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## RAYMOND J. CHAMBERS' CONTRIBUTIONS TO THE DEVELOPMENT OF ACCOUNTING THOUGHT

*Abstract:* Raymond J. Chambers was an internationally recognized scholar, influential theorist, as well as an important contributor to the study of the history of accounting thought. He was an advocate of the needs of financial statement users. He investigated what users, not accountants, considered important and what in fact was relevant to their decision-making. He challenged existing theoretical propositions which he believed were only rationalization of current practices. He argued that the lack of a rigorously developed theory of accounting led to contradictory and less relevant accounting practices. In his theory of continuously contemporary accounting (CoCoA), he demonstrated with logic and evidence that only an accounting system based on market selling prices is relevant to users' evaluation and decision-making process. Chambers dedicated a significant amount of his most recent work to his *Thesaurus* [1995] and to the origins and developments of conventional accounting. He endeavored to refute the widely held assumption that cost-based accounting is a superior rule. Besides launching *Abacus* in 1965, his works, *Accounting, Evaluation and Economic Behavior* [1966] and *An Accounting Thesaurus* [1995] are among Chambers' notable contributions to the accounting literature.

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## A PERSONAL PROFILE

Raymond John Chambers was born on November 16, 1917 in Newcastle, New South Wales, Australia. He was a very private person devoted to his wife of 60 years, Margaret Scott Brown, and to his two daughters, Margaret and Rosemary, and son, Kevin, who graduated from the University of Sydney in languages, social work and medicine. Chambers had early interests in the study of the English language and literature, mathematics, and physics. He also shared similar interests in sociology, psychology, and the history and philosophy of science. His hobbies were once listed as reading, writing and arithmetic. He was known for his endless effort to help and support his colleagues and students and to encourage young academics and writers to produce high quality research and progress in their careers.

Chambers' journey in accountancy education commenced when he was awarded the University of Sydney Exhibition (scholarship) to study economics, whereafter he completed his undergraduate studies in 1939. After graduation, he undertook several professional examinations to qualify for membership in the Commonwealth Institute of Accountants and the Australian Institute of Cost Accountants. Chambers started his work experience as a junior clerk in the New South Wales' Attorney General's Office and later as a stock clerk with Shell Oil Company and as a materials controls supervisor and statistical officer at the Electricity Meter and Allied Industries Company. Next, he worked with the Australian Prices Commission during the period from 1943 to 1945. He also provided consultation to various companies and governmental and professional bodies.

Chambers' first academic assignment came in 1945 when he was appointed as a teacher in the School of Management of Sydney Technical College. In 1953, Chambers became the first full-time appointed senior accounting lecturer in the Faculty of Economics at the University of Sydney. He was later appointed as the University's Foundation Professor of Accounting when the Department of Accounting was established as a unit separate from the Department of Economics. During his long academic career, Chambers accepted various fellowships and invitations to teach and present lectures and seminars in numerous prestigious universities throughout the world including the United States, United Kingdom, New Zealand, Europe, Canada, Southeast Asia and South Africa. Chambers retired officially on December 31, 1982. He continued his academic work as an

Emeritus Professor at the University of Sydney and as an Adjunct Professor at Deakin University for over a decade.

After facing several episodes of challenge and frustration [Wells, 2000], Chambers launched in 1965 *Abacus*, a scholarly publication, to fill a gap that resulted from the discontinuance of *Accounting Research* in the U.K. which ceased publication in 1958. His main goal was to promote high quality research in accounting from a variety of perspectives. His commitment to *Abacus* and to accounting research resulted in worldwide recognition of this publication. He served as the founding editor from 1965 until 1975 and as an active consulting editor, thereafter.

In spite of his decision to devote himself to academic work, Chambers identified himself with the practicing accounting profession and sought to foster relationships between academics and practicing accountants. He accepted numerous invitations to address professional associations and served in professional and governmental committees as well as in advisory and editorial boards. He also served as a State, and later as a National, President of the Australian Society of Certified Practicing Accountants (formerly known as the Australian Society of Accountants).

During his career, Chambers received many honors and awards. In 1967, he was awarded the American Institute of CPA's Gold Medal for his contributions to accounting literature. He was also the first overseas invitee to be the American Accounting Association's Distinguished International Lecturer. In 1991, Chambers was awarded the American Accounting Association's prestigious Outstanding Accounting Educator Award and was also the first inductee into the Accounting Hall of Fame from Austral-Asia. He also earned three Citations from the Australian Society of CPAs and was elected as a Fellow of the Academy of the Social Sciences in Australia. Chambers was made a life member of many accounting organizations and was granted several honorary doctorates by various universities. He was named an Officer of the Order of Australia for his services and contributions to research and education.

Chambers' valuable contributions to accounting literature took the form of several books, numerous monographs, and more than 200 articles, conference papers, and submissions to governmental and professional bodies. His works were selectively published in Spanish, Italian and Japanese. His first publication was a book titled, *Financial Management* [1947], which was the outcome of the first two years of his teaching

experience. His last published paper, "The Poverty of Accounting Disclosure," appeared in *Abacus* in October 1999. Chambers died in Sydney on September 13, 1999 at the age of 81.

He has been described as 'inspirational and visionary' [Wolnizer, 1999]; a 'philosopher' and 'reformer' [Barton, 1982]; 'one of the most influential theorists of his time' and 'a man for all seasons' [Lee, 1987]; an 'intellectual giant' [Mathews, 1982]; a 'determined seeker of truth and fairness' [Gaffikin, 1994]; and 'informal, gentle and a bit lonely' [Moonitz, 1982].

The reminder of this paper is organized as follows. First, the paper highlights the early influences on Chambers which led to his criticism of conventional accounting practices. Next, major phases in the development of Chambers' theory are outlined and its key characteristics are identified. Then, the paper reviews Chambers' effort to promote acceptance for his proposals and examines the criticism that his theory faced. In the next section, the paper considers Chambers' work as an historian and how he employed accounting history to explain and support his theory. The paper concludes with a summary and general comments on Chambers' significance and contribution to accounting literature and development of thought.

### EARLY INFLUENCES

Prior to becoming intellectually committed to the accounting discipline as a field of knowledge, Chambers had the opportunity to view accounting from outside the profession and assess its value from the viewpoint of its jury, its users. During his undergraduate study of economics, Chambers' exposure to accounting was limited to two introductory classes of accounting and, thus, his knowledge of accounting when he commenced working was not substantial nor was he trained enough to absorb the obscurity of some conventional accounting practices, as he viewed them later. His early positions as a clerk accountant and materials controls supervisor provided him with a real world sense of how conventional accounting was performed. He was in a backstage position that enabled him to observe how actual financial reports were prepared using flexible methods that could be based on inconsistent assumptions, particularly where the issue of asset valuation was involved. He noted first hand that financial statements could, in fact, be misleading.

A later, and more significant, experience was with the Australian Prices Commission. Different from his previous

involvement as a processor or transmitter of information, Chambers' responsibility at the Commission resembled the users of financial statements. Similar to that of a financial analyst, his task was to evaluate companies' financial statements and assess the appropriateness of their cost allocation methods and eventually to ensure the fairness of the calculated prices to consumers, especially during the critical period of war. During his years with the Commission, Chambers identified the inconsistency and incomparability of financial statements that he had to analyze to support his decisions. To him, such financial statements were incapable of producing the relevant financial view that he, as an analyst, needed. Combined with his brief educational background of what accounting was expected to provide and his experience of how accounting was actually practiced, his Commission experience led him to the view that accounting was far short of what it was presumed to be and what it was capable of providing.

As noted, Chambers' academic career started in 1945 when he was appointed to the Faculty of the School of Management of Sydney Technical College. Chambers' teaching responsibilities were not limited to accounting; in fact, he taught nearly all the subjects offered by this school, particularly those required in a special diploma program that he had designed. This influential experience had encouraged Chambers to explore the other disciplines of management, economics, and finance, thus, making him more acquainted with business behavior and decision-making process. With this broader view of the business world, Chambers was able to identify further limitations of accounting to meet the expectations of those users it was expected to serve. His teaching experience had indeed motivated Chambers to reconsider, more in depth, the value of accounting information, not from the narrowed traditional view of accountants, but from the viewpoint of users whose satisfaction is presumably the ultimate goal of accountants. He investigated the behavior of management as well as other users of financial statements. His focal point was on the economic behavior of businesses and especially how they made their decisions and what financial information was deemed necessary to make their decision-making process more effective.

In summary, Chambers became an advocate of those who use financial statements. He noticed the insufficiency and irrelevance of accounting information contained in financial statements and realized the resultant gap between what accounting was providing and what users actually needed.

## THEORY DEVELOPMENT

Chambers' approach to theoretical investigation was to define the actual problem, identify its real causes, and then attempt to find an appropriate solution. His thorough understanding of the shortcomings in existing practices and identification of the underlying factors responsible for such deficiencies represented an important phase in the development of his accounting theory.

*Criticism of Conventional Accounting:* Based on his personal experiences, Chambers detected anomalies in accounting practices. Accounting's function was perceived to serve its users; yet the reality of Chambers' experience suggested otherwise. He believed that the information accountants provided fell short of fulfilling this function. Users expected certain relevant information, while accountants followed their self-prescribed procedures and supplied other information regardless of its actual relevance to users' evaluation and decision-making process.

Sharing similar concerns to those of MacNeal [1939] with regard to small investors, Chambers argued that the average user cannot fully understand the actual differences in income that might result from the application of different acceptable accounting methods. Conventional accounting practices had unjustifiably combined results from past, present, and future values leading to inconsistency which lacked any defense but custom. This explains why Chambers [1989] preferred to describe this system as 'higgledy-piggledy' accounting. He wondered if [1999b, p. 246] even accountants would think that Robert Sterling, for example, could manage to come up with "2,971,332,000 different book values that could be reported for inventory." He argued that, in many cases, some financial information was not only irrelevant, but also misleading. This phenomenon could have a serious impact on capital markets that were consequently composed of poorly informed participants. As he characterized it, "that today's securities markets are well informed is a myth" [1973, p. i]. In short, accounting practices involved too many anomalies and irregularities making the conventional accounting system flawed and unacceptable.

Several issues confronted Chambers. For example, if the failure to fulfill users' information needs is as serious a problem as Chambers viewed it, could existing accounting practices overcome such a challenge? Also, if this failure continued to exist despite the effort to overcome it, what was the proper

remedy? Seeking answers to these questions dominated Chambers' work during the rest of his career. The obscurity of conventional accounting practices caused Chambers to investigate accounting literature and examine the theoretical grounds, if any, for such flawed practices.

He critiqued and challenged existing theoretical propositions as being poorly developed. In his view, they did not qualify to be considered a theory. They were rationalization and justification for current practices and were based on a set of inconsistent assumptions. This view provided Chambers a basis to attack misleading practices, their legitimacy, and their application. The fact that current practices did not conform to theoretically sound bases explains the increasing complexity in accounting rules and widening differences in acceptable methods.

The basic conclusion of Chambers' own experience and inquiry was that the lack of a sound, well developed theory of accounting had led to the contradictory and controversial accounting customs and procedures that distorted accounting information and made it less useful. This conclusion compelled him to find a solution to the problem and replace theoretically inconsistent propositions with a more dependable, self-defending theory of accounting.

*Approach to Theory Development:* An important characteristic of Chambers' work is his freedom from association with pre-existing conventional accounting schools of thought. Chambers was not committed to any single method or research community for developing and promoting his ideas. His approach was based on his exploration of the history and philosophy of science and his investigation of related and more developed fields. When Chambers' work is examined, his main arguments are remarkably consistent. This consistency is difficult to find in other scholars whose writings had been constructed over a period of five decades. Thus, when a new issue is brought up in a contemporaneous paper, one finds the underlying ideas consistent with the arguments presented decades earlier.

Chambers had great confidence in his orthodoxy and employed great energy to achieve its recognition. He avoided association to any particular school of thought that might limit his ability to accomplish his objectives. Instead, he would be "guided by what seemed to be practical problems and what seemed to be practicable and technically feasible ways of resolving them" [1991a, p. 24]. One observation by Zeff notes that Chambers "deserves to be known amongst his many

achievements as the only accounting academic who includes in his bibliography, his own bibliography" [1982, p. 181]. Thus, it is not a surprise that Chambers also was described as a 'loner' and a 'his own man' [Stamp, 1982].

Chambers' next task was to explore the accounting literature, the literature of related disciplines and carefully investigate accounting practices and their actual role in the society, particularly their function in the business world. His attention was focused on theories of economics, language, communications, psychology, sociology, mathematics, and measurement. For example, he needed to better understand how general economic decisions were theoretically and practically made and to understand how users of financial statements actually behaved in the real world. He studied what users, not accountants, considered important and what in fact was relevant to their decision-making. He searched the literature of communications to determine how such information, once obtained, could be disseminated effectively to users.

Having determined his goal of fulfilling the function of accounting in terms of providing what users actually expected, Chambers attempted to discover the best methodology of constructing a system of accounting that would achieve this objective. He believed his approach should follow a successful, effective pattern which might replicate other well-developed disciplines. During this time, Chambers' work was directed towards methodological evaluation of current academic work and, eventually, the proposal of a more appropriate approach for developing a sound theory. This direction is clearly seen in a series of Chambers' articles beginning in 1955 with "Blueprint for a Theory of Accounting." In this article, he asserted what should be expected of theories in general, and of accounting in particular. Drawn from his management teaching experience and exploration of economics and social sciences, general and straightforward propositions necessary for developing a theory of accounting were outlined and justified. Further discussion of methods of theory construction was provided in another article, "Details for the Blueprint" [1957].

Chambers was very confident about the validity of his arguments and his determination and persistence led to an aggressive debating style. This not only strongly 'annoyed' [Gaffikin, 2000, p. 285] his opponents who held established, orthodox views, but also set up personality conflicts between the two camps. Whittington and Zeff [2001] observe that "Aged 39 and not yet a professor, Chambers had bearded one of the lions of



US academic accounting [Littleton . . . who] never came to terms with Chambers' criticism, which he took as an affront" [p. 212].

Chambers' ultimate goal was not simply to criticize the work of others. After describing how theories ought to be *scientifically* constructed based on his exploration of other well-developed fields of knowledge, Chambers' next step was to offer a theory of his own. In 1961, he introduced a proposal of his theory in "Towards a General Theory of Accounting." He followed the scientific approach that he previously outlined in his "Blueprint" to provide a system of accounting thought which was rigorously and consistently developed. He dedicated this paper to developing a set of postulates and assumptions that would later be used to derive his theory. His appeal for the employment of rigor, reasoning, and structure in developing accounting theory was indeed among Chambers' most significant contribution to the development of accounting thought. Further, his "Towards a General Theory of Accounting" was considered as the "watershed between the old style of pragmatic accounting and the new theoretically based accounting in which Chambers was to play such a dominant role in developing it during ensuing years" [Mathews, 1982, p. 177]. The complete version, except for few minor issues, of Chambers' solution to the deficiencies of conventional accounting was offered in his major work, *Accounting, Evaluation and Economic Behavior (AEEB)*, published in 1966. *AEEB* has been considered by many as his *magnum opus* (e.g., [Brown, 1982]), a work for which he was awarded the AICPA's Gold Medal in 1967. The book demonstrates his thesis and reasonable premises which conformed to commonsense and intuition as well as his rigorous and logical development of propositions and foundations supporting his final conclusions.

It is important to note that the significance of *AEEB* stems not only from its conclusions, but also from how such conclusions were derived. Recognizing Chambers' significant contribution to the methodology of accounting research, Gaffikin [2000] states that "There is little doubt . . . that Chambers was the first in the English accounting literature to fully explicate such a rigorous scientific method and then consciously employ it in developing a theory" [p. 288].

In 1967, Chambers theory came to be popularized as "Continuously Contemporary Accounting", later identified by the acronym, *CoCoA*. Chambers initially used the abbreviation (CCA) to refer to this theory until 1975 when the Sandilands

Committee proposed its Current Cost Accounting system, and the same abbreviation (CCA) was used to refer to that particular system. As a result, Chambers preferred to use the new acronym (COCOA) and later (CoCoA) [1976].

#### CONTINUOUSLY CONTEMPORARY ACCOUNTING (COCOA)

A unique characteristic of CoCoA lies in its approach to the subsequent measurement of assets. Measurement is an essential task of accounting and thus considered a cornerstone of the development of any theory of accounting. Many of the deficiencies in accounting practices and reports, according to Chambers, relate to the application of inappropriate measurement approaches. Therefore, dealing with measurement issues, in addition to epistemic and methodological concerns, comprised the major and most critical component of Chambers' work.

In his theory, Chambers made an important distinction between measurement and valuation. Measurement is a function of accounting: accountants are to relate facts and communicate them to users. Valuation, on the other hand, is concerned more with expectations of future benefits that could be generated by the underlying asset; i.e., how such facts discovered by accountants are perceived by the user. While a specific asset should be measured equally by different accountants, it might as well be valued differently by two different users based on their unique perceptions of the utility of that asset. In short, while valuation by definition is subjective, measurement should be objective and independent from the influence of accountants or any group of users. The question then became: how to measure accurately?

During the early years of 1960s, Chambers addressed this question by exploring the literature of measurement, especially in physical sciences. He concluded that accurate measurement requires the observation of both the initial state and terminal state of the object under examination as well as the consideration of any necessary adjustments for changes in conditions during that period. Given this description of measurement, Chambers' criticism of conventional accounting practices focused on two issues. First, values at certain points of time were derived rather than observed. Accounting rules prescribed that measurement of assets at the end of the period be based on cost allocations and other calculations rather than on real observations and actual discoveries of the true and fair values of such assets. Chambers argued that accounting should use only

factual or *observable* values and that the only scales of value that are discoverable and can be observed are market prices. Second, changes in the purchasing power of monetary units were not taken into consideration by current accounting rules. To measure the distance between two points, they both must share the same measurement unit; if not, the initial state must be adjusted to have the same common unit of the terminal state, i.e., share the same 'standardized' condition. It is generally accepted that adding U.S. \$100 to D.M. 220 would be inappropriate for they do not share the same measuring unit. Correspondingly, an Y2K dollar should not be added to a 1973 dollar since they do not represent equivalent measurement units.

Chambers [1965], therefore, argued that if a true and fair view of the changes in financial position is to be obtained, market prices and changes in the general price levels should be reflected in financial statements and calculations of net income. Based on this extensive exploration and examination, Chambers reached the conclusion that "informed economic action is a derivative of a periodical accounting, based on the current cash equivalents of assets from time to time, periodical income calculations in dated real terms, and the authenticity of financial statements established by direct observation of prices from time to time" [Chambers and Dean, 1986, p. i].

Three major departures from conventional accounting identify Chambers' alternative system, continuously contemporary accounting, or CoCoA. First, assets should be stated at their monetary or money-equivalent values. Second, the value of non-monetary assets should reflect any changes in value specific to these assets. Only contemporary values are capable of reflecting the specific changes in asset values and, as a result, all other measures of value become irrelevant. Third, changes in the general purchasing power of money should be taken into consideration for they have impact on financial positions and results of operations.

An important question remained. What market values should be used: entry prices or exit prices? Chambers' view was that a firm exists within an environment that includes many constituents—related either contractually or socially to the firm. Based on economic theory and adaptive behavior, Chambers argued that firms typically have unlimited wants, possess limited resources, and exist in volatile environments. The extent to which a firm can grow and survive in such environments is influenced by its ability and readiness to adapt to the new changes in business conditions [1947]. Chambers observed that

the entity's financial position should reflect its capacity at a specific point in time for engaging in exchange within its environment. A firm's financial position is based on its ability to adapt to the new environment and either maintain or alter its operations; that is, its capacity for buying new assets or paying off its current debts, when necessary. According to Chambers, *buying or entry prices*, although relevant to the decision of selecting new assets, are not capable of showing such adaptive ability. When a firm, for any reason, needs to generate a sum of money, i.e., adapt to a new environment, its ability to operate would be limited to the sum of the monetary assets that it possesses and what its other assets could bring in to the firm, e.g., *selling or exit prices*. Therefore, Chambers concluded that non-monetary assets should be restated to contemporary values using their net realizable value, what he classified as 'money equivalent.'

It is important to note that Chambers did not deny the significance of other valuation methods, but he always argued that a firm's adaptive capacity to change to a new environment could not be reflected in financial statements except when using contemporary, net realizable values. For accounting information to be useful and functional, it needs to be relevant; and for information to be relevant, it has to be current—that is, contemporary. Historical costs are relevant only at the time of initial transactions. Their relevance as indicators cannot be relied upon in subsequent periods. Likewise, discounted values are important and widely used as a method for choosing from certain projections of profitability for different alternatives. Yet they are still hypothetical in nature and are greatly influenced by their underlying assumptions and expectations that might vary broadly from one person to another [1979].

Chambers' premise was that accounting has to provide users, not with assumptions or hopes, but with facts—its function is fact-finding not decision-making [1966]. Accountants are to provide users with facts and information corresponding to reality, free from distortion. Such information may in turn be processed differently by users based on their varying needs and expectations. In short, Chambers demonstrated with logic and evidence that only market selling prices are relevant to users' evaluation and decision-making process.

*Clarity, Simplicity, and Effective Communications:* Chambers campaigned for a useful accounting system that was also straightforward. He called for simplicity in accounting

methods, clarity in the forms of distributed information and argued that a clear and simple message is easier to communicate, comprehend, and be utilized. This emphasis persisted throughout Chambers' work and the title of one of his very last published papers, "The Case for Simplicity in Accounting" [1999a] confirms this view.

Clarity, simplicity and effective communication are among the key qualities of his theory. Chambers believed that the function of accounting information is to increase the knowledge of users and reduce their doubt [1966, p. 144]. He affirmed that the value and relevance of accounting information depends on the effective dissemination of such information. For various reasons, users practically are unable to observe all events and transactions of the firm. They rely on other specialists with certain skills, e.g., accountants, to process transactions and provide summarized, valuable information. The processor is an intermediary between the financial statement users and the transactions, with a responsibility of providing a substitute for a direct experience by users/decision makers. Chambers identified several qualities which should be satisfied to ensure the utility of the messages communicated to the user/decision maker. For example, a message should correspond objectively to the actual experience or object without any deliberate or unintentional biased influence by the processor. Other criteria include reliability, consistency, and comprehensibility (see [Lee, 1982] for further discussion). A message that fails to stand such a test and meet these qualities would lose some or all of its effectiveness and render the communication process unreliable. Therefore, these characteristics should be represented in the accounting information, which is the message, in order to maintain the perceived value and credibility of the accounting profession, that is the processor.

To ensure the effectiveness of the process, it is important to use signs that bear the same meaning to the processor as well as to the user/decision maker. To Chambers, clarity in the terms used in financial statements is a necessary condition required for effective communication between users and accountants. When signs are interpreted differently, the message loses its effectiveness and, hence, its value. In Chambers' view, the lack of mutual agreement on sign interpretation seems to persist openly in current practice. He noted that "Accounting is widely said to be a form of communication; yet the prime condition of communication—shared understanding between source and receiver—is nowhere considered" [1996, p. 129]. He argued that

present accounting communication lacks effectiveness as a result of users/decision makers not receiving clear, undistorted messages that should resemble responses from direct involvement. For example, the unsophisticated recipient expects the value of an asset shown in the balance sheet to reflect its fair and true value on the date stated on such a report, yet this is not conventionally what the processor has in mind when preparing such a statement. With the continuing use of confusing technical jargon found in current financial statements combined with complicated, inconsistent accounting methods, Chambers identified further concerns about the declining utility and reliability of accounting information.

He observed directly many flawed practices that hindered the effectiveness of accounting communication. He argued against the use of supplementary statements with different valuation methods because that would confuse users and reduce the creditability of all reported information. He disagreed with the use of specialized accounting rules for different industries, noting that comparability of results across industries was vital for investors and for the efficiency of capital markets. Chambers also opposed the application of conservative rules in income calculations that were distorting facts, favoring future users at the expense of current ones. Some users, for various reasons, might prefer to understate the value of reported financial figures when making conservative decisions, while others would like to be more optimistic and place more values in these numbers. But accounting has a fact-finding function and is not to be directed by varying users' tastes or reactions to certain types of information. Chambers saw a double standard or 'doublethinking' with the treatment of certain transactions where overestimation of income was not allowed while overestimation of expenses was not only permissible, but also encouraged. Thus, he argued against the merit of the doctrine of conservatism. He believed that conservatism has no place in accounting as conservatism should be a quality of users and not a quality of facts or information. He disputed the validity of certain tax allocation practices which lead to the inclusion of artificial liabilities, resulting in misleading financial statements. Further, he rejected the practice of mixing facts with fiction where certain costs reflecting hopes for success, e.g., goodwill and deferred research and development costs, are treated as if they were actual assets contributing to the firm's current financial capacity. He never considered the various arbitrary cost allocation-depreciation methods as

worthy approximations of any asset value, especially when they claimed to provide a true and fair view of a firm's financial position.

Chambers confidently argued that CoCoA would provide a far simpler and more useful message. It is the message that he believed would correspond to economic reality; be easily comprehended; be free from distortion; and be general and relevant to all users. It is easier for an individual, unsophisticated user to understand the actual current market price of an asset than to accept, for example, that the value of an asset might legitimately vary depending on the method of calculation, which after all would not necessarily have to correspond to the actual value of this particular asset. In short, Chambers' objective was to provide a simple message that is easier to understand and to be acted upon.

The previous discussion was constructed as a summary of Chambers' theory and its key qualities. He recognized the importance of these qualities when he developed CoCoA and believed that their relevance and importance would play a key role in his effort to sell his theory.

### THEORY PROMOTION AND CRITICISM

Chambers was determined and fully confident about the soundness of his theory and validity of its arguments. After developing CoCoA, his next task was to seek its endorsement by others. A major opportunity to promote CoCoA and influence public policy occurred during the inflationary period of the 1970s. Inflation led to discomfort with existing financial statements. Serious doubt was cast on the usefulness of conventional accounting. As a result, many valuation alternatives were proposed. Chambers believed this was a great opportunity to demonstrate the superiority of CoCoA over all other valuation systems and gain its acceptance. To achieve this goal, he studied extensively other recommendations, wrote numerous papers and made several proposals to various governmental and professional bodies in Australia, the U.K. and the U.S., comparing all alternatives and demonstrating how all competing systems provided only partial solutions to the problem (see Appendix 1).

There were several episodes in his effort to influence public policy including the 1975 Sandilands Committee. As noted earlier, this Committee favored a Current Cost Accounting system and recommended an approach identified with the acronym 'CCA,' which Chambers had previously used for his theory. This

'theft' [Clarke, 2000, p. 279] of his CCA nomenclature and rejection of his proposal did not stop Chambers from continuing to promote his theory at official levels. Another public policy opportunity occurred in 1978 when Chambers, as the head of Accounting Standards Review Committee, proposed changes to accounting standards in Australia, following from his theory. However, ease of application and cost-benefit tradeoffs favored the selection of other means, such as indexing. Chambers' somewhat indulgent analysis of this is found in an acronym made from the latter portion of the title words of his paper "NOD, COG, AND PUPU-See How Inflation Teases" [1975]. However, the superior rationality of CoCoA did not seem to be *the* deciding factor in determining policy applications by regulators and standard setters during this period.

Subsequent to the inflationary period of the 1970s, public and professional interest in CoCoA and in inflation accounting declined among many academics and professionals. So as to understand the reasons behind the lack of official support for CoCoA, one must understand the criticism that the theory faced and the concerns that were raised about its validity.

*Criticism Of CoCoA:* One sign of a worthy theory is an abundance of critics and CoCoA drew its fair share. Critics asserted chiefly that CoCoA was inconsistent by allowing for different valuation measures; contradicted the assumption of going concern; underestimated the problem of limited availability of market prices; and ignored the 'other side' of the balance sheet.

Chambers argued for the superiority of market selling prices as the only appropriate means of measuring asset values. However, in the early stages of his theory development, he had accepted the use of current replacement costs for inventories and index prices for some durables, due to his recognition of the unavailability of market selling prices. It was never intended to be a change of principle but only as an accommodation. From the outset, Chambers made it clear that these substitutes were approximations allowed only temporarily to overcome practical difficulties [1966]. Shortly thereafter in "Second Thoughts," he clarified this issue and retracted support for the use of all such approximations [1970].

Other critics of Chambers argued that his ideas contradicted the going concern assumption. Given such an assumption, changes in prices of assets, critics argued, should be disregarded since assets are bought to be held over time and not resold. They claimed that his accounting system was based on a



liquidation value orientation, which would undervalue the firm as an entity whose sum value is greater than its parts. Chambers, on the other hand, argued that the going concern assumption was widely misunderstood [1981]. Regardless of the original intentions that firms have when acquiring new assets, changes in technological and economic environments would definitely influence the decision of keeping, discontinuing, or replacing such assets. There is no acceptable justification for assuming that when an asset is acquired, it must be kept for its entire life. Assets are changed because business plans are also changed in response to shifts in the environment. To Chambers, a going concern assumption was based on the firm's ability to adapt to new environments and to survive in a dynamic future. Such a concept implies that the firm will not cease operations immediately, but that it may transform its operations. Its future is not necessarily aligned with the property or service life of assets, but with their usefulness to contemporary market needs. Further, Chambers pointed out that there is a difference between market selling prices under duress by creditors, e.g., in the case of liquidation, and market prices under normal, day-to-day business conditions [1973]. CoCoA does not assume that liquidation values are identical to current market prices. Market prices can be, and normally are, obtained from various sources during the normal course of business. CoCoA requires periodic updates of assets' values by consulting newly obtained market information and the current values of such assets.

Operating the CoCoA model in the face of unavailability of market selling prices was, and continues to be, another area for criticism. Chambers maintained and attempted to demonstrate that market prices for most assets are discoverable [1971, 1973]. While some prices might be more easily obtainable than others, he argued that firms have always been successful in finding the prices of their assets when they persisted. Yet, where CoCoA had failed to demonstrate itself effectively was in the ability to make operational sufficient sources of market value information to readily and inexpensively facilitate accession of exit values across a broad spectrum of asset classes other than traded investment securities. Even with current advancements in information technology, it remains difficult to immediately obtain market prices for, say, uniquely constructed assets. Nonetheless, CoCoA, as a theory, Chambers insisted, does not concern itself per se with how market prices are discovered and thus should not be rejected on theoretical grounds,

simply because issues of application are being developed or resolved [1974].

While Chambers might have fully presented his case for the 'left-side' of the balance sheet, some critics argue that the right-side received less attention and justification from Chambers. Critics' claims of possible inconsistency in Chambers' treatment of liabilities overlook basic assumptions of CoCoA. Assets and liabilities should be stated at their monetary values. When such values are not immediately available, they are approximated by their money-equivalent values, i.e., market values. Liabilities already have contractually stated monetary values and the amounts that the firm owes to its vendors or bankers are immediately determined. The firm does not have to reevaluate the cash it has on hand nor does it need to reevaluate the loan it has borrowed from the bank. Given that liabilities almost always have explicit contractual monetary values, the explanation of their treatment did not exhaust as much effort as the treatment of non-monetary assets required.

*Judging CoCoA:* The fact that policy makers withheld official support should not lead to the conclusion that CoCoA is logically invalid or irrelevant. Gaffikin's [1989] analysis of Chambers' work concludes that that CoCoA's rejection was the result of other behavioral, political, philosophical and sociological factors. The history of science suggests that paradigm shifts and advancements of knowledge take extended periods of time in overcoming the extant habits of thoughts. To fully understand and appreciate Chambers' significant contribution to the accounting discipline may require us to admit for now that a "lack of recognition seems to be the fate of the academic ahead of his or her time" [Bedford, 1982, p. 113]. Also, our "history might be too young" to provide for the understanding and appreciation needed [Gaffikin, 1994, p. 1].

Despite evidence indicating general agreement on the relevance of money equivalents for valuing non-monetary assets [e.g., Chambers et al., 1987], Chambers knew that, 'old habits die hard' [1970]. This difficulty had been well anticipated by Chambers in the very early stages of the development of CoCoA. He argued that, as in the case of medicine, advancements in accounting might take time before they could be actually used [1966, p. 3]. He never lost faith in the validity and future of his theory. For instance, following the inflationary experience of the 1970s he was asked if CoCoA would have a future. Chambers replied, "Certainly" [English, 1989, p. 15]. However, his

confidence about the future of his theory does not deny his disappointment with how his ideas were received by others. He appreciated that the logic presented in an argument does not always guarantee its acceptance. For example, when commenting on his experience with the Australian Society of Accountants, Chambers noted that "Over the sixteen years I served as a councillor, I proposed many changes in the technical, educational and research business of the society; I can't recall that any one of them became adopted" [2000, p. 323].

From the analysis of Chambers' work over the course of five decades, one can observe two major themes. In the first, Chambers used observations as a way to discover anomalies in accounting theory and practice and then he introduced his solution to such anomalies by the formulation and refinement of CoCoA. This theme can be clearly seen in the subject matter of his outputs during the first half of his career. In the second half, another theme was reflected in his effort to gain acceptance for his position as well as to explore accounting history to explain the development and persistence of conventional cost-based accounting systems. Obviously, these two efforts overlap and represent a natural transition in focus and emphasis. After Chambers developed and refined his theory to his satisfaction, he employed history not only to explain and justify the rationality and legitimacy of CoCoA, but also to understand the reasons behind its lack of endorsement. This major theme of Chambers' work suggests a move in this analysis from Chambers the *theorist* to Chambers the *historian*.

### CHAMBERS THE HISTORIAN

Chambers has been internationally recognized as an eminent theorist and dedicated researcher. However, his work as an historian does not always receive similar attention. A significant portion of Chambers' work was devoted to employing case study and historical material to demonstrate the validity of his arguments.

Some of CoCoA's critics accused Chambers of being abstract, normative, and lacking empirical support. His first defense argued that CoCoA was developed based on observations of real world behavior and its objective was to solve actual day-to-day problems. Chambers' attempts to satisfactorily refute such accusations included first "Evidence for a Market Selling Price Accounting System" [1971] and then *Securities and Obscurities* [1973], later republished under the title of *Accounting*

in *Disarray*. Chambers provided ample evidence supporting the conclusions of *AEEB* based on large collections of court cases, governmental and professional inquiries, and reports of financially troubled companies in Australia, the U.K. and the U.S. A common theme that Chambers found in these data was that companies published financial statements that were "seriously deficient in quality" and were based on accounting practices that were "inadequate, uninformative, and obscurantist" [1973, p. i]. He showed how cases of financial distress and corporate failure were linked to misleading accounting practices and insufficient financial reports. This was used to illustrate the dissatisfaction with the products of conventional accounting practices as well as to demonstrate the validity of his arguments and the superiority of CoCoA over all alternative systems.

In more recent writings, Chambers used a great number of references to textbook authors who over hundreds of years had 'endorsed' the use of current selling prices as the basis of valuation [1989]. His investigation led him to conclude that "from the time of Pacioli onwards there are bookkeeping manuals, constitutive documents of partnerships and companies, and judicial dicta, to the effect that assets were or were expected to be presented by the currently dated market prices or selling prices" [1991b, p. 14]. For example, in a 19th century case, Chambers and Wolnizer [1991] found evidence that banking partnership deeds for the period 1827-1843 either required the use of current values or clearly proscribed asset's valuation based on original costs.

More importantly, Chambers dedicated a significant amount of his most recent work to exploring the accounting literature and investigating the development of conventional cost-based accounting. During the early years of accounting and well before the separation of ownership from management, owners had shown a tendency towards keeping their financial affairs secret from outsiders as well as from their employees. This secrecy was presumed to enable owners to obtain a better position in business negotiations. Chambers described this phenomenon as the 'cult of privacy' [1987, p. 98]. Consequently, owners used a dual system of accounting where two sets of financial records were usually carried. First, a nominal ledger was responsible for keeping track of all business transactions with other merchants. Second, there was also concurrent undisclosed *libro segreto*, secret or private ledger, occasionally containing locks and keys. The latter type of records had very limited access and contained confidential information such as

partners' capital contributions and real or current values of the business' assets. Owners were able to extract a real and complete view of their actual financial affairs by combining these two sources of information. Therefore, Chambers argued that current prices were in fact used, although not always explicitly, as the basis for assessing the financial position of businesses and their results of operation.

However, when the widely used form of public incorporated ownership emerged in the 19th century, this dual system was abrogated and an intrusion to the traditional privacy of owners occurred because of public ownership and information rights related thereto. In order to meet the reporting requirements of public companies laws, only the available nominal ledgers were used to produce published financial statements. This was also the case given that, as businesses continued to grow in size and complexity of operations, there was an increasing reliance by managers and outsiders upon large amounts of processed information. Accountants were not well prepared for this fast shift from a dual system of accounting to a more comprehensive one that would include the type of information found in private ledgers. Perhaps for reasons of facility alone, historical information became the dominant if not the sole source of information used to prepare external financial statements, whereas the information needed to extract the true and fair view of the firm's financial affairs became less complete.

While accountants continued to keep nominal ledgers, Chambers asserted that contemporary information that once appeared in private ledgers became available only to one group of users: professional management and other insiders. Given that accounting is not intended to exclusively serve one group of users, other users of accounting information deserve similar contemporary information. This can be accomplished, Chambers argued, through the use and disclosure of market selling prices in the accounting system. Stated differently, a fair and equal treatment of users requires that access to private information which owners used to have and managers and other insiders continue to have as to the contemporary aspects of an accounting system should be provided to a broader set of users to provide such a true and fair view of the business.

Furthermore, the laws of the 19th century which allowed for the limited liability form of corporations demanded a price for trading under this legal privilege by requiring the disclosure of all relevant information. The purpose was to provide

additional protection to creditors whose risk increased greatly with this new form of business. Such provisions, however, compelled accountants and managers to become more conservative when reporting financial statements in order to protect themselves against possible lawsuits by creditors and shareholders. Consequently, a tendency towards undervaluation of assets resulted and was increasingly implied if not endorsed, occasionally by judicial opinions. An example could be found in the following court decision: "The purpose of the balance sheet is primarily to show that the financial position of the company is at least as good as there stated, not to show that it is not or may not be better" [Buckley as cited in Chambers, 1989, p. 18].

Similarly, tax laws clearly influenced accounting practices and how income was determined based on multiple arbitrary methods that favored the convenience of cost-based valuation at the expense of contemporary values. Also, rapid development at the turn of the 19th century coupled with the increasing complexity in business operations resulted in the limited availability of market prices for unique capital-intensive, specialized assets especially in industries such as railroads. As a result, U.K. companies legislation allowed companies in those cases to use cost allocations in the determination of net income. This provision was subsequently used to justify the application of the same treatment to all other types of expenditures and eventuated the increasing application of the cost doctrine [1999a].

Chambers also identified 'debt supposition' as a contributing factor to the conventional use of cost-based accounting. 'Personification' of the accounts was practiced in early centuries when accounting instructors illustrated the double entry system by describing different ledger accounts as if they were different persons having interrelationships among themselves as accounts. As a result, the business was seen to be composed of different persons: a cash person, an inventories person, a stock person and so on. Collier illustrated this idea saying, "These clerks mind their own business and do not interfere in another's department. Thus, if perchance 'Goods' received some money, he instantly hands it over to 'Cash' because he himself has no business with money" [cited in Chambers, 1994, p. 78]. Chambers argued that this approach, however, was later used to associate asset valuation with their original costs. Later in the eighteenth century, Donn, a mathematician, expanded this approach in the following logic: "As I may expect to make of my

goods as much as they cost me, they are in effect the same to me as if their value was due to me from some person; and, as in such case, that person would be debtor, so I may make the goods in my possession debtor for their first cost" [cited in Chambers, 1994, p. 78]. Therefore, subsequent valuation of assets based on their original costs was followed based on the assumption that assets could be valued as such 'first costs.' This notion was later used to endorse the use of the cost doctrine in accounting practices, especially with the official endorsement of this approach by the company law, as discussed earlier. Also, additional support for the cost-based accounting came from the regulated accounting practices in utilities companies. A double accounting system was prescribed for such companies where capital was required to be kept at cost for monitoring and rate setting purposes. Subsequently, this notion of valuing capital expenditures at cost was further applied to other unregulated companies, based on the authoritative support of such practices.

In sum, to Chambers the unambiguous message of this extensive investigation of accounting history refuted the widely held assumption that cost-based accounting is a superior rule, while accounting based on market selling prices was nothing but an anomalous departure from this norm. Hence, Chambers argued that conventional accounting practices based on the cost-based doctrine should not be considered the only method of traditional accounting. According to him, the term 'conventional accounting' rather than 'traditional accounting' is more descriptive to cost-based accounting systems. He also argued that until relatively recently the cost doctrine did not actually constitute an accepted accounting practice. For example, he believed that:

It seems highly probable that the realization and cost doctrines became entrenched in the pedagogical literature, and thence in practice, through the Tentative Statement of Accounting Principles of the American Accounting Association (1936), reinforced by the prescription of upward revaluation by the SEC shortly thereafter [1989, p. 13].

Further, Chambers' work as an historian includes his important recent contribution to accounting literature, *An Accounting Thesaurus: 500 Years of Accounting* [1995]. This seminal work can be fairly described as his second *magnum opus*, after his *Accounting, Evaluation and Economic Behavior*. This

'Treasury of Accounting Thought,' as Clarke [1996] appropriately prefers to describe it, represents a comprehensive literature review of the development of accounting thought over more than five centuries delivered in a well-designed, easy-to-access structure. It also provides a valuable reference for exploring the historical development of meanings and the usage of terms and concepts that are part of the existing accounting literature. This collection of varying perspectives on a wide variety of issues also provides a rich background that can enhance our appreciation of how accounting thought has developed. Indeed, this significant contribution to the accounting literature is "a necessary aid to an intellectually curious and inquiring mind in our discipline" [Previts, 1996, p. 115]. A peerless study, which has been less than a decade in print, it has only begun to enter the employment of contemporary theorists and historians.

### CONCLUDING COMMENTS

Raymond J. Chambers was an eminent scholar, influential theorist, prominent educator, dedicated researcher, and an important contributor to the study of the history of accounting thought. His compassion for and commitment to his view of our discipline led him to seek a more relevant theory of accounting. His seminal contributions to accounting thought stem from his effort to introduce a systematic approach to construct a sound and consistent theory of accounting and replace the popular dominant explanation which he demonstrated against for providing less relevant accounting. In addition to his criticism of conventional thinking of accounting, he sought to understand and explain accounting in a multidisciplinary context that recognizes the links between accounting and other social disciplines.

We have argued that Chambers should be recognized not only for his notable contributions to accounting thought but also for his important contributions to accounting history. The majority of non-historian accountants may perceive that the demands for incorporating current values into accounting are a relatively recent phenomenon. Chambers' research established evidence from centuries of accounting practices and a considerable number of references to refute this notion. This evidence clearly shows the use of current prices to have been acceptable business practice in much earlier times. He also explored accounting history to better understand and explain the origins



and development of cost-based accounting. Chambers showed original cost-based valuation to be basically the product of certain legal developments, tax laws, regulatory influences, and recent corporate traditions. He was critical of describing the cost-based accounting system as *the* traditional system of accounting for it represents only one of several traditional methods, including current value accounting.

In addition, we have argued that as the study of the history of science would suggest, the validity and relevance of CoCoA should not be considered disproved because of limited initial acceptance. The rigorous development of this theory and its conformity to real needs and decision values will continue to warrant support and experimentation, and potentially will ensure greater understanding and then acceptance. The failure to achieve official endorsement of CoCoA may be understood in terms of three dimensions: its nature, timing, and misconception. First, Chambers' theory seemed revolutionary in nature and required establishing a basis of support not easily won from the dominant practice approach, especially from regulators. For to adopt CoCoA would require gradual acceptance in a discipline known for its reluctance to change, and an evolutionary approach conducive to incrementalism. Second, CoCoA came into the literature in the late 1960s, a period that witnessed the advent of market-based accounting research. This new stream of research did not relate to Chambers' work, and consequently created a form of resistance to his ideas, especially as the former became increasingly dominant in academic research in 'leading' U.S. scholarly journals and institutions. Third, many misunderstood CoCoA thinking that it was merely another inflation accounting alternative; hence, they believed that once inflation abated, so did the need for CoCoA. However, Chambers never intended CoCoA to be solely a solution to the inflation issue. CoCoA is a comprehensive accounting system and inflation was simply one of the many deficiencies that CoCoA was capable of overcoming.

For now, the future of Chambers' theory is unsettled-so soon after the death of its principal advocate. It could be maintained that Chambers' arguments in CoCoA are *logically* superior to those of other alternative systems and that its major deficiency is that it lacks the facility of application. Yet one of the aspects of his work that requires attention is the need to continue a level awareness as advances in technology improve the information base from which relevant contemporary data are made available on global terms. The speed, ease, and low

cost of more market price data will lead to increased operational application.

Another key issue is CoCoA's treatment of knowledge assets or intellectual capital. Chambers' focus was on the *valuation* of intangible assets, not simply additional descriptive *disclosures* about them, as supported for example in the recent writings of Arthur Levitt (e.g., [Levitt, 2001]). There is a fundamental difference between making disclosures and performing valuations. On the latter, Chambers' views continue to be a valid expression about the problem associated with current valuation attempts for such asset items. Chambers' theory recognizes the value of assets only when they have obtainable market values; thus, intellectual assets do not qualify as assets until their market values can be established. He argued that intangible assets are based on assumptions and hopes, rather than facts, and thus should not be recognized in the balance sheet. While this argument might have been less controversial in an industrial economy during the 1950s and 1960s when CoCoA was developed, the role of intellectual capital and other intangibles has become increasingly significant in the information-based, technology-oriented economy of the 21<sup>st</sup> century, and therefore bodes well for overcoming objections based on such assets' primacy.

Finally, it is important to forestall Lee's [2000] observation that "To the large [number] of the accounting community . . . [Chambers] was and is unknown except, perhaps, as a name listed in a library index" [p. 71]. While our paper seeks to provide scholars and researchers with a survey discussion of Chambers' contributions to accounting literature as well as a summary of several high points of accomplishment, a full study of such contributions cannot, of course, be satisfied in a single essay. It is hoped that with the newly established Chambers' Archives at the University of Sydney, scholars will be attracted to consider the manuscripts and materials now available at this facility. For it will not be sufficient merely if Chambers is recalled, but rather that his work is emulated and his contributions are understood. His significant work merits this well deserved place as a fundamental theory, and as an important element and contribution in our discipline's history of thought.

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**APPENDIX 1**  
**Comparison of Five Accounting Systems**

		Original Cost	Price Level	Dis-counted Value	Replace-ment Cost	CoCoA
A1	Is it, in principle, a double entry system?	Yes	Yes	Yes	Yes	Yes
A2	Are its transaction inputs, in principle, facts?	Yes	Yes	Yes	Yes	Yes
A3	Are its transformations (depreciation, inventory valuations, etc.), in principle, facts?	No	No	No	Yes	Yes
A4	Are its transformed magnitudes measures?	No	No	No	Yes	Yes
A5	Are its transformed magnitudes contemporary?	No	No	Yes	Yes	Yes
A6	Do its transformations give prompt effect to relative price changes?	No	No	No	Yes	Yes
A7	Does it give a comprehensive history of relationships and transactions of the firm? (Is it isomorphic?)	No	No	No	No	Yes
A8	Is aggregation of measures of items logically possible?	No	Yes	Yes	Yes	Yes
A9	Is it a representation of facts, or, alternatively, does its theory provide for other ways of getting contemporary facts?	No	No	No	No	Yes

... / continued

### Comparison of Five Accounting Systems / . . . continued

		Original Cost	Price Level	Dis-counted Value	Replace-ment Cost	CoCoA
B1	Are the results neutral as to specific future actions?	Yes	Yes	No	No	Yes
B2	Are individual measures relevant at stated dates to choice or adaptation?	No	No	No	No	Yes
B3	Is income a measure of general command of goods and services?	No	No	No	No	Yes
B4	Do magnitudes provide a basis for comparison of present operations with future potential variants?	No	No	No	No	Yes
B5	Is a valid current ratio given?	No	No	No	No	Yes
B6	Is a valid debt to equity ratio given?	No	No	No	No	Yes
B7	Is a valid rate of return given? (Is rate of return comparable with rates of return on pure money contracts and other opportunities?)	No	No	No	No	Yes
B8	Are interfirm comparisons of ratios valid?	No	No	No	Yes	Yes
B9	Do balance sheets and income accounts fairly present positions at stated dates and changes between those dates?	No	No	No	No	Yes

Source: Chambers, R. (1967), "Foundations of Financial Accounting," Berkeley Symposium on the Foundations of Financial Accounting (Berkeley: University of California): 26-44.