

Challenges confronting accountancy in the 21st century

C Koornhof

Abstract

As we enter the 21st century, the accounting discipline and the accounting profession shall have to adapt to an environment that is increasingly being subjected to rapid and discontinuous change. This article addresses challenges in Accountancy that should be addressed in response to its changing environment. An extensive inter-disciplinary literature survey was undertaken to identify sixteen challenges that should be considered if the discipline and profession are to retain their relevance and usefulness for society.

Key words

Accountancy

Financial Accounting

Management Accounting

Critique of accounting

Change

Systems Theory

1 Introduction

As a result of rapid changes occurring in the environment, Accountancy¹ faces a number of challenges on entering the 21st century. These changes have already resulted in significant shifts in the focus of disciplines such as Management Science and Organisational Theory. Regrettably, Accountancy has been very slow in adapting to the changed circumstances. The Financial Accounting Standards Board (FASB 1996) has recognised this fact and has consequently identified the enhancement of the use of the financial reporting model as a tool for decision making in a rapidly changing economic and technological environment as one of its strategic foci for the 21st century.

1 Accountancy is defined in broad terms to include the accounting discipline, theory and practice, the accounting profession and the preparers and users of accounting information within and outside an organisation. Accountancy, in this context, includes Financial Accounting and Management Accounting.

Viewed historically, the accounting system was originally developed for trading enterprises and was extended during the Industrial Revolution to accommodate manufacturing enterprises (Association for Investment Management and Research 1993:27). The accounting system was not designed for, nor is it suited to, reporting on service and information-based enterprises, currently the fastest growing section of industry, (FASB 1996). Kaplan (1983) notes that the traditional accounting model is based on the mass production of a mature product, that has known characteristics and on the assumption of a stable technology. Such assumptions are clearly no longer suitable in an environment characterised by customised products, innovation, continuous improvement, rapid introduction of new products and services, short product life and exponential growth of technology.

2 Problem area

Accountancy has not kept abreast of the changes that have taken place in its environment. As a consequence, it has been criticised in publications as failing to reflect reality; providing misleading information; not providing information that is relevant, timely and useful for decision making; and as being inflexible and unable to adapt to a changing business environment (see Hakanson 1978; Lee 1987; Turney and Anderson 1989; Johnson 1992; Allen 1994; Lapsley and Pettigrew 1994; Hope and Hope 1995). This article considers the changes required of Accountancy, or conversely the challenges confronting Accountancy, at the beginning of the 21st century.

This article should be of interest to users of accounting information. It could make them more aware of the potential of Accountancy to provide information beyond the narrow constraints of the current accounting model. It should also be useful to the standard setters, educators and researchers, by suggesting shortcomings of Accountancy which should be addressed. Finally, it could make the profession aware of the changes required of Accountancy as it adapts to the changing demands of its environment.

The article commences by briefly discussing the methodology applied. It thereafter reviews the changing environment within which business enterprises have to operate. It also considers the major changes that have taken place in the way businesses are organised and managed in response to the environment. Finally, it considers some of the major challenges faced by Accountancy in adapting to these environmental changes.

3 Methodology

In this article Systems Theory is used as a research method and a functionalist view (Burrell and Morgan 1979) is adopted. It is assumed that Accountancy is (or should be) an open system which interacts freely with its environment and

that the system can be understood by studying its external environment, internal environment and interrelationships. Secondly, in terms of a functionalist perspective, it is assumed that an institution or artefact such as Accountancy should either suit the social system or will be adapted to suit the social system (Puxty 1993:17).

A literature survey is used to identify the challenges being faced by Accountancy in adapting to the changing needs of society. The literature survey is of an interdisciplinary nature, which is in line with an open-system approach. A survey that is limited to literature on Accounting would only be appropriate if a closed-systems approach is adopted. The literature survey is used as a basis to discuss the changing environment and changing organisation, which leads to a discussion of the challenges confronting Accountancy.

The categories of challenges identified in the article emanate from the authors' interpretation of the literature. These challenges may not be exhaustive or mutually exclusive and may differ from the perspectives of other researchers. Because of the broad scope of the literature survey, it is possible that all the views of academics in Accounting and related fields have not been included.

4 The changing environment

The rate of *social, political, economic and technological* change is greater today than it has been at any time in the past. Previous eras have also been subject to change, but never at the rate that we are currently experiencing (Ackoff 1974). Whereas social change may previously have passed unnoticed in an individual's lifetime, today such change has become so rapid that our imagination cannot keep up with it (Snow, in Ackoff 1974:4). Allen (1994) perceives current social change to be a shift of emphasis from the state to the individual. Political change has resulted in the near demise of communism. Economic change has produced world markets and global competition, which have resulted in the lifting of trade restrictions, creation of economic blocks, repositioning of old industries and creation of new industries. Technological innovations in respect of computers, robotics and telecommunications have made instant global communication possible and have fuelled the race to gain a competitive advantage through knowledge, expertise, service excellence, information and time.

Less obvious changes have also taken place on the scientific and research front. The "old science", which focused on objects and on the basic building blocks of matter, has been replaced by the "new science" the underlying currents of which include the movement towards holism, relationships and open systems. In the past, logical thought processes and rigorous scientific research methods were often used to advance the boundaries of knowledge. Now March (1978:3) contends that discoveries increasingly result from lucky guesses based on shaky arguments and absurd ad hoc assumptions which

formulae that turn out to be right, though at first no one can comprehend why on earth they should be.

All these changes combine to create a more uncertain and complex environment for businesses to operate and survive in. Managers are finding that proven methods, techniques, beliefs and recipes no longer solve today's and tomorrow's problems, because in periods of rapid change the patterns of the past are being replaced by new ones. Kanter (1982) believes that business organisations are facing changes that are even more extensive, have more far-reaching implications, and are more fundamental than the changes that led to the "modern" industrial system in the period 1890 to 1920. If business organisations are required to change fundamentally, then fundamental changes should also be made to their accounting information systems.

5 The changing organisation

In response to the rapidly changing environment, business managers have had to change the structure, culture and strategy of their organisations. Nadler (1995) believes that we are moving from an era dominated by incremental change to one of discontinuous change, and that in the 1990s and beyond the emphasis will be on *altering* the fundamentals of organisations rather than *merely improving* them.

These *fundamental changes* are being promoted by proliferating literature on "how to manage a business in a changing environment" (see Peters 1991; Peters and Waterman 1982; Schonberger 1990; Kanter 1982; Foster 1986; to name but a few). The central idea of the proposed organisational changes is that change should be managed through a *process* of fundamental and continuous improvement and renewal instead of through mere ad hoc reorganisation and restructuring. Change has to be integrated into the corporate culture.

The following areas of fundamental organisational change are mentioned in the literature surveyed:

- achievement of **total quality**, not only in respect of goods and services, but also in time, place, equipment, processes, people, safety, information, measurement and the environment;
- continuous **innovation** throughout the organisation, with everyone in the organisation being committed to and involved in innovation;
- effective use of the latest **technology** to improve the organisations competitive advantage and to remain ahead of competitors – the attacker's advantage (Foster 1986);
- continuous **elimination of waste** in respect of materials, time, space, labour, work, costs and so forth;
- involvement, training and **empowerment of employees**, recognising that they are the primary source of a competitive advantage;

- creation of a **customer-orientated** culture in which satisfying the needs of existing and potential customers is the primary concern of the organisation (Schonberger 1990); this does not only apply to products and services, but also to information;
- changing the management style, from an emphasis on command and control to an emphasis on **leadership**, where leadership is viewed as enabling and helping others to perform their work by removing barriers and constraints;
- introduction of **new information systems** that empower skilled employees to make decisions rather than to perform command and control functions;
- creation of a **vision** to direct decisions and actions in the organisation and increasing the emphasis on a **strategy** that is aimed at positioning the organisation optimally within its environment;
- changing the organisational **structure**, from mechanistic charts and boxes of command reminiscent of the military, towards an informal, organic enterprise with a flat hierarchy, self-focusing teams and involvement of people across functions, a structure which Drucker (1988) compares to a large symphony orchestra.

These changing perspectives on the management of an organisation are the result of a paradigm shift in Management Theory. Scott (1978) contends that management theories have in effect progressed from a mechanistic view of organisations (closed-system approach) to gestalt thinking (open-system approach), and from a rational view of an organisation, in which clear aims and objectives for the organisation are deemed to exist, to a social view, in which objectives are based on value choices rather than on mechanical choices.

The changes that are occurring in organisations, impact directly on the information systems and in particular on the accounting systems of those organisations (Thompson 1995). The accounting information system should not only measure change, but should contribute to anticipating, supporting and reporting on change and the strategies adopted by the organisation in response to such change. The momentum for changing and adapting the accounting systems should not only be provided by the users of accounting information, but also by the accounting profession.

6 Challenges confronting accountancy

Accountants, managers and other users of accounting information cannot afford to ignore the significant changes that have taken place in the environment, business organisation, business environment and broader society. Puxty (1993) stresses that accounting is not merely a collection of techniques, but that it has a significant impact on society at large. Similarly, society has a direct impact on accounting. Consequently, a failure to adapt to the environment may cause the accounting discipline to lose its credibility, usefulness and relevance, and the accounting profession to lose its standing in society.

The accounting system has been extremely slow in responding to the changes in its task and general environment and has in essence retained its closed system and rational and reductionistic approach. For instance, Hakanson (1978) condemns accounting as a reductionistic discipline which destroys information and fails to reflect reality. This reductionism in accounting arises because information is selected or discarded, then the selected information is processed, summarised, aggregated, smoothed, communicated and interpreted, producing an end product that does not reflect reality. Throughout this process, valuable information is lost without any apparent concern for the loss. Turney and Anderson (1989) censure accounting and accountants for their failure to adapt to the new competitive environment, which calls for continuous improvement in the design, manufacturing and marketing of products. This innovation calls for radical change to the information provided and to the role of the accountant. In their case study on the Portables division, Turney and Anderson found that such accounting innovation was best implemented by employing newly qualified accounting staff who had received only minimal training in the old accounting information system. According to Lee (1987), perhaps the saddest comment on contemporary financial reporting practice is its slow rate of innovation. The few innovations that have occurred were often initiated by users of information rather than by accountants or accounting researchers. Users introduced innovations such as activity-based costing, target costing, cost drivers, cash-flow statements, economic value-added measures, key-performance measures, the value-added statement and even earnings per share, to enable them to run their businesses more efficiently. The momentum for change appears to be largely provided by the users of accounting information rather than by accountants.

The changing environment has confronted Accountancy with a number of challenges that should be recognised, accepted and addressed promptly in order to reverse an already declining trend in the usefulness and relevance of Accountancy. These challenges may also be used:

- as criteria to assess the contribution made by research, improvements or innovations in Accountancy;
- as a means of focusing attention on those areas of Accountancy that require change;
- as a point of departure for studying the interrelationship between Accountancy and its environment.

A systems approach is used as the basis for identifying the challenges, as illustrated in figure 1. As already stated, society has been subjected to political, social, economic and technological change. These changes resulted in globalisation, the rise of the informed and selective customer and the development of information technology – the first level of challenges. Within the business organisation, change is apparent from the shift in business types and cost profiles as well as from the increase in strategic decision making and a greater

emphasis on survival – the second level of challenges. In the accounting information system, areas requiring change include the selection, processing, interpretation, dissemination and standardisation of information; use of non-financial indicators; use of information as a control measure; short-term perspective created by accounting information; behavioural impact of such information; and assumptions underlying the discipline – the third level of challenges.

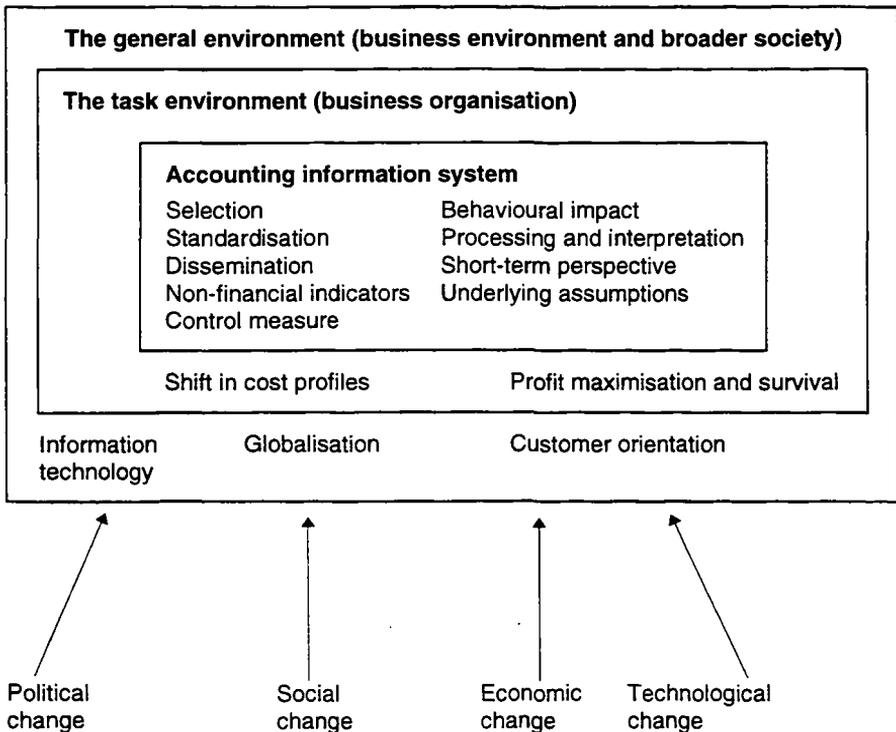


Figure 1 Challenges confronting Accountancy

6.1 Globalisation

In recent decades there has been an astonishing disappearance of geographical barriers, both physical and psychological. The concomitant globalisation of markets will probably continue until almost all barriers have disappeared (AIMR 1993:22). As a result, companies can raise capital anywhere, sell on markets anywhere and base their operations anywhere. The accounting system should therefore support the raising of capital anywhere in the world, obtaining of listings on foreign exchanges, co-ordination of world-wide operations, assessment of multinational performances as well as the measurement of productivity, continuous innovation and responsiveness to change. Some progress has been made towards the achievement of this aim as a result of the harmonisation

processes of the International Accounting Standard Committee and the European Economic Community. The accounting information system has, however, not been developed sufficiently to deal with complex areas of reporting on and the support of decisions within multinational enterprises.

The challenge confronting Accountancy is that it should become a universally understandable language with the aim of even-handed distribution of information to enable global resources to be allocated efficiently. It should be able to report on the performance of and support the decision making within complex multinational business groups in which the location of operations, position in markets, payment of taxation, listing on stock exchanges and volatility of currencies are of prime importance.

6.2 Customer orientation

One of the keys to success in the new dynamic environment is to recognise the dominant role of the customer. A key deficiency of the current accounting model is that it is not customer driven. Hope and Hope (1995) present evidence that huge amounts of work in every type of organisation provide no added value to the customer. Yet the accounting system is not able to highlight such waste. This raises the ethical question of whether the customer should be expected to pay for inefficiencies where the price of a product is based on cost.

Accounting information should support the business in becoming and remaining customer orientated by supplying more information that is useful for making decisions such as information regarding relationships with customers, exposure of waste and costs that fail to add value for customers. Furthermore, the American Institute of Certified Public Accountants (1994) contends that just as successful businesses align features of their products and services with the needs of their customers, so too should the providers of business reports.

The challenge confronting accountants and the accounting system is to become more customer orientated, shifting the focus of attention towards the needs of customers for products, services and information.

6.3 Information technology

Computing and related technologies have had, and will continue to have, a profound impact on the ways in which information systems gather, process and distribute information within organisations. They affect two kinds of systems. Firstly, they affect the non-information systems that support business functions such as design, manufacturing and distribution. Secondly, they affect the accounting information system. Unfortunately, new technology has often been used in the latter instance to merely speed up old methods, i.e. to crunch conventional numbers (Drucker 1988). Accounting software programs are often based on the dualistic convention of debits and credits, a method originally developed for manual record keeping. Ward (1992) suggests that the additional

benefits of selectivity, analysis, prediction, accuracy and retrieval on demand should be investigated. The Institute of Chartered Accountants of Scotland (1988) notes that the full corporate report could be made available to users on an electronic distribution network at a very small cost. The dual accounting convention of debits and credits could also be replaced with a storage and retrieval system more suited to the computer environment.

The challenge confronting software developers, accounting practitioners and accounting researchers is to develop information systems which utilise fully the potential of the new technology to efficiently and accurately record, process and report on the performance of organisations. The accounting system should utilise technology for more purposes than merely the processing of large volumes of conventional data. The appropriate use of technology should result in a major shift of emphasis from the gathering and processing of information to the interpretation, utilisation and dissemination of information.

6.4 A shift in business types

A shift is taking place in the nature of business as the second wave of industrialisation is being replaced by the third wave of information technology (Toffler 1994). The number of mercantile and manufacturing enterprises is declining and the number of information and service-based firms escalating. Knowledge has changed from a minor to a major factor in production. The accounting model was initially developed to report on mercantile enterprises and later adapted to report on manufacturing enterprises. It was not designed to report on information-based and service-based enterprises, in which human resources, knowledge, information and intangible assets, often the main sources of revenue, are not recognised or are written off immediately in the accounting system.

The challenge confronting accounting researchers is to develop a system for the gathering and processing of information that is more suited to reporting on Information Age companies. Such a system should still accommodate the need for information with which to compare investment opportunities of disparate nature (AIMR 1993).

6.5 A shift in cost profile

The shift in the nature of businesses, as well as the rise of new business approaches, have caused major shifts in the cost structures of businesses. The amounts invested in inventory and labour have declined steadily with the introduction of business innovations such as Just in Time and automation. The nature of labour costs has changed increasingly from direct costs to indirect costs. Overheads have increased substantially and have shifted from variable costs to fixed costs. Nonetheless, several companies continue to allocate overheads on the basis of labour hours and keep meticulous record of dwindling

inventory (Schonberger 1990). A few innovations, such as cost drivers, activity-based costing and target costing, have been introduced in this area of accounting, but further research is required in this area. (See for example, Johnson 1992:141). Accountants should assist in introducing and refining these new cost-allocation techniques in businesses.

The challenge confronting accountants and other internal users of accounting information is to recognise and accommodate the changes that have taken place in the cost structures of organisations and to develop innovative and cost-effective means of recording, allocating and reporting on the costs of these organisations.

6.6 Strategic decision making

In highly competitive global markets, managers are obliged to devote an increasing proportion of their time to strategic decision making, leaving more and more operating and administrative decisions to employees (Ansoff 1988). The managerial focus has shifted from mainly making inward-looking decisions to making outward-looking decisions, or stated differently, from a closed-system approach to an open-system approach. In the past, accounting recognised and measured information that was mainly related to operating decisions, and to a lesser extent, administrative decisions. This has been as a result of an accounting information system that has remained essentially a closed system, focusing on the internal affairs of a business organisation. The demand is changing, however, towards more information that will assist strategic decision making. Although some work has been done in this field with the development of strategic management accounting, the current accounting system is not really geared to the support of strategic decision making (Allen 1994:11).

The challenge confronting accounting researchers, accountants and other users of accounting information is to develop an information system that can focus on the external environment. Such a system should support the organisation's strategy, assist in the choice of new strategies and report to both internal and external users on these strategies.

6.7 Profit maximisation and survival

In the past, when the business environment was stable and fairly predictable, the main aim of business was to maximise profits and more recently, to create shareholder wealth. Accounting is based on the assumption of going concern or survival, but this may no longer be an acceptable underlying assumption (see Drucker 1958).

The traditional accounting model emphasises the maximisation of profit by supplying a income statement to measure profitability on a periodic basis. In order to assess shareholder wealth, the value-added statement together with other sophisticated, indicators such as economic value added and shareholder

value added, have been developed (Stern 1993 and 1996). In contrast, information on survival remains rudimentary, often limited to a few simple solvency and liquidity ratios (Heath 1978).

One of the underlying assumptions of the accounting model is that of going concern – the assumption that an enterprise will continue operating for the foreseeable future. It is apparent that an unstable environment is increasingly threatening this assumption. Senge (1990:17) finds that few large corporations live even half as long as a human being. He states that by 1983, one third of the firms listed in the Fortune 500 of 1970 had vanished.

The challenge confronting accountants, the auditing profession and other users of accounting information is to identify those aspects that are crucial to the survival of an organisation in the Information Age and to develop new and more reliable indicators that can be used to assess the survival potential of an organisation. The indicators should also include qualitative measures that assess the quality of management, employees, research and development, innovation, new markets and products that are introduced over time.

6.8 Non-financial indicators

Belkaoui (1981:222) has observed that conventional accounting is characterised by (1) the use of historical cost as an attribute of the elements of financial statements, (2) the assumption of a stable monetary unit, (3) the matching principle and (4) the realisation principle. In particular, the practice of measuring everything in terms of monetary units has tended to blind the accountant to the potential of non-financial measures such as product quality, customer satisfaction, order lead time, factory flexibility, the time it takes to launch a new product and the accumulation of skills by the labour force over time (Peters 1991:589). These factors are increasingly becoming the real drivers of corporate success over the middle to long term. Although some research has been done on the development of non-financial indicators (see the Balanced Scorecard of Kaplan and Norton (1993) and the case study of Turney and Anderson (1989)), these measures have not yet permeated accounting practice.

The challenge confronting accountants and other users of accounting information in organisations is to develop, utilise and report on a variety of non-financial operating indicators. Castelano et al. (1995) view this need to move towards a greater use of operational versus financial measures of performance as a paradigm shift in accounting.

6.9 Selection

Accountants only recognise those *transactions* and *events* that fulfil the definition of elements as well as the recognition criteria in the Conceptual Framework. In effect, the use of the conventional accounting model results in the selection of certain data for processing and the discarding of other data which

fail to meet its criteria. Accountants therefore act as “gatekeepers”, deciding which data to process and which data to discard. However, accounting education has conditioned them to concentrate more on the accuracy of data that is processed than on the data that is lost through the screening process. Wheatley (1994:109) suggests that the gatekeeping criteria should be revised. She states that the gates should be opened to more information in more places and that information that is ambiguous should be identified and retained. “Gatekeeping” was a necessary function in the past, when the inputs made to a manual recording system had to be limited, but now that technology allows the processing of large amounts of data quickly and accurately, the screening function should be minimised. Many examples of the adverse affect of the extensive screening process in accounting exist, viz the non-recognition of human resources, future contracts on the balance sheet and the non-recognition of orders until the actual transactions take place.

The challenge confronting accountants, educators and researchers is to reassess the criteria for the selection of data in accounting. Useful information may be lost through restrictive and dated gatekeeping criteria. Advances in technology can facilitate the extension of the type of data selected for processing.

6.10 Processing and interpretation

Data that has met the restrictive criteria of the traditional accounting model is often processed in a way that destroys its decision-useful qualities. The volatile, exceptional, conflicting, small variance, unusual fluctuation and the unexpected are often processed, analysed and explained away so that only the large numbers, important trends, significant variances, expected fluctuations and comparable amounts remain. This creates an illusion of objectivity, accuracy and usefulness. Wheatley (1994:108) contends that we’ve been so engaged in rounding things off, smoothing things over, and keeping the lid on, that our organisations have been dying due to a lack of the information which they can feed on, information that is different, disconfirming and filled with enough instability to knock the system into new life. Wheatley’s view is supported by discoveries in Chaos Theory, which suggest that it is often the small, seemingly unimportant and slight variances which may be indicative of the future direction of a system – the so-called “Butterfly effect” (Gleick 1987). Yet accountants are still trained to diligently remove the “white noise”, the small, apparently marginal deviations and distortions from our financial information and they remain uncomfortable with volatility.

The challenge confronting accounting practitioners, educators and researchers is to re-evaluate the accounting concepts, qualitative characteristics and practices such as materiality, comparability, income smoothing, aggregation, matching, prudence and consistency, because the careless application of these concepts, characteristics and practices may destroy useful and potentially direction-giving information.

6.11 Dissemination

In the information-based organisation, knowledge tends to accumulate at the bottom, in the minds of the specialised and highly trained personnel who do the work and direct themselves (Drucker 1988). The “new” management style therefore adopts a “bottom up” approach to the dissemination of information, instead of the “top down” approach of the “old” management style. In the old style, information was gathered for management (top) who distributed it selectively to employees (bottom) on a need-to-know basis in order to command and control employees’ actions. The new style requires that information should be generated for and used by the specialist employees working together in teams (bottom) before being passed on to management (top).

Consequently, the accounting department within an organisation should become decentralised. Accounting staff should become members of the self-focusing, cross-functional and independent teams within the organisation. They will gather, process and distribute information to the teams, allowing these specialists to appraise and amend their own processes. Information will become freely available timeously to all who require it for decision making. Accountants will increasingly become team players with excellent communication and interpersonal skills who can produce new innovative measures of performance when required to do so by the users.

The challenge confronting accountants and educators is to adapt to the new demands of the Information Age organisation by gathering, processing and disseminating information so that decision-useful information can be supplied timeously to all interested users. It requires of accountants to improve several skills, namely communication skills, interpersonal skills, problem-solving ability, innovative and creative thinking skills as well as the ability to work in teams.

6.12 Behavioural impact

The traditional accounting model developed in a pragmatic fashion, addressing and solving problems as they were encountered. The collection of principles, concepts and characteristics used in solving these problems have only recently been codified in the Conceptual Framework (SAICA 1990). Unfortunately, these principles, concepts and characteristics were adopted without due consideration being given to their behavioural impact, both within and outside the organisation. Hopwood (1985:18) suggests that much more effort should be devoted to finding out how accounting affects user behaviour. The interest of society is not served if the accounting system encourages dysfunctional behaviour, such as the manipulation of results.

The challenge confronting accounting researchers and standard setters is to consider the behavioural impact of accounting principles, concepts and characteristics in the context of a dynamic environment and a changing management

approach. Such an assessment should consider the behaviour that these concepts and characteristics may cause both within and outside the organisation.

6.13 Short-term perspective

One of the dysfunctional behaviours that is supported by the accounting system is the short-term perspective in managerial decision making. This phenomenon occurs when managers are dominated by the price of the firm's shares on the stock market (Lapsley and Pettigrew 1994). Contrary to research findings, they often believe that a growing bottom line can favourably influence stock market prices. Therefore, they may resort to tactics that "create" short-term profits at the cost of the long-term well-being of the organisation.

Kaplan (1983) suggests that many managers adopt a short-term perspective, especially during a downturn in the economy. They attempt to minimise the negative impact on reported earnings by reducing capital investment and intangible investment in areas such as research, product development, human resources research, advertising, promotion, maintenance, training, quality control and customer services. The immediate effect of such reductions is to boost reported profits, but it is done at the expense of the company's long-term competitive position (Johnson and Kaplan 1991).

Although accounting is not the sole cause of the short-term orientation of management and other stakeholders, it does encourage and reinforce short-term assessments. Castelano *et al.* (1995) argue that the meeting of numerical targets encourages short-term thinking, as do tactics aimed at making the numbers. The periodic breaking of the business cycle in order to report the organisation's results also encourages a short-term view, as users place excessive reliance on profit figures that merely reflect short-term profitability and that cannot guarantee long-term profitability.

The challenge confronting educators and accountants is to encourage and support a longer term view in the assessment of the performance of an organisation by both internal and external users. Consequently, accounting information should focus more on the factors that create long-term value, including non-financial measures, that indicate how key business processes are performing (AICPA 1994).

6.14 Control measure

Accounting information has not been used only to assist in decision making and to evaluate the performance of an organisation, but also to control the activities within the organisation. Johnson (1992) argues in "Relevance Regained" that relevance was not lost by inappropriate accounting information, but rather by the inappropriate use of accounting information to control business operations. Financial targets, budgets, forecasts and planning models became the focus of management to the detriment of areas such as customer relations, innovation,

design and the use of technology. The myopia created by control based on financial numbers often resulted in lucrative opportunities being lost in favour of “meeting the budget”. Therefore the incorrect use of accounting information for control purposes encourages disfunctional behaviour on the part of the people in organisations. Deming (in Castelano *et al.* 1995) recognises the need for financial data for the purposes of planning, score keeping and resource allocation, but warns against the use of such data for ranking, control and performance evaluation.

The challenge confronting accounting researchers, accountants and other users of accounting information is to cease using it to control, and to emphasise and develop its role as a supporter of decisions and a scorekeeper of results.

6.15 Standardisation

In an attempt to make reporting more comparable and to reduce the number of accounting practices, standard setters world-wide have standardised accounting practices by issuing statements to regulate the reporting of business information. Business reporting is further entrenched by legislation such as the Companies Act and the Public Auditors and Accountants Act. The combination of legislation and standards have created a comfort zone that makes many accountants slow to accept change and even encourages some to oppose change. Lee (1987) attributes the lack of innovation in financial reporting practice to standardisation. He suggests that:

- “standardisation creates a compliance complex;
- standardisation sterilises the accounting education process;
- standardisation neatly preserves the status quo.”

The challenge confronting accounting educators, standard setters and accountants is to break through the compliance mind-set caused by standardisation, regulation and legislation. They should become more innovative; willing to experiment and to produce information that is exceptional, conflicting and unexpected. They should draft reports that reflect economic reality with its concomitant volatility; and should be more willing to exercise their professional judgement.

6.16 Underlying assumptions

The original accounting system flourished in an era dominated by a Newtonian view of the universe. In terms of this perspective on reality, man manages by separating wholes into parts, believes that influence occurs as a direct result of force exerted by one person on another, engages in complex planning for a world that is expected to be predictable and searches continually for better methods of objectively perceiving the world (Wheatley 1994:6). In essence, the universe is viewed as a large machine. Reality is viewed as existing “out there”

in the external world and I, “in here”, can objectively observe, measure and speculate about the external world without changing it (Zukav 1979:55). However, in the twentieth century, scientists were obliged to abandon the Newtonian view and admit that nature is not a huge predictable machine that can be understood by studying its parts. Furthermore, modern science now views man as being an integral part of nature and therefore he cannot observe reality without changing it (Zukav 1979:56). The new perspective casts doubt on some of the fundamental assumptions underlying the natural sciences and the social sciences. In Accountancy, the new scientific perspective implies that information cannot be recognised or measured without changing it, that objectivity is impossible, and that consequently all information provided by accountants is biased.

The underlying or implicit assumptions of the accounting discipline are still based on a dualistic, mechanistic and reductionistic perspective. In other disciplines, the Newtonian view is increasingly being replaced by a “new science” approach. This approach involves a move from monism and dualism to holism; from wholes and parts to connections, patterns and relationships; from linearity to non-linearity; and from closed systems to open systems. Basic assumptions about reality such as rationality, predictability, objectivity, entropy and causality are being questioned. The effect of the “new science” approach has already manifested itself in the social sciences in disciplines such as Management Theory and Organisational Theory (Scott 1978). The question is whether Accountancy can survive if it continues to use implicit assumptions that are so far removed from those being adopted in business organisations and in greater society?

The challenge confronting accountants is to re-examine their view of reality, the underlying assumptions, and the scientific approach adopted in accounting. Such an re-examination may well result in far more radical and profound changes than are envisaged in the current literature, but periods of discontinuous change call for the reassessment of the fundamentals of disciplines such as Accountancy.

7 Conclusion

The Accounting discipline has evolved over the centuries on the basis of an ad hoc and pragmatic approach. As problems were encountered, accountants addressed them by developing appropriate solutions. The accounting system has remained essentially a closed system, focusing largely on the financially measurable features of a business organisation. This closed-system approach has served to insulate the discipline against changes in the environment.

Today’s rapidly changing environment is obliging accountants to reassess their role and function both within the organisation and in society. The continued

disregard of changes in the environment and a lack of innovation will undoubtedly bring the accounting function into increasing disrepute, particularly when accountants admit publicly that the current system is seriously flawed (Lee 1987). The accounting information system cannot continue to produce inwardly focused information if the users of the information are increasingly requiring information on customers, suppliers, markets and competition, in other words outwardly focused information. This implies that Accountancy should become a flexible, open system that can readily adapt to changes in its environment. Accountancy should be a product of its environment. Furthermore, Accountancy has the potential to develop from being a watchdog and a scorekeeper to being a change facilitator of change (Turney and Anderson 1989).

This development in Accountancy can only be achieved if accountants, academics and standard setters are willing and have the ability to adapt to the changing business environment. They shall have to become the drivers of change and the innovators in the accounting discipline, business organisation and broader business environment. This role requires the development of new skills; a change of attitude to change, volatility, uncertainty and continuous learning; and a restructuring of the education and training of new accountants.

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C Koornhof
Professor
Department of Accounting
University of Pretoria
Pretoria