (CO822/72/7: East African Native – Brain Structure and Capacity; memorandum by V. Flood, dated 1936, held at the National Archive, U.K.).

that pervaded official documentation.[20]

In addition to British settlement, there were also immigrant Asians, mainly Indians, and Arabs in the colony [Ghai and Ghai, 1965; Leys, 1975; Ogot and Ochieng, 1995], mainly the remaining descendents of Indians who had been brought to the colony as laborers for the construction of the Uganda railway and other skilled immigrants [Van den Berghe, 1970].[21] Ghai and Ghai [1965] argue that the Asians tended to acquiesce in the racist hierarchical system for the most part for a number of reasons. First, they were a conservative group and preferred to be left undisturbed to pursue their traditional ways. Second, defining acceptable occupations and activity on a racial basis meant that Asians were to some extent protected from African competition. Finally, although Asians might not accede to public office, they were able to generate wealth and personal fortune through commerce and in private professional practice.

The lower echelons of the social hierarchy comprised the indigenous Africans. Social exclusion and inequality in colonial Kenya meant that they had far fewer opportunities to achieve the standards of living and education afforded to the ruling Europeans and the more affluent immigrant Asians [Leys, 1975]. Although the majority of African Kenyans were either subsistence farmers or employed as laborers on the European estates, from the 1920s, small numbers of African Kenyans

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[20]The language used by ruling officials, commonplace at the time, provides some indication of the colonialist view of indigenous peoples and, therefore, their treatment of them: "Suggest that settlement in Kenya in the future is based on industries which are independent of the native labour supply….wheat-growing, dairying and mixed farming. They are industries natural to *true white colonisation* and if they are properly encouraged will exorcise forever the dangers which arise when a *superior race* finds itself, from an economic standpoint, completely in the hands of a *backward and childish* race, because it is dependent on the labour of that race for the success of all its ventures" [CO822/4/19: imperial policy in East Africa, memorandum from Sir Edward Grigg, governor of Kenya Colony, 1927].

[21]The role of the Asians in the economic development of Kenya has historically been important, and it is argued that without their participation it is unlikely that Kenya would have developed economically in the way that it did. As traders, they extended the monetary economy into rural areas, introducing the African subsistence farmers to consumer goods and, until the 1960s, acted as primary outlets for the produce of indigenous Africans. Although no formal data are available, it is estimated that by the early 1960s, Asians were also making a significant contribution in professions such as medicine, law, engineering, pharmacy, accountancy, and business management in general. They also made a large contribution to skilled manual personnel such as mechanics, electricians, carpenters, salesmen, and supervisors [Ghai and Ghai, 1965].

were attracted to the towns to "enjoy modern amenities and acquire money" [Ogot and Ochieng, 1995, p. xvi]. It is this group that eventually emerged as the African "petty-bourgeois" class [Swainson, 1980]. Education for Africans had been limited to the "bush schools" run by missionaries, but by 1924, the British Administration passed the Education Ordinance which set out to encourage an agriculture-based education for rural Africans and, later, trade and technical schools.[22] The majority of Africans found employment as domestic servants, nurses, skilled workers, interpreters, and eventually, as education levels rose, as teachers and clerical workers (some Africans were selected for higher education from the 1940s). Even when educational standards were attained, it was often the case that other operative barriers prevented the progression of Africans,[23] and although some were able to train for professions, such as teaching, they were still not on a par with white colleagues.[24]

During the colonial period, Kenya was a country that operated a system of racial partition which was reinforced by economic, social, and political segregation [Ghai and Ghai, 1965; Rothchild, 1969; Mutungi, 1974]. Such social exclusion and racial discrimination was facilitated in a number of ways through state-sponsored legislation, including the imposition of a race-based salary structure and restrictions on the access to employment for non-whites in both the public and private

[22]Other sources of education and training for Africans included low-level training in government departments (such as the railways and harbors) and the Native Industrial Training Depot. The latter produced the following trainees in its first ten years 1927-1937: carpenters, 654; masons/bricklayers, 487; smiths, 80; painters/sign writers, 43; tailors, 22. A direct result of this Ordinance was the establishment of the Jeanes School (Nairobi) in 1925, which ran skills-based courses in agriculture, masonry, and tailoring among others [Odhiambo and Wanyande, 1989, p. 64].

[23]For instance, until 1961, the British administration operated a policy of preventing Africans from undertaking a legal education, citing the argument that Africans only wished to study law "as a preparation for careers in politics" [Odenyo, 1981, p. 183].

[24]Oginga Odinga was a key leader of the nationalist movement in the 1940s and 1950s, he was also vice president of KANU (the Kenya Africa National Union) between 1963-1966. In his autobiography, Odinga [1967, p. 50] comments on the requirement for hiring him, as an African teacher, always to inform "the White supervising teacher, who had the final say in the arrangements." He goes on to quote a conversation with a senior colleague, employed between 1946 and 1947, to illustrate the commonly held racist perspective of many expatriates at the time, "look here Oginga, you are very intelligent, but you must understand that your brain is no better than the brain of my six year old son because you Africans have not developed anything" [Odinga, 1967, p. 58].

sectors; spatial segregation of the three racial communities and the quality and extent of services provided in terms of housing, schooling, and healthcare; the institution of race-based political representation; restrictions on land ownership and the development of African reserves; and, more informally, through race-based social distancing [Ghai and Ghai, 1965]. Such policies were implemented in order to preserve the position of privilege at the peak of the "colonial economic, political and social pyramid" [Ogot and Ochieng, 1995, p. xv] enjoyed by the colonizing Europeans.

In this polarized colonial society, indigenous Africans were detached from the mainstream, and race-based social exclusion was promulgated through state apparatuses and societal structures. There were few opportunities for the African underclass to participate in education and commerce or to amass capital. While it was acceptable for Africans to hold menial positions, opportunities for more highly paid professional work were on the whole, "monopolised by expatriates and guarded jealously by the metropolitan professional associations" [Johnson, 1973, p. 288]. The remainder of the paper focuses on such professional work and, in particular, the prejudicial attitudes of the expatriates that perpetuated the exclusion of non-whites from accountancy. The next section examines how the growth of commerce in the colony precipitated the arrival of British accountants.

CREATION OF A MARKET FOR ACCOUNTANCY SERVICES

Several large British merchant houses operated in East Africa in the early 20th century. Companies such as Smith Mackenzie, Mitchell Cotts, and the British East Africa Company facilitated the exchange of goods between the metropolis and the colony. The latter provided a captive market for goods manufactured in Britain.[25] Prior to 1939, estate capital was prevalent in Kenya, and the white settler farmers and estate owners were the dominant political force by the early 1920s despite constituting less than 1% of the population [Swainson, 1980, p. 6]. The settler farmers wielded power politically through participation in

[25]Mitchell Cotts, a British firm with a base in South Africa, shipped exported and imported supplies from Mombassa. By the late 1920s, it was the sole supplier of coal to the colony and had a large share of the wheat and coffee trade, which had just taken off in the years preceding World War I. The British East Africa Company, incorporated in 1906, had been closely involved with the Cotton Growing Association and facilitated the export of cotton to Britain. It later became involved in agricultural operations and distribution of various imported goods throughout the colony [Swainson, 1980].

the Legislative Council and local councils [Ogot and Ochieng, 1995] and economically as capital was concentrated in the hands of the settlers and estate owners.[26]

Companies legislation became necessary in early 20th century Kenya as a result of increased activity by commercial enterprises in the colony. Many of the early regulations relating to accountancy in Kenya were drawn from similar acts already in operation in other colonies. The Companies Bill, 1918, consolidated the requirements of previous applicable legislation relating to companies operating in the colony.[27] Enacted as an ordinance in 1921, the legislation set out to regulate companies operating in the colony through requirements for accounts and audit. It required that every company incorporated outside the colony that had a place of business in Kenya and every company established within the colony prepare and file an annual balance sheet with the public authorities.[28]

At the time, since "the position as to the recognition of auditors in Kenya [was] rather anomalous" [CO533/378/3],[29] the

[26]This concentration of capital was reinforced in a number of different ways. First, the operations of British banks in the colony facilitated trading activities and provided capital for many settler ventures. Second, the establishment of marketing organizations, such as the Kenya Farmers' Association, ensured that settlers maintained their monopoly over distribution within Kenya. Third, the imposition of tariffs in the colony protected the settler agricultural monopoly. Finally, settler involvement in new company formations not only accumulated capital but also facilitated even greater exercise of influence over the colony. For instance, Lord Delamere, a prominent early settler, owned large shareholdings in three important early companies – Unga, Ltd., a grain mill; Nyama, Ltd., a cattle ranch; and *The Times of East Africa* which gave voice to the settlers on political issues [Swainson, 1980].

[27]These provisions had drawn mainly from the Indian Act of 1882 and the Indian Act of 1913, which itself was founded upon the Imperial Companies (Consolidations) Act, 1908. The provisions of the Companies Act 1913 (relating to private companies), the Companies (Foreign Interests) Act 1917, and the Companies (Particulars to Directors) Act 1917 were all included within the 1918 Bill. [KNA/AE/20/2, file dated 1919].

[28]This requirement was objectionable to British firms that had outposts in the colony as illustrated by this comment made by the Manchester Chamber of Commerce in correspondence: "the East Africa business of practically all the firms concerned only represent a portion of the trading interests of such firms, and therefore they consider that it would be unreasonable for the authorities to insist upon the production of a balance sheet showing as it would full details of the firms total trading interests" [KNA/AE/20/6, dated 31/7/22]. Amendments to the act were suggested in the form of an "auditor's extract" showing the firm's East African finances.

[29]CO533/378/3: Letter and documentation to the Colonial Office from the Kenya Office concerning the status of auditors in Kenya, dated 21 May 1928, held at the National Archives, U.K.

ordinance provided guidance on the status of auditors. It stated that "no person was to be appointed as an auditor unless he held the Governor's Certificate or was a member of a society recognised by the Governor." As such, the Governor was empowered to make "rules," as advised by the ICAEW, for the granting of certificates and for the recognition of accounting societies [Extract from the Companies Ordinance, 1921]:

> 144. (1) No person shall be appointed as an auditor of any company other than a private company unless he holds a certificate from the Governor entitling him to act as an auditor of companies. Provided that the Governor in Council may, by notification in the 'Gazette'declare that the members of any institution or association specified in such notification shall be entitled to be appointed and to act as auditors of companies throughout the colony.
>
> 144. (2) The governor in Council shall, by notification in the 'Gazette' make rules providing for the grant of certificates entitling the holders thereof to act as auditors of companies.

Thus, the earliest recognized accountants in the colony were British expatriates with British qualifications. The Chartered and the Incorporated Accountants were recognized as being suitable to conduct audits, although the correspondence reveals the perceived status of some of the other accounting bodies: "the Glasgow Corporation of Accountants are said to be 'definitely third rate' … various societies were recognized including the London Association (who according to Mr. Caine have a rather dubious reputation) but not including the Glasgow Corporation" [CO533/378/3, dated 1928].

However, the qualifications of auditors were not at this time defined in legislation, and the view was held that "the appointment of an auditor for a company is a matter for the shareholders" [CO533/378/3]. This presented problems for qualified accountants competing for business with unqualified accountants as noted in the correspondence: "the practice has proved detrimental to professional men who are bound by the etiquette of the home and other societies to which they belong … are authorized to practice under Rules in the absence of a governing body" whereas those not bound by such etiquette "have recourse to extensive methods of advertising themselves in ways which professional men cannot properly adopt" [CO533/378/3]. At the time, it was concluded that it "is not the general practice for colonies to lay down special qualifications" for persons conducting the audits of companies" [CO533/378/3]. It was left to the local administration to exercise discretion in the award of certificates. No such "rules" existed for the regulation of providers of accountancy services at this time.

A new Companies Ordinance was issued in Kenya in 1933, based on the Tanganyika Ordinance, 1931, itself based on the U.K. 1929 Act. This ordinance was passed as the result of the increasing commercial activity in the colony, as the correspondence shows [CO533/431/3: Colonial file, note dated January 27, 1933, held at the National Archive, U.K.]:

> Confidential: I am seriously concerned at the rumours of company-promoting activities in Kenya in connection with gold-mining. It is clearly important that adequate powers should exist to deal with e.g. fraudulent prospectuses. Would it not be possible to enact as a matter of urgency legislation based closely on the Companies Ordinance 1931 of Tanganyika.

The passage of the ordinance brought Kenyan companies legislation closely into line with British law at the time. The ordinance required that, "Every company shall at each annual general meeting appoint an auditor or auditors to hold office until the next annual general meeting" [Section 132 (1)], although no specific guidance was given as to the qualifications of such auditors. A combination of the needs of the colonial administration, the growth in commerce, and related legislation created a demand for auditors and accountants, which was satisfied by the arrival of British accountants.

PATTERNS OF PREJUDICE IN PROFESSIONAL ACCOUNTANCY IN COLONIAL KENYA

The Arrival of British Accountants in the Colonial Period: In common with other ex-colonies, the majority of early accountants working in colonial Kenya were expatriates with British qualifications and membership in one of the British accounting bodies [Johnson and Caygill, 1971; Johnson, 1973]. They provided accounting services to individuals, farmers, companies, and the colonial administration. However, the following correspondence, dated June 8, 1928, indicates that in the early days, there were inadequate numbers of suitably qualified accountants to undertake the necessary work and that the class divisions operative in Britain at the time were also servicing colonial society in Kenya [CO533/378/18: correspondence from H.D. Fisher to W.H. Smith in the Colonial Office, dated June 8, 1928, held at the National Archive, U.K.].

> We are in the position here of having to defend the practice of promoting to 'senior posts' in the local audit department in Kenya members of the Colonial Audit Department of less than eight years service. The correspondence is confidential, and behind it all, I suppose, is the question whether a training in commercial accountancy is a necessary qualification for senior posts in our audit offices. Of course our auditors have to be trained in Government or appropriation audit and the principles which they have to apply are not drawn from the text books of commercial accountancy, but from the proved regulations which we inherit from the Exchequer and Audit Departments. If we can secure public school men or men who have passed known examinations in subjects required for a public school education we have a guarantee (isolated exceptions there might be) as to their fitness for supervising work in the audit office in Kenya in much less than eight years.

Walker [1986, pp. 59-60] presents evidence that helps to provide an alternative explanation for the "export" of British accountants to the colonies, noting that the increasing number of Scottish CAs between 1904 and 1908 resulted in an "oversupply" of accountants and their emigration to England or the Colonies if they were unable to find work in Edinburgh or Glasgow. Thus, these individuals "were forced out by overcrowding rather than pulled in by the attractions of alternative locations." In particular, emigration was advocated for those who had few connections, had not passed examinations, or had little or no capital and were therefore seen as the "inferior alternative."[30] Presumably, the high incomes offered and the "high social status in the strict social hierarchy of empire nations" were also obvious attractions. Thus, there is the possibility that some of these Scottish accountants migrated to colonial Kenya.

There is also evidence that work was in abundant supply for accountants in colonial Kenya. For instance, there were suggestions in early 1950 that the Association of Accountants in East

[30]Walker suggests that many emigrant CAs were effectively excluded from the Society of Accountants in Edinburgh's (SAE) affairs, for instance, by not being updated on professional developments and not being allowed to take on SAE-registered apprentices, although this attitude later changed as the SAE became more motivated by "its own colonization pretensions."

Africa (AAEA)[31] arrange for the provision of an employment service. In response to the suggestion, its minutes record that "the demand for unemployed accountants is so great that there is no necessity for such a service" [AAEA Minutes, 27/1/50, p. 1]

Race-Based Analysis of Participation Rates in Accountancy in Colonial Kenya: The requirements of the Companies Ordinances, 1921 and 1933, and the passage of the Accountants (Designations) Ordinance, 1950[32] [Cap. 524] resulted in British accountants with British qualifications primarily providing accountancy services in the colony. Evidence is presented (Figure 1) analyzing the race-based participation rates in the profession in Kenya dating from 1914, the first recorded arrival of British accountants, to 1963, the date of independence. The data have been collated from the members' registers and directories of the British professional accountancy bodies cited in colonial legislation in Kenya. The total number of expatriate accountants with British qualifications reached a peak of 298 prior to 1963. Given their second-class status in the social hierarchy, some Asians were able to attain the standards of education required to gain access to professional accountancy as reflected in their much earlier participation, compared with indigenous Africans, in the profession from the early 1950s.

Figure 1 shows that members of the ICAEW formed the largest contingent of British accountants in colonial Kenya. Although Earnest Beasely Gill was the first known English CA to establish a practice in Kenya, arriving in Nairobi in 1907, the first documented expatriate ICAEW members are not listed there until 1914.[33] By the early 1920s, the expatriate ICAEW

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[31]The AAEA was a professional body formed by the mainly expatriate British accountants in Kenya, Uganda, and Tanzania. It sponsored legislation such as the Accountants Designations Act, 1950, and closed off the market for the provision of accountancy services to non-members and, initially at least, non-whites (Sian, 2006b).

[32]The Accountants Designations Ordinance, 1950, set out to define appropriate designations and restrict their use to those individuals belonging to the stated professional bodies. These were: the SAE; the Institute of Accountants and Actuaries in Glasgow (IAAG); the Society of Accountants in Aberdeen (SAA); the ICAEW; the Institute of Chartered Accountants in Ireland; the SIAA; the Association of Certified and Corporate Accountants (ACCA); the Societies of Chartered Accountants in South Africa; and the Institute of Chartered Accountants in India (ICAI).

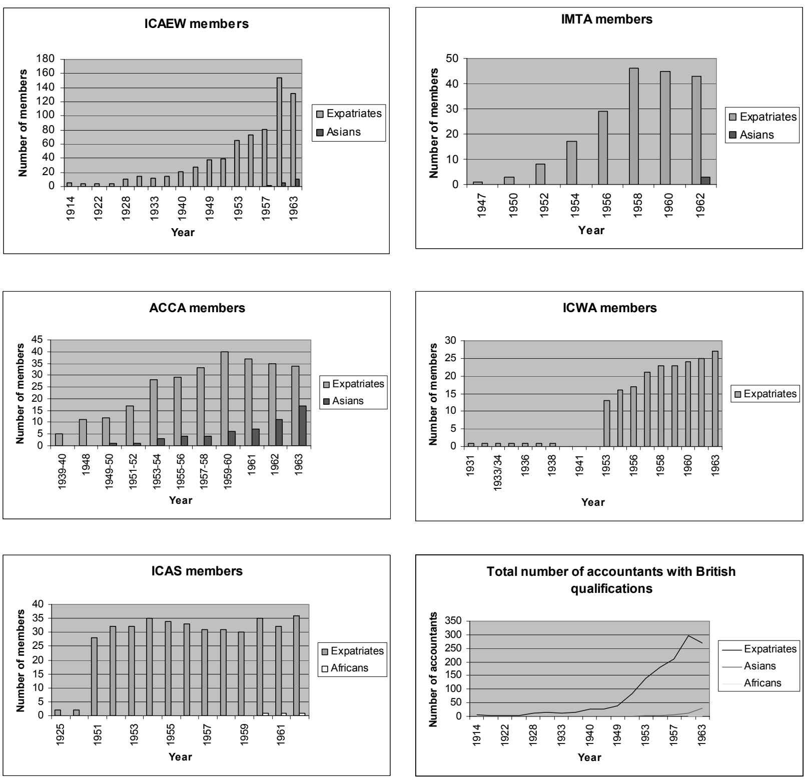
[33]These members were O.S. Crawford, F.S. Dunn, E.B Gill, P.H. Johnson, and P. Wheelcock. They formed the first two accounting practices in Nairobi (Cole, Dickin, Hills & Dunn and Gill, Wheelcock & Johnson).

members had also formed firms in other towns; thus, ICAEW firms appeared in Mombassa and Nakuru in1923, in Eldoret in 1928, and in Kisumu and Kitale in 1940.

Throughout the colonial period, the numbers of expatriate ICAEW members grew steadily in Kenya. The ICAEW required trainees to pass its examinations and to serve as articled clerks for five years (three years for graduates) with a member of the Institute and required articles to be undertaken by trainee accountants with accounting firms in Britain. Bodies such as the SIAA did not have the same stringent rules, and their trainees

FIGURE 1

Participation Rates Analyzed by Race: Membership of British Professional Accountancy Bodies Listed in Kenya, pre-1963



Source: membership directories

Note: With the exception of the IMTA, the professional bodies published membership directories/registers annually. For most bodies, there is a gap for the war years. Thus, the ACCA registers for the years 1941-1948 and the ICAEW registers for 1941-1946 are missing.

were required to serve either as articled clerks with an incorporated accountant or have completed six years (three years if graduates) of approved professional service as accountancy clerks in the office of a public accountant [RCS, *Careers in Kenya,* 1957]. There is evidence that indicates that the SIAA established an examination center in Nairobi as early as 1930 so that expatriate trainees could take examinations locally [Johnson and Caygill, 1971] as part of their strategy of expansion through a "British Empire policy" [Parker, 1989].

Although indigenous Africans remained excluded, the very first Asian ICAEW member was listed in 1957 as T.N. Patel of the firm Patel, Mehta & Co., listed in both Nairobi and Mombassa that year. By 1960, the number of Asian ICAEW members had increased to five.[34] In other countries where racial divides have prevented non-whites from entering and progressing within the profession, such as the case of African Americans [Hammond, 2002], the excluded have often resorted to opening their own practices, serving the needs of own-race clients. Similarly, Asians were not always successful in gaining employment with expatriate firms and many established their own practices, initially providing accounting services mainly to Asian businesses.

In addition to race-based exclusion, colonial society was also subject to gender-based exclusion, possibly a reflection of conditions within the profession in Britain at the time. Although the evidence presented indicates that accountancy services in Kenya were provided mainly by expatriate British males, the ICAEW directories show that the first female ICAEW member, albeit not in practice, is Miss P.M. McCombie, listed in Nairobi in 1955. The first female member in practice is listed in 1967 as Mrs. D. White with the firm Field & White in Nairobi.

The large ICAEW firms appeared in Kenya for the first time after World War II. Thus, Cooper Brothers, Leslie, Seex and Co. established offices in both Nairobi and Mombassa in 1949; Deloitte, Plender, Gill & Johnson and Peat, Marwick, Mitchell & Co. both opened offices in Nairobi in 1950; and Whinney, Murray, Ernst & Ernst appeared in Nairobi in 1963. The growth in the number of firms establishing offices in Kenya is indicative of the growing needs for staff, although in most cases such needs were satisfied by recruiting more accountants from Britain.

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[34]The first Asian Kenyan ICAEW members in Nairobi were S.S. Chatrath (with the firm Chatrath [Shyam S.] & Co.); A.R. Kassim (with the firm Kassim [Ameer R.] & Co.); Mehta, I.K. (sole practitioner); T.N. Patel (with the firm Patel [Mehta] & Co.); and I.B. Patel (not in practice) [*1960 ICAEW Register*].

"The most important source of demand for professional services in Britain's empire from the last decades of the nineteenth century was the colonial administration" [Johnson, 1973, p. 287]. Many of the accountants employed by the colonial administration were Institute of Municipal Treasurers and Accountants (IMTA) members whose presence in Kenya can be dated back to 1947.[35] British IMTA members were employed in various positions at the national level as local government inspectors or financial officers in the Revenue Service or the Treasury. They were also employed at the county council level in the county treasurers department, at various levels, or as financial officers. In city or town government, IMTA members held positions at various levels with local treasury departments.[36] Although Africans remained totally excluded from membership in the IMTA during the colonial period, the first three Asian IMTA members in Kenya are listed in 1962. Thus, one Asian IMTA member was employed as the assistant town treasurer in Mombassa, another was employed in the Nairobi City Treasurer's Department, and the third was employed in the Ministry of Local Government and Lands.

Some British professional bodies, such as the ACCA, actively sought expansion in order to exert greater influence at home by exporting their qualifications to countries such as Kenya [Johnson and Caygill, 1971; Johnson, 1973; Briston and Kedslie, 1997, p. 177]. The first five ACCA members listed in Kenya appeared in the year 1939-1940, all expatriates. The ACCA did not have the same stringent training contract requirements as the ICAEW, but both the training and the ACCA examinations could be taken in Kenya, facilitating education via correspondence courses. This meant that entry to the ACCA was easier for the non-expatriate Kenyans and happened much earlier than it did for the ICAEW. The first Asian ACCA member, Manohar Lall, is listed in the 1949 year book, as a sole practitioner. As Figure 1 shows, the participation of Asians significantly increased in the colonial period between 1947 and 1963, a period of general increase in the total numbers of professionally qualified account-

[35]A.W. Kent, associate of the Institute since 1933, was the first IMTA member employed as a deputy treasurer in Nairobi City Council and, by the time of publication of the 1950 year book, he had been promoted to municipal treasurer.

[36]Although the first IMTA members were employed in Nairobi, by 1954, IMTA members were also municipal or town treasurers in Nakuru, Mombassa, and Kisumu. From 1956, IMTA members were being appointed to positions of county treasurers or assistant county treasurers in the various county councils (Aberdare, Nairobi, Nakuru, Nyanza, Kitale, Naivasha, and Central Rift Valley).

ants to serve the growing demands of commerce in the post-war economy.

The Institute of Cost and Works Accountants (ICWA) had the smallest representation in colonial Kenya. The first expatriate ICWA member was listed in the 1931 directory.[37] In the post-World War II period, many ICWA members were listed in South Africa, where members were expatriate British and white South Africans, and in India, where many Indians had become members. Despite the large numbers of Indian ICWA members listed in India pre-1963, no Asian members were listed in Kenya. It may be speculated that this was because companies large enough to warrant the employment of a cost accountant were mostly British, more likely to sponsor British trainees than Asians.

The ICAS directories record two members in Kenya in 1925 and 1926,[38] but no others until 1951. A possible explanation is that when three Scottish organizations (the SAE, the IAAG, and the SAA) merged in 1951 to form ICAS, previous records were misplaced. Given Walker's [1986] theory on "oversupply," one might have expected to see more ICAS members in Kenya colony in the early part of the century. Therefore, it is unexpected that no members are listed in Kenya between 1927 and 1951, the year in which 28 ICAS members are registered in Kenya.[39] The ICAS categorically confirms that although it has directories dating back to 1896, with the exception of the war years, no records can be found indicating the presence of ICAS members in Kenya between 1927 and 1951. Although the ICAS has no Asians listed as members, it is able to lay claim to the first African to qualify as a CA in the central and east African region. The late John Mwangi was admitted to membership on September 18, 1959, having served a five-year apprenticeship with Reid and Mair in Glasgow.

In addition to the British professional bodies, some members of the Indian profession were also practicing in Kenya. The

[37]I.W. Prestoe was the first ICWA member in Kenya and was employed as the works accountant at the Magadi Soda Company, Ltd., which was a subsidiary of Imperial Chemical Industries, ICI. The first female ICWA member in Kenya, listed in the 1953 year book, was Iris Monica Devoil, employed by East African Railways and Harbours and originally admitted to membership in 1945.

[38]In the 1925-1926 directory, Grant Hay is registered in Eldoret, working for A.C. Hoey, and Douglas Keith is registered in Mombassa, working for Gill and Johnson.

[39]Scottish accountants tended to migrate to traditional destinations, such as North America.

directories of the ICAI show that, in 1956, eight members were listed in Kenya, four in Uganda, and two in Tanganyika [*ICAI Year Book,* 1956]. After this date, however, overseas members were no longer listed in the Indian register.

TOWARDS POLITICAL INDEPENDENCE: DECONSTRUCTION OF A SEGREGATED SOCIETY AND INCREASING PARTICIPATION

Participation of Non-Whites in Accountancy: There is evidence that increasing numbers of accountants were employed in the colony after World War II to meet the demands of an expanding economy.[40] By the 1950s, some of these were new Asian immigrants who had already been educated in India while others were Asian Kenyans who, as a result of their higher social standing and wealth, were able to access education more readily than their African counterparts. At this time, the social divisions in colonial society were becoming a little less pronounced, and there were more opportunities for education for indigenous peoples. There is also evidence that some firms were beginning to employ Africans too, although not at the professional level [L: senior member in practice, member of first ICPAK Council – expatriate]:

> Well, prior to Independence we were almost totally staff-side, European and Goan. And a large influx of Goans here in the capital. And a smattering of Asians I suppose, but we were just beginning to employ one or two Africans within the office.
>
> [M: senior member in practice – expatriate]:
>
> I know we had, when I first joined in pre-1951, we had one African who was sort of, he wasn't really on the professional staff, but he was a filing clerk and a general factotum and he could be used for all sorts of things, like ruling red lines on Balance Sheets and stuff like that, you know. But that was it – he was the only one that I can remember.

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[40]Kenya experienced a postwar boom in both agricultural and industrial production as GNP rose from £53 million in 1947 to £103 million in 1951. By 1954, GNP attributed to manufacturing had superseded that attributed to European agriculture in the colony. The economy was further boosted by an increase in official grants to the colony and the inflow of new private capital, much of which was directed towards industries that yielded larger and quicker returns than agriculture [adapted from Swainson, 1980, p. 110].

In part, this change was the result of new training initiatives in both the public and private sectors. In the private sector, the AAEA ran bookkeeping courses for those Africans who had achieved suitable educational standards [Sian, 2006b; B: early chairman of ICPAK – African]:

> There was the Association of Accountants in East Africa that used to actually run some training and examination schemes to prepare junior and middle-level assistants, mainly Africans, to become good bookkeepers. You got a certificate but it had no professional standing, but the Association could issue other certificates that would show you had gone through some kind of accounting and bookkeeping training. But it did not go beyond that.

"In most of the third world towards the end of the colonial period, access of the local population to professions on equal terms with their colonial rulers was an important issue" [Silcock, 1977, p. 21]. In Kenya, having seen the status accorded to the expatriate qualified accountants and their earning capacity, suitably educated Africans also aspired to becoming qualified accountants [J: ACCA-trained senior member of profession in practice, past chairman – African].:

> I chose to become an accountant because of my (expatriate) deputy headmaster at school. Since, his son only had o'levels I thought that I too could go on to study accountancy. At that time this was not a career considered to be suitable for a black African. If I am honest I'd say that one of the things that attracted me to accountancy was the fact that all accountants I knew of were wealthy and well off.

Although only one professionally qualified African accountant is listed in the membership records of the British professional accountancy bodies prior to independence, there is evidence that by the early 1960s, some Africans were attempting to study for accountancy examinations either on their own or through correspondence courses. Those who were able paid for their own accounting education on realizing the potential economic benefits, often taking other jobs to help to pay for courses and books [J: ACCA-trained senior member of profession in practice, past chairman – African]:

> There were no specific barriers in Kenya to stop you going beyond level one ACCA, but there were just not the opportunities. Where would you study? There were

> no books. Where would you go to learn? There were no revision classes. You had to do it all on your own. There was no formal training and it was by correspondence... even the University of Nairobi did not run such courses.

[J: ACCA-trained senior member of profession in practice, past chairman – African]:

> In Kenya we basically had apartheid, and blacks were not supposed to aspire to careers and professions, particularly things like Chartered Accountancy. They were happy for us to study for diplomas of various sorts, Chamber of Commerce Examinations, or you could study for ACCA exams up to level one and then go on to work, or treasury exams and then work after level one.

While Asians were able to enter accountancy much earlier than African Kenyans, reflecting their position in society, they too experienced discrimination and barriers. The earliest Asians to qualify as accountants (with the ACCA and the ICAEW) found it almost impossible to obtain employment with the expatriate firms, and most eventually began to establish their own practices, serving the needs of Asian businesses [K: senior member in practice, member of first ICPAK Council – Asian]:

> That was the time there was still racial segregation in Kenya. For example, you could not stay in this hotel. You cannot use the restaurants, yes. Nobody would give me any employment. I tried Coopers, I tried Gill & Johnson. No way! So, I had to start on my own.

This situation is similar to other studies found in the literature documenting the exclusion of women in the early days of the British accountancy profession. There is evidence that although women accountants received some encouragement and support from male colleagues or mentors, they were subjected to hostility, discrimination, and exclusion. In defense of such treatment, it was argued by the profession that the charter was written in the male gender and that women were unsuitable for the profession rather than simply to admit that the entry of women was not condoned [Cooke, 1997].

Beginning in the 1960s, some Africans and Asians were recruited by large companies operating in Kenya and permitted to study for accountancy qualifications. Some were sent abroad to gain experience, in some cases funded by the Colonial Development and Welfare Fund Empire Scholarship Scheme, while others began to study for the ACCA or the IMTA (now CIPFA) through correspondence courses. These qualifications were often more suitable or convenient as it was generally difficult for non-whites to obtain training contracts with expatriate accounting firms [I: senior administrator at KASNEB – African]:

> Some people were sent overseas to read for CIS (Chartered Institute of Secretaries). But by the time now, we are coming to around 1961, everything, a lot of effort was given to training young Kenyans to take the examinations of IMTA, now CIPFA. Kenya Railways also was sending quite a number of young men later on to the U.K. to read their CIMA. And more or less at the same time, there [were some bodies] encouraging young men to take ACCA examination.

Following the Lancaster House Constitutional Conference of 1960, the Service and Training Branch of the government was formed. The Kenya Institute of Administration (KIA)[41] was established in July 1961, with financial support from the British and U.S. governments. The colonial government anticipated that many expatriate British civil servants would leave the country after independence, vacating administrative and executive positions in the senior ranks of the civil service and that these positions would have to be filled locally. The main function of the KIA therefore was to provide a training facility for the higher cadres of the civil service and to play a role in the training of Africans in Kenya [Sian, 2007].

In order to meet these needs, the KIA was organized into specialist departments. The Department of Public Administration was established in July 1961 to run training courses for central government administrative officers, such as assistant secretaries, district magistrates, and senior administrators in the private sector. The Department of Local Government was established in May 1962 to conduct courses at advanced and ordinary levels in local government administration for officers from local authorities [B: early chairman of ICPAK – African]:

> That was the period just before Kenya became independent and there was a lot of concern on the part of the government, and a lot of our own local institutions to bring in young people from universities and other places of higher learning for training, with the inten-

[41]The KIA was developed from the Jeanes School which had been used to train soldiers during the war and was now used to train low-level civil servants in the post-war period [Odhiambo and Wanyande, 1989].

> tion that they will take on the responsibilities that were being shouldered by the colonial, British colonial, officers. The City Council of Nairobi has always been one very large organisation in Kenya, and it was amongst the organisation that they were very keen in taking on young Africans, to put them through training programmes of one kind or another, individuals on site to be trained as municipal engineers, water engineers and accountants.

Thus, in the build-up to independence, preparations were made for the changes that would ensue. Not only were efforts made by the colonial government to train Africans for positions that would be vacated by the departing expatriates but a change of attitude, perhaps the result of self-interest, to the employment of Africans is also detected [L: senior member in practice, member of first ICPAK Council – expatriate]:

> That was the political thing to do. But we (expat firms) had to look into training Africans. But I don't think that at any time there was anybody sitting on top of us and saying "you must take on an African". And we were then, I suppose, at that stage, looking for the right type of African. And I think most of us were looking at Africans who had some association with people who were going to be important in the post-Independence period.

[J: ACCA- trained senior member of profession in practice, past chairman – African]:

> ICI had to sponsor me, because by then they were operating a work-permit system for the expatriates and they had to show that they were prepared to train black Africans.

Similarly in the public sector, arrangements were made to improve the position of the Africans, while safeguarding the positions of the expatriates and Asians already employed. There was a real urgency in encouraging the upward mobility of Africans in the workplace, given the inevitability of independence. As the evidence presented indicates, it was necessary to change the attitude of existing employees to accept the changing position of Africans in society and in the workplace, where many were promoted quickly in the interests of "Africanization" [CO544/100: Report on the Working of the Civil Service Commission, 1961]:

> In brief, the policy has been to redress the disproportionate number of Africans in the senior ranks of the Service as quickly as possible without unduly lowering standards and at the same time to maintain the morale and safeguard the prospects of local officers of other races already in the Service....The Commission is aware that there are many serving Africans whose experience and ability is not reflected by their position in the seniority lists.

[CO822/629/3 Letter from the Kenya Civil Servants Union to the Colonial Secretary, London, dated March 18, 1961]:

> Non Africans will continue to be assets to the Kenyan Civil Service provided they accept that this is an African country and that the majority of policy decisions will be made by Africans. Unfortunately it is clear from the past and even the present attitude of many non-African civil servants that they will be unable to accept these basic facts and will therefore be an unstable element in the service during the post-independence period.

[CO822/629/3: Letter from the Kenya Civil Servants Union to the Colonial Secretary, London, dated March 18, 1961]:

> Preference to be given to Africans in the filling of all vacant posts (including 'promotion posts') and candidates of other races to be considered only if no suitably qualified African is available.

Political, Social, and Economic Change: Throughout the 1950s, the Mau Mau had waged a nationalist campaign for independence.[42] Following talks in London in 1962, a new constitution was drawn up and elections were held in Kenya in May 1963. Jomo Kenyatta led KANU to power as political independence was declared on December 12, 1963. A key policy of the post-independence Kenyatta administration was the "Africanization" of the economy and public services; in short, the transfer of power to the indigenous Africans and the deconstruction of the racially segregated society and social exclusion that existed under the

[42]Unlike other Kenyan political leaders at the time, the Mau Mau leadership was prepared to use violence as a means to further their cause. A state of emergency was declared by the governor of Kenya in 1952, and the activities of the Mau Mau were critical in drawing attention to the plight of indigenous peoples and ultimately forcing the issue of independence with the ruling British in the early 1960s.

colonial regime. New legislation and training initiatives[43] were implemented to equip Africans, where possible, to replace the departing expatriates in both the public and private sectors. Large land transfers and changes in housing, welfare, and education underpinned the Africanization policy.

The new government's training initiatives and its policy of widening participation in higher education enabled more African Kenyans to achieve the standards required for participation in the elite professions, such as accountancy. For instance, the Royal Technical College, Nairobi, intended to serve the needs of all races, had started accepting students in 1955 and offered courses that would prepare students for the graduateship examinations of British professional institutions [CO533/567/13: Memorandum on the proposal to establish the Technical College in Nairobi, by F.J Harlow, assistant education advisor, 1951]:

> Those students able to proceed to professional qualifications can in suitable circumstances prepare directly for the examinations held by United Kingdom professional institutions. Similarly in commercial subjects there are appropriate examinations conducted by the Royal Society of Arts, the London Chamber of Commerce and the various professional associations for secretaryship and accountancy.

The expatriate British accountants, acting through the AAEA, continued to dominate and control the provision of accounting services even after independence had been achieved. As a group, they were able to restrict access to jobs in accountancy at all levels. The requirement to serve articles represented a further barrier for Africans who had achieved the required level of education. Various forms of such exclusionary practices are commonly encountered [Murphy, 1984], and in Kenya, these were not restricted to accountancy. For instance, Ghai [1981] comments that barriers were also faced by trainee African Kenyan lawyers searching for a pupilage. In Kenya, such conditions were prevalent well into the post-independence period. Ogot and Ochieng [1995, p. 111] note that "Africans constituted an extremely small percentage of professional and managerial groups. In 1964, for example, Africans made up only 3% of the legal profession and 5% of physicians and surgeons." The next section presents evidence highlighting the changing participa-

[43]Details of the Africanization process and the new government's initiatives in accountancy after independence can be found in Sian [2007].

tion of all three races in the accountancy profession after independence.

PARTICIPATION RATES IN PROFESSIONAL ACCOUNTANCY POST-1963

The implementation of the post-independence government's Africanization policy was far more effective within the public sector than it was in the private [Nzomo, 1978, p. 10]. A similar picture emerged in accountancy. Since only those holding accountancy qualifications as stipulated by the Accountants (Designations) Act, 1950 were recognized as accountants, this meant that Africans wishing to qualify were required to become a member of one of the British bodies. Therefore, analysis of the membership of the British accounting bodies in this period provides some indication of the success of Africanization and subsequently changing participation rates. The data are drawn from an analysis of the members' directories of the British professional accountancy associations to 1970, when the first local Kenyan professional accountancy examinations were established, and it was no longer necessary to undertake the examinations of the British bodies.

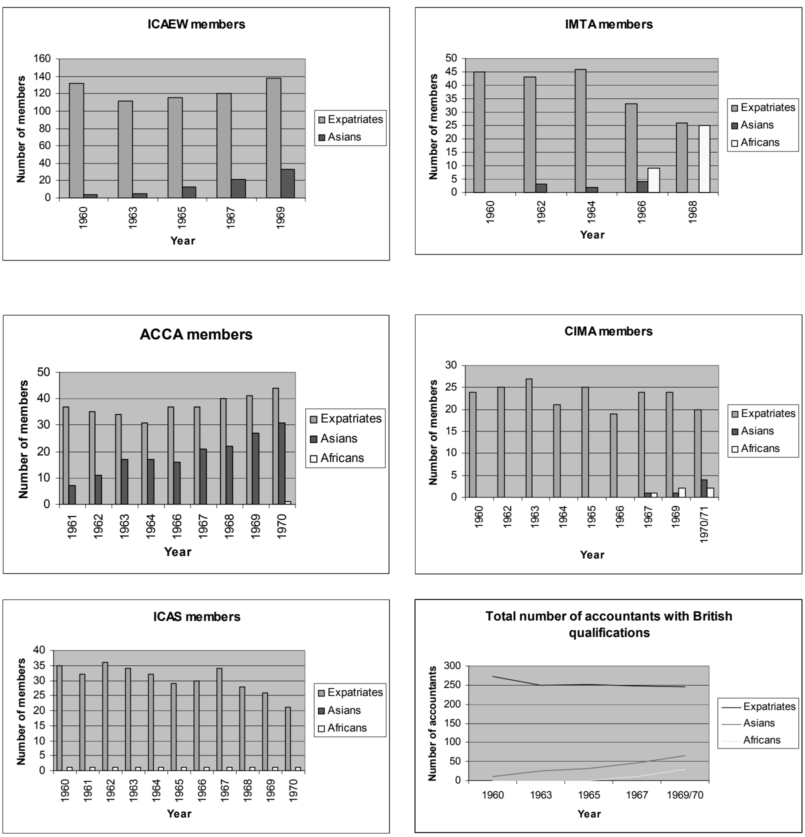
Figure 2 shows that few non-whites achieved entry to the "senior" chartered organizations, although access to the "lower tier" organizations of the British profession was more easily attained. The total number of expatriate accountants in Kenya reached a plateau at about 250 in the period 1963-1970, while the number of Asians increased from 11 to 64 and, correspondingly, professionally qualified Africans increased from one to 29.

The ICAEW members remained the largest contingent of professionally qualified accountants in post-independence Kenya. In the year of independence, 1963, there were 132 expatriate members listed in the ICAEW register and 11 Asians. By 1969, the number of expatriate ICAEW members in Kenya had increased to 154 and the number of Asian members to 39. While the participation of non-whites was slowly increasing, racial demarcation and prejudice remained inherent within the profession. The difficulty incurred by Asians, for instance, in their attempts to secure employment with the dominant expatriate firms continued to result in many of them establishing their own practices. In Mombassa, two Asians had their own practice or were in partnership, while a further four were listed as being not in practice. In Nairobi, six Asians had their own practice or were in Asian partnerships, while 27 were listed as not being in practice. No African Kenyans were listed as ICAEW members, which is perhaps a reflection on the difficulty in obtaining training contracts with existing firms, a necessity for ICAEW membership requiring the need to train in Britain.

The early years of the post-independence period remained dominated by expatriate IMTA members with only two Asian members listed in 1964, alongside 46 expatriates. In Kenya, the civil service was an early point of entry into commerce and business for Africans [Leys, 1975], and some of the earliest African accountants were trained in the public sector. By 1966, the first African IMTA members appear in the registers. Figure 3

FIGURE 2

Participation Rates Analyzed by Race – Kenyan Membership in Professional Accountancy Bodies, 1963-1970



Source: membership directories

provides details of these first African IMTA members and gives an indication of the type of jobs they performed. Most were still students in the mid-1960s as they did not begin to train as accountants until after independence.

FIGURE 3

The First African-Kenyan IMTA Members Listed in the 1966 Yearbook

Name	Employer	Position	IMTA status*
Kangethe, N.M.	East African Common Services Organisation	accountant general	student since 1964
Araujo, I.C.S.	Ministry of Local Government	financial officer	student since 1965
Muga, J.C.	Central Rift County Council	deputy county treasurer	student since 1964
Gitau D.K.	Central Rift County Council	assistant county treasurer	student since 1964
Okuku, J.P.	Kisumu Council	Town Treasurer's Department	Student since 1965
Oloo A.G.	Kisumu Council	Town Treasurer's Department	student since 1964
Njoya J.M.	Mombassa Council	town treasurer (designate)	student since 1964
Mbugua S.K. **(BSc Econ.)	Nairobi Council	City Treasurer's Department	student since 1964
Ogembo S.B.	Nairobi Council	City Treasurer's Department	student since 1964

* IMTA status categories were honorary fellow, fellow, associate, student
** later became the first ICPAK (Institute of Certified Public Accountants of Kenya) chairman

The success of the government's Africanization policy was particularly evident in the public sector. By the year 1968, the number of IMTA expatriate members listed in the year book dropped from 33 to 25 and there were 25 African Kenyans additionally.[44] Of these, only one, Mr. Stanley Mbugua (later, in 1978,

[44]Two of these African Kenyans were employed nationally, one within the Ministry of Local Government and the other by the East African Common Services Organisation; seven were employed at the county council level as chief financial officers (two) or within the County Treasurers Department (five). The other African Kenyans were employed within the Treasury Departments at Nairobi City Council, Nakuru Municipal Council, and the Mombassa and Eldoret town councils.

the first chairman of the Institute of Certified Public Accounts in Kenya), had qualified and been awarded associate status. The ACCA also proved to be a popular qualification for Asian trainees. By independence, the number of expatriate ACCA members in Kenya had risen to 34 and the number of Asian members to 17. Some of the Asian ACCA members established their own firms while others were employed in a variety of positions in commerce and industry (see Figure 4).

FIGURE 4

Participation of Asian ACCA Members in 1963, Employment and Positions

Name	**Position**	**Employer**
Mombassa		
Mistry, C.M.	audit manager	Cooper Brothers
Mitha, A.H.	internal auditor	Diamond Jubilee Investment Trust
Patel, C.J.	–	Patel, Shah & Joshi
Patel, R.M.	assistant town treasurer	Municipal Council of Mombassa
Nairobi		
Bassan, A.S.	accountant	Accountant General's Department, E.A. Common Services
Jerath, K.L.	–	Mobil Oil, East Africa, Ltd.
Kothari, S.D.	accountant	Police Dept., Kenya Government
Lobo, J.M. (B. Comm.)	finance officer	Ministry of Local Government
Lall, M.	–	Manohar Lall & Rai
Mohamedani, S.G.	aAssessor	East Africa Income Tax Department.
Patel, C.J. (B. Comm.)	–	Patel, Shah & Joshi
Patel, R.B.	assistant secretary and assistant accountant	Schweppes, East Africa, Ltd.
Patel, R.B. (B. Comm.)	–	Shah & Shah
Rai, T.S.	–	Manohar Lall & Rai
Saini, R.S.	accountant	East Africa Common Services Organisation
Sood, M.P.R (Ph.D.)	senior auditor and training officer	Exchequer and Audit Department, Kenya Government
Vyas, C.P.	–	Chiman Vyas & Co.

Asian Kenyans had access to higher levels of education and were able to undertake training for accountancy much earlier than African Kenyans, who do not appear in the ACCA registers until the end of the decade. By 1970, 44 expatriate members were listed, 31 Asian members, and only one African Kenyan (F.A. Mbuya is listed in 1970 as the chief accountant [designate] at the East African Railways Corporation). The majority of ACCA members in 1970, 76 in total, were concentrated in the main commercial centers of Nairobi (39 expatriates, 25 Asians, and one African) and Mombassa (3 expatriates and 8 Asians). Other ACCA members were geographically dispersed in more rural areas such as Eldoret, Kericho, Nakuru, Nyeri, Mariakana, and Kisumu.

The ICWA had far fewer members than either of the other British bodies in Kenya, and at the time of independence, only 27 members were listed (24 in Nairobi, one each in Magadi, Mombassa, and Nakuru). By 1967, the first Asian, Ramesh Shah, was listed as the assistant chief accountant at the Kenya Meat Commission. In the same year, the first African is also listed as the commissioner of income tax at the East African Tax Department. By the year 1970, when KASNEB examinations first became available, there were four Asians and two African members listed in the ICWA year books, along with 20 expatriates. Figure 5 shows the positions held by the Africans and Asians and provides an indication of their seniority and the

FIGURE 5

Asian and African ICWA Members in 1970

Name	**Position**	**Employer**	**Year admitted**
Dhillon, T.S.	senior accountant	Ministry of Agriculture, Mariakani	1969
Desai, R.M.	chief accountant	Kenya Co-operative Creameries, Ltd., Nairobi	1970
Desai, V.K.	assets controller – East Africa and Zambia	Singer Sewing Machines Co., Nairobi	1970
Mitoko, M.H.	works accountant	Union Carbide	1970
Mubiru-Nebayosi, S.K.	chief accountant	East Africa Railways & Harbours, Nairobi	1968
Shah, R.S.	accountant	Kenya National Trading Corporation, Nairobi	1966

relatively short period between qualifying and, in line with the government's policy to replace expatriates with locals as quickly as possible, achieving that position. The data show that few ICWA members migrated to Kenya and that the body was also slow to admit Asians and African Kenyans. The implementation of the government's Africanization policy was slow in the commercial firms that were most likely to employ ICWA members.

The number of ICAS members remained fairly static in the early post-independence period and then began to decline in the late '60s. No Asian members were admitted to the ICAS in the period. However, John Mwangi remained an active member of the profession in Kenya. Having qualified with the ICAS in 1959, he established a practice in Nakuru. His firm merged with Barber, Bellhouse & Co., an expatriate firm established there in 1930, to form Barber, Bellhouse, Mwangi & Co. in 1965, later to become part of Ernst & Young. Interviewees who knew him have suggested that he offered training contracts to the many Africans he mentored.

Although the data provided here focus on the Asians and Africans who were successful in their attempts to join the accountancy profession, it should be emphasized that these individuals were indeed exceptional. The evidence presented supports the suggestion that "despite the new liberal rhetoric of colonial self-determination and racial equality, white dreams of power persisted" [Bush, 1999, p. 18]. In accountancy, prejudice, hostility, and discrimination within the profession continued to impede the entry and progress of non-whites.

CONCLUSION

Recent studies have focused on the exclusion from the accountancy profession on the basis of class, gender, and race. This paper extends the latter thread of this body of literature by providing empirical data on the historical participation of the three main races in the Kenyan accountancy profession, mapping these shifting patterns against wider political and social changes.

Osterhammel [1997, p. 4] suggests that "colonial reality was multi-faceted … and was shaped by particular local features overseas, by the intentions and opportunities of the individual colonial powers." Although the broader intentions of the colonial power may have been different in countries like Trinidad and Tobago and Jamaica [Annisette, 2003; Bakre, 2004] as compared with Kenya,[45] social exclusion and ethnocultural and racial demarcation were defining features of these racially diverse colonies. Osterhammel's theorization of colonialism provides an insight to the rationale underlying the prevalent attitudes towards the non-white population in such outposts where issues of race penetrated social, economic, and political relations. In all of these instances, such race-based societal stratification was reflected and even amplified in professional organizations.

In Kenya, going beyond prejudice and "laissez-faire discrimination," institutional racism enshrined within legislation provided the context for discriminatory practices in employment, housing, welfare, and education.[46] Here, the early demand for suitably qualified accountants was satisfied by the arrival of British expatriate accountants. As in other racially diverse colonies, the hierarchical structure of colonial society rendered redundant the need for the expatriate accountants to employ formal strategies to exclude non-whites, in particular the less educated Africans. Indeed, if Osterhammel's theorization is to be applied here, then it may be speculated that the earliest colonizers believed that, given the "inferiority of the native brain," there was little benefit attached to the education of indigenous peoples, and certainly not to the levels required for membership in professional associations. The data gathered here indicate that such attitudes toward Kenyan-African education remained so, albeit in more subtle forms later, throughout much of the first half of the 20th century. One might conclude, therefore, that this represents a more implicit or indirect mode of social exclusion as Africans could not meet the educational or social requirements of the professional associations. However, it remains the case that the colonial state did specifically legislate for differential levels of education for the three races.

Although the post-independence dismantling of hierarchical social structures had a significant impact upon the civil and legal rights of Africans with respect to housing, education, welfare, employment, and citizenship, the evidence presented here and elsewhere [Sian, 2006a, 2007] indicates that imminent change within the profession was not forthcoming. Those Africans who

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[45]The former are usually classified as non-settler colonies, with mainly an itinerant white population, whereas Kenya was essentially a settler colony. The black population in the former comprised the descendents of slaves whereas it was an indigenous population in Kenya.

[46]Osterhammel [1997, p. 87] suggests that in some instances "ethnosocial distancing was an outgrowth of societal interaction and not always based on discriminatory law" – a case perhaps of voluntary social exclusion.

had attained levels of education suitable for entry to professional associations remained a social underclass throughout much of the early post-independence period partly because of deeply embedded racist ideologies promulgated in the colonial period. Thus, in accountancy, although participation rates for both Africans and Asians in the profession rose slowly in the period 1963-1970, they continued to be subjected to a panoply of exogenous forces principally associated with racial discrimination.

This study supports Annisette's [2003, p. 669] assertion that "specific accounting work-sites [such as public practice or government accounting] can become racialised." Despite the passage of anti-discriminatory legislation, Africans, in particular, found it difficult to find employment with the expatriate accounting firms. Therefore, in Kenya, the public sector was a key entry point for African accountants after independence. By comparing their progress within the IMTA with other private sector bodies, the evidence presented here supports the suggestion that the implementation of the Kenyatta government's Africanization policy was far more effective in the public sector [Sian, 2007].

Asians were higher up in the social "pecking order" than Africans, and their eventual entry to the profession in the 1950s preceded that of the Africans. Indeed, some Asians were migrant members of the Indian Institute, competing for business with expatriates in colonial East Africa. The Indians, too, were marginalized on the basis of race, although it is possible to speculate that their marginalization was also beneficial for the expatriate accountants in terms of reducing competition in the market for accounting services.

The case of the non-white accountants in Kenya closely parallels the experiences of excluded groups in other societies in a number of ways. First, while not considered suitable for performing tasks associated with professional competence, those at the lower levels of the social hierarchy (women and non-whites) were considered suitable for performing more mechanical work [Kirkham and Loft, 1993; Hammond and Streeter, 1994; Annisette, 2003]. Thus, in the colonial period, if Africans had attained suitable levels of education, some were permitted to train for the bookkeeping examinations of the AAEA or, as one expatriate commented, they could be used for "ruling red lines on Balance Sheets." Second, a common justification for the continuing exclusion of non-whites from the expatriate firms in Kenya was that such representatives of white firms would not be well received by clients. This resonates with the experiences of women in the British profession at the turn of the century [Lehman, 1992; Shackleton, 1999] and pioneering African-American CPAs [Hammond and Streeter, 1994]. Third, as in other cases to be found in the accounting literature, there is evidence indicating that non-whites who did find employment in the private sector tended to provide support for others [Hammond, 2002].[47] In Kenya, John Mwangi, the first African Kenyan CA, provided encouragement and mentoring for other Africans. Many pioneering Asian accountants established their own practices, initially providing accounting services mainly to Asian businesses.[48]

Although this study traces patterns of participation in the Kenyan profession, it does focus only on the membership of British accounting associations in Kenya. The records indicate that there were also Asian accountants in Kenya who had qualified with the ICAI whose directories show 14 members listed in East Africa in 1956. However, after this date, Indian overseas members are no longer listed. Thus, an obvious limitation of this study is the lack of data on members of the Indian Institute participating in the profession in Kenya. A further limitation of the data presented here may be that they focus only on professionally qualified accountants offering services in the colony. There is both archival and oral evidence that various others (partially qualified individuals, those qualified by experience, company secretaries, those with lower-level diplomas, and those belonging to associations not recognized by legislation) were also offering accountancy and bookkeeping services. It may further be speculated that some of these individuals may have been of Indian or (later) African extraction. Thus, non-whites may well have participated in the accountancy profession, albeit at lower echelons, much earlier than indicated by the data presented here.

Although the sociological perspective of race conceives of phenotypical differences, the literature suggests that issues of race and class may be conflated within colonial contexts such as this. As a British colony, class-based divisions in Kenya existed and were based upon those operating in British society at the

[47]In America, many of the pioneering African-American accountants were encouraged or mentored by J.Blayton, an accounting professor at Morehouse University, Atlanta. Those who were successful in qualifying often resorted to establishing their own practices, serving the needs of own-race clients [Hammond, 2002].

[48]Parallels can be drawn with the study conducted by McNicholas at al. [2004] which found that Maori accountants in New Zealand were often sent to Maori clients. Although no evidence has been presented here, one might speculate that this may well have been the case when the first African Kenyans eventually began to train in the profession.

time. Indeed, the social exclusion literature refers constantly to the plight of the "underclass." The position of indigenous Africans in colonial Kenya certainly identifies with the term. For instance, when Africans were eventually recruited to train as professional accountants prior to independence, it was initially those with "connections" who were sought by the expatriate firms; that is, those from the "higher" classes.

In Kenya, as in other racially diverse colonies, it was "race rather than some other principle of organisation that had been the operative agent in the social functioning of accountancy" [Annisette, 2003, p. 668]. Here, race-based, social exclusion was state-sanctioned via legislation and provided the context for a variety of discriminatory practices both in wider society and in the accountancy profession. Accountancy effectively remained the preserve of British expatriates until after independence when the participation rates of non-whites gradually increased as a result of government-induced social engineering.

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ACCOUNTANTS IN THE BRITISH CENSUS

Abstract: Published reports on censuses of population and the surviving enumeration books on which they were based are key sources for accounting historians. The increasing availability of electronic versions of census enumeration books (CEBs) for Canada, the U.K., and the U.S. offers opportunities for better understanding the history of occupations concerned with the performance of accounting functions. However, census reports and original census documents must be interpreted critically. The paper reports on a study of accountants appearing in the transcribed version of the British CEBs for 1881. It is shown how the published census underreported the number of accountants in Britain and suggests that there are potential inconsistencies in the manner in which accountants were counted. While accounting historians may rely on the high level of accuracy in transcribed versions of the CEBs, transcription errors have been discovered in relation to female accountants, those pursuing occupations spelt in ways closely resembling "accountant," and individuals possessing complex occupational titles. Caution in respect of entries relating to accountant clerks is also suggested.

INTRODUCTION

The documentary outputs which emerge from the processes attending official population counts are of increasing interest to accounting historians. For example, studies of accounting and indigenous peoples perceive census taking as a technique of "(ac)counting" which facilitates governance in colonial contexts [Neu, 1999]. The manner in which census authorities classify those performing accounting illuminates shifts in the state's per-

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ception of the occupation and the socio-economic locale of its practitioners [Kirkham and Loft, 1996]. Published reports of the census have been used to track the gendered nature of accounting professionalization [Kirkham and Loft, 1993]. While the published abstracts of the census permit macro and meso-level analyses of accountants and related occupations, the sources from which the published data were compiled, such as the census enumerators' books (CEBs), also permit studies of named individuals. Such sources have proved invaluable for conducting biographical and prosopographical studies of accountants, the investigation of social mobility in the profession, the masculinization and feminization of the accounting function, the location of accountants in contemporary social structures, and the spatial, demographic, and occupational profiling of the craft [Walker, 1988, 2002, 2003; Kedslie, 1990; Carnegie and Parker, 1996; Lee, 1996, 2002, 2006a, b; Carnegie et al., 2000; Parker, 2004; Edwards and Walker, 2007].

While census data can be used to explore numerous socio-demographic themes such as family structure and geographical mobility, it is the information provided about the occupations of individuals, communities, and nations that is especially enlightening. Indeed, information about occupation is "the most used in census analysis" and is also that which is of most interest to accounting historians [Mills and Schürer, 1996a, p. 8, 1996c]. The reason for this is not difficult to find: "The occupational information recorded in the nineteenth-century censuses is of fundamental importance for reconstructing Victorian society" [Higgs, 1996a, p. 94]. Given that occupation is "our best guide to social class," the data contained in the census provide opportunities for studies of contemporary social structures and relationships [Armstrong, 1972, p. 202; Banks, 1978; Mills and Mills, 1989; Mills and Schürer, 1996c]. Data about the occupations of the people may also be utilized to track the structure of the economy and the emergence (or demise) of particular occupational groups such as accountants.

It is not surprising therefore that the individual-level census was the foundation for numerous studies in demographic, economic, local, and social history from the 1960s [Armstrong, 1978; Mills and Schürer, 1996a]. The use of the census for historical investigation has been facilitated in recent years by its increasing accessibility as a primary source. Accessibility has been successively enhanced by the indexing of persons and places appearing in CEBs, the use of microfilm copies of the original documents, and the availability of searchable electronic versions of the individual-level census. The latter has transformed the scope for exploiting this major source. In particular, the digitized censuses of Canada and Great Britain in 1881 and the U.S. in 1880 are available on CD-Rom, and an increasing number of searchable censuses are available on-line at genealogical websites. Projects to extend the availability of census material through electronic media are advancing apace.[1]

Given the scale and significance of this source and its potential for accounting history research, the time appears ripe for a discussion of some of the methodological issues which emerge from its use. The current paper focuses on three themes emergent from a comprehensive investigation of the occupation of accountant using the transcribed version of the enumeration books relating to the British census of 1881. First, the paper describes how the source was generated and indicates the scope for error. While it is acknowledged that inaccuracies in the individual-level census can relate to reported name, address, age, marital status, birthplace, or other data categories, the emphasis here is on the key variable of occupation. Second, the paper discusses the issues surrounding the classification of the occupation of accountant by the British census authorities and explains why the number of accountants reported in the published census abstracts differs from the totals found in the CEBs. Third, it explores the accuracy of the transcribed version of the CEBs so far as researching accountants is concerned and alerts researchers to some of the problems encountered when using this vast and important source.

TAKING THE CENSUS

Decennial censuses began in Britain in 1801. Initially they were headcounts, but from 1841 and 1851 the census became a sophisticated enumeration of named individuals [Drake, 1972; Higgs, 1996a, pp. 7-11]. During the 19th century, the census represented the single most comprehensive attempt by the state to amass socio-economic information: "It was the most ambitious exercise of its type, covering every family in the land and requiring the co-operation of every household head" [Wrigley, 1972, p. 1]. The focus of the present contribution, the British census

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[1]The most important of these projects is the North Atlantic Population Project (NAPP). The NAPP is a major venture which utilizes the available digitized censuses of the late 19th century to create a harmonized database of almost 90 million individuals in Canada, Great Britain, Iceland, Norway, and the U.S. [see Roberts et al., 2003a].

of 1881, was perceived by contemporaries as one element in a greater statistical venture: "The success of the coming Census of the Motherland will be hailed with interest not only by her own people, but by the growing millions in her Colonies across the Atlantic, or in the Southern hemisphere where a like Census is taken to fill up the roll of the English race" [RG27/5, fol. 43].

For the purpose of taking the ninth census of England and Wales on April 4, 1881, the country was divided into 34,711 enumeration districts, and an enumerator appointed for each.[2] The size of the enumeration district was based on the estimated capacity of the enumerator to visit all the houses within its boundaries in a single day [RG27/5, fol. 27]. In towns, enumeration districts were determined on the assumption that an efficient enumerator could visit 200 houses; in rural districts, that he could travel 15 miles. Separate arrangements were made for the enumeration of residents of public institutions, hotels, and vessels. Those appointed as enumerators were expected to be aged 18 to 65 years, be "intelligent, trustworthy, and active; he must write well, and have some knowledge of arithmetic" and be "temperate, orderly, and respectable" [RG27/5, fol. 2]. Their stature was enhanced by the inclusion of clergy and other professional men among their number [RG27/5, fol. 43]. Despite these safeguards, there were inevitably variations in the enthusiasm and capabilities of those appointed as enumerators [Drake, 1972; Mills and Schürer, 1996b].

During the week commencing March 28, 1881 the enumerator delivered to each occupier a householder's schedule. Under the Census Act, 1880, the householder was obliged to complete the schedule on census (Sunday) night. Refusal or willing submission of false information could result in conviction and a penalty of £5. The reverse of the householder's schedule contained detailed instructions on the filling up of the column headed "Rank, Profession, or Occupation." This emphasized that individuals with more than one distinct occupation were to inscribe them in order of importance. Those engaged in commerce (the order to which accountants were assigned) were requested to state the branch of commerce or business in which they were engaged [RG27/5, fol. 5].[3] It should be noted

[2]The census for Scotland was conducted in a broadly similar way [Schürer and Woollard, 2002, p. 3].

[3]It is worth iterating at this point that the census is a snapshot; it concerns the occupation of the individual on census-day, not necessarily that pursued in the recent past.

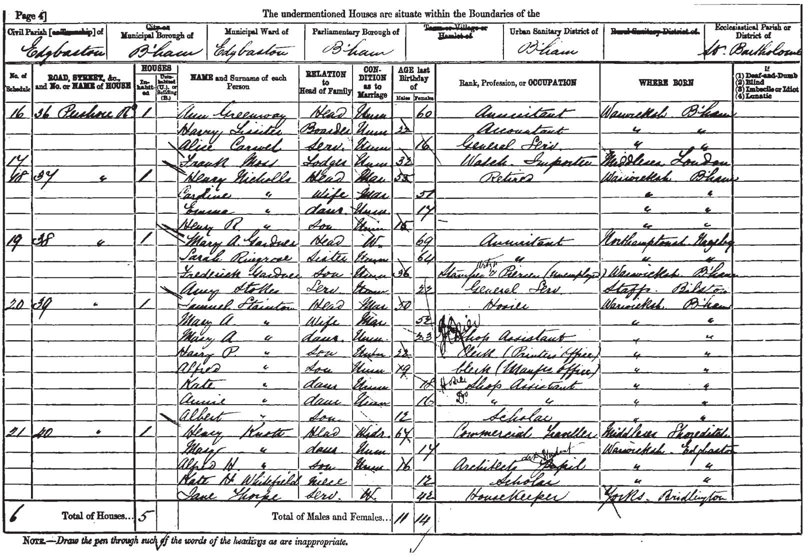
that the individual submitted information about occupation on the assumption that this was not for public disclosure, unlike that provided for a local or trade directory. This means that occupational descriptions may be less full in the census but, as the intention was not to attract business, also more reflective of internalized notions of occupational status.

The completed householders' schedules were to be collected on the 4th and no later than the 5th of April. When collecting the schedules, the enumerator was requested to see that the details had been correctly entered and ask any questions to help achieve that objective. He was obliged to "pay particular attention to the column headed '*Rank, Profession, or Occupation*,' taking care that what is inserted under that head is in conformity with the instructions" [RG27/5, fol. 2]. Indeed, on March 14, the Registrar General had specifically requested that enumerators be instructed on the need to provide accurate and full entries of (particularly industrial) occupations as, "It was found at the last Census that very great trouble and inaccuracy resulted from the indefinite terms that were frequently used in describing the Occupations of persons in the Schedules" [RG27/5, fol. 41]. In altering the schedules, the enumerator was asked not to make erasures but draw a line through incorrect entries.

Having collected the householders' schedules, the enumerator was required to copy their contents into an enumeration book, and to do so legibly and in strict accordance with instructions. An example from a completed page of an enumeration book is reproduced in Figure 1. This process resulted in the correction (and introduction) of minor errors, standardization of occupational terms, and additions by the enumerator on the basis of local knowledge [Schürer and Woollard, 2002, p. 4]. Between April 4 and 11, 1881, the enumerator submitted the householders' schedules and completed enumeration book to the local Registrar of Births and Deaths (of whom there were 2,176 in England and Wales, each heading a sub-district). The Registrars examined and revised the enumeration books and compared the householders' schedules with the CEBs to ensure completeness, accuracy, and compliance with instructions. The Registrar was also remitted "To see that the column headed 'Rank, Profession, or Occupation,' is filled up in conformity with the Instructions" [RG27/5, fol. 2]. In practice, however, Registrars do not appear to have introduced large-scale amendments [Schürer and Woollard, 2002, p. 5]. Once the enumeration books were examined and corrected as necessary, the Registrar signed a certificate, and by April 25 sent the enumeration books for his sub-district (and other documents) to a Superintendent Registrar. The Registrar sent the householders' schedules to the Census Office in London. The schedules were later destroyed.

FIGURE 1

Example of a Page from a Census Enumeration Book (Illustrating the Similar Appearance of "Accountant," "Annuitant," and "Assistant," Marks and Annotations)



Page 4]

The undermentioned Houses are situate within the Boundaries of the

Civil Parish [~~or Township~~] of	~~City or~~ Municipal Borough of	Municipal Ward of	Parliamentary Borough of	~~Town or Village or Hamlet of~~	Urban Sanitary District of	~~Rural Sanitary District of~~	Ecclesiastical Parish or District of
Edgbaston	B'ham	Edgbaston	B'ham		B'ham		St. Bartholome[w]

No. of Schedule	ROAD, STREET, &c., and No. or NAME of HOUSE	HOUSES In-habited	HOUSES Uninhabited (U.), or Building (B.)	NAME and Surname of each Person	RELATION to Head of Family	CONDITION as to Marriage	AGE last Birthday of Males	AGE last Birthday of Females	Rank, Profession, or OCCUPATION	WHERE BORN	If (1) Deaf-and-Dumb (2) Blind (3) Imbecile or Idiot (4) Lunatic
16	36 Pershore Rd	1		Ann Greenway	Head	Unm		60	Annuitant	Warwicksh. B'ham	
				Harry Lissiter	Boarder	Unm	22		Accountant	" "	
				Alice Carwel	Serv.	Unm		16	General Serv.	" "	
17				Frank Moss	Lodger	Unm	32		Watch Importer	Middlesex London	
18	37 "	1		Henry Nicholls	Head	Mar	53		Retired	Warwicksh. B'ham	
				Caroline "	Wife	Mar		51		" "	
				Emma "	daur.	Unm		17		" "	
				Henry R "	Son	Unm	15			" "	
19	38 "	1		Mary A. Gardner	Head	W.		69	Annuitant	Northamptonsh. Naseby	
				Sarah Ringrose	Sister	Unm		64	"	" "	
				Frederick Gardner	Son	Unm	36		Stamper & Piercer (unemployed)	Warwicksh. B'ham	
				Amy Stokes	Serv.	Unm		22	General Serv.	Staffs. Bilston	
20	39 "	1		Samuel Stainton	Head	Mar	50		Hosier	Warwicksh. B'ham	
				Mary A "	Wife	Mar		52		" "	
				Mary A "	daur.	Unm		23	Shop Assistant	" "	
				Harry P. "	Son	Unm	22		Clerk (Printer's Office)	" "	
				Alfred "	Son	Unm	19		Clerk (Manufrs Office)	" "	
				Kate "	daur	Unm		18	Shop Assistant	" "	
				Annie "	daur	Unm		16	Do " "	" "	
				Albert "	Son		12		Scholar	" "	
21	40 "	1		Henry Knott	Head	Widr.	67		Commercial Traveller	Middlesex Shoreditch	
				Mary "	daur.	Unm		17		Warwicksh. Edgbaston	
				Alfred H. "	Son	Unm	16		Architect's Pupil	" "	
				Kate H. Whitfield	Niece			12	Scholar	" "	
				Jane Thorpe	Serv.	W.		42	Housekeeper	Yorks. Bridlington	
6	Total of Houses...	5			Total of Males and Females...		11	14			

NOTE.—*Draw the pen through such of the words of the headings as are inappropriate.*

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Transcribed Version of the Above Page by the Genealogical Society of Utah of the Church of Jesus Christ of Latter-Day Saints

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Dwelling: 36 Pershore Rd
Census Place: Edgbaston, Warwick, England
Source: FHL Film 1341707 PRO Ref RG11 Piece 2954 Folio 5 Page 4

	Marr	Age	Sex	Birthplace
Ann GREENWAY	**U**	**60**	**F**	**B'ham, Warwick, England**
Rel: Head				
Occ: Annuitant				
Harry LISSITER	U	22	M	B'ham, Warwick, England
Rel: Boarder				
Occ: Accountant				
Alice CARWEL	U	16	F	B'ham, Warwick, England
Rel: Serv				
Occ: General Serv				
Frank MOSS	U	32	M	London, Middlesex, England
Rel: Lodger				
Occ: Watch Importer				

Dwelling: 37 Pershore Rd
Census Place: Edgbaston, Warwick, England
Source: FHL Film 1341707 PRO Ref RG11 Piece 2954 Folio 5 Page 4

	Marr	Age	Sex	Birthplace
Henry NICHOLLS	**M**	**55**	**M**	**B'ham, Warwick, England**
Rel: Head				
Occ: Retired				
Caroline NICHOLLS	M	51	F	B'ham, Warwick, England
Rel: Wife				
Emma NICHOLLS	U	17	F	B'ham, Warwick, England
Rel: Daur				
Henry R. NICHOLLS	U	15	M	B'ham, Warwick, England
Rel: Son				

Dwelling: 38 Pershore Rd
Census Place: Edgbaston, Warwick, England
Source: FHL Film 1341707 PRO Ref RG11 Piece 2954 Folio 5 Page 4

	Marr	Age	Sex	Birthplace
Mary A. GARDNER	**W**	**69**	**F**	**Nazeby, Northampton,** England
Rel: Head				
Occ: Annuitant				
Sarah RINGROSE	U	64	F	Nazeby, Northampton, England
Rel: Sister				
Occ: Annuitant				
Frederick GARDNER	U	36	M	B'ham, Warwick, England
Rel: Son				
Occ: Stamper & Piercer (Unemployed) (Artzn))				
Amy STOKES	U	22	F	Bilston, Stafford, England
Rel: Serv				
Occ: General Serv				

Dwelling: 39 Pershore Rd
Census Place: Edgbaston, Warwick, England
Source: FHL Film 1341707 PRO Ref RG11 Piece 2954 Folio 5 Page 4

	Marr	Age	Sex	Birthplace
Samuel STAINTON	**M**	**50**	**M**	**B'ham, Warwick, Eng**land
Rel: Head				
Occ: Hosier				
Mary A. STAINTON	M	52	F	B'ham, Warwick, England
Rel: Wife				
Mary A. STAINTON	U	23	F	B'ham, Warwick, England
Rel: Daur				
Occ: Shop Assistant (Hosier)				
Harry P. STAINTON	U	22	M	B'ham, Warwick, England
Rel: Son				
Occ: Clerk (Printers Office)				
Alfred STAINTON	U	19	M	B'ham, Warwick, England
Rel: Son				
Occ: Clerk (Manfrs Office)				
Kate STAINTON	U	18	F	B'ham, Warwick, England
Rel: Daur				
Occ: Shop Assistant (Hosier)				

Annie STAINTON	U	16	F	B'ham, Warwick, England
Rel: Daur				
Occ: Shop Assistant				
Albert STAINTON		12	M	B'ham, Warwick, England
Rel: Son				
Occ: Scholar				

Dwelling: 40 Pershore Rd
Census Place: Edgbaston, Warwick, England
Source: FHL Film 1341707 PRO Ref RG11 Piece 2954 Folio 5 Page 4

	Marr	Age	Sex	Birthplace
Henry KNOTT	**W**	**67**	**M**	**Shoreditch, Middlesex, England**
Rel: Head				
Occ: Commercial Traveller				
Mary KNOTT	U	17	F	Edgbaston, Warwick, England
Rel: Daur				
Alfred H. KNOTT	U	16	M	Edgbaston, Warwick, England
Rel: Son				
Occ: Architects Pupil (Art Student)				
Kate H. WHITEFIELD		12	F	Edgbaston, Warwick, England
Rel: Niece				
Occ: Scholar				
Jane THORPE	W	42	F	Bridlington, York, England
Rel: Serv				
Occ: Housekeeper				

Source: Midland East Region, *1881 British Census and National Index* [1999].

The 630 Superintendent Registrars, each of whom headed a registration district, were remitted by the Registrar General to ensure that census returns "shall be both accurate and complete as to reflect credit upon yourself and all concerned" [RG27/5, fol. 27]. However, the Superintendent Registrar was not required to make a minute examination of the kind expected of Registrars. Rather, the "inspection should be sufficiently complete to satisfy yourself that the Registrar has in every case duly performed the duties required of him, and that all inaccuracies have been corrected as far as possible, so you may be enabled to sign the Certificate to that effect in each Enumeration Book" [RG27/5, fol. 27]. The enumeration books were to arrive at the Census Office, London, "in rapid succession" from the end of April.

At the Census Office, the enumeration books were reviewed again by clerks. They were then used to compile abstracts of data for publication [Higgs, 1996a, p. 15]. Conscious that undetected errors would cause inconvenience during subsequent stages of abstraction, the Registrar General issued specific instructions to clerks on revising the enumeration books [RG27/5, fol. 52]. Abstracting clerks were engaged to classify the occupations and ages of the population. Aided by an alphabetical and classified listing of occupations,[4] the work of abstraction involved assigning the occupation entered in the enumeration book to one of 399 occupational headings. Ticks were entered on abstract sheets for males and females under each occupational heading falling in various age groups. It was at this stage that most of the annotations which appear in the surviving enumeration books were made. As discussed below, these annotations often assist the researcher but can also cause confusion [Tillott, 1972].

Traces of abstractor's work include ticks, corrections to occupational entries, and the insertion of abbreviations of occupational titles and codes. Occupations in the enumeration books which did not appear in the alphabetical list or which could not be assigned on the basis of common sense were entered at the bottom of the abstract sheet to be "dealt with by a special person" [RG27/5, fol. 69]. Specific instructions were given for ticking various "special cases." Although accountants were not identified as special cases, the instructions did cover allied occupations such as agents, auctioneers, bookkeepers, cashiers, and clerks. The instructions are also important to the treatment of accountants with multiple occupations, those out of employment, and dealing with missing occupational information in a district with a dominant industry [RG27/5, fol. 69].

Despite the existence of the alphabetical lists, it is not clear that occupational information was always treated consistently by different abstracting clerks [Schürer and Woollard, 2002, p. 7]. Abstractors were remunerated according to the amount and accuracy of the work performed. It was recommended that they initially work slowly to become acquainted with the occupational headings and the classification of orders and sub-orders. Knowledge is sparse about the effectiveness of the limited checks performed on the accuracy of abstractors, some of whom were temporary employees prone to errors and the misclassification of occupations [Schürer and Woollard, 2002, pp. 7-8].

The abstracts were the basis for the preparation of statistical tables in the published reports of the census. It is important to recognize that the classification and structure of the occupational data reflected contemporary socio-cultural circumstances and the specific objectives of the Registrar General [Higgs, 1990,

[4]The list of 1881 replaced the 'dictionary' used at previous censuses. The dictionary had contained 7,000 occupational names, many of which were found to be no longer in use [*General Report*, 1883, p. 26].

1996a, pp. 154-159]. Users of the published data should be alert to comments made in the *General Report* of the census which appeared in 1883. This referred to the difficulties associated with the tabulation of occupational data. It was conceded that, "The most laborious, the most costly, and, after all, the least satisfactory part of the Census, is that which is concerned with the occupations of the people" [*General Report*, 1883, p. 25]. The report referred to the vast array of, often obscure, occupational designations; single occupations which were known by different names; how the same name was used for totally different occupations; how careless enumerators failed to record occupations with the necessary precision; the impossibility of embracing all those working in an occupation within a single heading, necessitating the making of "arbitrary rules"; the problem of classifying individuals pursuing more than one occupation; and, whether apprentices, assistants, the unemployed, and the retired should be allocated to the occupation concerned. The report concluded that abstracting the occupations of millions of individuals on the basis of enumeration books of varying quality was a task of "gigantic dimensions…in which strict and unfailing accuracy is practically unattainable. We made every effort to secure as great accuracy as was possible under the circumstances, but we are bound to state that the margin that must be allowed for error is very considerable" [*General Report*, 1883, p. 28], particularly where the occupation concerned was ill-defined.[5]

The foregoing illustrates that there was scope for error and alteration in the original source from which modern transcriptions of the CEBs are drawn, particularly in relation to occupation. Householders' schedules may have contained inaccurate or false information [Higgs, 1996a, p. 16]. There were inevitably some transmission errors from householder's schedule to enumeration book. Enumerators, Registrars, and Census Office clerks may have amended the record to enhance the accuracy of information but they also introduced errors [see, for example, Mills and Schürer, 1996c; Woollard, 1997]. Corrections and oth-

[5]The *Report* of the Census of Scotland, 1871, was even more candid on this point. While confidence was expressed in the totals reported as occupied in orders and sub-orders, the numbers assigned to individual occupations were "somewhat indefinite" [*General Report*, 1883, p. xxxvi]. It was explained that "the classification adopted is so prolix and minute, embracing nearly seven hundred specific Occupations, that, train as we would, not one-half of the clerks who were employed in making the Abstracts could be got to master the exact positions of these seven hundred Occupations in the forms of Table which we used, so that no great confidence can be placed in the particular numbers assigned to each Occupation."

er changes reflect the practices of the numerous enumerators, registrars, and clerks across the country. Higgs [1996a, p. 16] comments: "In general the work appears to have been done conscientiously but users must be aware of the failings of particular enumerators, local peculiarities and the problems associated with the interpretation of certain types of information."

CLASSIFICATION ISSUES

Scholars are advised to assume a critical stance when using the published occupational tables in census reports, particularly given the scope for errors arising between the completion of the original householders' schedules, the compilation of abstract statistics, and the scope for those involved in the enumeration process to interpret and amend occupational information in accord with contemporary ideals [Higgs, 1996b]. The availability of the CEBs, in tandem with the published reports of the census and documents relating to the procedures to be followed by those engaged in the census, permit an evaluation of the ways in which the reported numbers in particular occupations such as accountancy were arrived at by census authorities, and also to assess their consistency and accuracy.[6]

In contrast to the census of 1871, in 1881 the occupational classification devised for England and Wales was also applied to Scotland [*General Report*, 1883, p. xxv]. At the end of the enumeration and abstracting process, 11,606 individuals in England and Wales were counted under the heading "Accountant." This figure represented a 20% increase on the corrected total reported for 1871 [*General Report*, 1883, p. 34]. In Scotland 1,136 accountants were counted as were 50 in the Islands.[7] The number of commercial clerks in England and Wales (which included bookkeepers and cashiers) was double that of a decade previously though changes to the manner in which clerks were classified rendered the data "not comparable." The number of individuals identified as accountants from the transcribed enumeration

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[6]For a history of the published occupational statistics during the 19th century, see Bellamy [1978] and Higgs [1996a, pp. 154-168].

[7]The NAPP database relating to the British Census, 1881, counts 13,107 accountants (11,891 in England and Wales, 1,161 in Scotland, and 55 in the Islands). This total is reasonably close to that reported in the published census reports due to the NAPP adoption of conventions on the counting of occupations which closely approximate those found in the instructions issued for taking the census in 1881. The NAPP applies a standard definition of accountant which accommodates cultural variation among the countries covered by the project [Roberts et al., 2003b].

books for the current study was 16,180 (14,280 in England and Wales, 1,833 in Scotland, and 67 in the Islands). It is therefore appropriate to suggest that in its treatment of accountants, the classification regime employed by the Census Office "may have distorted the occupational landscape" [Woollard, 2004, p. 39].

The 1881 census identified accountants as an occupation in Class III, the Commercial Class, Order 5 "Persons Engaged in Commercial Occupations," Sub-order 1 "Merchants and Agents." The classified section of the *Instructions to the Clerks Employed in Classifying the Occupations and Ages of the People* identified four occupational titles which fell under the heading "accountant" – accountants, actuaries, auditors, and chartered accountants.[8] Table 1 reveals that further relevant detail was provided in the alphabetical section of the *Instructions* for classifying accountants. The fact that the alphabetical section of the *Instructions* specifically allocated certain accountants, actuaries, and auditors to other occupational categories indicated that those working in particular sectors should be counted in that sector if an appropriate occupational heading was included in the classification. Hence, dock accountants were to be included in "Harbour, Dock Service" as opposed to "accountants"; actuaries in insurance companies were counted in "Insurance Service" and traveling auditors were classified as "Other Railway Officials." Further, those occupied in the finance function of local authorities were to be classified not as "accountants" but as municipal officers in the Professional Class. All bookkeepers, cashiers, and clerks who were not specifically classified elsewhere, were to be counted as "Commercial Clerks."

[8]The Instructions to Clerks produced for the 1871 Census of England and Wales included only accountants and auditors under the heading "Accountant." It was also noted that "Accountant in Corn Trade" would be classified as "Corn Merchant." All actuaries except those in government service were to be counted as "Insurance Service" rather than "Accountant." Note also that "Accountant" was defined as an "(M)" occupation, meaning that only males were allocated to it. The description "Book-keeper" was classified as either "Commercial Clerk" or "Woollen Cloth Manufacture." Bank and colliery cashiers were treated as "Bank Service" and "Coal Mine Service" respectively and numerous categories of clerks and secretaries were allocated to the relevant sector in which they were employed as opposed to the catch-all category of "Commercial Clerk" [RG27/4 Part B, fol. 85; Bellamy, 1978; Higgs, 1996a, pp. 161-162]. It should also be noted that a different Classification of Occupations was adopted in Scotland for the 1871 census. Of particular interest was the classification of accountants in two sub-orders – "Lawyers" (where 421 accountants were counted) and "Mercantile Pursuits" (where 686 were counted). For the background to this, see Walker [1988, pp. 16-17].

TABLE 1

Official Classification of Occupations Relating to the Accounting Function, 1881 Census

Occupational Description	Class	Order	Sub-Order	Assigned Occupational Heading
Account Book Maker	V	Vegetable Substances	Paper	Stationer
Account Book Ruler	V	Books, Prints and Maps	Books	Printer
Account Collector	III	Commercial	Merchants and Agents	Commercial Clerk
Accountant	III	Commercial	Merchants and Agents	Accountant
Accountant (Dock)	III	Conveyance	Canals, Rivers and Seas	Harbour, Dock Service
Actuary (not Insurance)	III	Commercial	Merchants and Agents	Accountant
Actuary (Insurance Company)	III	Commercial	Insurance	Insurance Service
Apprentices and Assistants	Assigned to occupation in which apprenticed or assisted			
Auditor	III	Commercial	Merchants and Agents	Accountant
Booker	III	Commercial	Merchants and Agents	Commercial Clerk
Bookkeeper (in all trades)	III	Commercial	Merchants and Agents	Commercial Clerk
Borough Chamberlain	I	General and Local Government	Local Government	Municipal Officer
Cashier (in all trades)	III	Commercial	Merchants and Agents	Commercial Clerk
Chamberlain	II	Domestic Offices or Services	Other Services	Office Keeper
Chartered Accountant	III	Commercial	Merchants and Agents	Accountant
City Treasurer	I	General or Local Government	Local Government	Municipal Officer

TABLE 1
Official Classification of Occupations Relating to the Accounting Function, 1881 Census
(Continued)

Occupational Description	Class	Order	Sub-Order	Assigned Occupational Heading
Clerk (in all trades, *unless specified below*)	III	Commercial	Merchants and Agents	Commercial Clerk
Clerk, Army	I	Defence	Army	Army Officer
Clerk, Bank	III	Commercial	Dealers in Money	Bank Service
Clerk, Book Stall	V	Books, Prints and Maps	Books	Bookseller
Clerk, Civil Service	I	General or Local Government	National Government	Civil Service Officer
Clerk, Insurance Offices	III	Commercial	Insurance	Insurance Service
Clerk, Law	I	Professional	Legal	Law Clerk
Clerk, Navy	I	Defence	Navy	Navy Officer
Clerk, Railway	III	Conveyance	Railways	Railway Officials
Clerk, Shorthand	I	Professional	Literary and Scientific	Reporter
Clerk of Works	V	Houses, Furniture and Decorations	Houses	Builder
Collector (Dock)	III	Conveyance	Canals, Rivers and Seas	Harbour, Dock Service
Collector of Accounts, Debts or Rents	III	Commercial	Merchants and Agents	Commercial Clerk
Collector of Monthly Accounts (Railway)	III	Conveyance	Railways	Other Railway Officials

TABLE 1

Official Classification of Occupations Relating to the Accounting Function, 1881 Census (Continued)

Occupational Description	Class	Order	Sub-Order	Assigned Occupational Heading
Collector (undefined)	III	Commercial	Merchants and Agents	Commercial Clerk
Commercial Clerk	III	Commercial	Merchants and Agents	Commercial Clerk
Debt Collector	III	Commercial	Merchants and Agents	Commercial Clerk
Examiner of Accounts (Dock)	III	Conveyance	Canals, Rivers and Seas	Harbour, Dock Service
Housekeeper (Female)	II	Domestic Offices or Service	Domestic Service	Domestic Indoor Servant
Manager/Managing Director (if nature of business is stated, assign to business, otherwise)	V	General or Unspecified Commodities	Makers and Dealers	Manufacturer, Manager, Superintendent
Mill Steward	V	Textile Fabrics	Silk	Silk Manufacture
Mine, Mineral Steward	V	Mineral Substances	Miners	Mine Service
Mining Records Keeper	I	General or Local Government	National Government	Civil Service Officer
Owners Account Man	V	Mineral Substances	Miners	Copper Miner
Purser (Tin Mine)	V	Mineral Substances	Miners	Tin Miner
Purser (Lead Mine)	V	Mineral Substances	Miners	Lead Miner
Savings Bank Actuary	III	Commercial	Dealers in Money	Bank Service
Scrivener	I	Professional	Legal	Law Clerk

TABLE 1

Official Classification of Occupations Relating to the Accounting Function, 1881 Census (Continued)

Occupational Description	Class	Order	Sub-Order	Assigned Occupational Heading
Secretary (not private, in any trade, *unless specified below*)	III	Commercial	Merchants and Agents	Commercial Clerk
Secretary (Cemetery)	I	Professional	Clerical	Church Officer
Secretary (Club)	II	Domestic Offices and services	Domestic Service	College, Club Service
Secretary (Private)	I	Professional	Literary and Scientific	Literary Service
Spinning Mill Steward	V	Textile Fabrics	Silk	Silk Manufacture
Steward (if nature of business is stated, assign to business, otherwise)	V	General or Unspecified Commodities	Makers and Dealers	Manufacturer, Manager, Superintendent
Tax Assessor, Collector	I	General or Local Government	Local Government	Municipal Officer
Timekeeper, Time Clerk (if nature of business is stated, assign to business, otherwise)	V	General or Unspecified Commodities	Makers and Dealers	Manufacturer, Manager, Superintendent
Trade Protection Society's Service	III	Commercial	Merchants and agents	Officer of Commercial Company
Traveling Auditor	III	Conveyance	Railways	Other Railway Officials
Treasurer (Theatre and Opera)	I	Professional	Artists	Art, Music Service

Source: Compiled from RG27/5, fol. 69.

Other census instructions are relevant to the classification of accountants. First, with the exception of army and navy officers, paupers, and prisoners, those described as retired or formerly employed in a specified occupation were to be counted as "Persons without Specified Occupations" in the Unoccupied Class (VI). Second, individuals who followed more than one occupation were to be allocated to that which appeared to be "the main or more important one. If there be none such, *the first in the entry* is to be selected" [*emphasis in original*, Instructions to Clerks, p. 2; also *General Report*, 1883, p. 28]. Hence, in the absence of other information a "stockbroker and accountant" would be counted as a stockbroker. Third, there was an exception to the above rule in the case of auctioneers, an occupation with which accountant was sometimes combined. If a multiple occupational title included "auctioneer," the individual was allocated to that category. Hence, an "accountant, estate agent and auctioneer" would be counted as an auctioneer even though accountant is the first stated occupation [*General Report*, 1883, p. 2]. A similar rule may also have been applied to the small number of accountants who farmed land. The instructions suggested that these be counted as farmers irrespective of whether this was their main or a secondary occupation [Woollard, 2004].

Although researchers cannot be sure that they always indicate the basis for the final count reported in the census, annotations in the original CEBs, most of which were entered by clerks in the Census Office, provide insights to issues arising in the classification of accountants and related occupations. These annotations potentially indicate departures from the strict application of the classification prescribed in the instructions issued to clerks. It is quite likely that some of the occupational descriptions relating to accountants were not easily resolved by reference to the limited entries in the alphabetical listing, in which case, as noted above, the clerk was requested to apply common sense or seek the opinion of "a special person." A summary of the classification of accountants suggested by annotations in the enumeration books is provided in Table 2.

Despite the fact that the *Instructions* to census clerks indicate that accountants were to be counted under the heading "Accountant," a significant number of entries in the enumeration books are annotated with "clerk," the proportion being higher among those identified as female accountants (as discussed below), teenage accountants, and those resident in certain districts. Some apprenticed accountants are also marked as clerks. It is possible that abstractors and other reviewers of the CEBs

TABLE 2

Occupational Classification Suggested by Annotations in Census Enumeration Books, 1881

Occupational Description	**Classification Suggested by Annotation of Certain Cases**
Accountant	*Commercial Clerk* (disproportionately applied to female accountants, teenage accountants and in certain localities)
Accountant (Apprentice, Articled, Assistant)	*Commercial Clerk*
Accountant Clerk	*Commercial Clerk*
Actuary	*Accountant*
Actuary in Bank	*Bank Service*
Agent's Accountant	*Commercial Clerk*
Auditor (including audit: assistant, clerk, officer and cash auditor)	*Accountant*
Auditor (District)	Some *Accountant* but (most appropriately also) as *Municipal, Parish, Union, District Officer,* and *Civil Service (Officers and Clerks)*.
Auditor (District) of Railways	*Other Railway Officials and Servant*s
Bank Accountant	*Bank Service*
Brewery Accountant	*Commercial Clerk*
Broker's Accountant	*Commercial Clerk*
Builder's Accountant	*Commercial Clerk*
Chartered Accountant	*Accountant* but in one case *Commercial Clerk*
Colliery Accountant	*Commercial Clerk*
Commercial Accountant	*Commercial Clerk*
Docks Accountant	*Commercial Clerk* unless naval *Civil Service (Officers and Clerks)*
Draper's Accountant	*Commercial Clerk*
Engineer's Accountant	*Commercial Clerk*
Factory, Foundry, Mill or Works Accountant (In metals, utilities and various textiles)	*Commercial Clerk*
Farm Accountant	*Farm Bailiff*
Grocer's Accountant (and various other retailers)	*Commercial Clerk*
Insurance Accountant	*Life, House, Ship, &c., Insurance Service*
Local Government Accountants (accountants to corporations, boroughs, school boards, boards of guardians, parishes)	*Municipal, Parish, Union, District Officer*
Merchant's Accountant (various)	*Commercial Clerk*

TABLE 2

Occupational Classification Suggested by Annotations in Census Enumeration Books, 1881 (continued)

Occupational Description	**Classification Suggested by Annotation of Certain Cases**
Mine/Quarry Accountant	*Commercial Clerk*
Money Scrivener	*Accountant*
National Government Accountants (accountants to various government departments, the military and various commissions and national boards)	*Civil Service (Officers and Clerks)*
Public Company Accountant	*Commercial Clerk*
Publisher's Accountant	*Commercial Clerk*
Railway Accountant	*Other Railway Officials and Servants*
Solicitors/Law Accountant	*Law Clerk and others connected with Law*
Warehouse Accountant (various)	*Commercial Clerk*

made alterations to the occupation of individuals in accord with the demographic and socio-economic circumstances indicated by the information contained in the enumeration book (indeed, they were asked to do this). Similarly, whereas the instructions indicate that dock accountants should be classified as "Harbour, Dock Service," the most common annotation for those so returned in the CEBs is "clerk."

Other annotations indicate a predilection by census officials to classify individuals as clerks rather than accountants. In a number of instances where the first named occupation is accountant but is also attended by cashier, bookkeeper, or collector, "clerk" (rather than accountant) is annotated. As suggested above, it appears that some census clerks used contextual evidence to form a judgment about an individual's main occupation [Tillott, 1972]. A review of a sample of those appearing in the CEBs as "clerk (accountant)" suggests that these were assumed to be commercial clerks. In one case "clerk" was even added to the occupational description of a chartered accountant – a title which was specifically identified in the instructions to abstracting clerks as included within "accountant." Conversely, there are a small number of instances where an unlikely occupation was annotated as "accountant" in the CEBs. These include a money scrivener and a notary public in practice.

Initial searches of the transcribed enumeration books for 1881 revealed 288 cases where the sex of the accountant was identified as female. However, the published census reports enumerated only 89 female accountants (all in England and Wales). The manner in which the occupations of female accountants were treated appears to have been conditioned by contemporary social mores and assumptions of gender roles. It has been rightly argued that "both the census authorities in their instructions, and enumerators in carrying them out, exhibited a male prejudice" [Mills and Mills, 1989, p. 69]. The census instructions stipulated that wives and other women with no specified occupation were to be allocated to Class VI "Unoccupied" [see Jordan, 1988; Higgs, 1987]. It was recognized, however, that while most such women were engaged in domestic duties many assisted in the businesses of male relatives [*General Report*, 1883, Vol. 4, p. 49]. The classification of these economically active women as "unoccupied" may help explain the difference between the small number of female accountants counted in the published census reports and the higher number appearing in the enumeration books. In some instances of females listed as accountants, "accountant" was horizontally struck out in the CEB, perhaps indicating that the woman was considered to have had no occupation. Other annotations in the enumeration books suggest that many female accountants were assumed to be clerks. "Clerk" or a variant thereof was added to the occupational description for 18% of the 190 female accountants identified in the current study. In other instances the occupation of a female baker's accountant was annotated with "assistant" and an accountant in a hotel was identified as an "inn servant."

The annotations contained in the enumeration books also suggest some inconsistencies in the treatment of accountants. While a large number of accountants and "accountant clerks" were annotated as clerks, audit assistants and clerks were sometimes annotated as "accountants." The annotations relating to district auditors indicate uncertainty as to whether the occupation should be classified as accountant, local government service, or national government service. Similarly, while annotations suggest that accountants to banks, insurance companies, local and national government, railways, and solicitors were assumed to be occupied in those sectors, tick marks indicate that many were likely to have been counted as accountants. In Cambridgeshire, for example, three solicitor's accountants were enumerated. The marks suggest that one was counted as a clerk, one as a solicitor's clerk, and one as an accountant. Where the official occupational classification contained no obvious category for placing bureaucratic functionaries operating in a particular sector, annotations suggest that many accountants were assumed to be commercial clerks, particularly if stated as accountant "at," "in," or "to." But there could also be exceptions. It is not clear why the annotation "clerk" is added to a number of colliery accountants as opposed to the available category "Mine Service."

THE CREATION OF THE TRANSCRIBED CEBS

The CEBs for 1881 were made available on CD-Rom in 1999 as the *1881 British Census and National Index*. This followed "11 years and more than two-and-a-half million hours of volunteer labor" [*1881 British Census*, 1999]. The transcription of 1.2 million pages of the original enumeration books and the compilation of a national index of the 30 million individuals therein was performed for the Genealogical Society of Utah of the Church of Jesus Christ of Latter-Day Saints under a license from Her Majesty's Stationery Office. Various genealogical and archival organizations were involved in transcribing. The transcription was performed according to codified procedures, including controls to secure accuracy and completeness [Genealogical Society of Utah, 1993]. In particular, each batch of records was transcribed twice and data input was evaluated and verified. The enormous project was to be completed "as quickly and as cheaply as possible without consequent debasement of quality" [Woollard, 1996, p. 98].

The object of the transcription was to reproduce the original data as closely as possible, retaining obvious errors. Occupational titles were to be transcribed as they appeared in the census, including misspellings and abbreviations. However, some marks in the CEBs were not transcribed. For example, underlining introduced by census officials (to indicate the most significant occupation in a multiple-occupation situation, as in "solicitor, <u>accountant</u>, and estate agent") was not reproduced. While various marks entered in the enumeration books were not transcribed and punctuation is limited, symbols were used in the transcription to indicate annotations in the original, such as crossed out entries and changes of handwriting. In this context one important ambiguity relates to the use of round brackets, as in "(clerk)." In the transcribed version of the census, this indicates that information was contained in round brackets in the enumeration book, but also refers to an entry in handwriting which differs to that of the enumerator or where the information was added or changed when preparing the index to the transcribed census. Hence, without reference to the original document, it is not clear whether an entry such as "Accountant (clerk)" is an accountant who practices as a clerk or is an accountant classified by the abstractors as a clerk. It is usually the latter. Double brackets around a term, as in "((accountant))," indicates crossing out in the original census. An example of a transcribed version of a page from an enumeration book is provided in Figure 1.

THE ACCURACY OF TRANSCRIBED ENUMERATION BOOKS IN RELATION TO ACCOUNTANTS

The transcription of the vast contents of the enumeration books introduced scope for errors of transmission, commission, and data input. Schürer and Woollard [2002, pp. 9, 13] remind us that the database was originally intended for use by genealogists rather than historians. However, they also contend that internal verification procedures were sound and ensured that "the overall accuracy and integrity of the data is equal to, or indeed surpasses, that of similar exercises." It is estimated that the transcription achieved a level of accuracy in excess of 95% [Woollard, 1996]. This optimism was not always shared by micro-level researchers such as genealogists who reported glaring transcription errors in certain individual entries. One notable instance was the recording of Karl Marx as "Karl Wass."

More systematic evaluations of the accuracy of the census transcription suggest greater levels of assurance [Goose, 2001]. A sample study of the transcription for the county of Hertfordshire revealed that only 1.6% of transcribed entries for all variables contained errors sufficiently "serious" to produce incorrect historical data. A further 6.4% of transcribed data contained "minor" errors, but these were of marginal or no interest to historians. In relation to the transcription of occupational data, only 0.3% of entries contained serious errors, and 3.0% contained minor errors. Although the study concluded that the transcription was performed to "an extremely high standard" and may be utilized "with considerable confidence" by historians, it did, nevertheless, alert researchers to the fact that serious errors could occur, particularly where the transcription was based on faint photocopies and heavily annotated returns [Goose, 2001]. Further, the study revealed marginal variations in error rates between individual transcribers.

The recent availability online of the manuscript pages of the enumeration books (at Ancestry.co.uk for England and Wales;

for Scotland, only transcribed versions of the 1881 census are currently available online) permits comparisons between the transcribed version and the original record to assess the accuracy of the former so far as accountants are concerned. Suspicions that there may be transcription errors in the electronic version of the census were aroused when the current researchers focused attention on female accountants appearing in the transcribed census for 1881. An earlier study of accountants in the transcribed CEBs for three counties of England in 1851 also offered a cautionary note on the subject of female accountants [Walker, 2002]:

> It is possible that a number of these instances of female accountants represent transcription errors in *The Resource File* or reflect recording conventions in the census. For example, aged widows entered as 'accountants' may actually be 'annuitants'. In another case 'Acct' may be a corruption of 'Asst' (assistant).

A search of the transcribed version of the British census of 1881 identified 288 cases of female accountant. These were checked to the manuscript version of the enumeration books (except for cases in Scotland, see above). The results of this procedure are summarized in Table 3.

TABLE 3

Female Accountants in the Transcribed British Census, 1881[9]

Female accountants in transcribed census	**288**
Males recorded as females	(8)
Incorrectly transcribed as accountant, occupation in manuscript CEB:	
Annuitant	(59)
Assistant	(4)
Accoutrement maker	(1)
Certified accountreress (a certified accoucheur)	(1)
Agent	(1)
Servant	(1)
Transcribed as accountant clerk, but accountant's clerk in original	(2)
Wives transcribed as having same occupation as accountant husbands but are "wives of"	(12)
Other errors of transmission/in original census	(9)
Adjusted total	**190**

[9]Eleven female accountants in Scotland were checked to the online transcription of the 1881 census (which appears to be the same as that available on CD-ROM) but not to the original manuscript.

While some errors reported in Table 3 appear in the original enumeration books, the majority were made during transcription. The exercise revealed that some handwritten occupational titles in the CEBs bear a very close resemblance to "accountant" and may have confused the transcriber; in particular, accoucheur or accoucheuse (an obstetrician or midwife), accoutrement maker (military clothing), annuitant (persons living on annuities), and assistants (various). Further, a number of women whose occupation was transcribed as "accountant" were actually the "wife of" the accountant who appeared immediately above in the manuscript version of the enumeration book.

The problems identified in the transcription of female accountants, particularly the large number of incorrectly transcribed annuitants, suggested that the reliability of the transcribed census relating to male accountants should be assessed. A random sample of the database population of 8,331 males identified as simply "accountant" in England and Wales and the Islands was therefore checked to the online manuscript version of the census. The sample size was 367 (95% confidence level). No transcription errors were discovered. While this finding offered a degree of assurance, other occupational descriptions relating to accountants from the transcribed census aroused suspicion and were also checked to the manuscript version. Again, a high degree of assurance was achieved. However, as the following instances indicate, a number of errors were discovered. These errors indicate the advisability of referring to the original source when the occupational description excites suspicion or contains references to medicine (because of the potential mistranscription of accoucheur), the military (because of possible confusion with accoutrement), retired accountants (annuitants), and unlikely looking assistants.

An example of a transcription error relating to accoucheurs is John Broom of Bristol who is entered in the transcribed census as "Physician (Surgeon & Accountant IK2CPS)." In the original manuscript, he is "Physician, Surgeon + Accoucheur LR2CPS." In relation to accoutrement makers, John R. Venall, Edmonton, Middlesex, is "Military Accountant Clerk (Helmets &c)" in the transcription, but in the original he appears as "Military Accoutrement Maker (Helmets &c)." John E. Howells, Birmingham is likewise "Military Ornament Stamper (Accountant Unemployed)" in the transcript, but "(Accoutrement) Military Ornament Stamper (Unemployed)" in the manuscript. John Greaves, Birmingham, is "Military Stamper (Accountant o)" in the transcription, but "(Accoutrement) Military Stamper" in the manuscript. John Albert, London, is identified in the transcript as "Army Accoun Mist Work," but is "Army Acoutrement Maker" in the original. Alfred J. Miller, Bermondsey, is "Army Accountant (Cutter)5" in the transcribed version, but "Army Acoutrement Cutter (Accoutrement)" in the original.

In relation to annuitants, Thomas Huard, Bermondsey, is entered in the transcription as an "Accountant Retired KM Engineer (Navy Off)," but in the original is an "Annuitant Retired RN Engineer (Navy Officer)." Thos Ryder, aged 78 of Cinderford, Gloucestershire, "Accountant," is an "Annuitant" in the original. In relation to assistants, Henry King, St. Pancras, appears in the transcribed census as a dentist's accountant but is a dentist's assistant in the original. In Yorkshire, Edwin F. Melton is entered as a grocer's accountant and Thomas W. Hirst an accountant at a woolen mill. Both are assistants in the manuscript census. Henry Pascoe, aged 16 of Wolborough, Devon, is recorded as a painter's accountant in the transcription, but he is clearly a painter's assistant in the original. Wm. Dyer, St Pancras, is a corn dealer assistant in the original as opposed to corn dealer accountant, and Thomas Lanagan of Hackney is a druggist assistant rather than druggist accountant.

By the same token, it is possible that a small number of those transcribed as accoucheurs, accoutrement makers, annuitants, and assistants were actually accountants. However, the more familiar usage of the occupation "accountant" compared to the others (except assistant) is likely to have lessened the scope for errors of this type by modern-day transcribers.

Where uncharacteristic occupational descriptions appear in the transcribed census, it is advisable to consult the original. For example, the stated occupation of Benjamin Room of Brighton in the transcribed census is "Public Audition Accountant." On examining the manuscript census, this odd-sounding occupation was revealed to be "Public Auditor (Accountant)." Some transcription errors result from illegible entries in the original census. Other pages are very faint, contain occupational strings which are congested in the available space of the *pro forma*, or are rendered confusing by marks added during the enumeration process. The latter were often made by census clerks using colored pencils, which are less distinguishable when reproduced in the monochrome microfilmed images of the originals used in transcription. For example, William Watson of Barnsley appears from the manuscript version as "Secretary West Riding Permanent Relief Fund." But this is incorrectly transcribed as "Secretary Permanent Relief Fund West Riding (Colliery Accountant)." Similarly, John Pile of Plymouth, aged 58, is transcribed as "Student Accountant to Owner of Land & Houses (House Agent)," but he was actually a "Steward, Accountant and House Agent."

In a small number of cases, information relating to variables other than occupation was incorrectly transcribed (e.g., age). The eldest accountant in the transcribed census was John W. Warland of London aged 96. In the manuscript version of the census, his age is stated as 56. It is prudent to be alert to inconsistencies in the information provided about an individual, such as a six-year old accountant whose marital status is entered as widower or a bank accountant aged five years. It is also possible that certain individuals were recorded twice during the enumeration process. John Adamson, "Accountant. FCA," aged 52, born in Derbyshire and resident with his family in Heaton Norris, Lancashire, is almost certainly the same John Adamson entered as a resident in the Salisbury Hotel, London, "Accountant FCA," aged 52 and born in Derbyshire.

The findings relating to female accountants reported above suggest the advisability of checking individuals who are entered in the transcribed census as "accountant clerk." These may be accountant's clerk in the original manuscript. It is important to note that some punctuation was not reproduced in the transcript version of the census and can also be frustratingly absent in the original. This is significant to the interpretation of occupational descriptions. An "accountant clerk" may be an individual performing the dual functions of accountant and clerk, an accountant who is described as a clerk, or a clerk to an accountant. The addition of an apostrophe, as in "accountant's clerk" more definitively locates the individual as the latter and as an employee. During the late 19th century, some apprentice accountants and even recently qualified professional accountants referred to themselves in the census as clerks. Hence a "Chartered Accountant's Clerk" may be a clerk to a chartered accountant or an apprentice. Also, the placement of annotations such as "clk" in the original census may be located differently in the transcription, affecting the interpretation of the individual's occupation.

Other ambiguities arising from lack of punctuation or insufficient detail in the original or transcribed versions of the enumeration books become clear from the following questions. Is an individual entered as an "accountant auctioneer" an accountant *and* auctioneer or accountant *to* an auctioneer? Is a "clerk colliery accountant" a clerk and colliery accountant or clerk to a colliery accountant? Is a "Mine Agent & Accountant" a mine agent and also an accountant or, more likely, an agent and accountant at a mine? Similarly, is an "accountant commission merchant & estate agent" an accountant, commission merchant, and an estate agent, or an accountant to a commission merchant and estate agent, or an accountant to a commission merchant and also an estate agent? Is an "accountant agent publisher" really an accountant, agent, and publisher or an accountant and agent to a publisher? Is an "Innkeeper and accountant" the keeper of an inn and the accountant at the inn or an innkeeper who also practices as an accountant?

In addition to the large number of individuals whose occupation is simply entered as "accountant," other descriptions in the transcribed or original version of the census can be frustratingly ambiguous. For example, is "Accountant and Secretary" an accountant and secretary to an organization or to a private person? Abbreviations also add complexity. Is a "Solicitor (Acct)" a solicitor and accountant or a solicitor practicing on his own account? Is "Bank Account," a bank accountant or someone living off banked income? There are a few examples in the transcribed census where the occupation is entered as "account" but is stated as "accountant" in the original. Often the abbreviation "account" used in the transcription is confirmed as referring to accountant in the original by the addition of a superscript, "account^{t}."

It appears to be the case that when the simple occupational description of "accountant" is applied to males, is not congested within the space provided in the enumeration book, is not heavily annotated, and is not uncharacteristically attended by military and medical references, the transcribed census is reliable. Where occupational descriptions contained in the transcription are fuller, more complex, and concern female accountants, it is advisable to check against the original version.

CONCLUSIONS

As numerous commentators attest, "The census of population is a key source for any study of 19th century England" [Lawton, 1978, p. 1]. The published occupational tables and individual-level sources on which the census abstracts were based are of particular importance to students of the emergent profession of accountant. These sources provide exceptionally rich data which may be employed to gain unparalleled decennial snapshots of the composition of the occupation, those who pursued it and their placement in the social structure. As more censuses become accessible via electronic media, opportunities will be provided to plot the complexion and progress of the occupation of accountant over time and in different places.

However, it is also clear that the census should not be used uncritically. Source criticism is, of course, an essential component of any historical research project but is especially significant in relation to the census. It is important to comprehend why, how, and in what context the manuscript enumeration books and published census tables were originally created. It is also prudent to be aware of the practicalities of conducting the census, how errors may have crept into the original source and in subsequently transcribed versions. The accounting historian's interpretation of census data, both at the level of the individual subject and abstraction, is substantially enhanced by an awareness of shifts in contemporary understandings of the meaning of particular occupational titles, the socio-economic structures of local communities in which accountants resided, and, in the case of biographical studies, detailed knowledge about the subject's life course.

The paper has illustrated the issues surrounding the use of occupational data contained in the published reports of the 1881 census. The census reported 12,792 accountants in Britain. A search of the transcribed enumeration books identified 16,180 who used that occupational title on its own or in combination with other vocations. It has been shown that this substantial difference arose from the application of rules relating to the counting of the occupation in instructions issued to those administering the census, particularly abstracting clerks. The instructions also offered scope for the exercise of judgment. Annotations to the original CEBs suggest some departures from the instructions issued and inconsistencies in the ways in which accountants were classified. These findings indicate that the numbers of accountants counted in the published census represent a serious underreporting of those engaged in the occupation in 1881, and, in consequence, a distorted view of the occupational landscape. Analyses of the data reported in published censuses are also problematical when used longitudinally due to intercensal changes in occupational classifications. The structure and content of published occupational tables and the classification of particular trades and professions reflect contemporary ideals and the potentially changing objectives of census-takers.

Problems surrounding the census reporting of occupational totals and the classification of occupations ensure that returning to the original enumeration books is desirable [Armstrong, 1978; Bellamy, 1978]. Moreover, "Working from the enumerators' books offers two great advantages over using census volumes; that the information can be extracted to fit the problem in mind, and that each entry concerns a named individual" [Wrigley, 1972, p. 2]. It should be recalled however, that entries in the CEBs "are multiple recensions of the householders' schedules and may, in many cases [involving multiple occupation], not even reflect the individuals' own interpretation of importance in their occupational entry" [Woollard, 2004, p. 37].

Source evaluation is particularly important when utilizing electronic and transcribed versions of the CEBs due to the additional level of intervention and mediation. Investigations of the transcribed version of the British Census of 1881 suggest a high degree of accuracy. The error rate is "so small as to be entirely insignificant when considering the total Census" [Woollard, 1996, p. 101; Goose, 2001]. However, at micro and meso-levels of analysis, where the focus is on individuals and particular groups, a higher degree of caution should be exercised.

The findings reported above indicate that various sets of individuals identified as accountants in the transcribed census should be checked to the manuscript versions of the enumeration books. First, female accountants may actually appear as annuitants or wives of accountants in the original source. Second, male and female accountants whose occupations contain medical or military references may be mis-transcribed accoucheur, accoucheuse, or accoutrement makers. Third, uncharacteristic combinations of occupations or extended, complex occupational strings may include mis-transcriptions of assistants or contain other errors. Fourth, when accountants are also entered as clerks, punctuation and use of parentheses should be checked to the original to clarify employment status. Fifth, cases should be checked where the individual's age, marital status, or relationship to the head of household is not consistent with the pursuit of the occupation of accountant.

Despite the possibility of encountering errors in the transcribed census and the frustrations which can arise when using images of the original manuscript, it should be reiterated that the census remains a key source for accounting historians. The errors discovered in this study represent a very small percentage of the total population of accountants. As previous studies of the accuracy of the enumeration books have discovered, "a large proportion of the data is entirely unambiguous: page after page, household after household, sometimes in an almost unwelcome monotony, exhibits not one of the many difficulties described. Even where they do occur, many of the ambiguities and errors are of a trivial nature and easily and confidently emended" [Tillott, 1972, p. 128].

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KING JOHN'S TAX INNOVATIONS – EXTORTION, RESISTANCE, AND THE ESTABLISHMENT OF THE PRINCIPLE OF TAXATION BY CONSENT

Abstract: The purpose of this paper is to present a re-evaluation of the reign of England's King John (1199–1216) from a fiscal perspective. The paper seeks to explain John's innovations in terms of widening the scope and severity of tax assessment and revenue collection. In particular, the paper seeks to highlight the significance of Hubert Walter as the king's financial adviser. He exercised a moderating influence in the first half of John's reign and was the guiding hand in the successful introduction of innovative measures designed to increase revenues. These became extreme after his death in 1205, when John lacked his counsel. It is further suggested that the Magna Carta was a direct reaction to such financial severity. Many of the clauses in Magna Carta refer specifically to John's tax innovations and severity. Linked to this, the paper argues that these events were critical to the establishment of the principle of taxation by consent. As a result of the innovative and extreme nature of John's fiscal measures, it is our contention that John is a significant influence in moving away from deep-rooted feudal systems to the beginnings of what we would now understand as a national taxation system. This occurred against the background of a period of transition in state finance from a domain-based to a tax-based state.

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INTRODUCTION

The aim of this paper is re-examine the reign of King John (1199-1216) in terms of revenue raising, with particular reference to the innovative, and often severe, taxation measures implemented during these years to widen the scope of assessment and collection. The paper aims to show how the genesis of the Magna Carta lay in resentment of the barons towards John's fiscal exactions, which, after the loss of Normandy in 1204 and the death of his key adviser, Hubert Walter in 1205, were perceived as excessive. The Magna Carta's clauses refer explicitly to John's fiscal exactions and the resentment felt against them. Emerging from this negative reaction was the concept that taxation required the consent of those upon whom it was imposed, representing a significant step away from feudal systems.

John's reign corresponded with an important period of financial history for several reasons. During the 12th and 13th centuries, most European states experienced a period of transition from a domain-based state to a tax-based state[1] [Ormrod, 1999, p. 38], with a clear move towards establishing the state on an economic foundation separate from its ruler [Swanson, 1999, p. 100]. This reflected the extent to which revenues derived from lands and possessions under a ruler's personal control ceased to be sufficient to finance the activities, particularly military, and ambitions a ruler wished to pursue. The need to raise additional revenue increasingly necessitated resort to state sources of finance of which taxation was the most important [see Frecknall Hughes and Oats, 2004, p. 204]. This transition is important for understanding the context of John's reign as expenditure requirements prompted John to engage in a series of innovations in terms of widening the scope and severity of tax assessment and revenue collection.

John's need for additional finance was occasioned by several factors. The one usually given most prominence was the loss in

[1]A domain-based state is one where its ruler relies solely on income from his own, personally administered lands and property to sustain him and his government. A tax-based state is one where such personal income is supplemented, if not superseded, by income from taxes raised from property other than that directly owned by the ruler (e.g., on church property or on trade). Strictly, in England at this time, the Crown ultimately owned all land but did not administer or receive revenues directly from all of it. Such revenues were claimed by the tenants-in-chief (the barons) to whom land had been given for services rendered, etc. For a comparative overview of the emergence of the tax state in medieval England and France, see Levi [1988].

1204 of Normandy and its attendant revenues[2] at a time when wars with France, fought on the continent to retain control of hitherto English-ruled states, were endemic.[3] A second factor was the continuing development of the machinery of government, begun especially under Henry II, which required more paid officials, a trend continued into the 14th century [Waugh, 1997, p. 58]. The complexity of government in the period is reflected in the increasingly detailed financial records which have survived.[4] A third factor was the continuation of some of the expensive policies begun by Richard, John's brother and predecessor, such as the cost of maintaining castles [see Barratt, 1999, p. 86]. Moreover, it should be remembered that as Richard too had needed exceptional funds for his leadership of the Third Crusade, and then for his ransom when captured and held by Duke Leopold of Austria on his return, John inherited a realm with considerably fewer resources than might otherwise have been expected.

John's willingness to push the boundaries of what was acceptable, both in terms of attempts to rack up income from a more intense exploitation of existing taxes and the creation of new sources in the period after the loss of Normandy in 1204, can also be attributed to the death in 1205 of Hubert Walter, who, as the king's chief financial adviser, had hitherto exercised a considerable moderating influence on John's revenue-raising activities. Walter was a key figure in state finance during this

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[2]See Powicke [1960] for a detailed history of the loss of Normandy. In addition to the loss of revenues, it was ensured that John was physically present in England for the years after 1204. The extent to which the measures of 1204 and after are attributable to his actual presence is arguable, but he was at least available to be involved in a way that, for example, Richard I could not be. Richard was only present in England for about six months of his ten-year reign.

[3]for example, the need to raise scutage in the years 1204-1206

[4]These records include Pipe Rolls (essentially audit documents), Rolls of Letters Patent, Rolls of Letters Close, Rolls of Charters, and the Rolls of the King's Household (Curia Regis), all aimed at keeping track of different material, for example, debts to the crown [Warren, 1997, pp. 125-135]. They are referred to as "rolls," as records were written on pieces of vellum, joined together and rolled up. For a discussion of the emergence of these and other written records, see Clanchy [1979]. The extant records are available in their original form in national/local collections, such as at the National Archives (formerly the Public Record Office) at Kew in London. Most are also published in sets of volumes which are available in any good history library. The Pipe Roll Society in the U.K. is dedicated to publishing such records by reference to regnal years. However, the records are predominantly written in medieval Latin, which makes them difficult to deal with other than by the specialist historian or classical scholar.

period, first under Richard I as justiciar[5] (1193-1198) and then as John's chancellor (1199-1205). He was also Archbishop of Canterbury. Warren [1997, p. 134] suggests that John was willing to listen to advice from Walter which is significant since John asked him to be his chancellor, an office he held until his death. It is more than likely that Walter's considerable experience in serving John's father, Henry II, and brother, Richard I, guided the fiscal policies adopted in the early years of John's reign. Since he knew what would work and what was likely to be least resisted, there is evidence of a careful hand behind measures before 1204. Under his aegis, John successfully attempted a number of innovative revenue-raising measures, but after Walter's death, John's approach to revenue collection changed radically and was increasingly perceived as extortion. While many historians note the significance of the loss of Normandy in altering the character of John's rule in England, few accord the same significance to the death of Hubert Walter as an adviser. We contend, however, that this event was even more important. We argue that the change was largely influenced by the absence of Walter's moderating influence.

Not surprisingly, John's fiscal ambitions, and the means by which he pursued them, provoked considerable resentment, an accumulation of grievances that was instrumental in precipitating the rebellion of barons that culminated in the famous Magna Carta.[6] Taking advantage of John's series of military reverses at the hands of the French, the disaffected barons, with the support of a number of bishops, organized an armed rebellion. The purpose was not to replace John, but rather to force him to agree to limits on his royal authority, to refrain from abusing his feudal rights, and to observe the rights of others as enshrined in law when dispensing royal justice. Rightly recognized as a major step towards establishing the pre-eminence of the rule of law over the exercise of the king's will, this aspect of Magna Carta has resonated down the centuries and across different countries. However, it is less appreciated that Magna Carta was largely concerned with a detailed redress of the fiscal abuses which the barons believed John had perpetrated. Most significant of all, Magna Carta (clauses 12 and 14), recording John's promise not

[5]The justiciar was the chief minister of justice to the Norman and early Angevin kings (see footnote 35 for the meaning of "Angevin"). His power was second only to that of the king.

[6]The version of the Magna Carta referred to here is that in Appendix B of Warren [1997, pp. 265-277].

to levy the taxes of "scutage" and "aid" without the "common counsel" of the kingdom, established the requirement, however rudimentary, of the need for consent to taxation.[7]

Previous examinations of state finance in this period have not fully explored these issues or the direct link with Magna Carta. For example, Mitchell [1914] takes a very detailed approach to medieval taxation under John and Henry III, while Barratt [1999, 2001] is concerned with quantifying tax revenues under both Richard and John and is less concerned with the underlying rationale for the exactions. Ormrod [1999] focuses on the much wider issues of the rise of the fiscal state over an extended period and does not consider John's reign in detail. Harriss [1975], however, does stress the importance of public consent to taxation as an outcome of Magna Carta, but he does not examine individual clauses since his investigation of public finance really begins at 1217. These studies are also located firmly in the mainstream history tradition as the significance of the available records remains largely unexplored in the accounting and financial history literature.

In the accounting history literature, little has been written about medieval accounting practices. In 1966, Jack [1966, p. 158] published a seminal paper in which she considered the neglect of medieval records by historians based on the false assumption that they were inferior to later double-entry accounts and in some way inefficient. She ably demonstrates, however, that medieval accounts served their purpose of control, and as public accounts "kept because it was necessary to settle affairs between one man and another, whether the two were King and subject, man and servant, fellow servants or independent individuals." Noke [1981], after examining 13th century accounting practice in lay and ecclesiastical estates, also concludes that medieval accounts served their purposes of accounting and control, as well as some forecasting, although they were not able to cope well with complex series of transactions. He focuses on the diffusion of techniques of written account keeping from the Royal Scaccarium[8] to estate administrators. Despite theses studies, subsequent accounting history has continued to pay relatively little regard to medieval and earlier accounting practices albeit with some notable exceptions [e.g., Hoskin and Macve, 1986; Bryer, 1994; Harvey, 1994; Macve, 1994; Oldroyd 1995, 1997; Scorgie, 1997; McDonald, 2005].

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[7]following Bartlett [2000, pp. 64-67]

[8]Scaccarium is a commonly used Latin term for Exchequer or Treasury.

More recently, a series of papers has been published concerned with the Domesday Book and its significance. Although Domesday has been widely discussed in other branches of historical literature, recent scholarship shows the value of an analysis from an accounting perspective. The context of Domesday compilation has permitted re-evaluations of its significance. Economic historians McDonald and Snooks [1985] posited that the tax levied in Domesday England was not arbitrary, but was in fact correlated with ability to pay. Godfrey and Hooper [1996, p. 38] brought the debate to the accounting history literature arguing that Domesday was a "multidimensional document combining accountability and decision making." Significantly, they highlight the importance of the social and political contexts, noting that the Domesday survey occurred during a period of potential military conflict and, therefore, heightened fiscal need. McDonald [2002] extended the consideration of Domesday within the accounting literature with the novel approach of using a regression analysis to examine the distribution of the tax burden in Essex, finding significant differences by hundred,[9] and concluding that the differences could be, in part, attributed to administrative practices.

If studies of medieval accounting are still rare, this is even truer of taxation studies [Lamb, 2003]. Although there is evidence of a growing interest in tax and its relationship with accounting within the accounting history literature, most extant studies deal with later periods, e.g., the 18th [Crum, 1982; Kozub, 1983; Oats and Sadler, 2004] and the 19th [Lamb, 2001, 2002; Oats and Sadler, 2007] centuries. Earlier periods were examined by Jose and Moore [1998] on Biblical taxation and Ezzamel [2002] on ancient Egyptian tax assessment and collection. To date there is very little examination of taxation in the medieval period. This paper seeks to remedy this shortfall by considering taxation and accounting practices in a key period of medieval history, the causes of change, and the dramatic consequences that resulted.

From our review of accounting and taxation practices in John's reign, we conclude that there is a clear track from experimenting with new means of tax sources to what was regarded as extortion, specifically leading to Magna Carta wherein particular clauses provide evidence of the grievances arising from John's measures. Of 61 clauses, well over half contain references to fis-

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[9]A hundred is a community measure, a division of a county supposed to contain a hundred families.

cal grievances,[10] indicating a deep dissatisfaction about the way sums of money were levied or goods/financial rights arbitrarily seized by the Crown. It is not usual to look at Magna Carta in this light as it is frequently cited as a source document for basic human freedoms as the outcome of a well-known political/constitutional conflict between John and his barons [e.g., Bryce, 1917, pp. xii-xiii; Carpenter, 1987, p. 69; Reynolds, 1997, p. 12]. Though its importance should not be underestimated, it is dangerous to see it as a document apart from its own time [Holt, 1992, chapter 1, *passim*, p. 188; Clanchy, 1998, pp. 139-140]. We contend that the underlying rationale for its existence was essentially financial.

The paper proceeds as follows. In the next section, we briefly describe the key sources of revenue in the medieval period. Following that we examine the changes that were made under King John with emphasis on those occurring in the second part of his reign, which we argue were aberrant in the sense that they moved from innovation to extortion, unchecked by Hubert Walter's moderating influence. In the third part, we consider Magna Carta as the outcome of rebellion against John's excessive fiscal exactions. The final section presents our conclusions.

MEDIEVAL REVENUE RAISING

Most writers [e.g., Mitchell, 1914] consider that royal revenues in the 12th century may be classed as ordinary and extraordinary. Mitchell [1914, p. 1] lists the ordinary revenues as follows:

- the county farm, a fixed sum paid by the sheriff for the privilege of farming the revenue of the royal domain and the fines of the local courts;
- amercements ("fines" in the modern sense of the word) imposed by the king's justices for violation of the law;
- the *firma burgi,* a lump sum paid by certain towns for the privilege of farming the town revenues (which worked in a similar manner to the county farm);

[10]There are 23 clauses out of the 61 which do not have such direct references, but, even then, there is arguably a financial grievance underlying some of them; e.g., clause 35 referring to standardization of weights and measures; clause 39 containing a reference to "disseising" (seizure of goods) of freedmen; clause 48, dealing with the removal of "evil customs" by sundry officials; and clause 49 dealing with return of hostages.

- the income from feudal incidents,[11] reliefs, marriages, wardships, escheats, etc.; and
- fines or oblations (offerings), payments to the king for such privileges as permission to marry a certain person, the custody of the lands of minors, the bringing of cases into the king's court, the delaying or expediting of a trial, and the grant and confirmation of charters (some of which overlapped with feudal incidents)

To this list should be added:

- income from the royal forest

Amercements, feudal incidents, etc., and fines/oblations may be termed "incidental" income as the events which gave rise to them depended on unpredictable events. While income would always arise from such events, the sources or events giving rise to them could not be guaranteed. The ordinary revenue, collected every year through the normal processes of government, funded the ruler and his activities. If the ordinary revenue was insufficient, then additional contributions were sought. These additional contributions constituted extraordinary income, extraordinary because they were not levied every year and required new collection machinery to administer them. Mitchell [1914, pp. 1, 13] itemizes these additional contributions:

- the aid on the knight's fee, called also scutage or shield money (see below for a detailed definition);
- carucage, levied on a unit of plough land called a carucate;
- tallage, levied on the towns and domain lands of the Crown;
- *dona* or *auxilia*, taken from Jewish or other money lenders, prelates, and religious houses; and
- the tax on movables

To this list should be added:

- church revenues which John received between the years 1208-1214

[11]"Feudal incident" is a general term to refer to certain issues often concerned with inheritance or the devolution of property, such as a widow's right to regain her dowry on the death of her husband and an heir's succession to his father's estate for which a sum (a relief) was payable. A woman or heir to property did not necessarily have the right to marry without the king's permission and might have to pay to be able to do so. Estates of underage heirs might be assigned to a trustee in wardship until the heir became of age. An escheat is an estate which has reverted to an overlord for lack of an heir or because of a felony. Persons could pay sums to acquire wardships and estates in escheat. There is no hard and fast rule about the use of terminology here (see also, later discussion of "fine").

All of these revenue-raising devices with the obvious exception of the appropriation of church revenues had existed under Henry II and Richard or even before. There is a sense in which some of the measures do not appear easily classifiable as taxes. For example, farming the royal domain could appear to some more like rent collection. This raises potentially unresolved questions about how to define a tax. Nevertheless, for this paper, all revenue-raising devices are considered the equivalents of tax measures. In the following section, we describe the most significant of these forms of taxation, highlighting the changes that occurred under King John.

WIDENING THE SCOPE AND SEVERITY OF REVENUE COLLECTION

In order to examine the extent and nature of these changes in the use of tax, we consider nine sources of revenue: the county farm, the royal forest, scutage, carucage, tallage, *dona* or *auxilia*, the tax on movables, and incidental revenue sources. Peculiar to John's reign, in addition, we consider the appropriation of church revenues. In general, John, initially guided by Walter, developed three main ways to increase revenue. First, an already accepted basis of assessment was widened by the use of an "add-on" to an existing revenue source as in the case of the county farm and scutage. Second, rates were raised or a tax collected more frequently (e.g., scutage and tallage) which, when unchecked, were felt to be extortionate.[12] Third, John was opportunistic, particularly in the appropriation of church revenues.

The County Farm: Ordinary revenue from shrieval (sheriffs') accounts is described by Barratt [2001, p. 637] as the "backbone of English state finance." Warren [1987, p. 151] observed:

> …Each sheriff on taking office agreed to pay a lump sum in respect of the revenues from the relevant lands

[12]An outstanding example of this extortion, in relation to a feudal incident, was John's asking the "fantastic" [Warren, 1997, p. 183] bride-price of 20,000 marks (one mark was roughly two-thirds of an English pound sterling) for his former wife, Isabelle, Countess of Gloucester, which Geoffrey de Mandeville was compelled to pay to marry her. Even £1,000, a much lower sum, was felt to be high. Perhaps unsurprisingly, Geoffrey is one of the barons involved in the Magna Carta and was a suretor. However, the reason why John demanded so high a price probably has its roots in a quarrel so that the full truth can never be known [Norgate, 1902, pp. 289-293].

> in the shire, and himself collected the rents or let the manor out to farm. The difference was his profit.

In 1189, at the beginning of his reign, Richard I auctioned off the sheriffdoms to the highest bidders as a means of increasing revenue [Warren, 1987, p. 152; Gillingham, 1999, pp. 114-116], but the more usual way of obtaining increased revenue, as introduced by Henry II, was charging the sheriff an increment in addition to the farms.[13] It would have been too radical to try for a complete re-assessment. Harris [1964, pp. 532-533] explains:

> One solution of this problem would have been to assess new farms of the shires, but this may have seemed too serious a breach of a customary assessment. Instead, a number of increments had been imposed. These were fixed annual payments of round-figure sums, accounted for separately from the farms.

However, an attempt was made in 1194, when Walter was Archbishop of Canterbury and chief justiciar to Richard I, to enquire more exactly into the profitability of the royal domain by commissioning itinerant justices to make enquiries [Warren, 1987, p. 153, quoting *English Historical Documents,* Vol. III, pp. 304-305].

In 1204, John began an experiment designed to increase his revenues from the English shrievalties [Harris, 1964, p. 532]. While there is no absolute proof, it is most likely that this was originally one of Walter's ideas.[14] The precise nature of the experiment remains unclear. It may have been an attempt to exact a further increment, referred to as a profit or profits (*proficuum*); a new system of collecting the existing increment, which, conceivably, could have been re-named *proficuum*; or a combination of both. It appears that many existing sheriffs were dismissed and succeeded by individuals called *baillivi*, who were required to account as custodians (instead of as farmers) for a variable amount over and above the standard farm. This meant that the custodian had to account for his income and expenditure on an item-by-item basis. This procedure seems to have applied to this variable element only; the farm itself was untouched. Rendering

[13] Warren [1997, p. 38] comments that in Richard's reign "[e]verything was for sale – privileges, lordships, earldoms, sheriffdoms, castles, towns, and suchlike."

[14] Walter's main biographers, Cheney [1967] and Young [1968], attest to his administrative skills and diplomatic talents. If such ideas are not attributable to him, then to whom might they be attributed since there was no person of similar talent or experience or of sufficient standing and authority at the time?

account on an item-by-item basis was customary in the case of the administration of escheated lands and others temporarily in the king's hands. There is little evidence as to how profits themselves were assessed or how the custodianships actually worked. Harris [1964, p. 536] cites evidence to show that the *baillivus* was becoming "a paid official with an expense account." For example, in 1215, it was stated as right that Peter fitz Herbert should receive expenses for custody of Yorkshire and its royal castles because he was answering for his profits.[15]

Warren [1987, p. 153, 1997, pp. 152-153] and Painter [1949, p. 120] consider that the experiment was a success in boosting revenues in the early years of John's reign but that it foundered from about 1208. However, Harris [1964, pp. 538] disagrees, based on the Pipe Roll figures for 1209-1212, arguing for continued success up to 1213 or 1214. Yorkshire was placed under custody in 1209, which significantly increased income. In 1209 as well, the shrievalties of Cambridgeshire and Huntingdonshire, Devon, Essex and Hertfordshire, Hampshire, Lincolnshire, Rutland, Sussex and Warwickshire, and Leicestershire went over to the custodian system. In fact, all except Devon, Essex and Hertfordshire, and Rutland were returning to the system after a previous abandonment.

The picture emerges of a new system gradually being put in place, perhaps running in tandem with the old, but aiming to supersede it. This is not to deny that in some cases it failed to work or that it was unpopular. Some sheriffs made offers of money so as to be relieved from implementing the system, and sometimes the Exchequer failed to make sheriffs produce any accounts.[16] Decline in profits was not unusual.[17] Indeed, a sheriff often spent more than he collected, possibly because of inflationary pressures, so that the Exchequer might owe him money. This situation could arise if there were heavy expenditures on castle maintenance or entertaining the king and his officials (e.g., John

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[15]Rot. Litt. Claus. i.187b

[16]Harris [1964, p. 538] cites the case of John Cornard, sheriff of Norfolk and Suffolk from 1205-1209, who consistently failed to produce any accounts, and of William de Montacute (of Dorset and Somerset), Roger fitz Adam (of Hampshire), and Hugh of Chacombe (of Warwickshire and Leicestershire) whose shrieval profits declined, such that they offered sums for the king's benevolence. They were removed from office.

[17]Harris [1964, p. 539] cites the case of William de Cahaignes, sheriff of Sussex, who could not account for profit because he had none.

regularly toured his kingdom to give court judgments[18]). This excess expenditure might offset other debts a sheriff owed.[19] The system did require much more careful accounting and administration, necessitating detailed records. This paperwork could have made the system unworkable, hence a good reason for sheriffs offering money to be relieved from implementing it. Equally possibly, it might have been perceived as another measure to extract more money from the same tax base, causing offence as it ran counter to what was customary and acceptable.[20] There are several explanations possible for the decline in income by 1214. By Michaelmas 1213, John had abandoned all the increments imposed not only by himself but by Richard too. The Pipe Roll for 1214 only accounts for the old increments imposed by Henry II. Unpopular sheriffs also were being removed from northern counties [Harris, 1964, p. 540]. However, the complexions of the farms had been radically altered by John's procedures.

As this system was initiated in 1204, it is likely that it stemmed from Hubert Walter's thinking as a means to tap into hitherto untaxed shrieval profits. However, it is evident from the above that it continued unchecked to a level perceived as extortion, which is an equally likely consequence of Walter's no longer being there to monitor its implementation and development.

The Royal Forest: There are many stories of venality and harassment in respect of the enforcement of forest law. Warren [1997, p. 152] says that "when John was in urgent need of cash he would send round a commission of forest justices." Such a forest eyre[21] in 1212 created debts on the Pipe Roll of £5,000 [Warren, 1987, pp. 162-163]. It is likely that such activity continued throughout John's reign not just in the period after 1204.

Scutage: Scutage arose originally as a feudal due (*servitia debita*) owed to the king in respect of grants of land (fees) made to

[18]Joliffe [1948, p. 123] expounds on how John made a significant innovation by organizing his cash and treasure supplies so that he could have ready access wherever he happened to be throughout England rather than concentrating them in London.

[19]Harris [1964, p. 536] also quotes the instances of Philip Mark and Engelard de Cigogne successfully claiming quittance from Exchequer demands for profits on the grounds that they had spent all sums owed on repairs to castles or on accommodating the king and his followers early in the reign of Henry III.

[20]For example, efforts to introduce any sort of poll tax in England have foundered, whether in the 14th century or the 20th.

[21]A forest eyre was an itinerant court dealing with forestry matters.

tenants-in-chief. As a condition of occupying land and receiving rents from it, tenants were obliged to provide a number of knights to fight on the king's behalf when called upon to do so. By the reigns of Richard and John, it was common for scutage to be commuted to a sum of money, a fine in lieu of military service, often referred to as an aid on the knight's fee.

Henry II had tried to increase the number of fees by an inquest in 1166. It was here established clearly that there were fees in existence in excess of the *servitia debita* which became a potential target for raising additional revenue. We contend that, under John, the notion of the fine came into its own. In this sense, a fine is not a financial punishment for a violation of law or privilege (usually referred to as an amercement), but derives from the Latin word *finis*, which means at root "end." Fines were used in settling an issue or bringing it to an end, most frequently in the sense of coming to a financial agreement over a particular matter. In addition to paying scutage, tenants often paid a sum of money in fine. Sometimes such payment was regarded as part of the scutage; sometimes it was dealt with separately.[22] As to what the fine actually represented is, in any given case, unclear. It could be calculated as a single sum or a fixed amount per fee.

Under John, the fine was extensively used as a result of the need to cover further increases in costs, ruralization of the population, and realization of the full feudal levy. While perhaps evident in the early years of John's reign, the effect was greater with the more frequent levies of scutage after 1204. Mitchell [1914, p. 5] says that these "sums were called fines *ne transfretent* or *pro passagio*." The term "*ne transfretent*" means literally "in order that they should not cross the sea." More exactly the word "*fretum*" contained in the verb *transfretare* means at root "strait," so may refer not just to seas in general but to the Channel in particular. Perhaps the fine was paid so that no one had to serve overseas, be it tenant or knights, especially in France, but conceivably they could still be called upon to serve in England. "*Pro passagio*" literally means "for the passage" or "for the passing," which could refer to the same idea, but is more likely to refer to the tenant-in-chief being granted permission by the king to recoup his scutage and fine from his own sub-tenants and lesser vassals.

The fines "*ne transfretent*" and "*pro passagio*" seem likely

[22]The view of Maitland [Pollock and Maitland, 1898, pp. 269-270, cited by Chew, 1922, 1923] that the scutage and fine were the same thing; that is, payments inflicted as punishment for disobeying a call to arms, is not now accepted.

to have been exploitations of different aspects of knights not serving in person. Serving overseas was unpopular as evidenced by the northern barons in 1214 refusing to undertake an expedition to Poitou on the grounds that service overseas was not due. One argument for compliance with John's demands was that the feudal spirit was deeply imbued in the tenants-in-chief. They knew that the king could insist on full military service which would likely be more expensive than scutage proper plus fine. Despite the opportunity for enrichment from war booty, a knight going overseas on a military campaign of unspecified duration would require substantial support in terms of horses and equipment, all of which he or his overlord had to provide. The commutation of scutage to money, even if accompanied by the fine, meant that the amount of financial commitment had known limits [Harvey, 1970], which would not be the case with an actual campaign where the duration and cost could not be known at the outset. Also, given the established fact that there were more fees in existence than the *servitia debita*, a threat of re-assessment and reform of the *servitia debita* to reflect the true situation in his reign always hung over the tenants-in-chiefs' heads.[23] However, it does seem as if different aspects of "not serving" were exploited under John, and scutage was becoming divided into two different taxes, much like the *proficuum* from county farms considered above. As an additional levy over and above a base amount, this use of the fine is so similar to the *proficuum* that it is hard to resist the conclusion that the idea behind it stemmed from the same mind, that of Hubert Walter. It was an exploitation of an existing device to which tenants-in-chief had been long accustomed, but here it seems to have been given a new twist.

It is significant that fines were not necessarily levied at the same rate per individual, and there is a possibility that this element was negotiable. As the fine represented an amount over and above a fixed rate, allowing a level of variation not feasible in the fixed rate, it could be tailored to the payee's circumstances. John and Walter may have also learned from the failure of John's father to extend the scope of scutage. The fine under John is likely to have achieved what Henry II had set out to do, but in a more subtle manner. John did not seek to levy scutage proper on an increased number of fees, but he succeeded in

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[23]That there were greater numbers of knights in John's reign is the implication throughout the survey by Faulkner [1996], though she looks at knights in 13th century England to establish this contention.

raising extra money by way of fine. The permission granted ("*pro passagio*," perhaps) meant that tenants-in-chief could recoup moneys from sub-tenants or knights whom they themselves had enfeoffed.[24] There is a strong suggestion that John had achieved what Henry had set out to do, but had avoided tampering with familiar feudal institutions to do it. The subtlety of the handling suggests Walter at work here again.

In contrast, the later part of John's reign witnessed an intensification of this method of revenue raising, as can be seen from Table 1. The restraining influence of Walter seems conspicuous by its absence. Table 1 below lists the scutages levied during John's reign.

TABLE 1

Scutages Levied by King John 1204-1214

Rate *per* fee[a]	Year	Reason
20s	1204	war against Philip Augustus
20s	1205	invasion of Poitou and Gascony
20s	1206	invasion of France
20s	1209	war against Scotland
2m (26s 8d)	1210	expedition to Ireland
3m (40s)	1211	two expeditions against the Welsh
3m (40s)	1214	invasion of Poitou

Source: Mitchell, 1914

[a] Here s denotes shilling, d denotes pence, and m denotes mark. One mark was roughly two-thirds of one English pound sterling, worth in turn 20 shillings. A pound contained 240 pence. These "old" pounds and pence remained the basic English currency until decimal currency was introduced in 1972.

Some of John's later campaigns appear questionable in military terms. Thus, the basis of the scutage was less valid and prompted resistance. In 1209, he marched north as far as Norham, apparently against the Scots, but concluded a truce without any fighting taking place. The barons opposed the expedition to Poitou and Gascony. In 1214, the northern barons particularly opposed fighting in Poitou on the grounds that service overseas was not due. The lack of military validity for the campaigns

[24]Tenants-in-chief, in certain circumstances, were permitted to create their own knights, who stood in relation to the tenant-in-chief creating them as the tenant-in-chief did to the king. The tenant-in-chief thus provided his own retainers with a fee (they were thus enfeoffed) to support them. The retainers' fees were granted from the tenant-in-chief's own fee.

from 1209 and after may reflect extortion measures rather than genuine attempts to raise revenue needed for campaigns.

Carucage: John raised tax by use of this method only once, in 1200. It seems to have been based on Hubert Walter's earlier attempt to implement a similar tax in 1198 to raise money for war with France [Jurkowski et al., 1998, pp. xvii-xix]. In 1200, the tax was for a specific purpose; namely, to raise the 20,000 marks John had promised Philip Augustus as a relief for his lands in France. It met with considerable opposition, especially from the Cistercian monks, and was described by Abbot Ralph of Coggeshall as a "very heavy exaction which greatly impoverished the peoples of the land" [Carpenter, 1998, p. 1220]. The tax was based on the number of plough teams and aimed to assess all property regardless of whether held by the Church or some other form of tenure [Mitchell, 1951, p. 108]. There is no record of how the tax was collected or administered, or how much it raised. It seems to have been an attempt to bring a much older tax, the danegeld,[25] up to date, but was unsuccessful and unpopular. There was an elaborate procedure for assessing liability [Warren, 1987, p. 147], but collection was hampered by the administrative machinery required to implement it. However, in its attempt to use plough land as a basis of assessment, it would have affected the vast majority of the population given that England was primarily an agricultural society. Unusually for an initiative specifically attributable to Walter, it did not succeed. As danegeld was a tax with long-established roots and familiar as a land-based tax, re-introducing it in a revised form might have been expected to succeed. In its attempt to be exact and wide-reaching, it seems ahead of its time. Mitchell [1951, p. 154] suggests that it was an attempt to create an effective land tax, and its lack of success was a result of the levies on personal property or movables proving more immediately lucrative and easier to administer as liabilities were less difficult to calculate.

[25]Danegeld was a very old tax and like carucage was based on a measure of land known as a hidage. It was levied originally to provide resources to fight the Danes, hence its name, but only appears to have been given the name danegeld in the 12th century. Henry I levied it regularly, but Henry II only twice. It fell into disuse, largely because the geldable lands could not provide sufficient sums to fund expensive continental wars [see Frecknall Hughes and Oats, 2004, pp. 217-218]. Also, records as to which were geldable lands had been lost in large part as a result of the civil war between Stephen and Matilda, which preceded Henry II's reign. Both Warren [2000, pp. 263-264] and Hollister [2001, p. 336] state that under Henry I and Henry II very many exemptions were granted from it.

Tallage: Tallage was a customary, if arbitrary, tax levied on the towns and domain land of the Crown. It was another way of increasing the yield from the royal domain. It was applied to unfree tenants and was a parallel to the "gracious aid"[26] or *auxilium* which could be levied from vassals and free tenants. Something of the nature of an "aid" was evident in tallage also as it was only taken "when the king had urgent need of additional money, and although it could be imposed at the king's will, it could not be refused, the amount to be paid was not determined arbitrarily but was open to negotiation" [Warren, 1987, p. 154].

Under John, the levies of tallage were much more frequent than previously, with per capita assessments being used in preference to collective offers.[27] Tallage was collected nine times in one form or another during John's reign often reflecting scutage in the same years. Not all areas were assessed in total. The 1199-1200 tallage appears to have been general [Mitchell, 1914, p. 31], but that of 1201 was collected in the bishopric of Lincoln and Yorkshire, while some sort of aid was collected only in the Channel Islands [Mitchell, 1914, p. 45]. In 1203, it was collected in 13 counties with an account of collections.

In the period before 1204-05, tallage was levied three times, but six times afterwards. Consistent with our proposition that 1204-05 marked a watershed in John's approach to fiscal exactions, both the frequency and the coverage of the tallage increased after 1204. In 1204, it was collected in 14 counties, 26 counties in 1205, and 32 counties in 1206 [Mitchell, 1914, pp. 61, 68, 76, 82]. It was collected in 1210 from cities, towns, the king's manors and lands in hand [Mitchell, 1914, p. 100], with the Jews being tallaged for 66,000 marks as well in that year. One of the chroniclers reports that at the beginning of 1210 all Jews in England, men and women, were arrested by order of the king and tortured to force them to give up their wealth [Norgate, 1902, p. 137].

A final tallage is recorded in John's reign in 1214, charged against manors and towns, with the aim of raising money to help pay the indemnity for the withdrawal of the papal interdict,[28] originally at 100,000 marks [Mitchell, 1914, p. 117]. The

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[26]"Gracious" here meant "reasonable."

[27]A per capita assessment is one where each individual was assessed. A collective offer is an amount offered on behalf of a community, such as a village or religious order, a body of persons typically working or living together in some way.

[28]The significance of the papal interdict was immense. It meant that England was, in effect, excommunicated. Although baptism and confession of the dying were permitted, no other religious rites were, the idea being to rouse "the faithful

method of imposition, which was based around a collective offer or a per capita assessment, seems to have been effective in terms of collection, thus contributing to its overall success.

Dona or Auxilia: An *auxilium* was an aid, given voluntarily in theory to assist royal finances. There were three occasions on which it was normal for a "gracious aid" to be raised – for the king's ransom, for knighting the king's son, and for marrying the king's eldest daughter [Ormrod, 1999, p. 27]. *Dona* were gifts, often raised from religious houses or churchmen, although the terminology seems rather blurred. Aid was often used to refer to a tax in general (for example, scutage was often referred to as an aid on the knight's fee), and a gift might be anything but a gift. Calling it so, however, was perhaps useful in disguising the nature of the exaction.

Some religious houses paid a contribution in 1199 which was variously referred to as a *donum*, *promissum*, or *tallagium* [Mitchell, 1914, pp. 32, 61]; a Dorset exaction in 1203 was called an *auxilium*. Widespread charges against religious houses are unlikely to have been encouraged under the aegis of Walter as he also had held the post of Archbishop of Canterbury. However, these levies increased after 1204-05. It is significant to note that these high charges were levied in the years of the interdict. There was no religious authority to stand in John's way and no chancellor sympathetic to the Church.

The Tax on Movables: Taxes on movable property to raise state revenue were not used until the 12th century and then not extensively. They were common in terms of the ecclesiastical tithe, so the concept was familiar. The tax applied to movable goods, including gold, silver plate and ornaments, and animals, but not to precious stones or clothes [Jurkowski et al., 1998. p. xiii]. Previously, these taxes had been used to raise levies for the Holy Land, for example, the Saladin Tithe of 1188 and the ransom for Richard I. These were exceptional in every way and appealed to a deep moral obligation, but were both novel and national. John, almost certainly instructed in these precedents by Walter who had been active in raising the ransom to free Richard, imposed the tax on four occasions during his reign.

In 1201, a levy of one fortieth of the revenues of one year

against the faithless" [Warren, 1997, p. 164]. It made not only the guilty suffer, but also the innocent, hence its potency as a weapon. See also the section on church revenues.

was raised in accordance with the Pope's request for aid for the Holy Land. Churchmen paid by order of the Pope on their spiritualities and temporalities. The money was collected by the bishop of each diocese. The king also contributed a fortieth part of the revenues of his domain, escheats, wardships, and lands in hand. He asked earls, barons, knights, and freemen to contribute at the same rate. There was no formal assessment as each man calculated the amount of his contribution. A roll was drawn up by the collectors, arranged by vills,[29] containing the names of the contributors and the amount paid by each. The royal domain contribution was recorded on a separate roll. Those who refused to pay were reported by name to the king [Mitchell, 1914, p. 45]. Although it is unlikely that the tax raised was substantial, the detailed accounting and the machinery of collection were novel and were a forerunner for other levies of this sort in John's reign, such as "the fifteenth" as it became known, collected in 1204 on the property of merchants. This latter tax was novel in that it was a form of customs duty levied at the ports. Warren [1997, p. 122] comments that, although this tax is dated 1204, it was in operation at least two years earlier.[30] Barratt [1996, p. 841] felt the tax was so insignificant that he disregards it in his revenue calculations in the absence of substantial evidence. However, Ormrod [1999, p. 32] considers that it was the progenitor of later customs duties which came to be part of the Crown's ordinary revenue. The tax lasted for about five years until a truce with Philip Augustus of France again allowed free trade.[31] It was a measure instituted to control trade with the continent, especially France and a part of John's wider plan to ensure that maritime power was in his hands. Restrictions on trade were so unpopular with merchants that it prompted clause 41 of the Magna Carta, affirming their freedom to come and go at will.

In 1203, a levy of one-seventh of the personal property of earls and barons was made [Mitchell, 1914, p. 54]. There is some confusion as to the rationale as the chroniclers report that it was taken on the pretext that the barons had deserted John on his return to England in December 1203. However, as the tax was levied in the summer, this rationale may not be valid. It seems to have been some sort of general levy, possibly of tenants-in-chief

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[29]A vill was the smallest acknowledged national community measure, consisting of a number of households and their respective land. The modern word "village" is derived from it.

[30]Rot. Pat., i. 42

[31]Wars with France were endemic in the 12th and 13th centuries.

and clergy. In 1203 also, a levy of a fifth part of one-year's revenues was taken in the Channel Islands on the lands of bishops, abbots, clerks, knights, rear-vassals, and others to support the knights and sergeants defending the islands [Mitchell, 1914, pp. 62-63]. Greater attention was apparently being paid to personal property as a means of raising tax. Cheney [1967, p. 79] specifically comments on the chronicler Roger of Wendover who attributed a significant role to Hubert Walter in exacting the seventh of 1203 from the clergy.

The largest levy of this kind, in the second part of John's reign, was "the thirteenth" (actually 12 pence in the mark) of revenues and movables taken in 1207. The levy seems to have been requested in the form of a "gracious aid," which was unusual but not without feudal precedent among the tenants themselves. However, John had no immediate need of these funds, and it seems to have been collected against a perceived future need to recover lands lost to Philip Augustus in France which could have been genuine or a mere pretext. John persuaded a council of his barons to agree to this charge on them, though not without protest. Prelates in a first council had refused this levy on beneficed clergy although both laity and clergy did later pay it. Many clergy paid a lump sum in fine. It was collected by a means similar to the levy of 1188, although by teams of special justices sent to each county, with as many as 14 reported for Lincolnshire. It seems to have raised about £60,000 [Mitchell, 1914, pp. 84-92; Warren, 1987, pp. 148-149]. A separate Exchequer of the Thirteenth was established to collect the tax although no overall accounts survive. There are some references in the Pipe Roll of the main Exchequer for Michaelmas 1207 [Jurkowski et al., 1998, p. 8]. The penalty for refusing to comply with procedures was forfeiture of chattels and indefinite imprisonment. The Archbishop of York, for example, was forced into exile and his lands seized for opposing the tax [Mitchell, 1951, p. 8].

This tax of 1207 was an important step away from feudal taxation towards national taxation. It was levied against an unspecified future need, on property not land, and paid by most classes of society, excepting some clergy. It was collected nationally by royal justices, using the vill and a form of self-assessment. It was legitimized because it had been agreed with a council of barons who represented the community in general that would suffer it. Unlike the county farm, which was payable in installments, and special levies (e.g., scutages and tallages) which, although due all at once, were paid over a period of time, the 1207 tax on movables was designed for immediate collection in full. "The county commissioners were to deliver the rolls of assessment to the sheriff every two weeks and the collection was to be made with all possible haste" [Jurkowski et al., 1998, p. 105]. Harriss [1975, p. 18] comments that "the language of the writ for the levy of the thirteenth in 1207 was more national than feudal in tone," while Maddicott [1997, p. 24] explicitly refers to it as "heavy national taxation" and sees it, in conjunction with John's more frequent scutage levies, as a measure which "extended the social and fiscal range of royal government" and at the root of clause 14 of the original Magna Carta.

Other (Incidental) Income: After 1194, Richard had increasingly exploited incidental revenue sources and fines relating to feudal incidents. John continued these practices but took them to extremes. Many of the examples cited by historians fall firmly into the period after 1204-05. Under John, fines were "imposed arbitrarily...and cynically developed...into a financial straightjacket intended to control the 'loyalty' of the barons" [Barratt, 2001, p. 653]. A particular method used by John to control his tenants in this way was by keeping them, or encouraging them to become, indebted to the Crown [Barratt, 1999, p. 77]. Warren [1997, p. 182] lists ways in which tenants might get into the Exchequer's toils. A man might commit a misdemeanor, such as allowing an outlaw to escape, making a false claim, or putting a fish weir in a river without the king's permission. He might be amerced (fined) for the offense. Usually the amount of his amercement would be assessed by his peers in the king's court, but John would prefer to have the tenant buy his goodwill at exorbitant rates. Warren [1997, p. 182] cites the instance of Roger de Cressi marrying an heiress without the king's permission. John seized the lands of both until Roger came to make his peace. It cost him 1,200 marks and 12 palfreys[32] (horses) to obtain the king's goodwill and regain his lands. As he was constantly moving about his kingdom, John could detect even small transgressions; for example, in 1210, Robert de Vaux was obliged to give the

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[32]Latimer [1999, p. 52] comments that "[i]n the twelfth and thirteenth centuries, when a good war-horse might cost over one hundred times as much as a plough-horse, a horse was anything but just a horse. … Outside of agriculture a broad range of types of horses occurs in the sources: pack- or sumpter-horses; rounceys; palfreys; hunters; chasers; destriers, and many beasts of widely differing value, described unhelpfully as 'horses'." The palfrey is significant, however, because "as the staple riding-horse of lords, knights and officials, it constituted a normal and important expense for the upper ranks of society."

king five palfreys "to keep quiet about the wife of Henry Pinel"[33] and to pay 750 marks for goodwill.

Generally, sums due in respect of feudal incidents were more than tenants could pay at any one time. Thus, they would become the king's debtors, often for many years, which gave the king financial power over them, especially since he required their estates pledged formally to the Exchequer. A debtor who defaulted could have his lands forfeited as, for example, the Earl of Leicester between 1207 and 1215. Allied to this notion was the use of financial resources to reward friends and followers. For example, an heiress might be given as wife instead of an individual having to pay the king for the right to marry her or a wardship might be similarly granted [Church, 1995, pp. 288-289]. Many persons in debt had recourse to Jewish money lenders but this solution was not necessarily an escape. There was the interest to pay and if a money lender died, the Crown was automatically heir.

John seemed to use these powers to cripple individuals financially simply because they were powerful or because he had become suspicious of them. William de Briouze had flourished under John, but died in exile in 1211 after being driven from his lands and from the country as a result of John's disfavor. His wife and son died in one of John's prisons, starved to death despite an offer of a ransom of 40,000 marks. Since every chronicle of the period contains a reference to this story [Warren, 1997, p. 185], it must have caused a very deep impression at the time.

Church Revenues: In consequence of John refusing to accept Stephen Langton[34] as Pope Innocent III's appointee to the see of Canterbury after the death of Hubert Walter, England was put under a papal interdict which lasted from 1208 to 1214. This meant that England was cut off from the influence and benefit of all religion. At a time when Catholicism was the predominant faith in Europe and the Pope wielded immense power over the entirety of the Christian world, the significance of the interdict should not be underestimated. Notwithstanding the seriousness

[33]Warren [1997, p. 182], citing Pipe Roll 12 John

[34]John's refusal was not unreasonable per se. Langton was the Pope's appointee, preferred because he would carry out Innocent III's planned religious reform program. It was usual, however, for monarchs to have appointed to such key positions a person whom they themselves wanted. John had a far from ineligible candidate of his own in John de Gray, his own secretary and Bishop of Norwich, who was well known in England whereas Langton was not [Warren, 1997, pp. 160-163].

of the interdict in religious terms, John moved quickly to exploit the financial opportunities it presented. Almost immediately after the interdict was declared, royal officers moved in to seize church property [Harper-Bill, 1999, p. 306]. John let it be known that the clergy could only regain it if they paid for the privilege, although even then the king retained some portion of the church revenues [Warren, 1997, pp. 167-168]. It would appear that the Angevin[35] rulers in general were well aware of the financial resources of the Church although Harper-Bill [1999, p. 303] comments that "John was probably no more assertive or rapacious in his relationship with the Church before 1205, and even before 1208, than his royal predecessors." However, the presence of Walter as Archbishop of Canterbury in the period before his death in 1205 would have deflected royal attention away from church property and revenues.

John's finances were immensely increased in the years of the interdict, with profits from bishoprics taken in hand amounting to £9,275 in the year 1212 alone [Bartlett, 2000, p. 405]. However, he was not dissuaded from levying other taxes. It is not really possible to estimate exactly how much the church revenues brought in [Warren, 1997, p. 168]. If church lands fell vacant because of the death of an abbot, John took them in hand. In all, 17 monasteries had suffered this fate by 1213 [Warren, 1997, p. 173]. The disquietude prompted by the king arrogating church lands in such a way resonates in Magna Carta clause 46, which states that an abbey founded by barons under charter or of which they have had long tenure "shall have custody in a vacancy, as [it] ought to have."

The interdict, though profitable for John, could not last forever. The barons, however, did not object as money was coming into the king's coffers "without drawing a single penny from their own" [Norgate, 1902, p. 128]. Nonetheless, many of John's officials were drawn from the clergy so that the longer the interdict lasted, the more uncomfortable they became with their dual position as servants of Crown and Church. Moreover, subservience, rather than otherwise, to the Church of Rome was

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[35]"Angevin" is a term used to describe the line of kings directly descended from Geoffrey Plantagenet, Count of Anjou, and his wife Matilda (sometimes called Maud), the daughter of Henry I. Hence, Henry II, Richard I, John, and sometimes John's son, Henry III, are often referred to as Angevins. However, because of their descent, they are also seen as the first in the line of Plantagenet kings, and there is no hard and fast rule about terminology. Henry III too is often referred to as Plantagenet, although it would be unusual to find any king after Henry III being referred to as Angevin.

the norm. It cost John 100,000 marks to end the interdict in 1214, 40,000 before it was lifted and 12,000 per year thereafter. Of the 40,000 marks, 13,000 were pardoned [Warren, 1997, p. 210]. Even then, John took a tallage to raise the revenue to pay the remainder.

Taken together, the changes in the way taxes, broadly defined, were raised after 1204-05 represent a marked departure from previous practice. No doubt this was in part the result of the loss of Normandy in 1204, which created for John a fiscal exigency requiring increased funds. Moreover, the death of Walter in 1205 removed any moderating influence in John's revenue-raising strategies. However, John's increasing defiance of custom and practice in his fiscal impositions led to resistance which culminated in the baronial rebellion and the demand for a charter of liberties. It is to the outcome of this struggle that the next section of the paper turns.

MAGNA CARTA[36]

Although the interpretation of the Magna Carta as a document of constitutional significance should not be underestimated, its original intent was not to lay down basic constitutional freedoms or to be a statement of law. Rather, it was primarily intended as a remedy for specific grievances, especially financial ones. Indeed, the 25 leading barons who acted as surety for the agreement and who were involved in its drafting all had grievances against John. Stephen Langton, the chief negotiator and "deal-broker," for instance, had been kept out of the lucrative office of Archbishop of Canterbury for the entire period of the papal interdict. Although the document has explicit references to the need for due process in its 61 wide-ranging clauses, these usually relate to financial matters. The implicit suggestion that the consent of parties involved in such matters be required should not be taken to have a wider meaning than the immediate context implies [see Maddicott, 1997, pp. 17, 22, on clause 14 of the original document]. The document primarily seeks to limit the financial power of the king.

If one looks at the specific clauses in the document in the light of John's exactions detailed in this paper, the nature of the document as a rebellion against financial grievances becomes very visible. For example, in the context of the county farm,

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[36]An easily accessible version of the complete document is available on the British Library website at http://www.bl.uk/treasures/magnacarta/magna.html.

clause 25 initially renounced the increments imposed by John, although this concession was omitted from re-issues. The issue became contentious again under Henry III [Warren, 1987, p. 153, citing Maddicott, 1984, pp. 28-30, 44-46]. The resentment seems not only to be concerned with John's development of the *proficuum* but to have extended back to the original increment. What was once acceptable, now as a result of John's extreme measures, became unacceptable.

John's exploitation of the royal forest was harsh enough to merit specific clauses in the Magna Carta (44, 47, 48, and 53). In particular, clause 47 disforests all areas which John had in his time designated as forest. Indeed, one of the original demands of 1215 was that the forest be reduced to the boundaries that existed at Henry I's coronation. John probably did not extend forest boundaries as much as his forebears had done, but as Warren [1997, p. 152] comments, "perhaps he had no need to: he made a lot of money out of what there was."

Scutage is directly referred to in Magna Carta, clause 12 where it is stated that no scutage shall be taken unless by common counsel, unless for ransom, making the king's eldest son a knight, or marrying the king's eldest daughter. Clause 14 also requires "common counsel" also in assessing an aid (form unspecified) and scutage. Clause 14 goes on to specify that "common counsel" comprised archbishops, bishops, abbots, earls, greater barons, and major tenants, with proper summons and notice being given. Clause 15 likewise prevents anyone levying an "aid" from his own freedmen. The implication here is that John had been attempting to levy scutage, if not at will, at least for unacceptable reasons. Table 1 shows that the rates in 1211 and 1214 were higher than anything previously levied.[37] The comments made above about fines "*ne tranfretent*" and "*pro passagio*," are indicative of the unpopularity and expense of providing for the king's overseas campaigns [Harvey, 1970]. Not surprisingly, clause 12 of Magna Carta indicates that demands for scutage should be agreed by all where imposed for military purposes, an indication of how strongly those affected by it felt.

Relevant here is the citation by Mitchell [1914, pp. 23-24] of instances of apparent double exaction since scutage was paid by individuals whose knights did go on expedition with the king.

[37]Henry II levied scutage six times in his 35-year reign at rates of one and two marks and 20 shillings per fee. Richard I levied the tax four times in his ten-year reign at rates of ten or 20 shillings per fee [see Barratt, 1999, p. 637, 2001, p. 839].

Although his knights were with the king, the Abbot of Ramsey paid eight marks on his four fees,[38] as did the Bishop of Winchester.[39] Similarly, the Earl of Devon had knights in the king's service and paid 30 marks scutage.[40] It seems generally true that tenants who performed their service received writs of quittance, and were therefore not to be held liable for scutage. However, if the tenant had fees which were in a different county, there might be a delay to the issue of a writ of quittance and on this pretext scutage levied. Clause 16 of Magna Carta stated that no one shall be compelled to do greater service than is due in respect of their land holding, strongly suggesting that "double service" (paying money and going on campaign) occurred frequently enough to be resented.

In terms of incidental income, clauses 10 and 11 of Magna Carta refer explicitly to the treatment of those who might die with debts remaining unpaid to Jewish money lenders. These clauses specified that the heirs shall not pay interest while under age, and if the debt falls into the king's hands, he will only reclaim the principal. A widow would retain her dowry in such circumstances, and after provision for minor children, debts were to be paid out of the residues of the estate. The need to re-establish protection against such practices suggests the presence of considerable exploitation of these situations. Similar rights were extended to different ranks of society who died in debt, although not necessarily to Jewish money lenders (clauses 26 and 27 refer to holders of lay fiefs and freedmen respectively).

There are several references in Magna Carta to amercements and determinations of their proper imposition on various types of individuals and appropriate rates (clauses 20, 21, and 22). Clause 55 details a procedure to deal with amercements and fines imposed unjustly by the king against the law of the land. As mentioned above, the royal court dispensing justice was peripatetic in John's reign, but Magna Carta Clause 17 established a fixed place for common pleas (suits concerning real property). Clauses 18, 19, 24, 32, 34, 36, 38, 39, and 54 likewise established procedures for other assizes and legal procedures so that they were not dependent necessarily on the king's presence or whim. Clause 40 explicitly agreed that the king would not sell, delay, or refuse justice to anyone. It is significant that the selling of justice has foremost mention in this clause.

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[38]Pipe Roll, 1 and 7, John, Cambridgeshire and Huntingdonshire

[39]Pipe Roll, 2 John, Hampshire, m. 7 d

[40]Pipe Roll, 1 John, Devon, m. 14 d; 2 John, Devon

The references in Magna Carta to feudal incidents are numerous. Clauses 2 and 3 refer to inheritance "taxes," standardizing the amount of "reliefs" payable at "old" rates by an heir who was of age to succeed to his father's title and lands. An underage heir, when reaching adulthood, would not have to pay a relief or fine. Clauses 4 to 8 refer to matters consequent on the death of a tenant-in-chief. Guardians of underage heirs should be accountable for their activities and should not be allowed to enrich themselves at the expense of those whose property they held in trust. Heirs should not be sold in marriage by the king to the highest bidder but allied to one of similar social standing. A widow should regain her dowry as of right, be allowed a period of residence in her former home, and not be compelled to marry against her will. The placing of these clauses at the beginning of the document indicates the significance of these issues to the barons.

In this context, it is not then surprising to find clause 9 of the Magna Carta saying that land cannot be seized for debt if a debtor's chattels are sufficient to pay the debt. Clause 49 allowed that hostages and charters given to the king by Englishmen should be returned. The king promised in clauses 58 and 59 that nobly born and royal Welsh and Scottish hostages would be returned. Clause 52 likewise promises to return lands, castles, franchises, and "right" to anyone "dispossessed or removed" by the king "without legal judgement of his peers," including Welshmen (clauses 56 and 57). It seems clear that John had his own "strong arm" retainers who gained unsavory reputations for enforcing his will in circumstances such as these, men such as the relations of Gerard d'Athée and others named in clause 50, who were to be removed from their bailiwicks, along with foreign knights and men-at-arms (clause 51). The presence of foreigners acting as advisers to the king caused considerable unrest and resentment, a not unexpected reaction among high ranking families who had been used to Walter's subtleties and diplomacy. Prevention of such strong-arm tactics is also inherent in clauses such as 28 and 30 which refer to the seizure of goods and chattels without payment or permission of their owners.

CONCLUSION

John's reign is important in tax history for two main reasons. On the one hand, the development of the notion of consent to, and legitimacy of, taxation, which arose from perceived extortion and the "innovative" over-use of measures to raise revenue is evident. On the other hand, the need for more regular taxation to provide funds to run government heralded the beginnings of a process of transition from a domain-based to a tax-based state. The need to derive additional revenue from sources such as taxation, and not wholly from assets under a ruler's personal control, to finance military and other ambitions and to administer increasingly complex machinery of government, moved the state increasingly towards being tax-based. The combined result of these simultaneous developments makes John's reign immeasurably significant from a taxation perspective.

We have argued that the nature of the changes in revenue collection under John can be divided into two distinct periods. The first, from his accession in 1199 until the loss of Normandy and death of Walter in 1204-05, is a period in which moderate increases in the scope and rates of taxes were generally evident. Subsequently, until Magna Carta in 1215, a different pattern of taxation emerges, with more radical changes in both the nature and extent of the exactions prompting considerable resentment. Taxes illegitimately imposed by John were considered extreme and therefore extortion. In response, there was a growing recognition that taxation needed to be justified and could not be imposed merely by the will of the king; the consent of those taxed was required. The need for regulation was shown particularly in "the thirteenth" of 1207 and later scutages. The resentment inherent in the development of the Magna Carta's clauses is a clear response to a perceived arbitrary and punitive imposition of taxes, as well as unregulated actions in respect of goods and property. In such circumstances, the remarkable thing is that the Magna Carta took so long to happen. Walter's influence in initially developing and applying John's fiscal measures may explain this development in part. That his contemporaries were glad to be free of John is evident in the remark of the chronicler, Gerald of Wales, who commented on the yoke of slavery being lifted by his death. The chains were clearly financial ones [Bartlett, 2000, p. 66].

In the course of John's reign, attempts occurred to increase royal revenues, both ordinary and extraordinary, by almost any means possible. John had several reasons for requiring additional finance – the loss of Normandy and its revenues; continued wars with France; the need to pay more officials to administer government; continuation of his predecessor's policies, such as castle maintenance; inheriting a realm already depleted by the Third Crusade and the ransom paid for Richard; and, most probably, personal greed. All contemporary sources seem to agree on this personal trait of John. It is possible to track these attempts, in part because of the increased record keeping which evolved in the 12th century, itself a significant feature of the age. It was necessary to keep track of increasingly complicated tax assessment and collection mechanisms, such as for the *proficuum* or the attempt to introduce carucage. There is a wealth of records, such as the Pipe Rolls, for John's reign in comparison with those of earlier monarchs. While their survival may be a happy accident, it seems clear that there were more produced. The records simultaneously kept track of financial material and facilitated the development of the tax system. These records underlie the interpretation of Magna Carta posited in this paper. The significance we have attributed to Magna Carta as essentially an attempt to remedy fundamental grievances resulting from John's revenue-raising activities extends understanding of a key period of medieval financial history.

The period is also important, as our examination of John's fiscal policies reveals, because of the change that came about in the nature of taxation, from feudal dues to taxes that had a national character. They were increasingly levied on property other than land and so applied to a wider cross section of society. This new direction is evident not only from the attempt to develop carucage as a replacement for danegeld, but from the increasing frequency with which taxes such as scutage and taxes on movables were levied. Scutage before John had been used to provide actual men-at-arms for war. Under John, it was increasingly levied as money, with the use of the fine being developed to allow the tax gathered from tenants-in-chief to be recouped from sub-tenants, thus widening the scope of the tax. John also endeavored to levy tax for unspecified future needs, as in the case of "the thirteenth" in 1207 and the later scutages. These attempts to raise tax for general, as opposed to specific, purposes were an important step towards distinguishing the economic needs of the state from those of its ruler. However, the resentment prompted by these attempts shows the difficulties inherent in this concept; the attempts were viewed as extortion, not as efforts to put the state on a sound financial footing. Changes on such a scale, which represented such a marked departure from previous practices and objectives, were always likely to stimulate considerable resistance. How far that resistance could have been ameliorated by the political management skills of Hubert Walter is a moot point. What is clear is that without such restraining influence, John's increasingly exploitative tax policies were always likely to exacerbate it. This resistance and the resulting settlement negotiated with John by the barons, embodied in Magna Carta, created precedents for the use of taxation which had profound effects on all subsequent revenue-raising activities.

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ACADEMY OF ACCOUNTING HISTORIANS

Margit F. Schoenfeld and Hanns Martin W. Schoenfeld Scholarship in Accounting History

The Academy of Accounting Historians invites applications for the inaugural *Margit F. Schoenfeld and Hanns Martin W. Schoenfeld Scholarship in Accounting History*, 2008.

The purpose of the scholarship is to encourage and support research on the history of accounting by doctoral students and recently appointed accounting faculty. The scholarship was initiated by the generous gift of Dr. Hanns Martin Schoenfeld and the late Dr. Margit Schoenfeld in recognition of their belief in the importance of historical scholarship to accounting education and research.

In 2008 an award of $3,000 is available to support research on a doctoral dissertation, or develop publications proceeding therefrom by a recent PhD graduate. Qualifying research topics should address the history of accounting. Projects of an international nature and those pursued by scholars whose first language is not English are particularly invited.

The recipient(s) of the scholarship will be determined by the Schoenfeld Award Committee, comprising the President of the Academy of Accounting Historians (Chair), the editor of *The Accounting Historians Journal* and Dr Hanns Martin W. Schoenfeld. The Committee has the capacity to share the award equally between two worthy candidates or to make no award in any one year.

Applicants must be currently enrolled for a PhD by research, or have completed a PhD by research within the last five years. Applicants should submit a full *curriculum vitae* and a statement (containing a maximum of 1,000 words) which discusses the doctoral research undertaken on the history of accounting, the stage reached and how the award would prove beneficial to the applicant. A short statement from a supervisor should also be submitted in the case of applicants currently enrolled for a PhD.

Applications should be submitted to: Stephen Walker, President, Academy of Accounting Historians, Cardiff Business School, Cardiff University, Aberconway Building, Colum Drive, Cardiff, CF10 3EU, Wales, UK. Email: Walkers2@cardiff.ac.uk.

The closing date for the receipt of applications is 31 December 2007.

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AN ANALYSIS OF THE EVOLUTION OF RESEARCH CONTRIBUTIONS BY *THE ACCOUNTING REVIEW*, 1926-2005

Abstract: In her presidential message to the American Accounting Association (AAA) in August 2005, Judy Rayburn discussed the issue of the relatively low citation rate for accounting research compared to finance, management, and marketing. Rayburn concluded that accounting's low citation rate was due to a lack of diversity in topics and research methods. In this paper, we provide a review of the AAA's flagship journal, *The Accounting Review* (*TAR*), following its 80 years of publication, and describe why some recent AAA leaders believe that significant changes should be made to the journal's publication and editorial policies. At issue is whether scholarly accounting research is overly focused on mathematical analysis and empirical research, or "accountics" as it has sometimes been called, at the expense of research that benefits the general practice of accountancy and discovery research on more interesting topics. We conclude from our review of *TAR* that after mostly publishing research about accounting practices for the first 40 years, a sweeping change in editorial policy occurred in the 1960s and 1970s that narrowly defined scholarly research in accounting as that which employs accountics.

INTRODUCTION

In 2005, the American Accounting Association (AAA) reached a milestone having published its quarterly flagship journal, *The Accounting Review* (*TAR*), for 80 years. The content of *TAR* has changed in overlapping phases over those 80 years, especially in the years since Chatfield [1975] published a review on the occasion of *TAR*'s 50th anniversary. Heck and Bremser [1986] subsequently published a more statistical review of *TAR*'s

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first 60 years. *TAR* was, and still is, one of the world's leading accounting research journals. However, now in its 81st year of existence, AAA leadership is questioning the focus of research published therein. In her presidential message at the AAA annual meeting in San Francisco in August 2005, Judy Rayburn addressed the low citation rate of accounting research compared to research in other fields. Rayburn [2006, p. 4] concluded that this low citation rate reflected a lack of diversity in topics and research methods:

> Accounting research is different from other business disciplines in the area of citations: top-tier accounting journals in total have fewer citations than top-tier journals in finance, management, and marketing. Our journals are not widely cited outside our discipline. Our top-tier journals as a group project too narrow a view of the breadth and diversity of (what should count as) accounting research.

The purpose of this paper is to review the evolution of *TAR* over its 80-year existence and to illustrate how the perceptions of what it means to be a "leading scholar" in accounting changed after a monumental shift in editorial policy in the 1970s. While *TAR* served accountancy teachers, practitioners, and standard setters of the profession in its first 40 years, it gradually changed in ways that mirrored other academic journals, according to McLemee [2006, quoted later in this paper].

In the opinion of some, *TAR* has evolved into a journal that is incomprehensible and, thus, of little interest to practitioners and many accounting educators [Flesher, 1991, p. 169]. While professions like medicine, finance, and economics have benefited from seminal ideas first published in academic literature, it is difficult to trace innovations in accounting practice to research published in scholarly journals. For example, many articles on activity-based costing (ABC) do appear in accounting research journals, but the idea for ABC costing started at the John Deere Company. Most other innovations in the profession, like dollar-value LIFO, can ultimately be traced back to the accounting industry rather than to academe [Jensen, 2006a]. The harvests of "discovery research" in the accounting academy have been called into question by the practicing profession.

Ittner and Larker [2001] conducted a review of studies in managerial accounting and concluded that existing research was practice-oriented and tended to focus mainly on management fads. Case studies and field-based surveys were purportedly shallow and not scientifically investigated. The main criticism was that results defied generalization. Zimmerman [2001, p. 412] followed up by conjecturing with respect to the literature's atheoretical approach:

> It has been 15 years since Kaplan … called for more field-based research. Although much field research has been published during this period, it has not led to the theory building and testing envisioned. Wandering the halls of corporations without tentative hypotheses has not been fruitful.
>
> Empirical researchers should use economics-based hypotheses and emphasize the control function of accounting. The shift towards consulting-like, practice-oriented research will cause less theory development and hypotheses testing research to be conducted and all areas of accounting inquiry will suffer.

Martin [2001] countered by questioning the value of the contributions of theoretical economics applications preferred by leading academic accounting research journals:

> See Kaplan 1998 and Jones & Dugdale who report that contributions such as the development of ABC were not authenticated by mainstream accounting journals or professional organizations. Instead management consultants at Harvard and CAM-I had a pivotal role. So the question can be turned around. What are the major contributions from what Zimmerman refers to as the mainstream North American accounting journals?

Especially during the 1986-2005 period, *TAR* editors rejected virtually all "consulting-like, practice-oriented research." We examined all articles published by *TAR* between 1986 and 2005 and found over 99% of *TAR*'s articles (excluding book/literature reviews, editorials, and memorials) contained complex mathematical equations and multivariate statistical analyses of a narrow subset of topics amenable to analysis using mathematics, management science, econometrics, and psychometrics. More traditional normative, historical, AIS, and case-method studies all but disappeared from *TAR*. Other top accounting research journals were changing as well and became virtually equivalent to the new *TAR* [Dyckman and Zeff, 1984]. Because advancement of faculty in top schools required publishing in top-tier journals [Langenderfer, 1987, p. 303], it became imperative over the past three decades for doctoral programs and their graduates to focus more narrowly on accountics as preferred by *TAR* and other top-tier accounting research journals.

Initially we point out trends since Heck and Bremser [1986] analyzed the first 60 years. Leading authors across the entire 80-year history of *TAR* are shown in Table 1. The number of appearances is adjusted proportionately by the number of co-authors on each published paper.

TABLE 1

Most Frequently Appearing Authors in *The Accounting Review*, 1926-2005

Rank	Author	Appearances	Adjusted Appearances	Rank	Author	Appearances	Adjusted Appearances
1	Littleton, A.C.	40	38.80	45	Ashton, Robert H.	9	7.00
2	Bierman, Harold, Jr.	20	18.33	46	Abdel-Khalik, A. Rashad	9	6.83
3	Paton, William A.	20	15.61	47	Kaplan, Robert S.	9	6.83
4	Kohler, E.L.	17	15.17	48	Krebs, William S.	9	6.54
5	Demski, Joel S.	17	11.67	49	Ijiri, Yuji	9	6.50
6	Murphy, Mary E.	16	16.00	50	Dopuch, Nicholas	9	6.00
7	Avery, Harold G.	16	15.50	51	Hatfield, Henry R.	9	6.00
8	Mautz, Robert K.	16	13.50	52	Lev, Baruch	9	5.83
9	Dohr, James L.	14	13.50	53	Wildman, John R.	9	5.10
10	Kerrigan, Harry D.	14	13.50	54	Briggs, L.L.	8	8.00
11	Greer, Howard C.	13	12.17	55	Chambers, R. J.	8	8.00
12	Scott, DR	13	12.17	56	Devine, Carl Thomas	8	8.00
13	Taggart, Herbert F.	13	11.64	57	Garner, S. Paul	8	8.00
14	Horngren, Charles T.	13	10.83	58	Moyer, C.A.	8	8.00
15	Revsine, Lawrence	13	9.67	59	Stettler, Howard F.	8	8.00
16	Mason, Perry	12	12.00	60	Davidson, Sidney	8	7.50
17	Husband, George R.	12	11.33	61	Myers, John H.	8	7.50
18	Lorig, Arthur N.	12	11.33	62	Raby, William L.	8	7.50
19	Bedford, Norton M.	12	.50	63	Newlove, G.H.	8	7.11
20	Cooper, William W.	12	5.92	64	Usry, Milton F.	8	7.00
21	Campfield, William L.	11	11.00	65	Rappaport, Alfred	8	6.50
22	Singer, Frank A.	11	11.00	66	Deakin, Edward B.	8	6.33
23	Scovill, Hiram T.	11	9.83	67	Chow, Chee W.	8	5.17
24	Kinney, William R., Jr.	11	7.67	68	Jaedicke, Robert K.	8	5.17
25	Manes, Rene Pierre	11	7.33	69	Decoster, Don T.	8	5.00
26	Beaver, William H.	11	6.83	70	Feltham, Gerald A.	8	4.83
27	Bowers, Russell	10	10.00	71	Sorter, George H.	8	4.83
28	Graham, Willard J.	10	10.00	72	Verrecchia, Robert E.	8	4.83
29	Simon, Sidney I.	10	10.00	73	Ronen, Joshua	8	4.67
30	Smith, Frank P.	10	10.00	74	Neter, John	8	4.58
31	Staubus, George J.	10	10.00	75	Larcker, David F.	8	3.83
32	Moonitz, Maurice	10	9.00	76	Nelson, Mark W.	8	3.67
33	Perry, Kenneth W.	10	9.00	77	Boatsman, James R.	8	3.25
34	Rorem, C. Rufus	10	8.61		31 Authors with	7	
35	Zeff, Stephen A.	10	8.50		45 Authors with	6	
36	Mckeown, James C.	10	6.33		72 Authors with	5	
37	Benninger, Lawrence J.	9	9.00		117 Authors with	4	
38	Stone, Williard E.	9	9.00		234 Authors with	3	
39	Van Voorhis, Robert H.	9	9.00		510 Authors with	2	
40	Vance, Lawrence L.	9	9.00		1827 Authors with	1	
41	Vatter, William J.	9	9.00				
42	Castenholz, William B.	9	8.50		Total Authors	2913	
43	Howard, Stanley E.	9	8.50		Total Appearances	5696	
44	Morey, Lloyd	9	8.25		Total Articles	4209	

Heck and Bremser [1986] showed that leading academic authors, such as Littleton, Bierman, and Paton, along with practitioners like Kohler, tended to dominate authorship in the early years of *TAR*. We added Table 2 to show that across four 20-year intervals, there has been a dramatic downturn in the probability that an author will have five or more *TAR* appearances over two decades. We find a much higher turnover of authors in recent years.

TABLE 2

Author Appearance Trends (as a Percentage of All Appearances) in *The Accounting Review*, 1926-2005

	3 or More	4 or More	5 or More
1926-46	22.8%	12.4%	8.4%
1946-65	19.5%	10.9%	5.6%
1966-85	12.4%	7.3%	4.5%
1986-05	14.5%	6.0%	0.2%
1926-05	19.8%	11.7%	7.7%

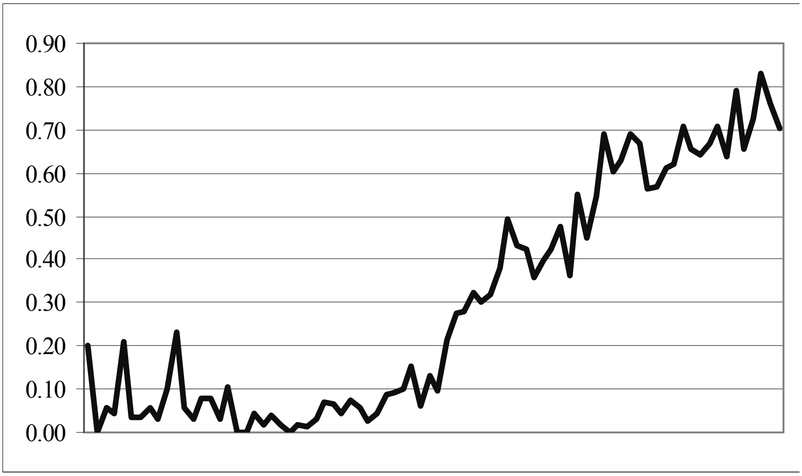
We expected that the rise in joint authorship might have increased the probabilities of particular authors to have five or more appearances, but this expectation turned out not to be the case. Joint authorship was almost nonexistent in the early years, but its incidence exploded in later years, as shown in Figure 1. This pattern is consistent with the findings of Heck et al. [1990, 1991] for multiple accounting research journals.

Table 2 outcomes indicate that joint authorship has not increased the probability of any one author having more than five appearances across two decades of time. We speculate that this is in large measure due to the fact that the "leading authors" in the past 20 years increasingly spread their papers among other research journals. *TAR* no longer holds the monopoly it once had as the only premiere journal of academic accounting research. But we also suspect that the actual reasons for this decline in probabilities are more complicated. Appearances in *TAR* have become much more competitive with the explosion in the proportion of capital-markets, accountics studies submitted to *TAR* by more and more accounting faculty.

Although the number of accounting doctoral programs in the U.S. approaches one hundred in recent years, there is a persistent set of doctoral-granting universities whose faculties have

FIGURE 1

Trend in Joint Authorship of TAR Articles, 1926-2005



published most frequently in *TAR* every decade even though individual authors have a much higher rate of turnover in those universities. See Table 3 for a listing of those universities employing the most frequent *TAR* authors for both the journal's entire 1926-2005 history and the most recent decades.

In Table 3, 16 universities are consistently in the top 30 and 12 universities are consistently in the top 20. In recent decades of intensive accountics, Pennsylvania roared out of nowhere from 1966-1985 to rank third in 1986-2005. Southern California, Notre Dame, Columbia, Arizona, Duke, and North Carolina made noteworthy jumps into the top 20 employers of *TAR* authors. Purdue, Georgia, and Kansas made brief appearances in the 1966-1985 decades but then faded from the top.

Two universities appearing in Table 3 are worthy of special comment. Harvard has an excellent reputation in managerial accounting but has never been a noted leader in accountics. It did not make the Table 3 top 30 over the last 40 years of *TAR* publishing. At the opposite extreme, the University of Rochester is a noted leader in accountics but is not in the top 30 in the last 40 years of *TAR*. We suspect the reason is that Rochester's accounting professors are fewer in number and prefer to publish accountics research in their own *Journal of Accounting and Economics* and in Chicago's *Journal of Accounting Research*.

We analyze the outcomes of doctoral students who graduated from those same programs later in this paper in Table 5.

TABLE 3

Most Frequently Appearing Institutions in *The Accounting Review*, 1926-2005

Period: 1926-2005				Period: 1966-1985				Period: 1986-2005			
Rank	Institution	Appear-ances	Adjusted Appear-ances	Rank	Institution	Appear-ances	Adjusted Appear-ances	Rank	Institution	Appear-ances	Adjusted Appear-ances
1	Illinois	272	224.94	1	Texas	78	51.08	1	Indiana	45	19.17
2	Texas	158	106.08	2	Illinois	50	33.83	2	Texas	43	21.50
3	Michigan	123	95.67	3	U. Washington	44	29.83	3	Pennsylvania	41	19.83
4	Chicago	118	92.67	4	Stanford	43	29.33	4	Michigan	34	23.17
5	UC Berkeley	109	93.67	5	Penn State	41	28.00	5	Cornell	34	17.17
6	U. Washington	105	75.33	6	Chicago	40	30.42	6	U. Washington	31	17.67
7	Michigan State	104	72.33	7	Michigan State	40	26.00	7	Iowa	30	14.33
8	Northwestern	102	74.17	8	Northwestern	37	24.42	8	Stanford	28	15.58
9	Stanford	99	68.58	9	Purdue	36	21.50	9	Illinois	26	13.50
10	Pennsylvania	93	68.83	10	Iowa	33	20.33	10	Southern California	26	11.50
11	Indiana	84	50.98	11	Michigan	31	21.83	11	Notre Dame	25	12.58
12	Penn State	76	55.75	12	NYU	31	19.67	12	Michigan State	25	11.33
13	Cornell	74	48.33	13	Carnegie Mellon	30	16.33	13	NYU	24	12.75
14	NYU	73	48.42	14	Cornell	28	20.33	14	Columbia	23	13.83
15	Columbia	72	57.77	15	Oklahoma State	27	18.50	15	Arizona	23	13.00
16	Iowa	69	40.67	16	Georgia	27	15.58	16	Chicago	21	13.25
17	Missouri	67	45.87	17	Wisconsin	25	16.17	17	Duke	21	10.58
18	Ohio State	66	49.31	18	Kansas	24	18.17	18	North Carolina	21	10.42

TABLE 3

Most Frequently Appearing Institutions in *The Accounting Review*, 1926-2005

(continued)

Period: 1926-2005				Period: 1966-1985				Period: 1986-2005			
Rank	**Institution**	**Appear-ances**	**Adjusted Appear-ances**	**Rank**	**Institution**	**Appear-ances**	**Adjusted Appear-ances**	**Rank**	**Institution**	**Appear-ances**	**Adjusted Appear-ances**
19	Wisconsin	63	41.75	19	Florida	24	17.67	19	Wisconsin	21	9.58
20	Carnegie Mellon	62	37.08	20	Arizona State	24	14.83	20	Florida	20	12.00
21	Southern California	59	39.81	21	UC Berkeley	22	20.67	21	Northwestern	20	11.83
22	UCLA	56	50.25	22	Missouri	22	17.33	22	Arizona State	20	9.50
23	Harvard	56	45.00	23	Virginia Tech	21	14.33	23	Baruch	20	9.17
25	Florida	56	41.67	25	North Carolina	20	14.33	25	UC Berkeley	18	11.33
25	Minnesota	53	33.00	25	Tel Aviv	19	7.67	25	Emory	18	9.17
26	North Carolina	50	33.25	26	Indiana	18	13.33	26	Missouri	18	8.17
27	Washington U.	50	32.91	27	Minnesota	18	9.33	27	Washington U.	17	10.83
28	Purdue	49	29.00	28	Massachusetts	17	12.67	28	Florida State	17	7.17
29	Arizona State	45	25.33	29	Ohio State	17	12.50	29	Ohio State	16	8.17
30	Rochester	44	33.00	30	South California	16	12.17	30	Hong Kong	16	7.67
	Arizona	44	27.33		Arizona	16	9.33		Texas A&M	16	6.75
	Georgia	44	24.75		SUNY Albany	16	8.5				
	Total All Authors	5,696			Total All Authors	1,834			Total All Authors	1,453	

Alma maters of frequent *TAR* authors are even more consistently in the top 20 than are the Table 3 rankings of employers.

TAR BETWEEN 1926 AND 1955: IGNORING ACCOUNTICS

Accountics is the mathematical science of values.
Charles Sprague [1887], quoted in McMillan [1998, p. 1]

Charles Sprague, an accounting professor at Columbia University (then called Columbia College), coined the word "accountics" in 1887. The word is not used today in accounting and has some alternative meanings outside our discipline. However, in the early 20th century, accountics was the centerpiece of some unpublished lectures by Sprague. McMillan [1998, p. 11] stated:

> These claims were not a pragmatic strategy to legitimize the development of sophisticated bookkeeping theories. Rather, this development of a science was seen as revealing long-hidden realities within the economic environment and the double-entry bookkeeping system itself. The science of acounts, through systematic mathematical analysis, could dicover hidden thrust of the reality of economic value. The term 'accountics' captured the imagination of the members of the IA, connoting advances in bookkeeping that all these men were experiencing.

By 1900, there was a journal called *Accountics* [Forrester, 2003]. Both the journal and the term "accountics" had short lives, but the belief that mathematical analysis and empirical research can "discover [the] hidden thrust of the reality of economic value" (see above) underlies much of what has been published in *TAR* over the past three decades. Hence, we propose reviving the term "accountics" to describe the research methods and quantitative analysis tools that have become popular in *TAR* and other leading accounting research journals. We essentially define accountics as equivalent to the scientific study of values in what Zimmerman [2001, p. 414] called "agency problems, corporate governance, capital asset pricing, capital budgeting, decision analysis, risk management, queuing theory, and statistical audit analysis."

The American Association of University Instructors of Accounting, which in December 1935 became the AAA, commenced unofficially in 1915 [Zeff, 1966, p. 5]. It was proposed in October 1919 that the AAA publish a *Quarterly Journal of Accountics*. This proposed accountics journal never got off the ground as leaders of the AAA argued heatedly and fruitlessly about whether accountancy was a science. A quarterly journal, *The Accounting Review*, was subsequently born in 1925, with its first issue published in March 1926. However, its accountics-like attributes did not commence in earnest until the 1960s.

Practitioner involvement, in large measure, was the reason for changing the name of the association to the AAA by removing the words "of University Instructors." Practitioners interested in accounting education participated actively in AAA meetings. *TAR* articles in the first several decades were devoted heavily to education and to accounting issues in particular industries and trade groups. Research methodologies were mainly normative (without mathematics), case study, and archival (history). Anecdotal evidence and hypothetical illustrations ruled the day. The longest serving editor of *TAR* was the practitioner Eric Kohler, who solely determined what was published in *TAR* between 1929 and 1943. In those years, when the AAA leadership mandated that *TAR* focus on the development of accounting principles, publications were oriented to both practitioners and educators [Chatfield, 1975, p. 4].

Following World War II, practitioners outnumbered educators in the AAA [Chatfield, 1975, p. 4]. Leading partners from accounting firms took pride in publishing papers and books intended to inspire scholarship among professors and students. Over the years, some practitioners, particularly those with scholarly publications, were admitted into the Accounting Hall of Fame founded by Ohio State University. Prior to the 1960s, accounting educators were generally long on practical experience and short on academic credentials, such as doctoral degrees.

A major catalyst for change in accounting research occurred when the Ford Foundation poured millions of dollars into the study of collegiate business schools and the funding of doctoral programs and students in business studies. Gordon and Howell [1959] reported that business faculty in colleges lacked research skills and academic esteem when compared to their colleagues in the sciences. The Ford Foundation thereafter provided funding for doctoral programs and for top-quality graduate students to pursue doctoral degrees in business and accountancy. The Foundation even funded the publication of selected doctoral dissertations to give doctoral studies in business more visibility. Great pressure was also brought to bear on academic associations like the AAA to increase the scientific standards for publications in journals like *TAR*.

TAR BETWEEN 1956 AND 1985: THE NURTURING OF ACCOUNTICS

A perfect storm for change in accounting research arose in the late 1950s and early 1960s. First came the critical Pierson Carnegie Report [1959] and the Gordon and Howell Ford Foundation Report [1959]. Shortly thereafter, the American Assembly of Collegiate Schools of Business introduced a requirement requiring that a certain percentage of faculty possess doctoral degrees for business education programs seeking accreditation [Bricker and Previts, 1990]. Soon afterwards, both a doctorate and publication in top accounting research journals became necessary for tenure [Langenderfer, 1987].

A second component of this perfect storm for change was the proliferation of mainframe computers, the development of analytical software (e.g., early SPSS for mainframes), and the dawning of management and decision "sciences." The third huge stimulus for changed research is rooted in portfolio theory, discovered by Harry Markowitz in 1952 as the core of his dissertation at Princeton, which was published in book form in 1959. This theory eventually gave birth to the Nobel Prize-winning Capital Asset Pricing Model (CAPM) and a new era of capital market research. A fourth stimulus was the availability of the CRSP stock price tapes from the University of Chicago. The availability of CRSP led to a high number of *TAR* articles on capital market event studies (e.g., the impact of earnings announcements on trading prices and volumes) covering a period of nearly 40 years.

This "perfect storm" roared into nearly all accounting and finance research and turned academic accounting research into an accountics-centered science of values and mathematical/statistical analysis. After 1960, there was a shift in *TAR*, albeit slow at first, toward preferences for quantitative model building – econometric models in capital market studies, time series models in forecasting, advanced calculus information science, information economics, analytical models, and psychometric behavioral models. Chatfield [1975, p. 6] wrote the following:

> Beginning in the 1960s the *Review* published many more articles by non-accountants, whose contribution involved showing how ideas or methods from their own discipline could be used to solve particular accounting problems. The more successful adaptations included matrix theory, mathematical model building, organization theory, linear programming, and Bayesian analysis.

TAR was not alone in moving toward a more quantitative focus. Accountics methodologies accompanied similar quantitative model-building preferences in finance, marketing, management science, decision science, operations research, information economics, computer science, and information systems. Early changes along these lines began to appear in other leading research journals between 1956-1965, with some mathematical modeling papers noted by Dyckman and Zeff [1984, p. 229]. Fleming et al. [2000, p. 43] documented additional emphases on quantitative methodology between 1966 and 1985. In particular, they noted how tenure requirements began to change and asserted the following:

> *The Accounting Review* evolved into a journal with demanding acceptance standards whose leading authors were highly educated accounting academics who, to a large degree, brought methods and tools from other disciplines to bear upon accounting issues.

A number of new academic accountancy journals were launched in the early 1960s, including the *Journal of Accounting Research* (1963), *Abacus* (1965), and *The International Journal of Accounting Education and Research* (1965). Clinging to its traditional normative roots and trade-article style would have made *TAR* appear to be a journal for academic Luddites. Actually, many of the new mathematical approaches to theory development were fundamentally normative, but they were couched in the formidable language and rigors of mathematics. Publication of papers in traditional normative theory, history, and systems slowly ground to almost zero in the new age of accountics.

These new spearheads in accountics were not without problems. It is both humorous and sad to go back and discover how naïve and misleading some of *TAR*'s bold and high-risk thrusts were in quantitative methods. Statistical models were employed without regard to underlying assumptions of independence, temporal stationarity, multicollinearity, homoscedasticity, missing variables, and departures from the normal distribution. Mathematical applications were proposed for real-world systems that failed to meet continuity and non-convexity assumptions inherent in models such as linear programming and calculus optimizations. Some proposed applications of finite mathematics and discrete (integer) programming failed because the fastest computers in the world, then and now, could not solve most realistic integer programming problems in less than one hundred years.

After financial databases provided a beta covariance of each security in a portfolio with the market portfolio, many capital market events studies were published by *TAR* and other leading accounting journals. In the early years, accounting researchers did not challenge the CAPM's assumptions and limitations – limitations that, in retrospect, cast doubt upon many of the findings based upon any single index of market risk [Fama and French, 1992].

Leading accounting professors lamented *TAR*'s preference for rigor over relevancy [Zeff, 1978; Williams, 1985, 2003; Lee, 1997]. Sundem [1987] provides revealing information about the changed perceptions of authors, almost entirely from academe, who submitted manuscripts for review between June 1982 and May 1986. Among the 1,148 submissions, only 39 used archival (history) methods; 34 of those submissions were rejected. Another 34 submissions used survey methods; 33 of those were rejected. One hundred submissions used traditional normative (deductive) methods with 85 suffering rejection. Except for a small set of 28 manuscripts classified as using "other" methods (mainly descriptive empirical, according to Sundem), the remaining larger subset of submitted manuscripts used methods that Sundem [1987, p. 199] classified as follows:

292	General Empirical
172	Behavioral
135	Analytical modeling
119	Capital Market
97	Economic modeling
40	Statistical modeling
29	Simulation

It is clear that by 1982, accounting researchers realized that having mathematical or statistical analysis in *TAR* submissions made accountics virtually a necessary, albeit not sufficient, condition for acceptance for publication. It became increasingly difficult for a single editor to have expertise in all of the above methods. In the late 1960s, editorial decisions on publication shifted from the *TAR* editor alone to the *TAR* editor in conjunction with specialized referees and eventually to associate editors [Flesher, 1991, p. 167]. Fleming et al. [2000, p. 45] wrote the following:

> The big change was in research methods. Modeling and empirical methods became prominent during 1966-1985, with analytical modeling and general empirical

methods leading the way. Although used to a surprising extent, deductive-type methods declined in popularity, especially in the second half of the 1966-1985 period.

We were surprised that there has been no reduction in accountics dominance in *TAR* since 1986 despite changes in the environment, such as the explosion of communications networking, interacting relational databases, and sophisticated accounting information systems (AIS).Virtually no AIS papers were published in *TAR* between 1986 and 2005. This practice was changed in 2006 by the appointment of a new AIS associate editor to encourage publication of some AIS papers that often do not fit neatly into the accountics mold. In an interesting aside, we note that the AAA has become a leading *international* association of accounting educators. Sundem [1987] reported that about 12% of the manuscripts submitted came from outside North America. The AAA is an international association that provides publication opportunities to all members; manuscripts are submitted from many parts of the world. In our opinion, this development has contributed significantly to the rise in accountics studies worldwide.

A major change at *TAR* took place in the 1980s with the creation of new AAA journals to relieve *TAR* of publishing articles that were less accountics-oriented. Prior to 1983, *TAR* was the leading academic journal for teachers of accounting as well as for practitioners. Numerous *TAR* papers appeared on how to improve accounting education and teaching. In an effort to better serve educators, the AAA created a specialty journal, *Issues in Accounting Education*, first published in 1983. A journal aimed more at issues facing practitioners was inaugurated in 1987, *Accounting Horizons* (*AH*). Around this time, the AAA also granted permission for specialty "sections" to be formed for sub-disciplines of accounting, resulting in additional new journals. These new journals allowed *TAR* to focus more heavily on quantitative papers that became increasingly difficult for practitioners and many teachers of accounting to comprehend.

Fleming et al. [2000, p. 48] report that education articles in *TAR* declined from 21% in 1946-1965 to 8% in 1966-1985. *Issues in Accounting Education* began to publish the education articles in 1983. Garcha et al. [1983] reported on the readership of *TAR* before any new specialty journals commenced in the AAA. They found that among their AAA membership respondents, only 41.7% would subscribe to *TAR* if it became unbundled in terms of dollar savings from AAA membership dues.

This suggests that *TAR* was not meeting the AAA membership's needs. Based heavily upon the written comments of respondents, the authors' conclusions were, in part, as follows [Garcha et al. [1983, p. 37]:

> The findings of the survey reveal that opinions vary regarding *TAR* and that emotions run high. At one extreme some respondents seem to believe that *TAR* is performing its intended function very well. Those sharing this view may believe that its mission is to provide a high-quality outlet for those at the cutting-edge of accounting research. The pay-off for this approach may be recognition by peers, achieving tenure and promotion, and gaining mobility should one care to move. This group may also believe that trying to affect current practice is futile anyway, so why even try?
>
> At the other extreme are those who believe that *TAR* is not serving its intended purpose. This group may believe *TAR* should serve the readership interests of the audiences identified by the Moonitz Committee. Many in the intended audience cannot write for, cannot read, or are not interested in reading the Main Articles which have been published during approximately the last decade. As a result there is the suggestion that this group believes that a change in editorial policy is needed.

After a study by Abdel-khalik [1976] revealed complaints about the difficulties of following the increased quantitative terminology in *TAR*, editors did introduce abstracts at the beginning of articles to summarize major findings with less jargon [Flesher, 1991, p. 169]. However, the problem was simultaneously exacerbated when *TAR* stopped publishing commentaries and rebuttals that sometimes aided comprehension of complicated research. Science journals are frequently much better about encouraging commentaries, replications, and rebuttals.

TAR BETWEEN 1986 AND 2005: THE MATURATION OF ACCOUNTICS

We pointed out earlier in Table 2 how the number of authors having five or more appearances in 20-year time spans has markedly declined over the entire 80-year life of *TAR*. Table 4 lists the most recent top authors for the 1986-2005 period. In contrast to the Heck and Bremser [1986] findings, the likelihood that any single author will have more than five appearances is greatly reduced in more recent times.

TABLE 4

Leading Authors in *The Accounting Review*, 1986-2005

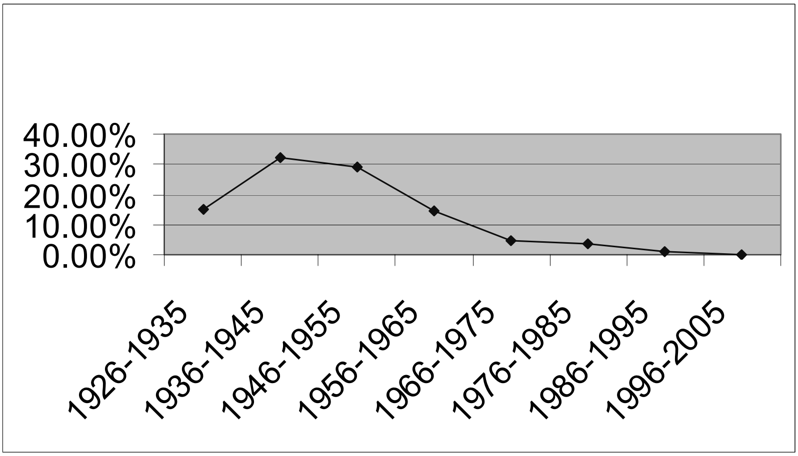
Name	Appearances	Adjusted Appearances
Nelson, Mark W.	8	3.67
Verrecchia, Robert E.	7	3.83
Barth, Mary E.	7	3.67
Bonner, Sarah G.	7	3.17
Francis, Jere R.	7	3.00
Baginski, Stephen P.	7	2.75
Banker, Rajiv D.	7	2.67
Landsman, Wayne R.	6	2.92
Maines, Laureen A.	6	2.17
Sansing, Richard C.	5	3.50
Bartov, Eli	5	3.33
Kinney, William R., Jr.	5	3.33
Rajan, Madhav V.	5	2.83
Khurana, Inder K.	5	2.67
Kachelmeier, Steven J.	5	2.33
Barron, Orie E.	5	2.25
Libby, Robert	5	2.17
Hassell, John M.	5	2.00
Bowen, Robert M.	5	1.83
Authors with 4 appearances	45	
Authors with 3 appearances	87	
Authors with 2 appearances	131	
Authors with 1 appearance	459	

Practitioner membership in the AAA faded along with their interest in its published journals [Bricker and Previts, 1990]. The exodus of practitioners became even more pronounced in the 1990s when leadership in the large accounting firms was changing toward professional managers overseeing global operations. Rayburn [2006, p. 4] notes that practitioner membership is now less than 10% of AAA members, and many practitioner members join more for public relations and student recruitment reasons rather than interest in AAA research. Practitioner authorship in *TAR* plunged to nearly zero over recent decades, as reflected in Figure 2.

When it commenced operations in 1987, *AH* was to provide a new outlet for practitioner authors and readers because *TAR* was becoming increasingly esoteric for a practitioner audience. In that first year, 22% of the articles published in *AH* had practitioners as at least one of the authors. It never again was this high. In the 1987-1995 time span, only 8.1% of the authors were practitioners. For the 1996-2005 decade, this degree of par-

FIGURE 2

Non-Academic Authorship in *TAR*



ticipation was reduced to 1.55%, with no practitioner authors at all for the years 1999-2004. Although the purpose of *AH* was to appeal to practitioners in terms of readership and authorship, it appears that the journal has failed in the latter case. Rayburn [2006, p. 4] announced that initiatives would be forthcoming to attract more practitioner authors, especially joint authorships between practitioners and academics in both *TAR* and *AH*.

Research published in *TAR* over the past two decades has become increasingly rigorous as more accounting researchers are conducting more sophisticated statistical analyses on larger databases. Compustat began to provide much more useful data such as operating earnings after 1985. Databases like Edgar and Audit Analytics did not exist prior to 1985. None of the accounting research databases were networked and online until the 1990s. At the same time, statistical inference software became easier to use when SAS came online in 1993.

TAR and other leading accounting research journals were influenced heavily by positivist methods expounded by Watts and Zimmerman [1978]. Positive theory in this context assumes that manager and investor wealth is positively tied to accounting earnings that in turn are impacted by accounting standards and tax regulators. More importantly, positive research methods are limited to scientific empirical and analytical studies verifiable under the Popper [1959] criterion of verifiability in reality apart from subjective opinion. Normative reasoning and opinion-based, case-study research, popular in law schools and in *TAR* before 1980, were seemingly no longer considered legitimate for *TAR*. Watts and Zimmerman [1990] raised a vigorous defense against positivism's harshest critics such as Tinker et al. [1982], Christenson [1983], Whitley [1988], and Williams [2003]. Nonaka [2006] provides arguments that positivism's dominance in sociology, management, and organizational behavior research badly hindered those disciplines as well.

Compared to the *Journal of Finance*, *TAR* has had a much lower citation rate across disciplines. AAA President Rayburn [2005, p. 3] noted that the 1990-2002 Social Science Citation Index (SSCI) credits the *Journal of Finance* with 26,741 citations and the *Journal of Marketing* with 18,595 citations. Over the same time period, *TAR* was cited only 4,064 times. As stated earlier, Rayburn concluded that the low citation rate was due to a lack of diversity in terms of topics and research methods in *TAR* articles. She recommended that the AAA must "increase both the number and a greater diversity of topics using a wider range of research methods," particularly in *TAR*.

To her recommendations, we might add our viewpoint that *TAR* policies about not publishing replications should be changed. Failure to publish replications in *TAR* and other accounting research journals is *prima facie* evidence that the findings themselves are not as important as the methods and tools used to derive them. It is difficult, if not impossible, to find a published replication of any study published in the leading journals of the AAA. Jensen [2006b] reports a December 5, 2002 message from David Stout recalling when he was editor of *Issues in Accounting Education* for the AAA:

> When I assumed the editorship of *Issues*, I had to appear before the AAA Publications Committee to present/defend a plan for the journal during my (then) forthcoming tenure. One of my plans was to institute a 'Replications Section' in the journal. (The sad reality, beyond the excellent points you make, is that the lack of replications has a limiting effect on our ability to establish a knowledge base. In short, there are not many things where, on the basis of empirical research, we can draw firm conclusions.) After listening to my presentation, the chair of the Publications Committee posed the following question: 'Why would we want to devote precious journal space to that which we already know?' To say the least, I was shocked--a rather stark reality check you might say. The lack of replications precludes us, in a very real sense, from 'knowing.'

AUTHORS AND ALMA MATERS

In Table 2, we found an increased turnover among *TAR* authors in recent years, although each year the majority of authors tend to have graduated from the top 20 universities. Table 5 lists the top alma maters of frequent *TAR* authors for the time intervals 1926-2005, 1966-1985, and 1986-2005. The persistence of the top 20 schools is even more noteworthy in Table 5 (alma maters) than in Table 3 (employers).

There are 17 alma maters consistently ranked in the top 20 in Table 5. Columbia and Pennsylvania dropped out of the top 30 in the 1966-1985 period but bounced back to ranks 25 and 23 respectively in the next two decades. Iowa was elevated to rank 7 in the 1986-2005 recent period. Ohio State and Rochester did not make strong showings in Table 3 as employers of *TAR* authors, but they are at ranks 8 and 19 as alma maters of frequent *TAR* authors in Table 5 across the most recent period. Although not noted for accountics, Harvard's doctoral graduates lifted Harvard to rank 27 in the last two decades.

The probability that any author in *TAR* will have one of the top 20 as an alma mater is over 50%. In terms of proportions of appearances of the top 20 alma maters in *TAR*, the percentages were 51.33% for 1926-2005, 59.27% for 1966-1985, and 61.39% for 1986-2005. There is some suggestion that not having graduated from one of the top 20 or 30 schools greatly reduces the probability of publishing in *TAR*.

Across the entire 1926-2005 *TAR* history, 37% of doctoral graduates were in the top 20 alma mater publishers in *TAR* using Hasselback [2006] data. But as new doctoral programs came on line, the very large doctoral programs, such as those at Illinois, Michigan, Texas, Indiana, and Michigan State, were greatly reduced in size over the 1986-2005 period. The top 20 schools in the 1986-2005 period (Table 5) only generated 13% of new doctoral graduates. Since most authors make appearances in *TAR* within a few years of graduation, we can roughly estimate that 13% of *TAR* authors in the most recent two decades had 61% of the *TAR* appearances. We stress that these comparisons are soft since some of the 1986-2005 *TAR* authors earned their doctorates before 1986.

Rodgers and Williams [1996, p. 58] reported the following about *TAR* authors from 1967-1993:

> 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.

TABLE 5

Leading Doctoral Degree Alma Maters of Authors in *The Accounting Review*

Period: 1926-2005				Period: 1966-1985				Period: 1986-2005			
Rank	Institution	Appear-ances	Adjusted Appear-ances	Rank	Institution	Appear-ances	Adjusted Appear-ances	Rank	Institution	Appear-ances	Adjusted Appear-ances
1	Illinois	470	373.37	1	Illinois	163	118.58	1	Michigan	70	37.75
2	Michigan	307	242.84	2	Texas	85	54.58	2	Illinois	69	34.00
3	Chicago	269	209.44	3	Michigan State	81	58.50	3	Chicago	68	39.50
4	Texas	208	146.58	4	Ohio State	80	55.25	4	Stanford	66	32.08
5	Ohio State	173	115.17	5	Chicago	76	61.00	5	Texas	60	33.00
6	Stanford	139	88.75	6	Michigan	75	53.67	6	U. Washington	55	31.92
7	UC Berkeley	130	99.92	7	Stanford	63	47.17	7	Iowa	53	27.00
8	Minnesota	130	93.75	8	Minnesota	47	29.83	8	Ohio State	52	25.42
9	Michigan State	130	90.33	9	Wisconsin	44	32.00	9	Indiana	40	17.58
10	Indiana	127	90.75	10	UC Berkeley	43	31.67	10	UC Berkeley	39	22.42
11	Columbia	118	91.85	11	Indiana	40	29.00	11	Cornell	39	20.75
12	Northwestern	99	72.50	12	Carnegie Mellon	39	22.50	12	Florida	36	17.67
13	U. Washington	94	62.08	13	Penn State	39	20.83	13	Michigan State	33	17.83
14	NYU	85	63.67	14	NYU	35	26.17	14	Arizona	32	18.00
15	Iowa	85	53.83	15	U. Washington	33	24.67	15	Minnesota	32	16.25
16	Wisconsin	79	52.35	16	Cornell	32	20.33	16	Northwestern	30	17.33
17	Cornell	75	44.08	17	Purdue	32	16.08	17	Carnegie Mellon	29	15.58
18	Pennsylvania	71	57.50	18	Northwestern	29	18.17	18	Wisconsin	28	15.58

TABLE 5

Leading Doctoral Degree Alma Maters of Authors in *The Accounting Review*

(continued)

Period: 1926-2005				Period: 1966-1985				Period: 1986-2005			
Rank	**Institution**	**Appear-ances**	**Adjusted Appear-ances**	**Rank**	**Institution**	**Appear-ances**	**Adjusted Appear-ances**	**Rank**	**Institution**	**Appera-rances**	**Adjusted Appear-ances**
19	Carnegie Mellon	69	39.08	19	Florida	27	21.50	19	Rochester	26	11.67
20	Florida	66	41.67	20	North Carolina	24	17.83	20	NYU	25	13.50
21	Penn State	62	33.33	21	Louisiana State	22	18.83	21	Penn State	23	12.50
22	Harvard	56	40.33	22	Oregon	19	14.00	22	Arizona State	23	10.58
23	North Carolina	48	31.42	23	UCLA	19	14.00	23	Pennsylvania	21	10.50
25	Arizona	46	29.50	25	Missouri	19	13.67	25	Columbia	21	9.33
25	Purdue	45	24.25	25	Alabama	19	12.17	25	North Carolina	20	10.08
26	LSU	41	35.08	26	Washington U.	16	9.83	26	Pittsburgh	19	10.83
27	Missouri	39	28.42	27	Kansas	16	8.67	27	Harvard	19	9.33
28	Arizona State	39	21.33	28	Iowa	15	11.50	28	Florida State	14	6.00
29	Southern California	38	28.00	29	Arkansas	15	10.33	29	Southern California	13	6.83
30	UCLA	37	27.92	30	Arizona State	15	10.25	30	Oregon	13	5.75
	Pittsburgh	37	27.17		Maryland	15	7.50				

> 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*.

Rodgers and Williams [1996, pp. 67-68] list 56 newer U.S. doctoral programs and their graduates' publishing rates in *TAR* since 1965. These schools had very low frequencies of publications in *TAR*, while the top 20 older programs continued to dominate in Table 5.

ARTICLE FREQUENCIES

Over time, both *TAR* in accounting and the *Journal of Finance* in finance became increasingly esoteric. A journal called *Financial Management* was introduced in finance in 1972 to provide an outlet for publishing research of interest to practitioners. *AH* was introduced in 1987 for the same reasons in accounting; both of these offshoot journals hoped to inspire professors and practitioners to engage in joint research. We thought it would be interesting to compare the article frequencies of these journals. Figure 3 compares the number of 2000-2004 doctoral graduates in accounting and finance over the same time span from AACSB-accredited universities.

New doctoral graduates are especially interested in publishing in the leading journals of their academic disciplines. Most submit one or several articles from their dissertations. Figure 4 compares the numbers of articles published from the two academic finance journals mentioned above with the two aforementioned AAA accounting journals.

Comparison of these two graphs is somewhat difficult because there are other academic journals in both disciplines. However, the outcome in Figure 4 alone suggests roughly three times as much opportunity for publishing in the two leading finance journals even though the number of doctoral graduates in finance is only slightly larger than accounting. During the 1986-2005 period, the *Journal of Finance* alone published well

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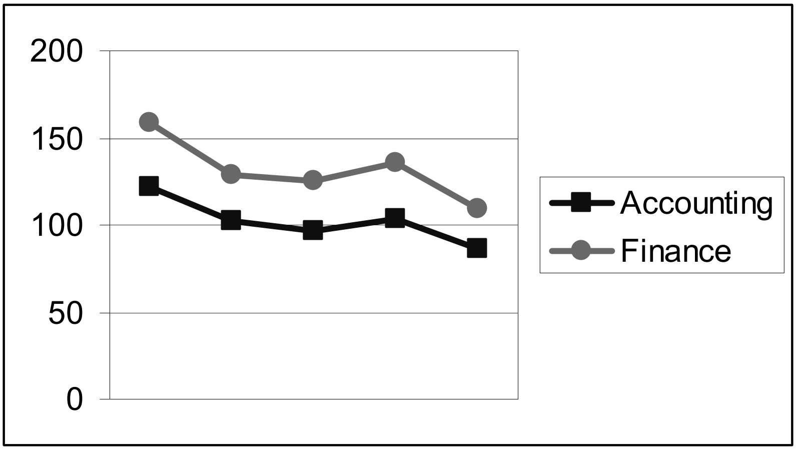
FIGURE 3

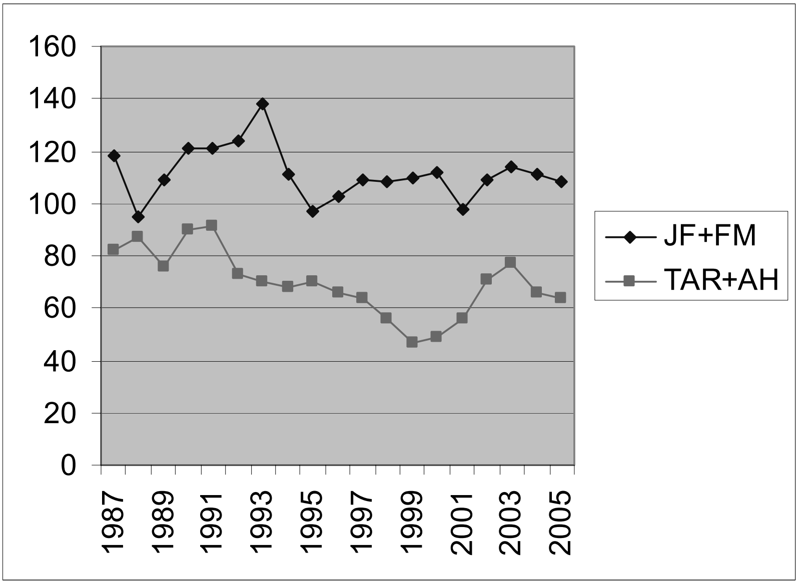
Numbers of Doctoral Degrees, 2000-2004



Source: Doctoral graduates of AACSB-accredited universities, provided by the AACBS Data director.

FIGURE 4

Numbers of Articles Published, 1987-2005



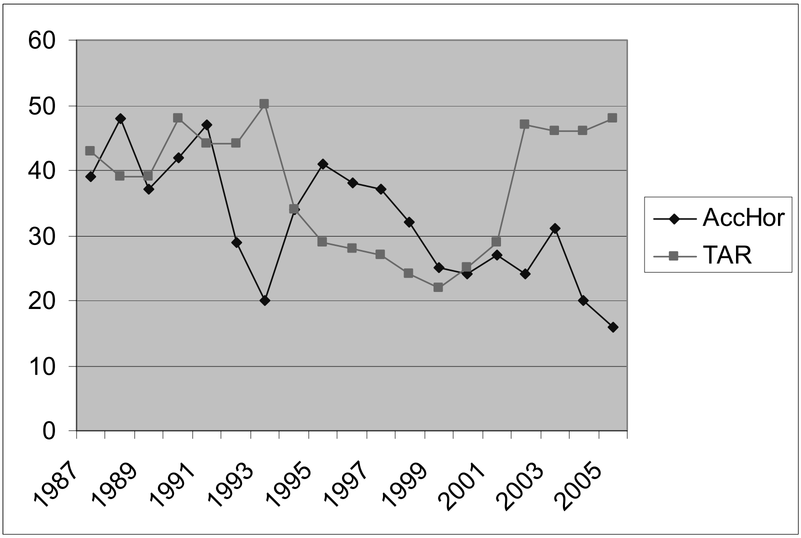
Accounting: *The Accounting Review (TAR)* and *Accounting Horizons (AH)*
Finance: *Journal of Finance (JF)* and *Financial Management (FM)*

over twice as many articles as *TAR*. This fact, plus the outcomes in Figures 3 and 4, support former AAA President Rayburn's contention that other academic disciplines such as finance provide many more outlets for faculty research than are available to accounting faculty. It also supports her recommendation for publishing more articles in *TAR*. Her appeal was answered in part when *TAR* increased the number of issues from four to six per year starting in 2006.

At the same time, Figure 5 shows a decline in the numbers of articles published in *AH* relative to the pattern for *TAR*. Accounting researchers have an increased propensity for publishing in *TAR* rather than the more practice and profession-oriented *AH*.

FIGURE 5

Articles Per Year in *TAR* and *Accounting Horizons*



TAR: *The Accounting Review*
AccHor: *Accounting Horizons*

Pressures for increased volume and diversity arise from accounting faculty, who argue that due to the long history of *TAR* as a premiere academic journal, publications there count more than publications in other AAA journals in tenure and performance evaluation processes.

TAR's lowest volume years as reflected in Figure 5 are somewhat misleading. During those few years, before the AAA raised membership dues and subscription rates, the Executive Committee placed hard restrictions on the number of pages allowed in AAA publications. This greatly reduced the number of articles in *TAR* until new funding relaxed the page restrictions. Outcomes in Figure 5 tend to bear out our contention that, over the past two decades, accounting researchers have been more interested in accountics than accounting practice.

PROPOSED CHANGES IN *TAR* AFTER ITS 80TH BIRTHDAY

Incoming AAA President Judy Rayburn addressed serious problems facing both the AAA and some of its publications, notably *TAR* and *AH*, in her August 10, 2005 presidential address at the annual meeting in San Francisco [Rayburn, 2005, 2006]. Her recommendations include increasing the number of articles in *TAR* by increasing the frequency of issues and the breadth and diversity of the published research. Rayburn's proposals for *AH* were that the AAA work actively to seek more articles that "deal with practice-related issues" and increase authorship by practitioners who work jointly with academics. Rayburn asserted: "Our top-tier journals as a group project too narrow a view of the breadth and diversity of [what should count as] accounting research."

In addition to publishing more papers in six rather than four issues per year, *TAR* will become somewhat more diverse in one sense. McCarthy [2005, p. 1] wrote the following with respect to AIS in *TAR*:

> This has been generally true [that *TAR* will not publish AIS research] in the past and there are certainly still a host of accounting journals that underestimate the importance of accounting information systems (AIS) research. Additionally, it is still true that almost all accounting academics remain clueless about the different kinds of methodologies that AIS, MIS, and computer science researchers generally use. Thus, accounting systems people (like Dave and I plus many AECM members) are forced to live in an academic world that understands neither 'the what' nor 'the how' of AIS research and teaching. However, the American Accounting Association (in general) and *The Accounting Review* (in particular) are taking steps to narrow this gap in understanding. Dan Dhaliwal, the senior editor of *The*

> *Accounting Review* (*TAR*) has appointed me – a known maverick in accounting circles and a long-time champion of AIS research and teaching – as an editor for *TAR*.

IMPLICATIONS OF ACCOUNTICS FOR ACCOUNTING PROGRAMS

We surmise that some professionals in accounting who have no aptitude or interest in becoming scientists refrain from enrolling in contemporary accounting doctoral programs due to their inherent narrowness and the lack of other epistemological and ontological methods more to their liking. New evidence suggests that this problem also extends to topical concentrations of those who do enter doctoral programs. In a study of the critical shortage of doctoral students in accountancy, Plumlee et al. [2006] discovered that in 2004, there were only 29 doctoral students in auditing and 23 in tax out of a total of 391 accounting doctoral students enrolled in years 1-5 in the U.S. We might add that the authors of the article were all appointed in 2004 by AAA President Bill Felix to an ad hoc Committee to Assess the Supply and Demand for Accounting Ph.D.s. Plumlee et al. [2006, p. 125] wrote as follows:

> The Committee believes the dire shortages in tax and audit areas warrant particular focus. One possible solution to these specific shortages is for Ph.D. Programs to create new tracks targeted toward developing high-quality faculty specifically in these areas. These tracks should be considered part of a well-rounded Ph.D. program in which students develop specialized knowledge in one area of accounting, but gain substantive exposure to other accounting research areas…
>
> A possible explanation for the shorages in these areas is that Ph.D. Students perceive that publishing audit and tax research in top accounting journals is more difficult, which might have the unintended consequence of reducing the supply of Ph.D.-qualified faculty to teach in those specialties. Given that promotion and tenure requirements at major universities require publication in top-tier journals, students are likely drawn to financial accounting in hopes of getting the necessary publications for career success. While the Committee has no evidence that bears directly on this point, it believes that the possibility deserves further consideration.

A number of AAA presidents have asserted that empirical research is not always well-suited for "discovery research." These

AAA presidents urged in their messages to the membership and elsewhere that accounting research become more diverse in terms of topics and methods. Examples include Dyckman and Zeff [1984], Langenderfer [1987], Bailey [1994], and Rayburn [2006]. The following is a quote from the presidential message of Sundem [1993, p. 3]:

> Although empirical scientific method has made many positive contributions to accounting research, it is not the method that is likely to generate new theories, though it will be useful in testing them. For example, Einstein's theories were not developed empirically, but they relied on understanding the empirical evidence and they were tested empirically. Both the development and testing of theories should be recognized as acceptable accounting research.

Although the AAA expanded the number and diversity of its journals, none carry as much weight as publication in *TAR* in university tenure and performance evaluation decisions. As a result, virtually all doctoral program curricula focus on the development of skill sets needed for publishing in accountics journals like *TAR*. Scientific research skills replaced accounting content in doctoral programs. Today, doctoral candidates in accountancy must have skills in mathematics, statistics, and scientific model-building areas such as econometrics, psychometrics, and sociometrics. This emphasis has discouraged many young practicing accountants from returning to campus to obtain doctoral degrees. Those with no interest in or aptitude for scientific research have virtually no place to go to get a quality accounting doctoral degree. Thus, an unwanted consequence of the publishing criteria at top-tier accounting journals has been the narrowing of doctoral program curricula and the decrease in the number of potential doctoral candidates in accounting [Plumlee et al., 2006].

For accounting, Hasselback [2006] reports that the number of accounting doctoral degrees plunged from 212 in 1989 to 96 in 2004. Even if he missed a few in his count, the trend is clearly critical. Fewer and fewer accounting undergraduate and master's degree graduates are returning to earn doctoral degrees. The reasons for this are complex, but there is considerable anecdotal evidence that some potential doctoral candidates are not interested in the narrow, scientific methodology curriculum offered in most doctoral programs.

Zimmerman [2001; Watts and Zimmerman, 1978, 1990] was a major mover in the top-tier journal shift toward positivist methods and accountics research. Later, he consistently took the position that the increased emphasis on teaching in business schools relative to research threatens the survival of business education in top universities [DeAngelo et al., 2005]. On this point, we differ with him and his co-authors. Student evaluations and demands for teaching have indeed put greater stress upon teaching, but tenure and performance evaluation of faculty have put greater pressure on faculty to publish in top-tier journals that have narrow accountics criteria. Many potential doctoral candidates are interested in teaching accounting and even in conducting research, but they do not want to conduct the mathematical and scientific research required for publication, tenure, and high performance evaluations [Plumlee et al., 2006].

CONCLUSION

In the first 40 years of *TAR*, an accounting "scholar" was first and foremost an expert in accounting. After 1960, following the Gordon and Howell Report, the perception of what it took to be a "scholar" changed to quantitative modeling. It became advantageous for an "accounting" researcher to have a degree in mathematics, management science, mathematical economics, psychometrics, or econometrics. Being a mere accountant no longer was a sufficient credential to be deemed a scholarly researcher. Many doctoral programs stripped much of the accounting content out of the curriculum and sent students to mathematics and social science departments for courses. Scholarship on accounting standards became too much of a time diversion for faculty who were "leading scholars." Particularly relevant in this regard is Dennis Beresford's [2005] address to the AAA membership at the annual meeting in San Francisco:

> In my eight years in teaching I've concluded that way too many of us *don't* stay relatively up to date on professional issues. Most of us have some experience as an auditor, corporate accountant, or in some similar type of work. That's great, but things change quickly these days.

Jane Mutchler [2004, p. 3] made a similar appeal for accounting professors to become more involved in the accounting profession when she was president of the AAA.

In the last 40 years, *TAR*'s publication preferences shifted toward problems amenable to scientific research, with esoteric models requiring accountics skills in place of accounting expertise. When Professor Beresford attempted to publish his remarks, an *AH* referee's report to him contained the following revealing reply about "leading scholars" in accounting research [quoted in Jensen 2006a]:

> The paper provides specific recommendations for things that accounting academics should be doing to make the accounting profession better. However (unless the author believes that academics' time is a free good) this would presumably take academics' time away from what they are currently doing. While following the author's advice might make the accounting profession better, what is being made worse? In other words, suppose I stop reading current academic research and start reading news about current developments in accounting standards. Who is made better off and who is made worse off by this reallocation of my time? Presumably my students are marginally better off, because I can tell them some new stuff in class about current accounting standards, and this might possibly have some limited benefit on their careers. But haven't I made my colleagues in my department worse off if they depend on me for research advice, and haven't I made my university worse off if its academic reputation suffers because I'm no longer considered a **leading scholar**? Why does making the accounting profession better take precedence over everything else an academic does with their time?

The above quotation illustrates the consequences of editorial policies of *TAR* and several other leading accounting research journals. To be considered a "leading scholar" in accountancy, one's research must employ mathematically based economic/behavioral theory and quantitative modeling. Most *TAR* articles published in the past two decades support this contention. But according to AAA President Rayburn and other recent AAA presidents, this scientific focus may not be in the best interests of accountancy academicians or the accountancy profession.

In terms of citations, *TAR* fails on two accounts. Citation rates are low in practitioner journals because the scientific paradigm is too narrow, thereby discouraging researchers from focusing on problems of great interest to practitioners that seemingly just do not fit the scientific paradigm due to lack of quality data, too many missing variables, and suspected non-stationarities. *TAR* editors are loath to open the journal to non-scientific methods so that really interesting accounting problems are neglected. Those non-scientific methods include case-method studies, traditional historical method investigations, and normative deductions.

In the other account, *TAR* citation rates are low in academic journals outside accounting because the methods and techniques being used (like CAPM and options pricing models) were discovered elsewhere, and accounting researchers are not sought out for discoveries of scientific methods and models. The intersection of models and topics that do appear in *TAR* seemingly are borrowed models and uninteresting topics outside the academic discipline of accounting.

We close with a quotation from McLemee demonstrating that what happened among accountancy academics over the past four decades is not unlike other academic disciplines that developed "internal dynamics of esoteric disciplines," communicating among themselves in loops detached from their underlying professions. McLemee's [2006] article stems from Bender [1993]:

> 'Knowledge and competence increasingly developed out of the internal dynamics of esoteric disciplines rather than within the context of shared perceptions of public needs,' writes Bender. 'This is not to say that professionalized disciplines or the modern service professions that imitated them became socially irresponsible. But their contributions to society began to flow from their own self-definitions rather than from a reciprocal engagement with general public discourse.'
>
> Now, there is a definite note of sadness in Bender's narrative – as there always tends to be in accounts of the shift from *Gemeinschaft to Gesellschaft*. Yet it is also clear that the transformation from civic to disciplinary professionalism was necessary.
>
> 'The new disciplines offered relatively precise subject matter and procedures,' Bender concedes, "at a time when both were greatly confused. The new professionalism also promised guarantees of competence — certification — in an era when criteria of intellectual authority were vague and professional performance was unreliable.'
>
> But in the epilogue to *Intellect and Public Life,* Bender suggests that the process eventually went too far. 'The risk now is precisely the opposite,' he writes.

> 'Academe is threatened by the twin dangers of fossilization and scholasticism (of three types: tedium, high tech, and radical chic). The agenda for the next decade, at least as I see it, ought to be the opening up of the disciplines, the ventilating of professional communities that have come to share too much and that have become too self- referential.'

For the good of the AAA membership and the profession of accountancy in general, one hopes that the changes in publication and editorial policies at *TAR* proposed by President Rayburn [2005, p. 4] will result in the "opening up" of topics and research methods produced by "leading scholars."

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Accounting History

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THE GEOGRAPHY AND IDEOLOGY OF ACCOUNTING: A CASE STUDY OF DOMINATION AND ACCOUNTING IN A SUGAR REFINERY IN AUSTRALASIA, 1900-1920

Abstract: This historical case study examines accounting in a sugar refinery from 1900 to 1920 in two arenas of operation. The geography of accounting enabled the workers at Chelsea to have their working experience sequestered by the company. Accounting routinized their work at the refinery, enabling their labor to become monitored, empty of meaning, and, at times, overwhelming. The ideology of accounting provided the company with an instrument of evasion to silence the voice of labor and an instrument of self-deception designed to justify and insulate the authoritarian hierarchy of the company and the power of its Australian general manager, Edward Knox. Accounting became an ideology that sought to legitimate the exploitation of the workforce and the generous return to shareholders.

INTRODUCTION

This case study describes and interprets accounting practices situated in the New Zealand branch of an Australian company, the Colonial Sugar Refinery (CSR). Known as Chelsea sugar refinery and located in the Auckland suburb of Birkenhead, the New Zealand company was started by Australian and New Zealand investors in 1883. This historical study examines ac-

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counting in the company from 1900 to 1920, particularly the use of accounting as a tool of domination. We examine this domination in two dimensions – the geography and the ideology of accounting. We explore the geography or locale of accounting in terms of the physical distance between the head office (Sydney) and Auckland and at the level of production locally at the Chelsea refinery. The accounting records enabled an autocratic and authoritarian leader to control the branch with vigorous surveillance from Australia. The Australian head office was unwilling to delegate any significant influence to the managers of the branch company. Decision authority was, therefore, effectively based in Australia, and any semblance of delegated authority was in form rather than substance. The geography/locale of accounting at Chelsea enabled the workers to have their working experience sequestered by the company [Giddens, 1991, p 149]. Accounting routinized their work at the refinery, enabling their labor to become monitored, empty of meaning, and, at times, overwhelming. It was only when crises or fateful moments [Giddens, 1991, p. 202], such as on-the-job accidents or union activity, introduced a moral reckoning that the accounting regime of truth [Foucault, 1980] created around the labor process was disrupted. Labor and production processes provided the location for accounting to control and monitor the labor force, known as "wage labour." It also provided the opportunity for labor to collectively reappropriate its closely monitored existence.

The ideology of accounting provided the company with an instrument of evasion to silence the voice of labor and became an instrument of self-deception designed to justify and insulate the authoritarian hierarchy of the company and the power of its Australian general manager, Edward Knox (EK) [Volf, 1996]. Accounting became an ideology that sought to legitimate the exploitation of the workforce and the generous return to shareholders and played a key role in advancing the particular interests of Knox and facilitating domination.

Based on the two dimensions, this paper aims to examine the broader narratives in which the accounting numbers were placed. These accounting-based narratives enabled the autocratic control and surveillance of the labor force to be carried out with a semblance of objectivity which sought to diffuse its contested nature. The narratives created a regime of truth that not only justified the way the workforce was deployed and managed under the hubris of efficiency but also enabled the more powerful narrative of shareholder returns. In the end, the accounting-based narratives presented by the company assumed it could melt the differing points of view of labor opposition into the common currency of a single truth [Volf, 1996, p. 241]. The accounting truth presented by the company served to legitimate the particular company interests of CSR and privilege the autocracy of Edward William Knox (EWK) and his fellow shareholders.

The study has benefited from a rich archive[1] of narrative material made up of letters and memoranda as well as accounting information. This information forms the basis of the paper which is organized as follows. First, the organizational context is described in terms of the company, the town, and the sugar process. The next section discusses the theoretical lenses informing the narrative of the paper. This is followed by a study of two dimensions of domination – the geography and the ideology of accounting. Findings are summarized in the conclusion.

ORGANIZATIONAL CONTEXT

Accounting research on the sugar industry has concentrated on the labor processes and relations in the agricultural sector. During 1850 to 1920, a wide variety of labor relations were used around the world in field production. Sugar refineries received raw material from agriculturalists ranging from the primitive to the sophisticated. Labor relations included tenant-farmers, sharecroppers, and peasant farmers as well as commercialized, agrarian entrepreneurs and seigniorial estates [Bosma and Knight, 2004, pp. 12-13]. Fleischman and Tyson [2000] examined how accounting was involved in the racial segmentation of the workforce on Hawaiian sugar plantations.[2] The sugar refinery, on the other hand, experienced considerable convergence in its production processes by the early 1900s. CSR itself exhibited this difference between field and factory. CSR had sugar plantations in Queensland and Fiji with differing labor characteristics; yet, their sugar refineries were similar in terms of the production processes.

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[1]The Chelsea sugar refinery archive is housed at the Takapuna Public Library, Auckland, New Zealand. Archival material is referenced by box number. The boxed archives of letters, memoranda, schedules, etc. are primary archives, separate and distinct from the "Research Notes on the Chelsea Sugar Works" of Watson [1979].

[2]For further discussion, see Burrows [2002] and Fleischman and Tyson [2002]. We did not identify any racial issues at Chelsea sugar refinery. Before the late 1930s, Chelsea was a totally masculine community of New Zealanders and a large British contingent [Luke, 1984].

The Company: EK and nine entrepreneurial shareholders founded the CSR on January 1, 1855, with a capital of £150,000. EK was experienced in the sugar industry having previously managed the Australasian Sugar Company until its dissolution in 1854. The company initially carried large amounts of debt but began to prosper in the 1870s after the establishment of its own sugar cane plantations and several mills on the northern rivers of New South Wales, Australia. EK's son, EWK, was involved with the company from the age of 17 and in 1880, when he was 35 years of age, the management of the business was passed to him. EK (chairman of the board) visited New Zealand in 1881 and purchased 160 acres of coastal land for the building of a sugar refinery. Two years later, CSR and the Victoria Sugar Company (an associated company of CSR) formed the New Zealand Sugar Company (commonly referred to as Chelsea sugar refinery), each entity holding one-third of the £300,000 authorized capital, with the remaining third held by high-profile New Zealand investors. Prior to the opening of the New Zealand refinery, the bulk of New Zealand's refined sugar was supplied by the Australian CSR refineries. From the beginning, the new refinery produced sufficient sugar for New Zealand's needs, so imports of refined sugar ceased. However, despite its monopoly position, the company failed to make profits for the first four years, and, by the end of 1887, the New Zealand Sugar Company was insolvent and was collapsed into CSR.

CSR was a single-product company. Sugar was increasingly being used in food processing, particularly in preservation and pickling. CSR's key strategy was to control the market and, by 1915, it controlled 90% of the refined sugar production in Australia and 100% in New Zealand. CSR dominated the market by underselling its competitors. At times it undersold competitors by 5 shillings per ton [Griggs, 2001, p. 368]. In 1893, CSR dismissed a suggestion from its competitor, the Australasia Sugar Refinery Company, to make a deal with CSR over New Zealand prices and market share. Under no circumstances was CSR going to give up its complete dominance of the New Zealand market. CSR also denied competitors outlets for their refined sugar. It had exclusive agreements with wholesalers and threatened them with the loss of their agency if they did not remain loyal. The underselling strategy even eliminated merchants who were importing overseas-produced, refined white sugar. By 1912, EWK admitted to controlling the price of sugar in Australia [Griggs, 2001, p. 372]. Griggs [2001, p. 373] comments that "this control enabled CSR to achieve handsome profits; it had paid annual dividends (plus bonuses) in the order of 15% on subscribed capital during the 1900s." This philosophy of domination of the sugar market spilled over into how the company was managed.

The Town: A sugar town soon developed around the hub of the refinery. The refinery was the only real employment in the area – "the sugar works was the biggest employer. … There was no other place" [unknown interviewee, quoted in Luke, 1984]. The town initially consisted of roughly built shanties. In 1884, the company built a barracks for single men and a number of workers' cottages. The cottages were cold and damp. Despite the cheap rent, most of them were unoccupied by 1890. They were condemned by health authorities in 1905, and four brick duplexes were built on the site of the old village. These were occupied by the managers while many of the single workers lived in a boarding house by the ferry wharf. The company refused to put in septic tanks to alleviate the sanitary problem in the town. Closets under the wharf used by workers would not be attended to "until pressure is brought to bear" on the company by the Department of Health [EWK to Auckland, 2/8/1905, box 151]. Young men progressed from school to the refinery at age 12. Often all the males in a family, father and sons, worked there. When the sons left home, they often married into another sugar family and merely shifted residence to another street in the sugar town [unknown interviewee, quoted in Luke, 1984]. Smoke from the refinery pervaded the town and discolored the washing.

The Sugar Process:

> Oh in the Stonegut Sugar Works
> The floors are black with grime
> As I found out when I worked there
> Among the dirt and slime;
> I think they must have built it
> In Queen Victoria's time.
>
> I had the job of hosing down
> The hoick and sludge and grit
> For the sweet grains of sugar dust
> That had been lost in it
> For the Company to boil again
> And put it on your plate;
> [Baxter, 1972]

These are two stanzas from a poem entitled *Ballad of the Stonegut Sugar Works* by James K. Baxter (1926-1972), one of New Zealand's most famous poets. He worked at the sugar refinery in the 1960s and wrote this poem about his working experiences even though he only lasted three weeks at the refinery. Despite his reflections being about working conditions in the 1960s, the poem provides a poignant insight into the tough working conditions of the Chelsea sugar refinery.

In the early 1900s, raw sugar came to the New Zealand refinery by ship from Java, Cuba, and Peru. Each ship carried about 15,000 tons of bagged raw sugar. Gangs of wharf hands unloaded the ships and stacked the bags in the raw store after weighing. Even at this level of operation, there was a hierarchy of jobs starting with the workers who pushed the empty trucks out of the shed. The next level was the "hooking on" which involved attaching clips to the sugar bags so they could be hoisted up onto a stack. Stackers formed the third level in the hierarchy. This job was prestigious as it required specific attention to ensure that the stacks of sugar bags were straight and stable. The easiest job, driving the jiggers, was usually reserved for older, long-term employees who could no longer cope with the rigor of the other tasks [Frank Schorman, quoted in Watson, 1979, p. 8].

The first stage of the refining process involved slitting the throat of the bags and pouring the raw sugar down through gratings for transporting to hoppers. Large wooden mallets were used to break up rock-hard raw sugar. Raw sugar consists of about 98% sucrose surrounded by a film of syrup which contains most of the non-sucrose constituents. All non-sucrose constituents have to be removed in order to obtain quality white sugar granules. This is the primary task of a refinery. The raw sugar was "washed" in hot water in high-speed centrifugal machines to remove the syrup film from around the sucrose crystals. The wash house consisted of huge tanks, ten feet long and six feet wide, in which jelly bags were suspended. The liquor (syrup) was filtered through these bags. Four or five workers would stand in the tank to wash out the muck-filled filter bags. They wore only a piece of filter cloth tied around their waists [Stan Cross, quoted in Watson, 1979, p. 9]. Most sugar workers agreed that this was the worst job in the refinery [Watson, 1979, p. 10]. The clear, filtered liquor was then passed over bone charcoal to remove color impurities. Every so often the charcoal had to be re-burnt in ovens heated to 1100-1200°F to restore its filtering capabilities. The re-burnt char was dragged out with long, rake-like poles. The men worked in extreme heat among clouds of fine dust. Stan Luker thought that no human being should ever have been asked to do this sort of job [Watson, 1979, p.10].

The purified liquor then went to the vacuum pans. "Sugar boiling" was a specialized job producing pure refined sugar. The contents of the pans were dropped down into cooling vats, and then the crystals of refined sugar were separated from the liquor by spinning in centrifugal machines. The resulting refined sugar crystals were dried, graded, and bagged. Twenty to 30 men packed the 70 and 140-pound bags in what was described as an incredibly noisy environment, "…all day and every day the same thing. Rattling away, clang, clang, clang. … It'd drive you round the bend. I reckon half them were insane that worked that job" [Curly Mayall, quoted in Watson, 1979, p. 11].

> And though along those slippery floors
> A man might break a leg
> And the foul stink of Diesel fumes
> Flow through the packing shed
> And men in clouds of char dust move
> Like the animated dead,
> [Baxter, 1972]

Other workers operated sewing machines to stitch the top of filled bags, to make new bags, or repair old bags. Clerical duties included the tally clerk who counted up to 12,000 bags in an 8-hour day.

> But the Clerk and the Slavedriver
> Are birds of another kind,
> For the clerk sits in his high glass cage
> With money on his mind,
> And the slavedriver down below
> Can't call a slave a friend
>
> Instead they have (or nearly all)
> The Company for a wife,
> A strange kind of bedmate
> That sucks away their life
> On a little mad dirt track
> Of chiselling and strife
> [Baxter, 1972]

THEORETICAL LENSES

Domination is a form of exclusion [Volf, 1996, p. 75]. "Wage labour" at Chelsea was assigned by EWK and the management of CSR to a place of inferior status and was subjugated for the sake of shareholder wealth. Accounting helped EWK colonize Chelsea so he could dominate and control. This is where Michel Foucault's work provides insight into accounting. Accounting becomes what Foucault [1979] calls a disciplinary mechanism. Accounting's power is in its subtlety. EWK realized that CSR was "stretched over large tracts of time-space" and that his personalized, monarchic-like control depended on high "presence-availability" which he realized was diffused [Giddens, 1987, p. 164]. Accounting provided a solution. Disciplinary power works through surveillance mechanisms such as accounting as opposed to threats of "exemplary power" of violence characteristic of previous ages [Foucault, 1979]. Accounting creates visibilities within the organization and produces a "truth" about the organization. Foucault [1980, p. 118] insists that truth is produced rather than disclosed or discovered. He is interested in "seeing historically how the effects of truth are produced within discourses which in themselves are neither true nor false." Volf [1996, p. 245] comments, "the significant question is not so much *what* is the case, but *why* and *how* is something proclaimed and believed to be the case."

Foucault's "regime of truth" captures an additional insight which is the association of truth and power. To produce truth and sustain it, "multiple forms of constraint" are needed [Foucault, 1980, p. 131]. To have constraint, you need to have organizational power [Volf, p. 246]. EWK was a powerful, autocratic presence in CSR. Accounting extended and reinforced his power. Accounting became a "regime of truth" that gave even more power to the already powerful Knox. CSR's accounting narrative reinforced his monarchic power, operating at a distance and becoming an administrative power at the locale of the Chelsea branch.

Giddens provides some insightful ideas for understanding how organizations like the Chelsea refinery regionalize time and space. He suggests sequestration is the "most pronounced form of time-space zoning," and its effect is to "radically alter the nature of day to day experience" [Giddens, 1987, p. 151]. The Chelsea refinery became a place of concealment for the wage laborers. Once they stepped through the factory gate, their existence became closely monitored and controlled. The laborers' lives were sequestered from their existence outside of the refinery into a world of surveillance enabled by the administrative/disciplinary power of accounting. The refinery became an architecture of power not only in the sense of the physical setting/layout of the refinery but also in the way that setting and social conduct interact to generate administrative/disciplinary power [Giddens, 1987, p. 159]. The specific locale of the Chelsea refinery permitted a consolidation of accounting at the top of the organizational hierarchy in Auckland, enabling EWK to exercise his patrimonial means of domination over CSR. The geography and ideology of accounting are heuristic descriptors that seek to convey the insights provided by these theoretical lenses.

ACCOUNTING FACILITATES DOMINATION

The First Dimension – the Geography of Accounting: Accounting facilitated the exercise of management's power and was an instrument for controlling workers from a distance [Riccaboni et al., 2006]. The physical distance between factory and decision maker (EWK), combined with EWK's autocratic characteristics, required large amounts of information be sent to the head office in order that he could control day-to-day operations from afar. Not only did accounting facilitate a general, administrative power but also the personal, monarchic power of EWK. The geography of accounting first examines this distance between the head office in Sydney and the branch in Auckland and, second, the locale of the sugar production at the Chelsea refinery.

EWK, the son of the founder, became general manager in 1880 and for 40 years controlled the company. According to Maynagh [1981, pp. 27-28], Knox was an austere, single-minded man apparently lacking in humor and having few outside interests. He demanded hard work and honesty and, above all, a dedication to the company. Loyalty was a distinctive feature of CSR with children of longtime workers given jobs and length of service seen as a principal quality for job advancement. This approach perpetuated a conservative and paternalistic approach in managerial appointments.

Birch and Blaxland [1956, p. 26] describe EWK as a "…somewhat impetuous and autocratic general manager. … He was not disposed to let his officers assume they were his equals when it came to a decision." The Colonial Office in Fiji described Knox as "a peppery aristocrat" and "an irascible autocrat of 75, notorious for his methods of dealing with strikers and business opponents" [Maynagh, 1981, p. 104]. Knox, as a free-trade supporter, strongly opposed government involvement in commerce and industry [Lowndes, 1956].

Lyle [1957, p. 538] outlines the importance of analyzing the sugar production process and creating visibilities around that process. Lyle points out that the figures analyzing production give control and direction to the business so that "[the manager] will always be able to carry out the detailed economy or efficiency crusades which form an essential part in keeping a factory…up to the mark." Weekly production reports were sent from Chelsea to Sydney via the Auckland Office. These reports detailed the stocks of refined sugar packed, melted, and delivered on a per-ton basis and included fine detail of costs recorded on a day-to-day basis. The reports were standardized across CSR's sugar refineries so as to facilitate comparisons. The weekly reports also monitored stocks of raw sugar received and melted as well as details of hessian cloth and bags, coke, coal, syrup, and molasses [Chelsea Refinery Production Schedule, 8/2/1896, box 159]. These reports were accompanied by a letter from the refinery manager, Mr. Miller, to the general manager in Sydney, EWK. The weekly letter outlined refinery issues (supplies of raw sugar and weekly production) as well as issues regarding the workforce and machinery.

Every six months, Sydney sent the half-yearly accounts of the New Zealand branch to Auckland. Accounts included stock on hand, sundry expenses, refined sugar sales, and schedules of balances and expenses. The accounts were accompanied by two key statements which compared "sugar house wages" and the "cost of manufacture" across the company's five sugar refineries of Pyrmont (Sydney), Yarraville (Melbourne), Glanville (Queensland), New Farm (Queensland), and, of course, Chelsea [e.g., 31/3/1903, box 125]. Sometimes Sydney questioned the accuracy of the accounting information sent. EWK, for example, questioned why the tons of refined sugar made did not equal the total on the chemical return by 107 tons. He even suggested that the error seemed to have been made in the March quarter [EWK to Auckland, 10/5/1911, box 152]. Other times EWK wanted further explanations of numbers submitted to Sydney. He insisted that "we should be fully informed of the work which this payment represents. … In cases of this kind, where abnormal expenditure is incurred, we expect explanations to be furnished without application from us" [Head Office to Auckland, 29/3/1910, box 150]. Knox wanted the returns to the head office to be detailed, breaking out items such as the cost of making filter bags from the cost of repairing them [Head Office to Auckland, 25/5/1904, box 154].

The comparative statements enabled Knox to exercise significant surveillance. Knox used the Pyrmont refinery and other Australian refineries as a quasi-standard to monitor and control the Auckland branch at a distance. In 1908, Miller (New Zealand manager) replied to questions about production quality based on these comparatives. He suggested that the quality of the sugar produced was different from Pyrmont due to the polarization of the raw sugars and, perhaps, the use of lime at the mills. He further stated that the quality of the char was another variable in its removal of ash and fruit sugars [Auckland to Sydney, 1/2/1908, box 145]. In 1909, EWK again compared Chelsea to Pyrmont observing, "…there has been a steady – almost continuous – increase in expenses, and the greater rate of work last half has not reduced the wages per ton of sugar…Considering that you have no charge for water, and that the delivery of refined sugar costs much less with you than in Sydney or Melbourne your figures do not show well alongside those for the other houses, namely Pyrmont and Yarraville" [EWK to Auckland, 28/4/1909, box 151]. Wastage was constantly monitored by EWK who noted that the loss of 1.49% cane sugar was 0.30% above the average of all refineries [EWK to Auckland, 25/10/1916, box 158].

CSR was shareholder focused; "they do not forget the results which must be achieved for their ultimate employers, the twelve thousand shareholders" [Lowndes, 1956, p. 349]. Knox objected to the Australian government investigating the sugar industry and was pleased in 1912 when a Sugar Commission recommended against the nationalization of the refining trade and for price controls on sugar cane and refined sugar. He describes such ideas as "old socialistic schemes." He was disappointed when the Commission questioned CSR's accounting data regarding refining profits by suggesting that "concealment of profits" may occur at CSR [Memorandum, 20/12/1912, box 125]. Strategies, such as the refusal to pay for overtime worked, provided a source of unpaid labor. The aim was to obtain the highest rate of return on the Australian investment by forcing "maximum surplus" from the factory workers [Tyson et al., 2004].

The second locale of accounting was at the Chelsea refinery. Accounting was implicated in the sequestration [Giddens, 1991] of the workers' experience in the sugar refinery and in the development of a regime of truth [Foucault, 1980] to ensure surveillance and control by the company's omniscient manager (EWK) and his representative at Chelsea, E.V. Miller, manager of the refinery from 1884 to 1920. Accounting enabled sequestration of the workers by enclosing the refinery's space through organization and order and by extracting more moments of time for productive use [Giddens, 1991]. An unknown interviewee [Luke, 1984] states that it was not until the 1940s that New Zealanders started rising through the company hierarchy. Prior to that time, the managers and the bosses were nearly always Australians who kept to themselves. All the senior positions were held by Australians – manager, chemists, chief engineer. Directors, managers, and auditors visited frequently from Australia. "The people running it were frightened of Sydney. They were definitely frightened of Sydney, of Head Office" [Charlie Castleton, quoted in Watson, 1979, p. 24]. The autocratic management style of EWK was perpetuated by Miller at Chelsea, who considered himself an omnipotent presence as indicated by his correspondence with EWK and the Sydney head office. "He'd been known to fire men for misbehaviour even when they weren't at work" [Curly Mayall, quoted in Watson, 1979]. "He ruled the men at work and when they were away too" [workers, quoted in Watson, 1979, p. 24].

> You will guess I got the bullet,
> And it was no surprise,
> For the chemists from their cages
> Looked down with vulture eyes
> To see if they could spot a man
> Buttoning up his flies.
>
> It's hard to take your pay and go
> Up the winding road
> Because you speak to your brother man
> And keep your head unbowed,
> In a place where the dismal stink of fear
> Hangs heavy as a cloud.
>
> [Baxter, 1972]

The Chelsea sugar refinery provides us with an example of an organization in which factory-floor workers and subordinate management were tightly monitored and controlled in an organizational structure imposing a formal bureaucratic hierarchy [Whitley, 1999]. Management was controlled by formal rules and procedures and tight budgets which limited its discretion in choosing appropriate strategies for day-to-day operation of the factory. Factory workers were tightly supervised to prevent the possibility of opportunistic behavior in the form of extended tea or toilet breaks. Local management and supervisors appear to have been concerned with the welfare of workers only to the extent of the possible impact on workplace productivity [Saravanamuthu and Tinker, 2003]. This lack of concern caused workers to feel that they were just pairs of hands, numbers, and costs to be minimized in order to produce profits for others.

The detailed accounting systems provided the basis for company activities and decisions. The power of this information fostered the autocratic management style of Knox and provided a structure of dominance from the head office. This accounting-based dominance acted as "a governance instrument for controlling workers at a distance" [Riccaboni et al., 2006] and served to legitimize the sometimes ruthless actions of management. Chelsea provided a specific geography or locale for accounting to be a key component in sequestering the workers' experience. The sentiments expressed in Watson [1979] indicate that the men perceived that the accounting records were the "eyes of the company" [Kaplan, 1984, p. 392], eyes that were always on them. Giddens notes that institutions like the factory significantly alter the nature of day-to-day experience [1987, p. 151]. This was the case for the Chelsea wage laborers. Accounting was used to discipline the workers to ensure profitable outcomes for EWK and his fellow shareholders. Accounting provided him and his managers with an architecture of power. Accounting facilitated the exercise of EWK's personal, monarchic power and created an autonomous, administrative power which took on a life of its own. What started as EWK's obsession for information became an administrative structure. Accounting objectified and shaped beliefs held about Chelsea by management and workers.

The Second Dimension – Accounting Ideology: This second dimension of domination describes the use of accounting ideology as a manifestation of power and control. Burchell et al. [1985] suggest that accounting information has an ideological function in that it is used to legitimize particular activities or rationalize behavior. In this sense, ideology has a key role in the use of accounting to advance particular interests and can be part of the process of maintaining domination [Thompson, 1984]. In the case of CSR, the ideology of accounting points to it as an instrument of evasion used to silence the voice of labor and an instrument of self-deception designed to justify the authoritarian hierarchy of the company and the power of EWK. EWK had a perception of the average worker, of his own role, his responsibility to shareholders, and the nature and role of business, government, and unions. This set of beliefs led him to use the information he gathered to control the lives of his employees. In addition, EWK used accounting information to make sure that the distribution of wealth met his expectations. When faced with a change in labor rates, he instituted compensating cuts elsewhere to ensure the overall distribution was unchanged. He acted to maintain status quo wealth distribution and to punish those who opposed him. When threatened, EWK used accounting information to support his position, to provide incentives, or to punish.

The working environment of the refinery was extremely hot, noisy, dusty, and dirty [Watson, 1979]. Every process was carried out with heated sugar solutions with the heat supplied by steam. The work involved three shifts a day (24 hours) from Monday to Saturday morning. The company did not allow the men morning and afternoon tea breaks. Toilet breaks were monitored:

> When the head chemist came to me
> Dressed in his white coat
> I thought he might give me a medal
> For I had a swollen foot
> Got by shovelling rock-hard sugar
> Down a dirty chute.
>
> But no: 'I hear your work's all right,'
> The chemist said to me,
> 'But you took seven minutes
> To go to the lavatory;
> I timed it with my little watch
> My mother gave to me.'
>
> [Baxter, 1972]

There was an envelope of control around the employees, facilitated by accounting information which was an important power resource [Pettigrew, 1972; see also, Roberts and Scapens, 1985]. The accounting records were detailed around the production process. The labor records enabled the head office in Australia to rule with an unusual intensity and glare. EWK used these detailed accounting records to create a regime of truth around the production process so he could justify his hard stance on wage rates and conditions. The weekly letter to the head office from Auckland outlined weekly production with comments made on all aspects of Chelsea's operations, particularly changes in the workforce. The six-monthly report included detailed individual wage information for each employee broken down by employee task. The age, hours per week worked, wages per week, and length of service were recorded for each employee as well as whether the worker was paid on contract basis or under an Employee Arbitration Court award. The performance of the Chelsea labor force was constantly compared to that of the Australian Pyrmont and Yarraville plants which became de facto standards for Chelsea. Chelsea's report was inserted into a comparative wages report for all the company's refineries organized around major employee functions in the production process. Computations showed total wages per occupation and the rate of wages paid per ton of sugar melted. The Chelsea factory was under constant surveillance, organizational behavior was tightly prescribed and controlled, and workers were closely monitored. In 1906, EWK noted that the cause of a serious loss the previous half year was due to a "system of supervision that must have been exceedingly lax." He suggested that more production records were the answer [EWK, 23/5/1906, Box 151]. As a result, the gatekeeper had to report when men were late and if they left early for dinner or at 5 p.m. [Gatekeeper's Duties, 19/7/1908, box 150].

Although wages of the refinery workers made up 28% of the cost of production in 1903, 21% in 1912, and 18% in 1920 [Cost of Manufacture, 31/3/1903, box 125; 31/3/1912-30/9/1925, box 114], EWK used the accounting's regime of truth to justify his non-negotiable approach to the workforce. The average annual wage of a refinery worker in 1912 was £120 compared to the refinery manager's salary of £700 and the Auckland general manager's of £1,100. The accounting records produced a truth which EWK proclaimed as fair and true in representing CSR's organizational facts, therefore legitimating his power to control the workforce to the benefit of the salaried Australian workforce in New Zealand and the primarily Australian shareholders. Foucault [1980, p. 131] states that "truth is a thing of this world: it is produced only by virtue of multiple forms of constraint." The accounting truth produced by CSR was used by EWK to impose his views of how and why the wealth produced by the company should be allocated the way it was.

Domination was also sought through welfare. In 1910, CSR decided to offer housing loans to some employees who came to live near the refinery. CSR used these loans (advances) to buy employee loyalty and commitment. Welfare sought to gain the loyalty of the workforce with the appearance of employer benevolence [Wright, 1995, p. 21]. CSR saw welfare as good business to engender loyalty. EWK noted that while on occasion they may have a house left on their hands and a small loss "against this we could set the advantage of having a number of men in the neighbourhood of the Works who were more or less tied to the place" [letter to Auckland Manager, 30/12/1910, box 150]. Over a third of all new houses in Birkenhead between 1910 and 1926 were financed from CSR loans. The loans were for 25 years with "rent" deducted from gross wages [Luke, 1984]. Employees viewed the loans as a blessing and a curse. The granting of a loan imparted the status of permanent employee – "they wouldn't sack you if you owed them money" [unidentified employee, quoted in Watson, 1979]. On the other hand, workers lost the freedom to leave the refinery. Teenagers began work in the bag shed: "When you got to 20 you used to get the sack if there were no vacancies in the mill itself and they would take a new boy on. They kept me on when I got to 20 because I was paying my father's rent. He had a sugar workers' house but he was on relief work. If they'd sacked me they wouldn't have got any rent" [unidentified employee, quoted in Luke, 1984, p. 12]. Another interviewee tells of how he got sick, received £1 a week sick pay, but had to pay 76% (15/2d) in loan repayments which left his family in dire straits [Watson, 1979, p. 45].

The company also formed a provident fund (retirement funds) and a benefit society. The provident fund ended after the 1920 strike; contributions to date were refunded. Despite these welfare arrangements, interviewees [Luke, 1984] talked of the indifference of the company to the workforce exemplified by the reference to workers as "units" or by their number. "I was number 421. You go into the gates as a number, and you come out the gates as a number" [Stan Luker, quoted in Watson, 1979]. A foreman might ask: "Can I borrow a unit off you for my shift" [Curly Mayall, quoted in Watson, 1979]? Labor was literally seen as a series of numbers, a cost to be minimized in order to provide profits to shareholders.

By the 1900s refinery production became standardized around two key technologies – the vacuum pan and multiple-effect condensers. The vacuum pan enabled the sugar to be boiled at a lower temperature by creating a partial vacuum. These technologies enabled continuous manufacture and the pacing and timing of work flows. Although these processes required a small number of experienced workers capable of applying judgment in their operation, these technological developments did not necessarily imply the existence of a free-labor market. In fact, CSR tried to constrain the capacity of the workforce to bargain over wages by demonizing union activity and segmenting the workforce to weaken its bargaining ability, labeled a deproletarianization of the workforce by Bosma and Knight [2004, pp. 13-14]. The company also solicited the state to bias Arbitration Court rulings against the workforce by emphasizing that sugar was an essential commodity and employees should be punished for interrupting its supply [Watson, 1979, p. 23].

The setting of wage rates exhibited further aspects of hierarchical domination. New Zealand was considered a world leader in enacting legislation to promote harmonious industrial relations [Bennett, 2004, p. 60]. In 1894, the Industrial Conciliation and Arbitration Act laid out a vision for industrial relations that included compulsory arbitration courts and awards. Unions had to be registered to bring a case and agree not to strike while a wage award existed. This encouraged harmonious relations and took the sting out of any militantly aggressive unions. William Reeves, who drafted the legislation, suggested that the act would "save...labour from itself" [quoted in Bennett, 2004, p. 58]. Labor would be "saved" in the sense that unions would be robust and have a process to follow for wage negotiations. This process was not embraced by Chelsea even though the legislation was considered enlightened and conciliatory. In 1903, some of the workers joined the Birkenhead Sugar Workers Union and took a case to the Arbitration Court. Laborers were awarded a reduction in hours from 54 to 48 for 42/- plus overtime of 1/1d per hour for six hours [memorandum, Auckland Arbitration Award, 1903, box 151]. This amounted to an effective increase of about 15%. Wages for boys were likewise increased. EWK had an uncompromising attitude towards unions. He did not appreciate being dictated to and was outright hostile towards workers who formed unions to negotiate wages and better working conditions. The company labeled union officials Moscow internationalists or Independent Workers of the World (IWW), a labor movement established in Chicago in 1905 whose motto was "the world's wealth for the world's workers."

In 1903, the company dismissed the union secretary after the first wage award was granted by the Arbitration Court [1903, box 151]. In addition, Knox dismissed 115 men from the provident fund so he could use the contributions the company made on behalf of those employees (£258) to offset the increased costs of wages because of the new award. The company had employed this tactic before in 1894 when the Factories Act was passed, and it became illegal to pay boys off before a holiday of which there were only two. The cost of paying the extra day to 16 boys was taken off the picnic fund "because in this way the men would suffer and it is they not the boys who are responsible for the law making" [Miller to Auckland, 27/11/1894, box 145]. EWK also refused to employ boys once they reached 19 so as to avoid paying higher award wages. He threatened to cut back production at Chelsea if the award increased the cost of work. He was more sanguine about cutting employees out of the Employee Benefit Society because it had implications for increased accident insurance [memorandum, Auckland Arbitration Award, 1903, box 151]. EWK's vindictive approach over the wage award is illustrated by his treatment of a watchman at Chelsea named Hatfield. Knox [letter to Auckland, 21/1/1903, box 151] states:

> the Award of the Court has altered our position regarding this man, and he cannot expect any retiring allowance or pension. The rate of wage fixed is so high that a much more active man must be employed. Now that the men have seen fit to appeal to the Court, they must be prepared to submit to their decision, and they need not look to us to go out of our way to assist those who are not fit either for work or to earn the wages laid down in the schedule.

EWK went on to state that even men with long service "who cannot keep up to the faster stroke made necessary under the finding of the Arbitration Court" can no longer be employed [EWK to Auckland, 28/1/1903, box 151]. For EWK higher wages brought an expectation of greater productivity.

At the same time, EWK suggested that Auckland management consider changing employment arrangements by contracting with employees in the wash house, the refined sugar fugals, and the refined sugar store. Using the accounting information, he estimated that cheaper work could be done, especially in the refined sugar store, although contractors would be expected to pay award wages. The accounting mapping of the labor process also suggested segmentation of work as a cost saving measure in response to the award. For example, loading and delivery should be separated from the ordinary work of the store [EWK to Auckland, 28/1/1903, box 151]. Further suggestions were made in 1904 regarding using female labor in the bag-making area because the women are "more handy at the sewing and handling of the material than the boys are." Auckland management, however, did not think it could employ women despite the possible cost savings [EWK to Auckland, 25/1/1904, box 151].

These strategies and tactics were always ready to be implemented at Chelsea under the direction of EWK. CSR did not view compulsory arbitration as its friend and were vindictive whenever the employees obtained a new award. The union asked for more concessions in 1905, which was a further catalyst for EWK to assert his control over Chelsea. EWK was upset with the unreasonable attitude of wage-earners in New Zealand and was disappointed with Chelsea management for meeting with the union representative, Mr. Wallace. EWK asserted, "no good whatever can accrue from your conference with the men…and anyhow the decision as to the course to be followed must rest with me" [EWK to Auckland, 1/2/1905, box 151]. No wonder EWK noted a "strong feeling against the Company amongst the men" despite the concessions of better light and ventilation in the refinery [EWK to Auckland, 19/6/1905, box 151].

EWK promoted union officials as "professional agitators." He would anticipate labor supply and demand in order to justify his hard-line stance against the company's workers. EWK constantly compared Chelsea workers' demands to those of the Australian employees, holding strongly to the idea "that the men working at Chelsea should not be put on a footing differing in any way from that of the Australian employees who certainly are not their inferior in capacity and probably do not live more cheaply" [EWK to Auckland, 25/3/1908, box 152]. He would not talk to any person who was not employed by the company. Cost of living increases asked for by the union would be dismissed by EWK as "the usual practice in New Zealand of paying fancy wages and passing the charge on to the consumer." He would always reiterate the threat that sugar can be refined in Sydney and delivered to New Zealand just as cheaply as being produced in Chelsea [EWK to Auckland, 15/4/1908, box 152]. In 1910, CSR gave a bonus to all employees, both staff officers and wage earners. The bonus was given to wage earners who were under the award and those whose pay was not subject to an award. This was different to the 1905 bonus which only non-award employees received. EWK stated that the employees under an award got the bonus as a reward for not applying to the Arbitration Court during the last five years [EWK to Auckland, 22/10/1910, box 150]. EWK was responding to changing labor market conditions.

In 1911, a 5% increase in wages was given to the workers, and the company topped up the employees provident fund by £10,700 [EWK to Auckland, 31/1/1912, box 152]. However, EWK was quick to make the point that these increases in wages were driven in part by the extravagant expenditure of government money and were not necessarily permanent [EWK to Auckland, 12/11/1912, box 152]. In addition, EWK instructed the branch that "no written announcement is to be made: each man is to be told verbally at the pay window if his pay has been raised" [EWK to Auckland, 15/4/1911, box 158].

In 1914, the wage award for carpenters was set at 44 hours per week. This reduced hours from 47 hours for the same rate of pay. Since EWK objected to paying overtime, his solution to the issue was to have the men do all the necessary work in the reduced time [EWK to Auckland, 7/10/1914, box 152]. The company, in response to workers' requests, gave out a weekly bonus for six months in 1915 to offset the unprecedented increase in the cost of food in 1915, but the bonus was only given to non-award employees [EWK to Auckland, 12/8/1915, box 152]. In 1916, an employee was dismissed for "willfully slowing down in the rate of his work." EWK attributed the "doctrine of slowing down" to the IWW. He accused some of the employees at the refinery of being contaminated by the IWW which had also happened at the Glanville refinery [EWK to Auckland, 1/6/1916 and 5/9/1916, box 152]. Union activity had increased greatly in New Zealand during the 1900s and had come to a head in 1913 with the Waihi miners' strike and the Wellington watersiders' strike the next year. There was a sense in the 1910s that, after a decade of inflation, New Zealand workers were falling behind other sections of society [King, 2003, p. 308]. There was worker discontent with the arbitration award system that banned strikes; unions were striking more frequently. This climate of employee-employer relations entrenched EWK further in his view that the company should not negotiate with unions.

World War I created a worker shortage for the company, so it offered bonuses to induce workers to the refinery. In 1916 and again in 1918, the hiring of female labor for bag making, sack darning, and syrup packing was considered although nothing came of it [EWK to Auckland, 29/11/1916 and 27/2/1918, box 152]. The bonus for the minimum adult wage was 6/- per week in 1916, 9/- per week in 1917, 12/- per week in 1918, 18/- per week increased to 22/- per week in 1919, and 26/- in 1920 [Cost of Manufacture, 1912-1925, box 114]. Again the bonuses were not applied to employees paid under awards. This increase in the amount of the bonuses irritated EWK so that in 1916, he suggested that the company needed to make a stand against further increases in wages without an increase in productivity. He further averred, "some of our employees may have thought our recent advances have been a sign of weakness, and that we would hesitate to be faced with a strike and thereby cut off the supply of refined sugar; but, while some inconvenience might be caused, actual hardship to the public could be avoided by supplying raw sugar. However, we trust that a position of this kind is not likely to arise" [EWK to Auckland, 19/12/1916, box 152].

The company proposed that employees work 11-hour days, and that in some areas of the production process, piecework rates be considered. However, Chelsea had to recognize that labor was scarce and that the workers had the upper hand. Some employees started seeking more reasonable conditions, such as taking a day (Saturday) off work without pay and wanting Christmas a paid holiday. CSR also had to deal with an increasing amount of arbitration awards from the Department of Labour over occupation definitions. It was convinced that its refined store workers were just sugar workers and should not come under the Storeman's Award [Miller to Department of Labour, 23/5/1918, box 150]. The company dealt with the inspector of awards, visiting their refinery and classifying their workforce. This was intrusive on the company and in a sense the company was spoiling for a fight with its workers. CSR objected to the increasing power of the employees and the intrusiveness of union activity and the arbitration awards. Management started writing on industrial peace and how to meet the "evil of industrial discontent." EWK had the view that "co-operation between employer and employed is not to be looked for in the present state of human nature" [Miller to Head Office, 18/3/1919, box 150]. The view of the company was that the workers wanted too much and justified this extra amount by Marx's theory of surplus value. EWK gives a telling insight into his beliefs about his fellow man and perhaps why he was so autocratic. He avowed that "unless the character and intelligence of the average wage earner improves there is little hope of permanent improvement in his material condition…but what motive is there for a man to improve his character and behaviour if he is firmly convinced that his troubles all arise, not from any deficiency in himself, but from the unjust actions of other men?" [Miller to Head Office, 18/3/1919, box 150]. This rhetoric, enmeshed with the accounting regime of truth, was a powerful force.

The company and the workforce were on a collision course. In 1920, the employees went on strike over their proposal to reduce their hours to 44 per week and increase pay from 74/- to 94/- per week. The strike was pronounced illegal by the minister of labour because the union was registered under the 1894 Industrial Conciliation and Arbitration Act. The company retaliated by abolishing the employees' provident fund. The strike lasted 35 days and the Arbitration Court awarded the employees a 44-hour week but only a 6/- wage increase. The company did not hire back any of the union officers, and when they selected the men to return to work, the men were taken to the office and had their contributions to the provident fund refunded [Watson, 1979, pp. 20-23].

The accounting for wages was designed to evade and silence the voice of labor. Yet labor made its voice heard, offering a different narrative and accounting of its contribution to the company without the accounting details the company had created. Although labor did not have access to the detailed accounting records of costs and profits of the company, it was not constrained in arguing its case for higher wages. Accounting information was not considered as significant a matter when dealing with a commodity business like sugar where the inputs of raw sugar and the outputs of refined sugar are easily obtained [Liberty and Zimmerman, 1986]. This, coupled with a transparent and well-documented manufacturing process, meant that labor was fairly confident of its wage demands despite the lack of access to the company's accounting information. In addition, the labor unions were motivated by social justice issues like human working conditions and livable wages. The alternative voice of the union challenged the prevailing accounting orthodoxy of CSR.

After World War I, the company deliberated extensively over whether Anzac Day should be included in 1924 as a paid holiday as it only wanted to pay for the Picnic Day and Good Friday. This attitude to the workers was representative of the way the company approached the refinery workforce. Knox was outraged by any sniff of union activity and segmented the workforce through actions like dismissal from the provident fund or the employee benefit fund or the granting of loans (advances) selectively. EWK did not completely have his way. Labor reappropriated its sequestered position through participation in the union. Not only did workers protest their repressed position but they also sensed moments of empowerment. Fateful moments, such as the crisis of an on-the-job accident or mobilizing periods of union activity, brought times of moral reckoning which placed labor outside the economic calculus of the company. The workers also appealed to tradition, religion, and national pride so they could withdraw from the rigors of their work to celebrate holidays such as Christmas and Anzac Day.

Chelsea entered into an exclusive supply agreement with the New Zealand government from 1917 to 1923 due to sugar's high demand as a staple commodity. These were essentially cost-plus contracts. The company became virtually an arm of the government much to the surprise of EWK. This situation led to negotiations with the government over selling prices of refined sugar so as to enable the company to make a reasonable profit. Prime Minster Massey decided in 1923 that the government should no longer be the sole buyer of Chelsea sugar. This had become a comfortable arrangement for CSR, and the company wondered whether it could adjust back to its free-market philosophy. In fact, the company concluded that to survive in New Zealand, it had to convince the government that a protective duty should be applied to all imported sugar if the company was going to be viable. It even co-opted the support of the labor although the workforce was suspicious as to why the company needed its voice of support. This suspicion was not surprising given the history of acrimony with management. The company was able to obtain the support of Parliament by working with the Labour Party opposition as well as the government of Massey's Reform Party. EWK had retired at this point and was not involved in negotiating the protective duty to which he was ideologically opposed.

CONCLUSION

Accounting reports produce "truth-effects" [Foucault, 1980]. This paper provides an examination of domination and autocratic control exercised through two dimensions, the geography and ideology of accounting. It demonstrates accounting regimes of truth and how the narratives within which accounting is situated produce domination and exclusion. The sequestration of the workers' experience by the company is an example of such domination. Accounting meshed with narratives of power embedded in the autocratic control of CSR's general manager EWK throughout the company. These accounting power plays affected the distribution of wealth among workers, salaried employees, and shareholders. Accounting thus influenced the managers and through them the life of the company, its workers, and society as a whole. Accounting information was itself a source of power for management in that the way it was used influenced the behavior of management and shaped organizational reality. EWK was able to exercise his iron fist in a velvet glove of accounting reports which produced and imposed a truth which favored the shareholders. These truth effects were countered by labor providing an alternative narrative to be considered. Accounting is a contested discipline wrapped up in the organizational regime of the production of truth. Thus, the ideology of accounting is suggested to be legitimizing and dominating, diminishing the voice of labor in order to maintain the hierarchical, authoritarian culture of CSR.

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Schedule of boxes in the archive:

Box 114
Cost of Manufacture 31/1/1912-30/9/1925
Cost of Manufacture 1912-1925

Box 125
Cost of Manufacture 31/3/1903

Box 145
Letter Miller to Auckland 27/11/1894
Letter Auckland (Miller) to Sydney 1/2/1908

Box 150
Gatekeeper's Duties 19/7/1908
Letter Head Office to Auckland 29/3/1910
Letter Knox to Auckland 22/10/1910
Letter to Auckland Manager 30/12/1910
Letter Miller to Dept of Labour 23/5/1918
Letter Miller to Head Office 18/3/1919

Box 151
Letter Knox to Auckland 28/1/1903
Letter Knox to Auckland 21/1/1903
Letter Knox to Auckland 25/1/1904
Letter Knox to Auckland 1/2/1905
Letter Knox to Auckland 19/6/1905
Letter Knox to Auckland 2/8/1905
Letter Knox to Auckland 23/5/1906
Letter Knox to Auckland 28/4/1909
Memorandum, Auckland Arbitration Award, 1903

Box 152
Letter Knox to Auckland 25/3/1908
Letter Knox to Auckland 15/4/1908
Letter Knox to Auckland 10/5/1911
Letter Knox to Auckland 31/1/1912
Letter Knox to Auckland 12/11/1912
Letter Knox to Auckland 1/6/1916
Letter Knox to Auckland 5/9/1916
Letter Knox to Auckland 29/11/1916
Letter Knox to Auckland 19/12/1916
Letter Knox to Auckland 27/2/1918

Box 154
Letter Head Office to Auckland 25/5/1904

Box 158
Letter Knox to Auckland 15/4/1911
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Box 159
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LYMAN MILLS AND ITS ENCOUNTER WITH PUBLIC ACCOUNTANTS' INVENTORY COSTING CIRCA 1920

Abstract: This paper addresses the schedule of cost of goods manufactured and the income statement of Lyman Mills (LM) for the year 1917. They were prepared by CPAs at the request of LM, based on the books of account and its accounting system dating from the 1850s. This system was described, but not perfectly enough, in Johnson and Kaplan's *Relevance Lost* [1987]. This paper compares the schedule of cost of goods manufactured and income statement prepared by CPAs with the accounts in LM's ledger summarizing its costs and performance. It leads to the conclusion that the traditional accounting system of LM was a complete accounting system different from but comparable to today's accounting systems.

INTRODUCTION

A report dated July 14, 1924 prepared by certified public accountants for Lyman Mills (LM) is found in the LM Collection housed in the Baker Library at the Harvard Business School. The report was prepared by the accounting firm Stewart, Watts & Bollong (SW&B) of Boston. Two of the three persons who constituted the firm, Andrew Stewart and Elbridge A. Bollong, were CPAs.[1] The title is *Report on the Special Examination Made for the Purpose of Adjusting the Federal Tax Returns from 1917 to 1923, Inclusive* [LM Collection, AC-1].

The report is composed of a nine-page text and 51 pages of appendices. Of the latter 51 pages, 44 are dedicated to the finan-

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[1]According to Kistler [1978], the society of public accountants in Massachusetts was founded in 1900, and the CPA Act in Massachusetts was enacted in 1909. The name of Andrew Stewart is found in the advertisements listing the entire membership of the Incorporated Public Accountants of Massachusetts inserted in the Boston City Directory in 1911 and 1912, inserted between pp. 162 and 163 of Kistler [1978].

cial statements of LM: two pages are for the year 1916 and six pages are devoted to each of the seven years from 1917 to 1923. The financial statements of each of the last seven years are the following:

Exhibit A: Adjusted Balance Sheet.
Exhibit A – Schedule 1: Details of Original and Adjusted Balance Sheets.
Exhibit B: Profit & Loss Statement.
Exhibit B – Schedule 1: Cost of Goods Sold.
Exhibit C: Analysis of Surplus.
Exhibit D: Reconciliation of Net Profit as per Books with Net Profit as per Exhibit B and Net Income as per Amended Tax Return (or Tax Return Filed for the years 1922 and 1923).

The statements were prepared based on LM's books of account and source documents, on the one hand; in accordance with the accounting methods prescribed by the U.S. tax laws, on the other. Therefore, the statements permit a clear comparison between the accounting practices found in LM's books of account and those imposed by the tax laws.

As will be seen later, profit at LM was basically determined in the two trading accounts in the ledger, which was the practice maintained from its early years. LM's accounting system in the 1850s, treated in Johnson's article [1972] and Johnson and Kaplan's (J&K) *Relevance Lost* [1987], continued to be in use until well after 1900. The accounting records of LM "include a double-entry general ledger...kept by the treasurer at the home office in Boston, as well as a double-entry factory ledger...kept by the mill agent in Holyoke" [Johnson, 1972, p. 469; J&K, 1987, p. 24]. Each ledger contains two mill accounts. Johnson [1972, p. 471] describes the mill accounts in the home office (general) ledger and the factory ledger as follows:

> Although the amounts charged to the respective mill accounts for cotton, factory labor, and factory overhead are identical in the general ledger and the factory ledger, only the mill accounts in the factory ledger resemble modern work-in-process control accounts. Unlike work-in-process accounts, the Lyman general ledger's mill accounts contain entries for non-manufacturing expenses and sales in addition to entries for manufacturing expenses. Consequently, the mill accounts in the general ledger resemble those early nineteenth-century trading accounts which Littleton and other authorities

> described as the 'bridge' between mercantile bookkeeping and modern cost accounting. These accounts provide profit and loss data useful in determining the semi-annual dividend to shareholders,...

The above observation might be summarized into the following three points. First, each of the two mill accounts in the factory ledger has a corresponding account in the home office (general) ledger; the entries for manufacturing expenses are the same. Second, while the factory ledger mill accounts recorded only manufacturing expenses, the mill accounts in the home office ledger record "non-manufacturing expenses and sales in addition to manufacturing expenses" and "provide profit and loss data." Third, Johnson associates the factory ledger mill accounts with modern work-in-process accounts and the home office mill accounts with traditional trading accounts.

This paper focuses on the traditional mill trading accounts in the home office ledger in which are recorded manufacturing expenses, non-manufacturing expenses, sales, and resultant profit or loss. Although Johnson does not specify this in the passage quoted above, the mill trading accounts in the home office ledger are inventory accounts and, as will be seen later, they record the beginning and ending finished goods inventories. Such inventory accounts served as trading accounts which Dicksee [1921, p. 93] described as "partly real, and partly nominal." LM's accounting system including traditional mill trading accounts was maintained until well after 1900 and, thus, confronted the early federal income tax laws.

According to Klein [1929, pp. 5-9], the corporate excise tax, "the forerunner of the true income tax measure," was created in 1909. "It imposed a tax of 1% on the net income of corporations, above an exemption of $5,000.00." "The imposition of a federal income tax without apportionment" was made constitutional by the Sixteenth Amendment adopted by Congress in 1911 and declared ratified on February 25, 1913, following appropriate action by the states. The resultant 1913 income tax law "imposed a normal and a graded tax (surtax) on individuals and a flat tax on corporations." Under the 1913 law, "the exemption of $5,000.00 allowed to corporations under the Corporation Excise Act of 1909 was discontinued, but the tax rate of 1% remained unchanged." In 1916, the tax rate for corporations was increased to 2%. In 1917, income taxation was intensified as the Revenue Act of 1917 which increased the tax rate for corporations to 6%, "by adding a 4% tax to the 2% tax provided by the 1916 Act."

The rate was further increased to 12% by the Revenue Act of 1918. Also, as a war measure, the excess profits tax on business income was created by the 1917 Act, the rates of which "were made to run as high as 60%." The excess profits tax was continued until the year 1921.

Previts and Merino [1998, p. 182] noted: "The tax law not only expanded the markets for accounting services but also greatly facilitated acceptance of techniques, such as depreciation,..." LM was far from accepting the modern accounting methods imposed by the tax laws. But LM needed public accountants' services all the more because it could not adapt to the modern methods. The report by SW&B notes that LM was obliged to pay additional income and excess profits taxes for the five years from 1917 to 1921.[2] The total additional taxes for the five years amounted to $255,742.67, while the total taxes originally paid were $942,444.93. The report says:

> The additional taxes due to the Government as shown above are caused chiefly by the following adjustments necessitated by the requirements of the tax law and regulations of the Internal Revenue Department.
>
> 1. Increase in income, due to the refiguring of inventories from an arbitrary basis to the basis prescribed by the Department, which was cost or market, whichever was lower.
>
> 2. Disallowance of capital items claimed as repairs on the original returns filed.
>
> 3. Disallowance of donations and inallowable reserves claimed as deductions on original returns filed.

The financial statements in the report were prepared in accordance with the above requirements and regulations and used to prepare the tax returns. It may be confirmed that the duplicates of the tax returns for the years 1922 through 1925 found in a box [AB-4] in the LM Collection were prepared based on the data on the financial statements prepared by SW&B. Regarding the years 1917 through 1921 that were the object of the additional taxes, box AB-4 contains only the original tax returns. However, it seems certain that the public accountants' financial statements were also used for the years 1917 through 1921 to prepare the amended tax returns. In the same box, a letter, dated

[2]The profit and loss account of LM's home office ledger [LM Collection, CA-7] records the payments of income taxes from the 1909 corporate excise tax.

July 19, 1926, from the Internal Revenue Service is found that indicates LM's amended tax returns had been accepted based on the examinations made in the years 1922 and 1923.

Therefore, the financial statements that are included in the report are those that were already used to prepare the tax returns. Of the six kinds of statements presented earlier, Exhibit D: Reconciliation of Net Profit as per Books with Net Profit as per Exhibit B and Net Income as per Amended Tax Return (or Tax Return Filed for the years 1922 and 1923) details the points of difference between the profit calculation made in LM's books of account and that made by the following two statements: Exhibit B – Schedule 1: Cost of Goods Sold and Exhibit B: Profit and Loss Statement. Those two statements were prepared in accordance with the modern accounting methods that are summarized into the three points noted in the above quotation but not considering the treatments peculiar to taxation. Therefore, the differences between the financial statements and tax return are further specified in Exhibit D. The main part of this paper is dedicated to the comparison between the profit calculation made in LM's books of account and that found in the public accountants' schedule of cost of goods sold and profit and loss statement focusing on the year 1917.

As will be seen later, LM's profit measurement was mostly performed in the two mill trading accounts in the home office ledger. Therefore, most of the points of difference specified by Exhibit D relate to those between LM's mill trading accounts and the public accountants' schedule of cost of goods sold and profit and loss statement. Differences stem from the three points made by the report. Of the three points, as will be seen later, the second point relates to accrual and depreciation accounting. The first point, namely the lower-of-cost-or-market method, affected LM's accounting practices as inventory costing procedures. More specifically, it concerns the distinction between inventoriable costs and period costs presupposed by inventory costing. The public accountants prepared two distinct statements: Cost of Goods Sold and Profit and Loss Statement. Although the former ends and the latter begins with the cost of goods sold, they essentially reflect formats of today's schedule of cost of goods manufactured and income statement, respectively. Inventoriable costs and period costs were clearly distinguished by the public accountants. Only manufacturing costs were treated as inventoriable in the cost of goods sold schedule. By contrast, as Johnson's observation quoted earlier indicates, LM's mill trading accounts recorded both manufacturing and non-manufacturing costs, which suggests inventoriable costs and period costs were not distinguished. It further means that cost and financial accounting were not differentiated. Under the traditional accounting system, which is characterized by the use of trading accounts, cost and financial accounting were not differentiated, but those records were kept within a double-entry framework sufficient to prepare a modern cost of goods manufactured schedule or Exhibit B – Schedule 1. Under the traditional accounting system also, cost data were used to determine profit to be distributed to shareholders. They were used, in today's sense, for financial accounting purposes. The nature of the traditional accounting system just outlined will be made clearer through the examinations to be made in this paper which will also suggest that the traditional accounting system was a complete accounting system comparable to today.

We have studies [Miranti, 1990; Previts and Merino, 1998; Kern, 2000] that describe the role played by federal income taxes and public accountants in the making of modern accounting after 1900. However, they deal with only the modern accounting methods and their formation. They do not describe the nature of the accounting practice that prevailed when modern accounting emerged. Modern accounting did not develop in a vacuum. The LM case treated in this paper presents an instance that details the accounting methodology with which modern accounting methods had to contend. The LM case suggests that early U.S. income tax laws and public accountants encountered an accounting system characterized by trading accounts. LM was not unique. Previts and Merino [1998, p. 212] mention an episode in 1917, where a member of American Institute of Accountants was accused of "certifying a misleading statement," namely a "mixed merchandise account" (synonymous with "trading account" in mercantile accounting), but not sanctioned. They also suggest that "as late as 1928," accounting textbooks often referred to "the mixed merchandise account."

J&K [1987, p. 130] contended: "The inventory costing procedures adopted by public accountants after the turn of the century had a profound effect on management accounting." This "profound effect" is the famous "relevance lost." However, it should be noted that J&K did not present a single case study that showed what accounting practice public accountants in practice actually faced. They could only speculate. They presented many historical cases in *Relevance Lost*, but they did not present a single case proving their main thesis, namely the "lost relevance." The LM case as treated in this paper demonstrates the accounting practice that public accountants actually faced.

Public accountants' inventory costing clashed with the traditional accounting system's use of trading accounts at LM. As noted earlier, Johnson [1972] recognized that the mill accounts in LM's home office ledger were trading accounts characteristic of premodern accounting practices. Nevertheless, he associated the mill accounts in the factory ledger with "modern work-in-process control accounts" and interpreted LM's entire accounting system as centering on the factory ledger mill accounts. Johnson should have noticed that the factory ledger mill accounts recorded neither the beginning nor the ending balance while the mill trading accounts in the home office ledger recorded both. The specimen home office and factory ledger mill accounts inserted in J&K [1987, pp. 26-27] illustrate this situation. Can accounts that record no balance be work-in-process accounts, inventory accounts, in a double-entry bookkeeping system?

The fact is that the factory ledger mill accounts were inventory accounts but incomplete ones. The data in these incomplete inventory accounts in the factory ledger were transferred to the home office ledger and became part of the complete inventory accounts, namely the mill trading accounts. Therefore, it is the mill trading accounts in the home office ledger that should be associated with modern work-in-process accounts. This transfer process can not be understood without the understanding of the real relationships between LM's home office and factory ledgers which Johnson [1972] and J&K [1987] failed to recognize. This relates to another aspect of the traditional accounting system that is described by Fujimura [1998]. The version represented by LM is detailed in Fujimura [2003]. But describing this aspect of the traditional accounting system goes beyond the scope of this paper. What can be said here is that LM's accounting system should not be understood based on the factory ledger mill accounts that were allowed to remain in an incomplete state. It should also be noted that because the factory ledger mill accounts recorded no balances, none of their records appeared on the balance sheet. Only the balances of the mill trading accounts in the home office ledger were reproduced in the balance sheet. Therefore, only the accounting practices found in the mill trading accounts in the home office ledger can be compared with public accountants' inventory costing. Those found in the factory ledger mill accounts cannot. Johnson [1972] and J&K [1987] focused on the wrong site; this paper focuses alternatively on the mill trading accounts in the home office ledger.

AN OVERVIEW OF THE RECORDS IN LM'S LEDGER AND THE PUBLIC ACCOUNTANTS' FINANCIAL STATEMENTS

Table 1 charts data on profit levels recorded in the report by SW&B. The total differences in the first five years between the taxable incomes determined by the original and amended returns brought about $255,742.67 of additional taxes as noted earlier. Of the two columns under the title "Net Profits," the one designated "Exhibit B" shows the net profit determined in "Exhibit B: Profit & Loss Statement" for each year from 1917 to 1923, more specifically the "Net Profit before Deducting Federal Income and Profit Taxes."[3] The column "Books" is the amount shown as "Net Profit as per books" in Exhibit D for each year from 1917 to 1923. As noted earlier, each Exhibit D records, other than this "Net Profit as per books," "Net Profit as per Exhibit B" and "Net Income as per Amended Tax Return (or Tax Return)," as well as the factors that cause the differences among these three calculations of profit. According to Exhibit Ds, the difference between the last two kinds of profit stems from only two minor factors – "Contribution disallowed" that was not deductible for tax purposes and "Interest on Obligations of U.S. Exempt from Taxation." They are, e.g., in 1917, (add) $10.00 and (deduct) $1,050.00, respectively.

TABLE 1

Taxable Incomes and Net Profits: 1917-1923

	Taxable Income		**Net Profits**	
	Original Return	**Amended Return**	**Exhibit B**	**Books**
1917	$ 426,097.15	$ 629,906.67	$ 630,946.67	$ 180,402.63
1918	858,254.30	1,049,097.88	1,041,503.45	492,655.11
1919	1,124,210.61	1,288,396.40	1,290,171.40	443,626.18
1920	182,671.53	365,352.26	366,157.99	– 421,799.11
1921	444,354.76	915,585.65	916,151.22	267,167.44
1922	———	———	208,978.51	616,191.94
1923	———	———	109,169.67	233,100.34

Note: Prepared based on the data in *Report on the Special Examination Made for the Purpose of Adjusting the Federal Tax Return from 1917 to 1923, Inclusive* (LM Collection, AC-1).

[3]"Profits Taxes" indicates the excess profits taxes.

The comparison between the profits in the columns "Original Return" and "Books" indicates that LM had much larger amounts of taxable income than book profits, suggesting that the firm sincerely addressed the requirements of the tax laws. In order to prepare acceptable tax returns, the data in LM's books must have been modified strictly in accordance with modern accounting methods. Then, LM had recourse to the services of public accountants, and SW&B prepared the financial statements reproduced in their report.

The report says: "No increase in tax for the years 1922 and 1923 is anticipated for the reason that tax paid was computed on the basis prescribed by the Revenue Agent for the years 1917 to 1921." However, still, no change occurred in LM's accounting practices in 1922 and 1923 as evidenced by the public accountants' Exhibit Ds for the those years and suggested by the largely different amounts recorded in the columns "Exhibit B" and "Books." The financial statements prepared by the public accountants were used only for tax purposes. This situation continued until 1926. Then, at last, in the first six-month accounting period of 1927, LM took the first step to accept modern accounting methods. However, in the second six-month accounting period of 1927, LM's land, building, and machinery were sold and its liquidation began.[4]

Table 2 is a reproduction of the report's Exhibit A – Schedule 1 for the year 1917. It constitutes comparative balance sheets showing the data in LM's ledger (the column "BOOKS") and the data rectified or adjusted in compliance with the tax law (the column "ADJUSTED") which were originally recorded in "Exhibit A: Adjusted Balance Sheet." Table 2 exposes the presence of enormous secret reserves in LM's books. The difference between the surpluses determined by the public accountants and recorded in the books, $2,113,872.47, represents secret reserves, a little less than half of which is accounted for by the understatement of inventories and a little more than half by the understatement of fixed assets.

It was LM's usual practice to write off newly constructed fixed assets immediately and to write down arbitrarily the fixed assets recorded in its "Real Estate and Machinery"

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[4]This paragraph's remarks are based on, other than those in AC-1, the documents in boxes AB-3 and AC-2 in the LM Collection. The first step was the adoption of the lower-of-cost-or-market method [AB-3]. The documents in AB-3 contain too much useful information to refer to more in a few words. Another paper would be needed.

TABLE 2

Exhibit A – Schedule 1: Details of Original and Adjusted Balance Sheets, December 31, 1917

ASSETS	*BOOKS.*	*DR*	*CR*	*ADJUSTED*
Cash	$ 258,844.14			$258,844.14
Accounts Receivable	701,137.82			701,137.82
Inventories:				
Raw Cotton	1,084,696.06	312,791.52		1,397,487.58
Goods in Process		412,837.60		412,837.60
Finished Goods	51,982.35	196,565.22		248,547.57
Supplies:				
Cloth Room	9,509.29	2,377.32		11,886.61
Fuel	14,433.49			14,433.49
Starch	25,329.14	6,332.28		31,661.42
Oil	362.74	544.10		906.84
Supplies	9,746.00	8,240.39		17,986.39
Liberty Bonds 3 1/2's	70,950.00			70,950.00
Liberty Bonds 4's	90,000.00			90,000.00
Real Estate and Machinery	1,000,000.00		1,000,000.00	
Land		166,250.00		166,250.00
Buildings		1,092,040.18		1,092,040.18
Machinery		689,681.02		689,681.02
Equipment		249,864.23		249,864.23
TOTAL ASSETS				
LIABILITIES & CAPITAL	$3,316,991.03	$3,137,523.86	$1,000,000.00	$5,454,514.89
Notes Payable	$838,000.00			$838,000.00
Accounts Payable	8,380.25			8,380.25
Accrued Liabilities	9,194.83			9,194.83
Reserve for U.S. Taxes	80,000.00		$ 23,651.39	103,651.39
Capital Stock	1,470,000.00			1,470,000.00
Surplus	911,415.95	1,000,000.00	3,113,872.47	3,025,288.42
TOTAL ASSETS				
LIABILITIES & CAPITAL	$3,316,991.03	$1,000,000.00	$3,137,523.86	$5,454,514.89

Source: LM Collection, AC-1

account.[5] Periodic depreciation was not calculated. In the column containing the data on the adjusted balance sheet in Table 2, the $1,000,000.00 given to the "Real Estate and Machinery" in the column "Books" is simply denied, which is the amount recorded in the ledger account of the same name. Instead, the amounts of fixed assets are listed by SW&B in this column by categories: land, building, machinery, and equipment. The amounts were determined by the "special examination of the available books,

[5]These practices at LM in the period 1854-1875 are detailed in Fujimura [2004].

vouchers and other miscellaneous records of the Lyman Mills from the time of incorporation in 1854," according to the report. The results of the examination are recorded over seven of the 51 pages of appendices. Of these seven pages, one is dedicated to the land and six are devoted to the schedules recording every year's fixed asset additions and depreciation from the founding year, 1854, through 1923. Straight-line depreciation is used there at a rate of 1% for buildings (100 years), 4% for machinery (25 years), and 5% for equipment (20 years) (no residual values considered). They were, according to the report, the "rates allowed by the Federal Internal Revenue Agent."

The useful lives accepted by the internal revenue agent were for actual physical life. Therefore, acceptable depreciation rates were much lower and the remaining values of fixed assets estimated were much greater than those existing under today's standards.[6] However, this latter aspect explains the merit of the public accountants' services. It was advantageous to LM that the fixed assets written off immediately be added to the fixed assets to be depreciated. Longer useful lives were advantageous in this context. Larger fixed asset values result in larger amounts of depreciation. That was what the schedules of six pages noted earlier did in accordance with the straight-line depreciation rates allowed by the internal revenue agent. In fact, at the outset of the report, the stated aim was: "This examination was made in order to ascertain the correct Plant valuation to be used in the computation of the Federal Income and Excess Profits Taxes." The schedules over six pages showing the annual additions and depreciation of fixed assets were prepared for this purpose. The results for the year 1917 are as shown by Table 2, although the depreciation bases are much larger.[7]

A COMPARISON OF THE TRADING ACCOUNTS AND THE PROFIT AND LOSS STATEMENT

Table 3 integrates the data in the two mill trading accounts in the year 1917. As Table 3 shows, materials (cotton), labor, and other items as well as beginning inventories composed of finished goods, namely cloth, were debited to the home office mill

[6]Therefore, the secret reserves were much smaller from the perspective of today's standards.

[7]According to the schedules on fixed assets noted earlier in the text, the depreciation bases for the year 1917 are the following: "Buildings," $1,565,994.00; "Machinery," $1,239,034.87; and "Equipment," $445,278.31.

accounts [Fujimura, 2004].[8] On their credit side were recorded ending inventories and sales. Credited with sales, the home office mill accounts recorded the resultant profits on the debit side and became trading accounts. The two mill trading accounts were, like other ledger accounts, closed semiannually. Therefore, the profit figure recorded in the integrated mill trading account

TABLE 3

Integrated Mill Trading Account: 1917

Balance	$42,448.20	Sales	$3,520,069.49
Cotton	1,770,330.42	Balance	51,982.35
Labor and Wages	647,675.35		
Other Items	537,706.50		
Expense*	25,530.30		
Interest*	19,059.00		
Discount on Sales*	68,411.35		
Renewals	42,102.03		
Write-Downs of Cotton	195,000.00		
Profit	223,788.69		
	$3,572,051.84		$3,572,051.84

Note: Prepared by integrating the entries in Mill Account No.1 and No.2 in the two six-month accounting periods of 1917 found in Ledger G and detailed in the corresponding journal (LM Collection, BA-7 and CA-7). An asterisk is put next to the items that have the corresponding items in the public accountants' profit and loss statement in Table 4. In the public accountants' statement, "Expense" is divided into "Office Expense," "Compensation of Officers," and "Contributions." Similarly, the amounts recorded as "Interest" and "Interest on Liberty Bonds" in Table 4 together represent the total credits in the ledger's "Interest" account in the two six-month accounting periods of 1917, and the amount recorded as "Interest Paid" represents the total debits. The resultant balance is as shown in this table.

[8]The LM Collection includes two books that are designed to record semiannual financial statements and audit reports [LM Collection, AM-1 and -2]. From the founding year, 1854, through 1887, the semiannual statements of each accounting period were composed of a balance sheet (or two balance sheets of the same contents named trial balance and general statement), a profit and loss account, and two mill trading accounts. The mill trading accounts included in the semiannual statements recorded a variety of cloth as their beginning and ending balances and recorded only a variety of cloth as the balances. That gives evidence that the beginning and ending balances recorded in the mill trading accounts in the ledger were composed of finished goods only. An example of such mill trading accounts included in the semiannual statements is presented by Fujimura [2004]. The fact that the mill trading accounts continued to record only cloth at their beginning and ending balances around 1920 may be confirmed by another document named "Treasurer's Report to Directors," which was prepared semiannually and which included a statement summarizing the records relating to the cotton and mill trading accounts in physical terms [LM Collection, AM-7].

in Table 3 is the total of the four profit figures in the two mill accounts in the two six-month accounting periods. Likewise, the other items (except inventories) in Table 3 each show the total of the related amounts being entered half-yearly, monthly, or irregularly.

The integrated mill trading account in Table 3 was prepared in order to facilitate the comparison between the data in the trading accounts and the performance statements prepared by SW&B. Table 4 is a reproduction of the report's "Exhibit B: Profit and Loss Statement for Year Ended December 31st, 1917." The items in the integrated mill trading account in Table 3 that relate to manufacturing costs, therefore to "Cost of Goods Sold" in the report's income statement in Table 4, are "Cotton," "Labor and Wages," and "Other Items." They (and the beginning and ending balances) are treated later when the report's "Exhibit B – Schedule 1: Cost of Goods Sold" is examined. As detailed in that occasion, "Other Items" are, in fact, composed of 12 items relating to indirect manufacturing costs and outsourced bleaching costs. Therefore, as opposed to the impression Table 3 gives, the items relating to manufacturing costs account for most of the items entered in the mill trading accounts. The item "Other Items" was created to facilitate the comparison between the data other than manufacturing costs in Tables 3 and 4.

The items "Renewals" and "Write-Downs of Cotton" in Table 3 are also treated later when the manufacturing costs are examined. The remaining three items in Table 3, next to which an asterisk is placed, are those that have no connection with manufacturing costs. They correspond to items in Table 4 also indicated with an asterisk (see the note in Table 3). SW&B accepted the LM's data without modification with regard to these administrative costs, interest, and discount on sales. This is the same for the total amount of sales.

The remaining items in Table 4, namely "Capital Stock Tax," "Rentals," and "Bad Debts Recovered," are not found in Table 3. They were recorded, on the part of LM's home office ledger, in the "Profit and Loss" or "Guarantee" accounts. "Capital Stock Tax" is in the "Profit and Loss" account; "Rentals" from the company's boarding houses and "Bad Debts Recovered" are in the "Guarantee" account. Therefore, SW&B accepted the data in the ledger with regards to all the items listed after "Gross Profit on Sales" in Table 4.

The main items recorded in the home office ledger profit and loss account were the profits transferred from the mill trading accounts and the dividends payable. The account may have

TABLE 4

Exhibit B: Profit & Loss Statement for Year Ended December 31, 1917

Sales		$3,520,069.49
Deduct:		
Cost of Goods Sold (See Schedule 1)		2,782,100.13
Gross Profit on Sales		737,969.36
Deduct:		
Operating Expenses:		
Office Expense*	$13,720.30	
Compensation of Officers*	11,800.00	
Capital Stock Tax	1,330.50	26,850.80
Net Income from Operations		711,118.56
Add:		
Other Income:		
Rentals	6,882.69	
Interest*	3,877.48	
Interest on Liberty Bonds*	1,050.00	
Bad Debts Recovered	425.77	12,235.94
Total Income		723,354.50
Deduct:		
Other Charges:		
Discount on Sales*	68,411.35	
Interest Paid*	23,986.48	
Contributions*	10.00	92,407.83
Net Profit before Deducting Federal Income and Profits Taxes		630,946.67
Deduct:		
U. S. Income & Profits Tax applicable to 1917		103,651.39
Net Profit to Surplus (See Exhibit C)		$527,295.28

Source: LM Collection, AC-1
Note: Asterisks are added to the original in order to show that the related items have their corresponding items in the integrated mill trading account in Exhibit 3.

recorded other additional items, such as "Capital Stock Tax" mentioned above. Besides, in LM's profit and loss account were recorded the cash payment for the federal income tax for 1916 ($7,668.16) and the reserve for federal income tax ($80,000) on the debit side and a credit of $38,304.14 related to capital expenditures. These three items were excluded by SW&B in the profit calculation shown in Table 4. Therefore, the items that caused LM and SW&B to calculate different profits may be divided into two groups – the above three items and items related to gross profit that have not yet been examined.

The net profits recorded in the column "Books" in Table 1 are those drawn by SW&B from both the "Profit and Loss" and "Guarantee" accounts in the ledger.[9] The amount in 1917, $180,402.63, is recorded at the top of the report's "Exhibit D: Reconciliation of Net Profit as per Books with Net Profit as per Exhibit B and Net Income as per Tax Return for the year Ended December 31, 1917," presented as Table 5. The $630,946.67 of "Net Profit as per Exhibit B" in Table 5 is "Net Profit before Deducting Federal Income and Profits Taxes" in "Exhibit B," reproduced in Table 4 and recorded in Table 1 in the column "Exhibit B." The difference between the net profit as per books and the net profit determined by the public accountants, $450,544.04, is explained by five factors in the schedule in Table 5. Among them, "Reserve for Federal Taxes" and "Federal Income Tax 1916" are, as has been seen, the items debited to the home office ledger profit and loss account and excluded from the public accountants' profit and loss statement in Table 4. The other item ($38,304.14) that the ledger's profit and loss account records but on the credit side, also excluded from the statement in Table 4 concerns capital expenditures, as noted earlier. This amount, $38,304.14, should be added to $51,505.69 shown as "Net Capital Items Charged to Profit and Loss" in Table 5. These "Net Capital Items" were, as will be seen in the following section, charged to the trading accounts. Therefore, the expression "Charged to Profit and Loss" should be read as "charged to expense." The $38,304.14 credited to the ledger's profit and loss account reduced the amount of "Net Capital Items Charged to Profit and Loss" by $38,304.14. In fact, the report by SW&B indicates that LM's "PLANT ADDITIONS" was $89,809.83 in 1917. Capital expenditure of $38,304.14 + $51,505.69 = $89,809.83 is the real "Net Capital Items Charged to Profit and Loss," in fact to the trading accounts. Therefore, it seems better to suppose that the statement in Table 5 records $89,809.83 as "Net Capital Items Charged" to expense and a negative amount of $38,304.14 together with "Depreciation not deducted on books."[10]

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[9]The "Guarantee" account was an unusual account used to camouflage the real profit and loss data by LM at that time.

[10]In LM's ledger, $38,304.14 is transferred from the "Bill Payable" account to the profit and loss account. Unusual entries were made in LM's "Bill Payable" account at the time under review. Capital expenditures paid in cash recorded in the account named "New Work" were transferred to the "Bill Payable" account. Seemingly the related amounts were further transferred from this account to the mill trading accounts or the profit and loss account. As a result, it becomes obscure how capital expenditures were treated. Therefore, it is difficult to explain

TABLE 5

Exhibit D: Reconciliation of Net Profit as per Books with Net Profit as per Exhibit B and Net Income as per Tax Return for the Year Ended December 31, 1917

Net Profit as per books for year ended December 31st,1917		$180,402.63	
Add:			
Net Capital Items Charged to Profit and Loss	$51,505.69		
Net Increase in Inventories	398,855.44		
Reserve for Federal Taxes	80,000.00		
Federal Income Tax 1916	7,688.16	538,029.29	$718,431.92
Deduct:			
Depreciation not deducted on books			87,485.25
Net Profit as per Exhibit B			630,946.67
Add:			
Contribution disallowed			10.00
Total			630,956.67
Deduct:			
Interest on Obligations of U. S. Exempt from Taxation			1,050.00
NET INCOME AS PER AMENDED TAX RETURN			$629,906.67

Source: LM Collection, AC-1

It may be said that the schedule in Table 5 virtually presents the three items that are recorded in LM's profit and loss account and excluded from the report's profit and loss statement as factors that cause the difference between the net profit figures. The remaining factors that Table 5 illustrates are "Net Capital Items Charged" to expense ($51,505.69 + $38,304.14), "Net Increase in Inventories" ($398,855.44), and "Depreciation not deducted on books" (minus $87,485.25). Their total is $401,180.02, and all relate to gross profit calculation. As has already been seen, the data listed after "Gross Profit on Sales" in the report's profit and loss Statement in Table 4 agree with those in the ledger. Therefore, the $401,180.02 should be the difference in gross profit terms between the profit figures in LM's ledger and the report. If $25,530.20 of "Expense," $19,059.00 of "Interest," and $68,411.35 of "Discount on Sales" are removed from the integrated mill trading account in Table 3, this trading account

the transactions described in the text, which seems to relate to correcting entries. Nonetheless, the credit balance at the end of the year 1917 of the "Bill Payable" account is reproduced in the balance sheet in Table 2 as "Accounts Payable." This balance in "Books" was accepted by the public accountants as Table 2 indicates.

shows gross profit comparable to "Gross Profit on Sales" in Table 4.[11] The amount thus calculated in the integrated trading account is $336,789.34. The difference between this amount and $737,969.36 of "Gross Profit on Sales" in Table 4 is $401,180.02. Thus, the remaining three factors in Table 5 mentioned above should explain the difference between the gross profit figures drawn from the integrated trading account and recorded in the report's profit and loss statement.[12] With that observation, we now address the remaining issue that relates to gross profit calculation.

THE COMPARISON IN TERMS OF GROSS PROFIT

This section begins by confirming the following facts: (1) the difference between the gross profit recorded in the report's profit and loss statement in Table 4 and the corresponding profit drawn from the integrated mill trading account in Table 3 is $401,180.02; and (2) the factors that caused the difference are "Net Capital Items Charged" to expense, "Net Increase in Inventories," and "Depreciation not deducted on books" ($89,809.83 + $398,855.44 – $87,485.25 = $401,180.02). The three factors should explain the differences between "Cost of Goods Sold" in Table 4, on the one hand, and the records found in Table 3 except "Expense," "Interest," and "Discount on Sales" (other than "Sales" and "Profit"), on the other. "Cost of Goods Sold" in Table 4 is detailed in the report's "Exhibit B – Schedule 1: Cost of Goods Sold for Year Ended December 31st, 1917," reproduced in Table 6. The comparison between the records in Tables 3 and 6 is the object of this section.

The items listed under the heading "Manufacturing Expenses" in Table 6 are indirect manufacturing costs except the outsourced "Bleaching" costs, while "Cotton Used" and "Labor and Wages" are direct manufacturing costs. Those costs comprise the total manufacturing costs incurred during the year 1917. Under the items constituting the manufacturing costs, the schedule in Table 6 records the differences between the beginning and

[11]Note that SW&B used gross sales in calculating gross profit.

[12]The difference between the profit figures between the "Original Return" and "Books" in 1917 in Table 1 ($426,097.15 – $180,402.63 = $245,694.52) is explained as follows. The three items recorded in LM's profit and loss account ($80,000.00 + $7,668.16 – $38,304.14 = $49,364.02) were not applied to the original return. Federal Capital Stock Tax recorded in both profit and loss accounts ($1,330.50) and write-downs of cotton recorded in the mill trading accounts ($195,000.00) were not applied to the original return.

ending work-in-process and finished goods inventories. The cost of goods manufactured is drawn from the manufacturing costs incurred during the year by considering the difference between the beginning and ending work-in-process inventories. The cost of goods sold is obtained from the cost of goods manufactured ($2,888,568.82) by considering the difference between the beginning and ending finish goods inventories. That is the bottom line of the schedule. Although the cost of goods sold is the bottom line, this schedule fulfills the function of a cost of goods

TABLE 6

Exhibit B – Schedule 1: Cost of Goods Sold for Year Ended December 31, 1917

				(Data in the integrated mill trading account)
Raw Material:				
Cotton Used		$1,781,316.70		
Labor and Wages		647,675.35		
Manufactring Expenses:				
Repairs	$87,975.23			$135,683.03
Depreciation	87,485.25			
Bleaching*	82,365.71			82,365.71
Fuel*	80,210.62			80,210.62
Cloth Room	45,313.71			47,691.03
Property Taxes*	38,803.95			38,803.95
Supplies	31,578.06			35,984.58
Starch	30,567.29			36,899.57
Mill Expense-Office*	30,563.03			30,563.03
Insurance*	27,620.90			27,620.90
Yard*	12,792.75			12,792.75
Teaming*	5,914.95			5,914.95
Oil	2,953.60	564,145.05	$2,993,137.10	3,176.38
Deduct:				
Difference in Goods in Process:				
December 31, 1917	412,837.60			
December 31, 1916	308,269.32	104,568.28	$2,888,568.82	
Deduct:				
Difference in Finished Goods:				
December 31, 1917		248,547.57		
December 31, 1916		142,078.88	106,468.69	
Cost of Goods Sold (See Exhibit B)			$2,782,100.13	

Source: LM Collection, AC-1

Note: The data in the mill trading accounts are added to the original. An asterisk is put beside the items that show the same amount in both this schedule and the integrated mill trading account.

manufactured schedule. As noted at the outset of this paper, SW&B valued inventories at lower of cost or market. Therefore, the beginning and ending work-in-process and finished goods inventories in Table 6 should have been valued on this basis. The schedule in Table 6 suggests that the costs used to value inventories are manufacturing costs. Therefore, SW&B computed the cost of goods sold in accordance with modern principles used today in preparing financial statements.

The data in the integrated mill trading account in Table 3, compared with those in the schedule in Table 6, are (1) the items relating to the manufacturing costs, (2) "Renewals" and "Write-Downs of Cotton," and (3) the beginning and ending finished goods inventories. The data on the indirect manufacturing costs and bleaching costs that are integrated into "Other Items" in Table 3 are detailed in Table 6. They are added to the original schedule, each on the same row as its counterpart is found. The manufacturing costs debited to the integrated mill trading account are those transferred from the related ledger accounts to the two mill trading accounts. The manufacturing costs on the original schedule in Table 6 lists are determined by using the data recorded in LM's ledger and source documents. The data are only modified on the part of the schedule. However, the corresponding accounts in the ledger are a little different. The data in the integrated mill trading account shown in Tables 3 and 6 are presented utilizing the items used by SW&B. The corresponding accounts in the ledger are as described below [LM Collection, CA-7].

The ledger includes two cotton accounts, just like it includes two mill trading accounts. The amount debited as "Cotton" to the integrated mill trading account in Table 3 is the total of the amounts transferred from the two cotton accounts. The amount of "Labor and Wages" in Table 3 is not that transferred from one account either. There is the "Payrolls" account in the ledger; most of the amounts relating to "Labor and Wages" are transferred from this account. The remainder is wages paid in cash and transferred directly from a cash account. Accounts with the same names as listed in Table 6 are found in the ledger except "Bleaching," "Property Taxes," and "Mill Expense – Office." "Bleaching," i.e., outsourced direct costs, is shared by the two bleaching accounts in the ledger. "Property Taxes" and "Mill Expense – Office" are recorded in only one account, "General Expense." The accounts recording direct material, direct labor, and indirect manufacturing costs (plus bleaching costs) are opened in LM's home office ledger, and the manufacturing costs incurred are transferred from these accounts to the two mill trading accounts. The accounts recording manufacturing costs opened in LM's ledgers scarcely changed from its early years [LM Collection, CA-1 to 8]. The firm continued to use its traditional accounting system still after 1900. The accounting system that Johnson [1972] and J&K [1987] saw was maintained in the period under review. LM's accounting records were used to determine manufacturing costs incurred during the year and cost of goods sold by the public accountants. It should be noted that J&K erred in recognizing LM's accounting system. Johnson [1972] and J&K [1987] maintain that all manufacturing cost records are found in the factory ledger. However, a quick review of a series of LM's factory and home office ledgers indicates that outsourced bleaching and insurance costs, which the public accountants included in manufacturing costs, were recorded only in the home office ledgers. The complete cost records were kept only in the home office ledger and found only in the home office ledger mill trading accounts.

Although SW&B used the data in LM's ledger and source documents, it modified them. As noted earlier, the modifications relate to "Net Capital Items Charged" to expense, "Net Increase in Inventories," and "Depreciation not deducted on books" ($89,809.83 + $398,855.44 – $87,485.25). In Table 6, an asterisk is put beside the items that show the same amount in both the schedule prepared by the public accountants and the integrated mill trading account. Regarding these items, SW&B accepted the ledger's data without modification. A comparison between Tables 3 and 6 indicates that the public accountants accepted the ledger's data on "Labor and Wages" as well. Therefore, the modified data on the manufacturing costs relate to "Cotton Used," "Repairs," "Cloth Room," "Supplies," "Starch," and "Oil." Besides, SW&B did not accept "Renewals" and "Write-Downs of Cotton" as costs and added depreciation expense. Further, there are significant differences between Tables 3 and 6 regarding the beginning and ending inventories. The differences are not limited to the amounts. The beginning and ending inventories recorded in the integrated mill account in Table 3 represent finished goods only, whereas the schedule in Table 6 records work-in-process and finished goods inventories. LM's ledger had cotton and mill trading accounts but no specialized account for the recording of work-in-process inventories. The public accountants considered that LM did not record work-in-process inventories as shown by the comparative balance sheets in Table 2. In fact, LM recorded work-in-process inventories in the cotton accounts. More specifically, LM valued the work-in-process inventories at materials costs only and recorded both cotton as materials and work-in-process in the cotton accounts. This issue, which is of critical importance in understanding traditional accounting, is treated in the following section. In this section, the assumption is made that LM did not record work-in-process inventories. It will facilitate the comparison between the data on the inventories recorded in Tables 3 and 6.

The differences between the data in Tables 3 and 6 should be explained by the three factors noted earlier. What "Depreciation not deducted on books" ($87,485.25) indicates is easily understood.[13] It is explained by the depreciation expense ($87,485.25) recorded only in the schedule prepared by the public accountants. "Net Capital Items Charged" to expense ($89,809.83) relates to the amount that the public accountants considered capital expenditures but LM treated as expense. It is explained by the difference between the amounts recorded as "Repairs" and "Renewals" in the integrated mill trading account and as "Repairs" in the schedule prepared by the public accountants ($135,683.03 + $42,102.03 – $87,975.23 = $89,809.83). $47,707.80 of repair expenditures and $42,102.03 of renewals expenditures were treated as expense by LM but expenditures to be capitalized by the public accountants.

The two factors just described show the difference in fixed asset accounting between LM and the public accountants. LM had recourse to renewal accounting instead of depreciation accounting. Charging capital expenditures for renewals against expense was a usual practice at LM from its early years. Immediate write-offs of expenditures for fixed asset additions were also made, but such write-offs were charged to the profit and loss account [Fujimura, 2004]. However, in the period under review, LM seems to have intended to hide that it made immediate write-offs of capital expenditures. It seems possible that the above $89,809.83 included not only renewals but also immediate write-offs of new capital expenditures and that, generally speaking, the "Renewals" account in the ledger recorded fixed asset additions as well as renewals. Anyhow, LM's traditional fixed asset accounting practices contrast to the public accountants' depreciation accounting.

The remaining factor is "Net Increase in Inventories"

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[13]According to the schedules on fixed assets in SW&B's report, the depreciation bases and rates for the year 1917 are the following: "Building," $1,565,994.00 × 1%; "Machinery," $1,239,034.87 × 4%; and "Equipment," $445,278.31 × 5%.

($398,855.44). It relates to cotton, work-in-process and finished goods inventories, but also supply inventories recorded in the "Cloth Room," "Supplies," "Starch," and "Oil" accounts. The ending inventories for 1917 recorded in these four accounts, as well as in the account "Fuel," are found in the comparative balance sheets in Table 2. Table 2 indicates that the four inventories are understated by $17,494.09 in the LM ledger. According to the comparative balance sheets of the previous year end, only "Oil" and "Supplies" are understated, by $4,115.19 in total. Therefore, in the public accountants' view, LM improperly recorded the four inventories by $13,338.90 during 1917. On the other hand, the Table 6 schedule suggests that the accounts "Cloth Room," "Supplies," "Starch," and "Oil" are recorded at an amount $13,338.90 greater in LM's ledger than in the public accountants' schedule. The public accountants judged that the $13,338.90 treated as expense by LM should be capitalized as supply inventories. Thus, $13,338.90 of $398,855.44 of "Net Increase in Inventories" is explained in this way.

Table 2 indicates that LM's cotton accounts understate the 1917 ending inventories by $312,791.52. The comparative balance sheet of the previous year-end indicates that LM understated the ending cotton inventories by $128,777.80. Therefore, the public accountants judged that the firm improperly reduced the cotton inventory value by $184,013.72 in 1917. On the other hand, as shown in Table 3, the write-downs of cotton actually debited to the mill trading accounts in 1917 are $195,000.00. The difference between the two amounts, $10,986.28, is counterbalanced by the difference between the cotton used recorded in Table 6 and that recorded in the integrated mill trading account in Table 3 ($1,781,316.70 – $1,770,330.42 = $10,986.28). The amount that the public accountants did not accept as write-downs of cotton was not $195,000.00 but $184,013.72. Thus, $184,013.72 of $398,855.44 of "Net Increase of Inventories" is explained in this way.

The remaining $201,502.82 ($398,855.44 – $13,338.90 – $184,013.72) relates to the work-in-process and finished goods inventories. In this section, as noted earlier, it is assumed that LM's ledger does not record work-in-process inventories. Therefore, the beginning and ending work-in-process inventories recorded in the schedule of cost of goods sold in Table 6, $308,269.32 and $412,837.60, may be regarded as the amounts understated by Lyman Mills at the beginning and end of the year 1917. For finished goods inventories, the amounts understated at the beginning and ending of 1917 are obtained by comparing data in Tables 2 and 5 as follows: $142,078.88 – $42,448.20 = $99,630.68 and $248,547.57 – $51,982.35 = $196,565.22. The total understated amount for 1917 is calculated as follows: ($412,837.60 + $196,565.22) – ($308,269.32 + $99,630.68) = $201,502.82. Therefore, it may be said that from the public accountants' point of view, LM improperly reduced the value of its work-in-process and finished goods inventories by $201,502.82 during the year 1917. In the public accountants' view, this amount was improperly charged to expense. The remaining $201,502.82 relating to the work-in-process and finished goods inventories is explained in this way. However, unlike in the case of "Cloth Room," "Supplies," "Starch," "Oil," and "Cotton," the amount was not charged to the mill trading accounts. The direct records of this $201,502.82 are found nowhere in LM's ledger. The amount may be obtained by comparing the differences between the beginning and ending balances. In the Table 6 schedule, the difference is $211,036.97 ($104,568.28 + $106,468.69), thereby reducing the cost of goods sold by an equal amount, while in the integrated mill trading account in Table 3, the difference is $9,534.15 ($51,982.35 – $42,448.20). The difference of the two amounts, $201,502.82, understates profits by the same amount. Thus, it can be seen that each of the five factors shown in Table 5 explains how the public accountants modified the data in the LM ledger.

SW&B's valuation of the work-in-process and finished goods inventories was based on the lower-of-cost-or-market method. However, since LM did not adopt this method, write-downs of $201,502.82 were not made. As noted earlier and detailed in the next section, LM valued its work-in-process inventories at material cost. Meanwhile, the company seemingly valued its finished goods inventories lower than it should have applying its normal method. However, entries writing down finished goods are not found in LM' books of account, as suggested above. Since write-downs of cotton are recorded in the ledger, the lack of such entries for finished goods seems to suggest that adjustments may have been made outside the books of account.

Here and in the preceding section, the public accountants' profit and loss statement and schedule of cost of goods sold were compared with LM's profit and loss, guarantee, and trading accounts. It has been confirmed that the public accountants, in preparing the profit and loss statement and schedule of cost of goods sold, relied on the data in the LM ledger and source documents. It has been further confirmed that the modifications made by the public accountants were specified in one of their schedules (Exhibit D). Exhibit D, by specifying the modifications made, gives evidence that LM's ledger and source documents provided sufficient data to prepare modern financial statements and also that LM's traditional accounting system is different from but comparable to modern accounting.

This nature of LM's traditional accounting system is further clarified by comparison between the integrated mill trading account and the public accountants' statements made in this and the preceding section. First, the comparison between the integrated mill trading account in Table 3 and the public accountants' schedule of cost of goods sold in Table 6 indicates that the trading accounts fulfilled a comparable function. Thus, LM's mill trading accounts are comparable to today's schedule of cost of goods manufactured, as well as today's work-in-process account.[14] Yes, there were differences in accounting methods between the cost records in LM's trading accounts and in SW&B's schedule of cost of goods sold, particularly with regard to fixed asset accounting and inventory valuation methods. But the presence of the differences rather proves that both were comparable. It was highlighted by the comparison in terms of gross profit made in this section.

Second, at the same time, the comparison between the integrated mill trading account in Table 3 and the public accountants' profit and loss statement in Table 4 indicated that LM's mill trading accounts fulfilled functions comparable to a modern income statement. The mill trading accounts functioned both as a modern cost of goods manufactured schedule and an income statement. The mill trading accounts evidence that cost and financial accounting were not separated in the traditional accounting system.

The mill trading account, as an inventory account, may be compared with the modern work-in-process account. However, it differs in that the mill trading account recorded both manufacturing and non-manufacturing costs. Inventoriable costs and period costs were not differentiated in the mill trading account. Thus, when ending finished goods were valued at cost, all costs were recorded in the trading account, including non-manufacturing costs. This did not occur at LM but did, for

[14]As noted at the outset of this paper, Johnson [1972] associated the factory ledger mill accounts with the modern work-in-process account. But comparable to today's work-in-process account are the home office ledger mill trading accounts. Note that the factory ledger mill accounts did not record all manufacturing costs.

example, at Schneider and Company [Fujimura, 2000].[15] Also, the costs recorded in the trading account were inventoriable but treated in a different way from today. In the modern accounting system, costs to be recorded in the work-in-process account are treated as an asset when incurred and as an expense when the related product is sold. Therefore, with today's lower-of-cost-or-market method, when the inventory is valued at a lower market price instead of a higher cost, write-downs must be recorded. By contrast, a value other than cost may have been given to the ending finished goods inventories recorded in LM's mill trading accounts without recording a write-down or write-up. Costs recorded in the mill trading accounts were not treated as an asset when incurred. Thus, cost and financial accounting were not separated; inventoriable costs and period costs were not differentiated; and costs recorded in the mill trading accounts were not treated as an asset when incurred.

THE RECORDING OF WORK-IN-PROCESS INVENTORY

In the preceding section, consideration was given to the assumption that LM did not record work-in-process inventory. However, as noted there, LM did record work-in-process inventory. It valued work-in-process inventories at their materials cost and recorded them in the two cotton accounts. This practice may be assumed since, as accounts recording inventories, LM's ledger had only two cotton and two mill trading accounts other than the accounts recording supply inventories. As the mill trading accounts recorded only finished goods inventories, the cotton accounts must have recorded work-in-process as well as direct materials inventories. This assumption may be confirmed by the cotton accounts included in box AM-7 in the LM Collection that is part of a series of documents [AM-1-9] called "Semi-annual accounts, unbound, docket-filed" in the catalogue of the LM Collection.

Table 7 is a reproduction of one of the cotton accounts in-

[15]It was a leading French company that ran coal mines, iron works, and machine shops. Valuation at cost was concerned with work-in-process inventories. Fujimura [2000] reveals at Schneider and Company in the 1840s that (1) work-in-process inventories in job costing were valued at full cost (manufacturing costs plus non-manufacturing costs); (2) work-in-process inventories in process costing recorded as departmental finished goods were valued at full cost (manufacturing costs plus non-manufacturing costs); (3) however, work-in-process inventories in process costing regarded as remaining in an unfinished state were valued at materials costs only. Some of the complete cost records concerning job costing that were used to value inventories are reproduced in Fujimura [2002].

cluded in box AM-7. It is named "Cotton Account Mill No. 1," and its records correspond to those of the account Cotton No. 1 in the ledger. Another cotton account in box AM-7 (Cotton Account Mill No. 2) corresponds to the account Cotton No. 2 in the ledger. The author confirmed that, for the two six-month accounting periods of 1917, the records in the two cotton accounts in box AM-7 agree with those in the two corresponding cotton accounts in the ledger except that the ledger cotton accounts record write-downs of cotton while the cotton accounts in box AM-7 do not. Therefore, the beginning and ending inventory values differ, differences that may be explained by the previous and current write-downs. Although their records agree, the cotton accounts in box AM-7 and the ledger had distinct features. First, the records in the ledger cotton accounts are essentially those of cash transactions, while those of the cotton accounts in box AM-7 are analytic as shown by Table 7. Second, as Table 7 also demonstrates, the cotton accounts in box AM-7 records numbers over three columns which are expressed, from left to right, in bales, pounds, and dollars, while the ledger cotton accounts record only dollar amounts. Third, and most important here, the cotton accounts in box AM-7 differentiate between cotton inventories as direct materials and work-in-process, while the ledger cotton accounts do not.

The balance sheet in Table 2 indicated that SW&B used the data in the ledger cotton accounts that record beginning and ending inventories without differentiating between raw cotton and cotton in process. However, as shown by Table 7, raw cotton and cotton converted into intermediate or semi-finished products were distinguished at LM. The cotton account in Table 7 refers to the following two groups of cotton as beginning inventory: "Cotton on hand, in store & on way" and "Cotton in process." "Est. frt." recorded on the first line of the opposite side is the "Estimated freight" that seems to be recorded to offset the freight expense of the cotton still in transit. As the ending inventory, the cotton account in Table 7 records cotton in the processes of carding, spinning, dressing, and weaving, on the one hand, and "Cotton on hand & on way" (the corresponding "Estimated freight" is debited) and "Cotton in Picker Room," on the other. As the beginning inventory in the next six-month accounting period, the cotton in a variety of production processes is recorded as "Cotton in process"; "Cotton on hand & on way" and "Cotton in Picker Room" are integrated into "Cotton on hand, in store & on way." The entries in the cotton account in Table 7 are illustrative of those in the cotton accounts in box

TABLE 7

Cotton Account Mill No. 1
Six Months Ending june 30, 1917

Dec. 1916	Cotton on hand, in store & on way		8,455	4,372,709	622,673.77
	Cotton in process			610,528	86,939.19
			8,455	4,983,237	709,612.96
Jan. 1917	Cotton Invoices	#71/83	1,151	576,146	101,484.44
Feb. 1917	Cotton Invoices	84/98	1,109	578,186	94,337.05
Mar. 1917	Cotton Invoices	99/11	11,033	529,165	94,322.10
Apr. 1917	Cotton Invoices	112/121	620	325,360	63,756.44
May 1917	Cotton Invoices	122/141	1,641	847,780	173,394.95
June 1917	Cotton Invoices	142/146	261	138,099	32,524.17
Waste 2 to 1				165,024	23,163.84
Bondsville D & B Wks					42.64
Estimated freight 6/30/17					11,023.64
Frt. paid past 6 months					17,277.71
Yarn 2 to 1					911.40
			14,270	8,142,997	1,321,851.34
	CREDIT				
Est. frt. 12/30/16					11,850.22
Cotton paid for			7	19,398	3,314.58
Cotton 1 to 2			7	3,612	582.25
Yarn 1 to 2				37,703	6,907.19
Yarn 1 to 2					911.40
6 months waste					26,394.94
Frt. overcharge					10.00
Cotton in process					
Carding					
Spinning					
Dressing					
Weaving				534,902	86,226.20
Cotton on hand & on way			5,989	3,085,826	497,435.15
Cotton in Picker Room			162	4,377,964	674,744.38
			14,270	8,142,997	1,321,851.34

Source: LM Collection, AM-7

AM-7, providing evidence that LM valued the work-in-process inventories at their materials costs only and recorded them in the cotton accounts. The ledger cotton accounts, in fact, include such work-in-process inventories.

This method of recording work-in-process inventories was used from LM's early years.[16] The method means that all other costs were treated as if they were period costs. Therefore, not only non-manufacturing costs but also labor and indirect manu-

[16]The fact that the beginning and ending inventories in the mill trading accounts included only finished goods from its early years may be confirmed by the semiannual accounts recorded in the books AM-1and 2 in the LM Collection. See footnote 8.

facturing costs were treated as if they were period costs. None of their costs were allocated to work-in-process as already pointed out by Johnson [1972, pp. 470-471] and J&K [1987, pp. 28-29]. A merit of Table 7 is that it gives evidence that work-in-process inventories were recorded as work-in-process.

The same practice was performed by another New England textile concern, the Lawrence Manufacturing Company, founded in 1831. According to Hoskin and Macve [1996], the company had the cotton and the cloth account which was a trading account equivalent to LM's mill trading accounts. The cloth account recorded only the finished goods as its beginning and ending inventories, meaning that the work-in-process inventories were recorded in the cotton account as at LM.[17] Norman and Wootton [2001, p. 77], who explored the recording of current assets on the balance sheet in the U.S. between 1865 and 1940, noted that "work in progress often was not listed on the balance sheet" in the period 1880 to 1899 and further suggested that that practice continued long after. Though that is not direct evidence, it seems to suggest that the practice of valuing work-in-process at materials cost alone survived until well after 1900.

J&K [1987, p. 28] argued that at LM "the inventories of raw cotton and goods in process are valued at market prices or nearly so." It means, as Table 7 suggests, that they were valued at acquisition costs. Regarding the valuation methods for finished goods inventories, J&K [1987, p. 147, fn.] did not refer to LM's practice, but they made the following observation: "There is strong evidence that the textile companies valued ending inventories at approximations of market price until well after 1900 and reasonable grounds to believe that nineteenth-century manufacturers in other industries never considered doing otherwise." Their view appears to be correct for it is quite normal that price-takers of the time valued their finished goods inventory at market price.[18] It is very likely that LM, as a price-taker, fol-

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[17]However, according to Porter [1980, p. 6], the Boston Manufacturing Company, founded in 1813, had the cotton, the spinning, the weaving, and the cloth account. The records in 1817 suggest that the values given to the work-in-process inventories recorded in the spinning and weaving accounts included materials and labor.

[18]Porter [1980, p. 12] contends that "the costs calculated were used in valuing inventory..." at the Boston Manufacturing Company in the 1830s. Hoskin and Macve [1996, p. 353] see a "lower of cost and market" approach (this expression is actually used) in the Lawrence Manufacturing Company's valuation of the finished goods inventories in the mid-19th century. Their view is criticized by Fujimura [2000, p. 31, fn.] who suggests valuation at market is most likely.

lowed the practice of the time before commencing to understate finished goods inventory values substantially in the period under review.[19]

CONCLUSIONS

This paper is concerned with one single case, namely the LM, founded in 1854, which maintained its original accounting system until well after 1900 and was, circa 1920, obliged to cope with the modern accounting methods imposed by the early U.S. income tax laws. This paper presents a case study treating the interface between traditional and modern accounting methods.

The LM case suggests that the traditional accounting system was a complete accounting system comparable to today. Accounting data were gathered and processed that makes it possible to prepare a modern cost of goods manufactured schedule and an income statement. Functions comparable to those of today's cost and financial accounting were carried out by the traditional accounting system within a double-entry framework of bookkeeping. The accounting system there which confronted modern practice was a complete accounting system, present in the 19th century, which survived well into the 20th. Therefore, it may be said that, contrary to the existing understanding, the accounting system of today was formed through the transition from one complete accounting system to another. Through this transition, cost and financial accounting came to be separated with the same framework of financial reporting coming to be applied to both commercial and industrial enterprise.

The above finding was made possible by focusing on one major aspect of the traditional accounting system, namely trading accounts. As Johnson [1972, p. 471] noted, this particular type of account drew the attention of "Littleton and other authorities" who wrote eminent books on accounting history based on contemporary accounting literature. For example, the trading account (called "factory account") treated in *Bookkeeping by Double Entry* by John Fleming, published in the U.S. in 1854, is referred to by Littleton [1933, pp. 355-356] and Garner [1954, p. 67]. As to the "manufacturing account" (or "merchandise book"), treated in F. W. Cronhelm's *Double Entry by Single*, published in England in 1818, Garner [1954, p. 64] says, "it was

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[19]Tentative exploration into data on costs and finished goods inventories recorded in LM's semiannual accounts [LM Collection, AM-1 and 2] suggests that LM valued the finished goods inventories at market prices in the mid-19th century [Fujimura, 2003].

a sort of trading account somewhat like that used by bookkeepers in the last century [the 19th]." Littleton and Garner, referring to trading accounts treated in contemporary accounting textbooks, understood that trading accounts were widely used in the 19th century. However, this phenomenon has not drawn the attention of many undertaking archival accounting history research. Exceptions are Yamey [1964], Johnson [1972], and Fujimura [2000, 2003, 2004], although they often cited Littleton [1933] and Garner [1954].[20] Even Johnson ceased treating the mill accounts in LM's home office ledger as trading accounts in J&K [1987]. While Johnson [1972, pp. 469, 474] found "a completely integrated double-entry cost accounting format" in the LM accounting system, relying on the presence of the mill trading accounts in the home office ledger, this opinion concerning "integration" was renounced in J&K [1987]. This paper suggests the importance of trading accounts in understanding the traditional accounting system. It is in Johnson [1972] and not J&K [1987] that a picture closer to the real LM accounting system is described.

It should be noted that a modern cost of goods manufactured schedule and income statement may also be prepared from the books of account and source documents of LM in the 1850s. A complete accounting system did exist at that time. This paper supposes that this LM case may be generalized, and that such an accounting system appeared much earlier. In other words, this paper presents the hypothesis that another complete accounting system illustrated by that at LM served price-taking industrial enterprises in the competitive market at that time. This conforms to the hypothesis of economists who assume that a price-taker in a competitive market has full knowledge of its cost of production. In this condition, a price-taker tries to maximize its profit in an economic model. What Johnson [1972, p. 469] attempted to reveal is the accounting practices at "a price-taking enterprise such as Lyman Mills (possibly also its many competitors)." However, as his article's title suggests, he focused on "cost accounting for internal management control" and not on profit measurement in trading accounts. As a result, he failed to present a whole picture of the price-taker's accounting.

[20]There are studies that treat trading accounts without recognizing them as such [e.g., Stone, 1973; Porter, 1980; Jones, 1985; Johnson, 1989; Hoskin and Macve, 1996; Williams, 1997].

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Call for papers for a special issue of *Accounting, Auditing and Accountability Journal*: "Accounting and the Visual"

This special issue aims to contribute to a recent and steadily growing interest in organizational visual images and methodologies with particular application to the field of accounting. In essence, the practices of accounting for and auditing organizational activity relate to visualisation – rendering tangible and intangible values visible in the form of reports, charts, graphs, diagrams, and pictures for instance. These artefacts can fruitfully be studied from a visual perspective as being traces of – and drivers for – organizational action, processes and culture, as indeed can organizational artefacts more generally. Likewise, the changing image of accounting as a profession can be read visually, for example trends in corporate architecture, space and accountants' professional identity.

The extent to which organisations trade on their image in such societies is also worthy of attention. Branding, organizational and/or corporate aesthetics management, and the construction of symbolically redolent buildings are all visual activities, and ways of accounting *for* the visual is also a theme we might usefully engage with. For example, in New Zealand, the 'arts bonus points' scheme allows organizations to gain more favourable planning decisions if they agree to invest in and display publicly accessible artworks in their buildings – importantly, these points are tradable, effectively creating a market that leads to the concept of an 'aesthetic bottom line' (Monin and Sayers 2006). In addition, accounting and management control processes can be studied visually through the use of documentary photography, photo-elicitation techniques and respondent-led photography.

In sum, as contemporary societies become defined by their 'visual culture' and technological advancements mean that 'the image' becomes all-important in every sphere of life, so organizational and accounting scholars must engage with these developments theoretically, empirically and methodologically. To date, the role of images and the visual world has been strangely overlooked in organizational research despite having a healthy provenance in the social sciences more generally, and a prominent profile across arts disciplines and associated cultural studies. This special issue aims to begin to rectify this neglect .

With these ideas in mind, we invite contributions that address *any* aspect of the visual and accounting, whether theoretical, empirical or methodological. We would particularly welcome creative, innovative approaches to the topic. An indicative, but not exhaustive, list of what we see as potential questions or approaches of interest is given below:

- Financial reporting as visual artefact
- Reflections of the image-dominated society within accounting

- The impact of developments in visual technology on accounting
- Visual representations of tangible and intangible values
- Visual rhetoric and accounting
- The role of the visual image in branding
- Corporate aesthetics management
- Accounting *for* the visual image
- Management accounting and the visual
- Architecture and the accounting profession
- The changing visual image of accountants' professional identity
- Visual images as historical records of accounting interest
- Photo-elicitation as a contemporary and/or historical research method
- Respondent-led photography as a research method
- Parallels between art and accounting
- Studies that criticise the desirability of an increasingly visual approach

The submission deadline for this special issue is 1st March 2008, but earlier submissions are welcomed. Manuscripts should be sent electronically by email (in a word file format) to Dr Samantha Warren, University of Portsmouth (sam.warren@port.ac.uk) All papers will be reviewed in accordance with *AAAJ*'s normal processes Authors are asked to follow *Accounting, Auditing & Accountability Journal*'s standard formatting requirements. For details, visit http://www.emeraldinsight.com/info/journals/aaaj/notes.jsp.

Authors wishing to discuss their papers prior to submission may contact any of the three guest editors:

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