The Objectives of Accounting in an Accounting Theory Based on Deductive Methodology

by

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DEPARTMENT OF ACCOUNTANCY

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I. INTRODUCTION

Deductive methodology and accounting objectives

There are several different methodologies[1] which have been used by accounting theorists in deriving their various theories.[2] One approach which has been frequently advocated recently, particularly by academic accountants, is deductive methodology. An accounting theory based on deductive methodology can be depicted diagrammatically as follows:[3]

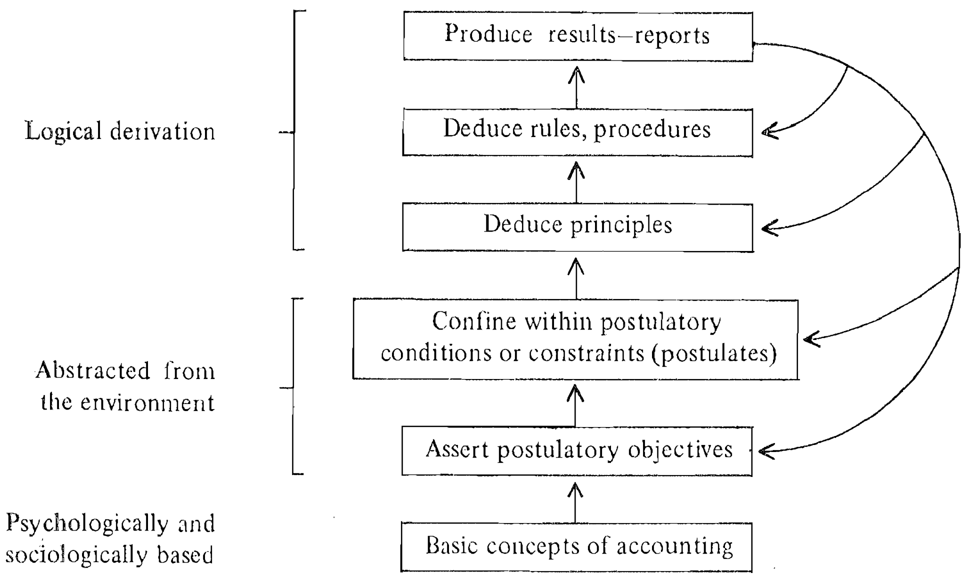

Fig. 1.—An accounting theory based on deductive methodology

As can be seen from the diagram, the writer believes that the first step in the derivation of an accounting theory using deductive methodology is the specification of the basic concepts of accounting (the two main concepts being the proprietary concept and the entity concept).[4] The next step, which is to some extent dependent on the first, is the statement of accounting objectives. Following this, postulates are stated. These, once again, are dependent on the previous step. Principles and rules and procedures are then derived from the postulates using deductive logic. The rules and procedures so obtained can then be used in practice to produce results. These results are used as a test of the theory which produced them. In this regard, Buckley, Kircher, and Mathews say that:

> . . . a researcher could follow the conceptual process to the point where his suggestions were put into practice, and, through feedback, test the results of the process. This would or would not establish the validity of his postulatory objectives, conditions [postulates], and principles, and determine the extent to which practices could be in conformance with the primary objectives.[5]

The writer believes that deductive methodology is the most important of the approaches available to the accounting theorist, and has a very important part to play in future accounting research. Hendriksen expresses this view when he says:

> . . . the most useful framework of an integrated theoretical system is one that is based on deductive reasoning. Therefore, the accounting theory developed and applied throughout this book places its main emphasis on the deductive approach.[6]

There is no room in a study of this size to include a discussion on the relative merits of the numerous methodologies that are available, but, briefly, the major advantages of the deductive approach are as follows:

1. The methodology does not rely in any way on the present system of accounting. Hendriksen states:

> Thus, the practical applications and rules are derived from the logical reasoning; the postulates and logically derived principles should not merely support or attempt to explain accounting conventions or currently accepted practice.[7]

Thus, under this approach, resultant theory does not inherit any of the weaknesses or failures of existing accounting. Further, the theorist is "free to imagine rules which have not been tried. This is the kind of inquiry which has yielded every invention of men from the first wheel to the latest space vehicle."[8]

2. Under deductive methodology, assumptions in a theory are explicitly stated. They may, therefore, be easily scrutinized. Consequently, in the event of any disagreement over conclusions, debate should readily be directed at the fundamental underlying causes of disagreement.

However, this study is not concerned with every element of an accounting theory based on deductive methodology. The aim of this research is to create a statement of the objectives of accounting which would be capable of forming part of the foundation of a general theory of accounting to be derived by the methodology.[9] It is not intended to derive any other elements of a general theory.

Since the aim of this study is to produce a statement of objectives to be used in deriving a general theory of accounting by deductive methodology, it is now proposed to examine more closely the meaning of the term "objectives", and the part objectives play in such a theory.

Whilst different interpretations can be placed on the meaning of the term "objectives" in ordinary usage, it is used in deductive methodology as being synonymous with "purpose", "function", "aim", and "raison d'être".[10] Several authorities[11] show this meaning as being valid and the terms will, therefore, be used interchangeably in this study. It should be noted that, used in this sense, the objectives or function of an object, the functioning of an object, and the object itself are three different conceptions. Chambers says:

> Now the function of an object and the object itself are two quite distinct conceptions—a "fry-pan" is not the "function of a fry pan" [*sic*]—and the *functioning* of an object is a different conception again.[12]

The function or objectives of an object are its purpose, aim or raison d'être. The functioning of an object refers to the series of operations which are executed under the name of the object, while an object itself will possess certain properties (e.g. physical properties) and may have a function (objectives) and a functioning (a series of operations). The definition of an object may specify its properties, its objectives, its functioning or a combination of these. However, the object, accounting, and its functioning are not the concern of this study. Here, only the function or objectives of accounting are under consideration.

It has been stated that the writer believes the first step in the formulation of an accounting theory is the specification of basic concepts (the most common views of which are known as the proprietary and entity concepts). These viewpoints are considered to have behavioural sources of a psychological and sociological nature. It has also been stated that the writer believes these concepts have some influence on the next step in the formulation of an accounting theory by deductive methodology—the statement of objectives. What, then, is this influence? As will be seen later in this section,[13] the statement of objectives involves specifying the general type of information to be included in the scope of accounting. Yet the basic concepts of accounting have a very fundamental effect on accounting information in that they involve the determination "of the unit from whose point of view or on whose behalf an accounting is carried out".[14] This effect is considered to be so basic that it causes the writer to believe that the basic accounting concepts underlie the specification of the type of information to be included in the domain of accounting, and hence the specification of accounting objectives.[15]

It can be seen from the diagrammatic representation of the application of deductive methodology to accounting theory, that just as the basic concepts of accounting underlie accounting objectives, so too the objectives underlie the postulates. It is now proposed to discuss this relationship between accounting objectives and postulates. On this subject, Hendriksen has the following to say:

> . . . not all aspects of society are relevant to accounting. Some are clearly irrelevant, others are only indirectly relevant, and many economic, social, and political aspects are directly relevant.[16]
>
> . . . some agreement on objectives is necessary to determine what postulates are relevant to accounting and to evaluate the principles and rules based on the postulates in order to determine whether or not they fulfill the requirements of the system.[17]
>
> In accounting, those postulates that are most relevant to the objectives of accounting should be selected.[18]

Chambers expresses a similar view when criticizing a statement on the function of accounting by Moonitz. Chambers states:

> . . . in developing a contrivance—accounting is a human contrivance—one needs to know at the outset the purpose or function it is to serve, or at least to propose tentatively a purpose which will direct the kinds of questions one should ask about the environment.[19]

He goes on to criticize Moonitz, saying that "we do not have at the beginning an indication of the grounds for including any given statement among the A postulates".[20]

As can be seen from the diagram of an accounting theory based on deductive methodology, in such a theory postulates are abstracted from the environment. However, as Hendriksen has pointed out, in deriving accounting postulates not all aspects of the environment are relevant. A statement of objectives should help in this regard. In deriving postulates, such a statement should "direct the kinds of questions one should ask about the environment". In other words, objectives help "determine what postulates are relevant to accounting". A statement of objectives in an accounting theory based on deductive methodology must, therefore, specify the *general scope* of the accounting discipline. It must do so if it is to direct the questions one should ask about the environment.

As Hendriksen,[21] and Buckley, Kircher, and Mathews[22] have pointed out above, a statement of objectives also provides a means of evaluating principles and rules. In fact, it really provides a test of a whole theory in that the results produced by the theory should be evaluated to ensure that they "meet the test of squaring with the basic objectives of accounting".[23]

It can be seen from the diagram of the application of deductive methodology to accounting theory that a statement of objectives is an essential element in such a theory. There must be some reason for this. It is, therefore, now proposed to have a closer look at the need for a statement of accounting objectives in accounting theory in general, and in an accounting theory based on deductive methodology in particular.

Need for a statement of accounting objectives

Arguments both for and against the defining of the objectives of accounting appear in the literature. These will be briefly examined in turn.

The arguments in favour of stating objectives are as follows:

1. A fundamental step in any field of study concerned with human activity is to specify objectives. Chambers made this point above.[24] Research staff of the National Association of Accountants expressed the same view when they stated:

> Accounting is a man-made art invented to aid men in achieving certain aims, and accounting techniques are means to attain these ends. It follows that accounting techniques must be judged on the basis of how much they contribute towards achievement of the ends intended. Purposes are, then, the starting point in building the structure of accounting. All other components of theory and practice are means to the ends represented by purposes for which accounting data are needed. Rational discussion of means is impossible until the ends are identified.[25]

In other words, they say that a human contrivance such as accounting exists merely to satisfy a human need. If the satisfaction of the need is to be maximized, it is desirable that the objectives of the contrivance, expressed in terms of this need, should be set down in order that the accounting profession will never lose sight of them. However, as has been explained above, this writer believes that the statement of objectives is the second step, rather than "the starting point in building the structure of accounting" by deductive methodology.

But regardless of where objectives actually fit into an accounting theory, it is certain that their statement is a fundamental step in the derivation of the theory. It has been stated that, in an accounting theory based on deductive methodology, a statement of objectives should specify the general scope of the accounting discipline.[26] In other words, such a statement "sets the limits or the boundaries to the discipline".[27] It therefore provides the foundation and parameters for research into accounting postulates and principles. As the range of human activity is almost limitless, these limits are essential. Any field of study must have some direction, some boundaries, even though the latter may be gradually widening.

Hendriksen, Sands, Hart, Devine, Vatter, Husband, Littleton, and Rappaport[28] have also expressed this argument in some form or another.

2. A different argument for the stating of accounting objectives is that such a statement is necessary in the *testing* of a theory. This argument, which has been discussed to some extent above,[29] is also put forward by Chambers when he says that a theory "must be demonstrated to be workable and to serve the functions for which it was designed".[30] In other words, a means of testing a theory is to see if the results produced by it meet the aims of the theory as set out in the statement of objectives.

3. Rappaport presents a further argument in the case for a statement of the objectives of accounting when he says that:

> Indeed, it seems proper to suggest that without a consensus regarding the essential premise of accounting objectives the current debate concerning basic accounting theory is likely to continue indefinitely with limited possibility for substantial progress.[31]

He goes on to substantiate this argument by pointing out that most researchers in the area of basic accounting theory (and, in this writer's opinion, in applied accounting theory as well) fail to develop properly, and to state explicitly the objectives of accounting. This, he says, forces individual readers to superimpose their own conceptions of what the objectives should be. However, because the conceptions are not explicitly stated, most of the individuals participating in debate concerning the merits of resultant theory fail to realise that differing conceptions of accounting objectives are an important cause of disagreement. Such debate is, therefore, really pointless. If, however, objectives and their underlying rationale were clearly stated, the real cause of the disagreement could be readily seen. Discussion could then be directed at the fundamental underlying issues involved and progress could be made. Grady and Daines[32] have expressed similar views.

On the other hand, Goldberg *doubts* the wisdom of supplying a definition (including the definition of "objectives") at the commencement of a study and gives several arguments to support his contention.[33] These are as follows:

a) Firstly, concerning his work, he says that "it is hoped, therefore, that the dogmatism which often results from initial formal definition may be avoided".
b) "Secondly, if a definition is to be relevant at all, it delimits the scope of discussion, whether it is submitted for that purpose or not. To put it metaphorically, a definition erects a wall around a field of discussion . . ."
c) "Thirdly, there appears to be some doubt among logicians themselves as to what comprises a definition and what its purpose is."
d) "Further, we are concerned with the question: what is accounting?, and a definition at this stage would of necessity presuppose the course and result of subsequent discussion."
e) ". . . accounting may be defined differently by various persons according to the particular point of view . . . [There are] other points of view which may, in fact, be just as legitimate as the point of view adopted."
f) "The process of definition (especially definition *per genus et differentiam*) is largely a part of the process of classification, and when a definition is offered the basis of classification is often presupposed."

This writer, however, does not agree with Goldberg's arguments. It is considered that, whilst they may apply to a definition in terms of the properties of an object or of its functioning, they do not represent a valid criticism of the functional definition that will be developed in this study. Here, the functional definition will not be made dogmatically, nor will other points of view be ignored, or a basis of classification be presupposed. Alternative objectives will be considered and evaluated before one is finally recommended.

It is true that the definition of objectives will delimit the scope of subsequent accounting research to establish postulates and principles, but this is considered essential. The field of enquiry cannot be limitless. It must have some direction and some boundaries, however broad these may be. Also, within these boundaries, alternative accounting systems will be permissible. These must be analysed and evaluated before any one classified system can be recommended. Thus, when accounting objectives are defined as a foundation for accounting postulates, principles, and rules, there will be no presupposition as to "the course and result of subsequent discussion". Direction only will be provided.

Whilst it may also be true that logicians are unable to agree about what comprises a definition, the writer agrees with Chambers when he says:

> Now, whether we accept one definition or another, it seems impossible to do without a statement of function which provides a rationale for its invention and persistence. . . an invented process cannot be understood without laying its foundation in some need or want not satisfied or satisfiable by natural occurring things. Unless the need or want is specified we have no way of focussing our inventiveness on a device which will satisfy it.[34]

In other words, a statement of objectives is essential regardless of whether it be called a definition or not. If accounting is to maximize the satisfaction of the want which creates the reason for its existence, its objectives, expressed in terms thereof, should be set down as a vital part of the foundation on which the object, accounting, is built. In fact, the object, accounting, and its functioning cannot really be understood without first establishing the function of the discipline.

It must be remembered that accounting, being a human contrivance, has no justification whatever in itself. As many writers have pointed out:

> It is important to realise that the only justification for the existence of any model is the utility of the information or knowledge it serves to produce. Thus if a model ceases to be useful there is no logical reason for its retention—it possesses no inherent validity or value.[35]
>
> . . . accounting does not exist for itself alone but for the services it provides to society.[36]

In other words, accounting was invented to fulfil a social need and will continue to exist only so long as society continues to demand its product. The objectives of accounting, therefore, are to fulfil a particular need of society and, theoretically then, the ideal accounting model is one which would maximize the satisfaction of the need. It can, therefore, be seen that it is necessary to establish the objectives of accounting, to specify them clearly, and never to lose sight of them in accounting research. This should apply no matter what research methodology is used. The statement of objectives will give direction to any research and provide a test for resultant theory.

Present state of theory on accounting objectives

In the above discussion the need for a statement of the objectives of accounting as a basic step in accounting research was indicated. In the writer's opinion, this need cannot be emphasized too strongly. However, despite this, there has been little research into accounting objectives, and in fact, with a few exceptions, there has been little indication that the need even exists. In addition, whenever objectives are discussed in the literature, there are generally two important deficiencies.

1. The objectives are presented in such vague terms that little or no direction is offered to the further development of a system of theory, and/or
2. The underlying rationale for the stated objectives is not given.[37]

For example, in discussing the purpose of accounting, Paton and Littleton say:

> The purpose of accounting is to furnish financial data concerning a business enterprise, compiled and presented to meet the needs of management, investors, and the public.[38]

Mathews makes a similar statement:

> The major purpose of accounting is to provide information to interested parties regarding the nature and significance of economic transactions.[39]

These statements, together with their related discussion, are too vague to provide any clear direction for subsequent research. In neither is any underlying rationale given.

The same criticism can be directed at many major research studies and at the official recommendations of most professional bodies. Research studies by a group at the University of Illinois and by Moonitz and Sprouse[40] are particularly deficient in this respect.

The importance of objectives in providing a basis for accounting theory, and consequently accounting practice, would lead one to expect that all professional bodies would have given close attention to the matter. However, this is not the case. The major professional bodies in Australia and England have not even considered the question. The official recommendations of the Institute of Chartered Accountants in England and Wales and the Institute of Chartered Accountants in Australia[41] do not mention the problem. Further, they do not state the accounting objectives implied therein. The Australian Society of Accountants has not issued any official recommendations or any other statement concerning the function of accounting. The position in the United States is not quite as bad, however. As long ago as 1941 the American Institute of Certified Public Accountants defined accounting, and presumably this definition has been implied in the Institute's accounting research bulletins and in the opinions of their Accounting Principles Board that have been issued since that date.[42] However, this definition refers primarily to the functioning of accounting rather than to its function, and on this latter point is rather deficient. As Mattessich points out, the overall definition is rather vague.[43] This is certainly the case as far as objectives are concerned. In addition, no rationale is given for the objectives adopted, and the rejection of alternatives.

The American Institute has recently adopted as an official statement of policy "A Description of the Professional Practice of Certified Public Accountants".[44] This statement incorporates one of the best statements of the objectives of accounting this writer has been able to find. However, it does suffer from some deficiencies. For example, the underlying rationale for the objectives adopted is not given.

Another major body of accountants in the United States, the American Accounting Association, has no official recommendations. The Association's most recent research committee stated what it considered were the objectives of accounting,[45] but in the writer's opinion, their treatment is also somewhat inadequate. For example, they, too, do not examine possible alternative functions.

A further aspect of the present state of theory on accounting objectives that should be noted is that, as will be seen in later sections, there is disagreement among accountants on matters which must be incorporated in such a statement. Prince examines statements of objectives put forward by several writers and concludes that "there is considerable difference of opinion on what is the function"[46] of accounting. In fact, subsequent analysis will confirm this.

The study

Because of the importance of a statement of the objectives of accounting in providing part of the foundation for accounting theory and practice, and because of

a) the lack of research on the subject;
b) the inadequacies in such statements that do exist; and
c) the considerable disagreement on matters having a bearing on objectives,

the purpose of this study is to examine in detail the problems concerning the definition of the objectives of accounting. The ultimate aim of the study is to recommend objectives for the discipline.

The methodology[47] adopted in this research will be to analyse and evaluate all matters affecting the definition of the objectives of accounting. Because of the inadequacies in research into accounting objectives mentioned above, it will be necessary to examine fragments of discussion from many articles and books in order to piece together an adequate consideration of the various issues. The approach in respect of each matter will be firstly to look at the general needs which traditional accounting is theoretically[48] meeting at the moment. The possibility of extending or restricting the general needs met by the accounting discipline will then be investigated. This will be done by examining the writings of accountants and the users of accounting (e.g. security analysts) to assess what extensions or restrictions have been suggested by the various writers. This writer will, from time to time, make further suggestions in this regard. An endeavour will be made to present all major alternative viewpoints. Following this, the various alternative views of the needs to be met by accounting will be analysed and evaluated. In order to carry out a thorough evaluation, it will be necessary to analyse not only the different views, but also their underlying rationale. Part of the aim of the analysis will be to assess whether the needs mentioned by the various writers actually exist. Following this analysis, a synthesis of the results obtained will be used to establish the writer's view on the particular matter under discussion. The reasons for the view adopted will be given in each case. When all the relevant matters have been considered, the conclusions reached on each will be integrated to form what the writer believes the objectives of accounting should be.

However, with respect to each matter affecting the definition of the objectives of accounting, there will often be several acceptable alternative views. The protagonists of each alternative will argue that accounting can best meet the needs encompassed within their viewpoint and that other disciplines, new disciplines, or possibly nobody, should meet needs not encompassed therein. It must be recognized that it is not possible to select between the alternative viewpoints using deductive logic. There will be no way of *proving* one view is correct and the others are incorrect. As Wright points out, in the final analysis the selection of "any statement of the purposes [objectives] of accounting is necessarily subjective".[49] The only way the accounting profession as a whole can set down one statement of the objectives is to use what Buckley, Kircher, and Mathews have called the authoritarian approach. They state that "the role of authoritarianism is to discriminate between well-founded but conflicting theories".[50] Under this approach the professional bodies could make an authoritative statement as to the accounting objectives that should be adopted by the profession. It would be desirable that they include in this statement their rationale. In this study the writer will give the reasons for the views adopted. However, it is recognized that these reasons do not *prove* the views to be correct.

Although environmental constraints and practical restrictions must be given due consideration, it is the aim of this study to establish what the writer believes to be an *ideal* function. This should be done even though the results may be incapable of practical implementation in some cases at the present time. Chambers expresses this view:

> Only if a theory [which includes the statement of objectives] deals with the ideal can it serve as a guide to developments and improvements in the practice of the related technology. The conditions under which the practitioner works will inevitably cause his work or his results to fall short of the ideal, for the conditions are never ideal. But if the points at which the conditions fall short are discerned, or if the deficiencies in the technique are known (by reference to the theory), there is hope that the practice will be gradually improved.[51]

It can be seen, therefore, that the aim of this research is not merely to examine the role accounting is playing in society today, but to establish what, in the writer's opinion, is the role that *should* be played (i.e. to establish the objectives that should be adopted by the profession). Accounting is one of several information systems existing in society, each supplying its own particular type of information. Accounting is *at the moment* meeting a human need for a certain type of information. However, it is possible that the discipline can and should provide a greater service in the future by either improving the quality of its existing output, and/or enlarging its scope to include information needed by society but not provided at all, or as well, by other systems. It is also possible at the moment that society is merely using part of accounting's output, the other part being redundant as a result of the profession's having lost sight of its raison d'être. (In view of the above-mentioned lack of research into the function of accounting, this must be a distinct possibility.) Careful analysis will, therefore, be required to derive what the writer believes to be the ideal objectives of accounting.

To summarize, then, this study is designed to analyse and evaluate all major views (and their underlying rationale) on all matters affecting the objectives of accounting, and other relevant factors, with the aim of recommending a function for the accounting discipline. The stated objectives should provide a clear framework for future accounting research and a basis for testing resultant theory.

Having thus discussed the aims of this research and the methodology to be employed, it is now proposed to outline the plan of the study. It was pointed out earlier in this section[52] that the writer believes the basic concepts of accounting underlie the statement of accounting objectives. The influence of the basic concepts on accounting objectives was discussed. Because of this influence, the writer believes that objectives cannot be adequately considered without first examining the basic concepts. These will, therefore, be examined in the following section. Unfortunately, however, space does not permit a detailed consideration of the various concepts and the arguments for and against each. They will, therefore, only be considered to the extent necessary to form an adequate base for the subsequent research into the objectives of accounting. Having established the essential foundation for the study by specifying a basic concept, it will then be possible to proceed with the investigation into the objectives of accounting.

Probably all accountants would agree that the function of accounting is to provide information for decision making regarding entities.[53] However, in making this extremely general objective more specific, several questions arise, and these must be considered fully and answered. The remainder of the study will be devoted to this task. The questions are as follows:

1. What is information? In recent years the word "information" has been gradually acquiring a technical meaning. As the objectives of accounting are to provide information, it is, therefore, necessary in stating these objectives more specifically, to enquire into the new technical meaning of the term. This enquiry will be made in section 3. It will be seen in this section that relevance is an important characteristic of information when the word is used in the technical sense.

2. Should the general scope of accounting take into account the specific *uses* of accounting information, the *goals* of decision makers, and the *behaviour* of decision makers and entities? There is disagreement among accountants as to whether the objectives of accounting should be such that the accountant need concern himself with the specific uses and goals of decision makers, and with the behaviour of decision makers and entities. For example, Ijiri considers these matters are within the scope of accounting. When discussing alternative methods of valuing assets and income, he says:

> The answer depends, in part, upon the way in which the resulting summary of assets and income is to be *used*. . . Furthermore, . . . we must know the *goals* to be served. And even this does not settle the matter. We must then consider how the individuals will *behave*. . .[54]

Chambers, on the other hand, does not agree with Ijiri regarding uses and goals. He says:

> Specific *ends* [goals] and the ranking of specific ends are beyond inquiry[55]

and that accounting information should be

> . . . uncolored by any presupposition regarding its *specific use*.[56]

Others would not agree with Ijiri regarding behaviour. For example, as will be seen later in the study, traditional accounting theory does not regard this matter as being within its scope. Section 4 is, therefore, devoted to a consideration of the question of whether behaviour and specific uses and goals should be encompassed within the scope of accounting.

3. To whom should the information be provided? Wixon states that "it is also the function of the accountant to know who uses his services".[57] Rappaport also makes this point when he says that a basic issue in establishing accounting objectives is the determination of "*to whom* published corporate accounting reports"[58] should be directed. Other accountants, however, would not agree with this contention. They would argue that the information they consider accounting should provide is relevant to *all* possible users and it is, therefore, not necessary to specify the individual user groups.

Whilst this writer acknowledges that *some* accounting information is relevant to all users, he agrees with Wixon and Rappaport that it is necessary to specify the individual recipient groups. This is because (as will be seen in section 4), the writer considers accounting should not only provide information that is relevant to *all* uses and goals, and hence *all* users (such information may be termed "information relevant in general"), but in addition, should provide "information relevant in particular". Information is relevant in particular when it is relevant to *particular* goals and uses of information, but is *not* relevant to *all* uses and goals. If it is desired to provide "information relevant in particular", then it is considered necessary to specify the parties to whom accounting is reporting. The reason is that these different parties will have different goals and different decisions to make (i.e. uses of information) and it is, therefore, unlikely that they will have identical requirements for "information relevant in particular". For example, Professor Goetz (who believes accounting should provide such information) considers that employees should be included in the recipient group and that the discipline should meet a need these individuals have for information regarding safety and promotions.[59] This is part of the information employees need in comparing alternative employment opportunities. Yet, it seems clear that few *other* parties (if any) would be very interested in these matters. This example is not meant to imply that the writer believes employees are rightful recipients of accounting reports. This matter will not be investigated until a later section. Rather, it is meant to demonstrate that different parties have different particular informational requirements.

If, then, accounting is to provide information "relevant in particular", it is necessary to specify the rightful recipients of accounting reports in order that their individual informational needs, both general and specific, can be investigated and met. Those parties (if any) not included in the recipient groups, and yet who make use of accounting information, will still undoubtedly find much information of relevance to their needs in accounting reports, for, as was pointed out above, much information is relevant to *all* users. However, it is unlikely that all their informational needs will be satisfied.

Unfortunately, however, there is further disagreement among accountants regarding this question of to whom accounting should report. The question is fully examined in section 5.

4. What *types* of information should be provided? As Rappaport has stated, in specifying accounting objectives, it is also necessary to "determine what *types* of information"[60] should be provided. This question will, therefore, be investigated in the following section (section 6). It was pointed out above that accounting will not be concerned with *all* forms of information required by society, but merely with a certain class of information. However, there are differing opinions among accountants as to what general type of information constitutes the rightful scope of accounting. There appear to be two major issues involved.

a) Should anticipatory calculations be included?
b) Should the discipline be limited to monetary calculation or should other forms of information be included as well? If so, what are these other forms of information?

These questions are considered in turn.

5. How much information should be provided? Rappaport says that another unresolved issue relating to the objectives of accounting is:

What should be the required technical comprehension level of the so-called "standard reader" of corporate reports?[61]

This question relates to the problem of the quantity of information which accounting should provide and will be examined in section 7. A further problem regarding the quantity of information to be provided concerns confidential information, and this will also be discussed in the same section.

6. How should the information be provided? The final process in the operation of an information system, such as accounting, is the communication of the information to its users. Part of the objective of accounting is to communicate information as effectively as possible. This is because even the best information will not be helpful unless it is effectively communicated from information processor to decision maker. In recent years some research has been carried out into the problem of communication, and this will be briefly examined in section 8.

Finally, section 9 will present the conclusions of the study. The conclusions reached in each of the sections on the matters investigated therein will be integrated to form a recommended definition of the objectives of accounting. This statement should provide a sound foundation for subsequent research into accounting postulates, principles, and rules, and also a means of testing resultant theory.

II. THE BASIC CONCEPTS OF ACCOUNTING

The various basic concepts of accounting which have been put forward by various accounting theorists represent different perceptions of the relationship between a firm and its participants,[1] and consequently "of the unit from whose point of view or on whose behalf an accounting is carried out".[2] It was pointed out in the previous section[3] that the specification of these concepts is considered to be the first step in the formulation of an accounting theory by deductive methodology, and that the concepts are considered to have some influence on the second step—the stating of accounting objectives.

The influence of the basic concepts on accounting objectives is considered to be as follows. The objectives of accounting are to provide information. In stating these objectives, it is necessary to specify the general type of information to be included in the scope of accounting. Yet the basic accounting concepts have a very fundamental influence on accounting information in that they determine "the unit from whose point of view or on whose behalf an accounting is carried out". This effect on accounting information is considered to be so fundamental that it causes the writer to believe that the concepts underlie the specification of the type of information to be included in the scope of accounting, and consequently the stating of accounting objectives.

Because of the important influence of the basic concepts of accounting on accounting objectives, the writer considers that objectives cannot be adequately investigated without firstly examining the concepts. These will, therefore, be considered in this section. Unfortunately, however, the scope of this study does not permit a detailed examination of the concepts. In order to limit the scope of the examination, and yet still provide a satisfactory foundation for the investigation of accounting objectives, the discussion can best be restricted in the following way:

1. As by far the great majority of accountants support either the proprietary concept or the entity concept, only these two will be considered.[4]

2. Only the general concepts themselves will be examined. An investigation of *all* the accounting implications of the viewpoints is thought to be of little or no relevance for the problem at hand.

3. It will not be possible to enter into a detailed debate giving the many arguments for and against each concept. Each will be explained and the writer will give the viewpoint he holds, but it will not be possible to go beyond this.

Before considering the proprietary and entity viewpoints, it should be pointed out that this writer believes that these and other viewpoints concerning the basic concepts of accounting "emerge from value frames of reference of people in our society",[5] and consequently have behavioural sources of a psychological and sociological nature. Further, because frames of reference vary from person to person, it is not surprising that different individuals hold different viewpoints regarding the basic accounting concepts. Because of the source of these viewpoints, it is not possible to *prove* one correct and others incorrect. Gynther also expresses this contention:

> Both of these concepts [the proprietary and entity viewpoints] emerge from value frames of reference of people in our society, and it is seldom possible to alter these by sophisticated or theoretical arguments. Therefore, if we want a general theory of accounting . . . we shall have to make an arbitrary decision as to whether to base it on the proprietary concept or the entity concept.[6]

As will be seen later in the section, in this study the "arbitrary decision" will be made in favour of the viewpoint held by this writer—the entity viewpoint. With these factors in mind, the proprietary and entity concepts will now be briefly explained.

As has been pointed out, the proprietary and entity concepts represent different conceptions of "the relationship of the decision-makers [of various classes] to the enterprise"[7] and consequently "of the unit from whose point of view or on whose behalf an accounting is carried out".[8] Gynther succinctly describes the concepts when he says:

> Those who hold the proprietary concept perceive the firm as being owned by a sole proprietor, a set of partners, or a number of shareholders. The firm's assets are looked upon as being the property of these people and the liabilities of the firm are their liabilities. . . The proprietors are the centre of interest at all times, and their viewpoints are the ones reflected in the accounting records. Total assets minus total liabilities equals that portion of their net worth that is vested in the firm. Revenue and expense items immediately increase or decrease this net worth . . .[9]
>
> The holders of this concept [the entity concept] see the entity as something separate and distinct from those who contributed capital to it. They see the assets and liabilities as being those of the entity itself and not those of the shareholders or proprietors. As profits are earned by the entity, they become the property of the entity; they accrue to the shareholders *only* if and when a dividend is declared.[10]

Thus it can be seen that the proprietary concept divides a firm's participants into two groups—the proprietary or ownership group and the non-proprietary group. Accounting is then carried out from the point of view of the proprietary group.

In the entity concept, on the other hand, "shareholders as well as the creditors" and other external parties are regarded as being "outside the organization".[11] Consequently, accounting is carried out from the point of view of the entity itself (or more strictly, from the way entity theorists perceive the entity), rather than from the point of view of any of its participants.

However, both viewpoints have several different versions. The versions of the proprietary concept depend on "who is perceived as belonging to the proprietorship group".[12] The three most common views as to the content of this group are as follows:

a) ordinary shareholders
b) ordinary and preference shareholders
c) all long-term investors, i.e. including note and debenture holders in addition to shareholders.

The different versions of the entity theory result from different views as to the nature of dividends, interest, taxation, and capital under the concept. However, these different viewpoints do not affect the general conception of the firm as being separate and distinct from its participants. It is, therefore, believed that it is not necessary to examine them for the purposes of this study.

Of these two concepts, the writer holds the entity viewpoint. He acknowledges that this view has probably been influenced by his background. A background as an employee in commerce, without any large shareholdings, may, as Gynther points out,[13] lead to a natural inclination towards the entity concept. The writer holds this concept because he believes that shareholders and creditors have little or no say in the corporations which dominate our economy.[14] More importantly, it is believed that:

> The interests of the members of the various subcoalitions interested in the firm depend on the results of the firm (entity) and its survival, and therefore the focus of attention is (should be) on the entity itself, and not on any particular member or subcoalition.[15]

In other words, in our economy today, the functions of production, distribution, servicing, etc., are carried out by entities, whether they be corporations, partnerships, sole traders, government departments, or other organizations. The emphasis is on the actions of the entity and not its participants. It is, therefore, necessary to account for the entities in order to evaluate their performances and the efficiency with which they are performing their functions in society. Only if an entity is accounted for in terms of its particular location, industry, organization, etc., can its participants make decisions regarding the efficiency of its operations. "The place for the recording of the interests of the shareholder [or any other participant] is in his own private accounting records."[16] In this study, the objectives of accounting will, therefore, be based on the entity concept.

Having thus established the necessary foundation for the following derivation of accounting objectives (i.e. by stating that they will be based on the entity concept), it is now possible to proceed with this derivation. As was pointed out in the previous section,[17] in order to establish accounting objectives in an accounting theory based on deductive methodology it is necessary to consider and answer six questions.

1. What is information?
2. Should the general scope of accounting take into account the specific *uses* of accounting information, the *goals* of decision makers, and the *behaviour* of decision makers and entities?
3. To whom should the information be provided?
4. What *types* of information should be provided?
5. How much information should be provided?
6. How should the information be provided?

These questions will now be investigated in turn in the following sections.

III. INFORMATION

It has been stated[1] that probably all accountants would agree that the objective of accounting is to provide information. However, in order to state accounting objectives more specifically, it is necessary to establish the meaning of the term "information". The purpose of this section, therefore, is to establish the meaning that will be attributed to the term when used in the statement of accounting objectives to be recommended.

Unfortunately most accountants have paid little or no attention to this matter. For example, an examination of Grady's exposition of traditional accounting theory[2] will reveal that the meaning of the term "information" has not been considered. This fact leads the writer to believe that accountants should be particularly interested in a body of knowledge that has been developing in recent years, and which has become variously known as information theory,[3] information science,[4] and information technology.[5] This body of knowledge has been concerned with information in general. More specifically, it has been concerned with the meaning of the term "information", and with the measurement and valuation of the informational content of messages.

Whilst information theory is concerned with information in general, and accounting is merely concerned with a particular type of information, the relevance of the theory to accounting should be obvious. The relevance of information theory to the present discussion should be equally obvious. It is, therefore, now proposed to examine this theory to the extent it is applicable to establishing the meaning that should be attributed to the term "information" in accounting. The scope of this study will not, however, permit a detailed examination of the theory. Only the general principles will, therefore, be considered. Following the examination of the meaning of the word "information" in information theory, its meaning in accounting will be considered. Finally, the meaning derived from this investigation will be stated. This meaning will be attributed to the term when it is used in the statement of accounting objectives to be recommended.

Information theory

The word "information" assumes a technical meaning in information theory. Some of the characteristics of this concept of information are given by Holmes when he says:

> Information refers to something newly apprehended by a decision-maker in the context of the decision to be made. The informational content of a message is its potential to evoke a response i.e. to bring about a change in the state of mind of the decision-maker in a specific situation. Information is useful data.[6]

The implications of this statement and other characteristics of the concept of information will now be investigated in detail.

Holmes has stated that information refers to something newly apprehended. In other words, as Rothstein has said, "if the message to be transmitted is known in advance to the recipient, no information is conveyed to him by it".[7] Data which is already known to the decision maker does not qualify as information in the technical sense.

It was further stated by Holmes that information is something newly apprehended *by a decision maker in the context of the decision to be made*. Vatter elaborates this point when he says that "data become information only when they convey a message which has some specific relevance to a problem or situation—a relevance which may be expected to capture attention and to precipitate action".[8] Thus it can be seen that, in information theory, information must be *relevant to a particular decision maker* in relation to a *particular decision* he must make.

It is implicit in this statement that information can only exist if a decision maker experiences uncertainty in relation to a decision. If the outcome of a decision is certain, then no further data can have any bearing on its outcome, nor, therefore, can it have any relevance to the decision. However, there are few business decisions that are absolutely certain. It is this fact that creates the need for information, for, as Chambers points out, "the function of information is to reduce the doubt of an actor [decision maker]".[9] Whilst it is extremely unlikely that any information system of the future can ever reduce decision making to certainty, information should *reduce* the uncertainty surrounding a decision, or, in other words, decrease the ignorance of the decision maker in relation to the particular decision.

The criterion of "relevance" is extremely important in information theory. The justification for the emphasis placed on this criterion is clearly stated by Goetz when he says that:

> At best, irrelevant data are useless; at worst, irrelevant data can lead managers into serious error.[10]

Unfortunately, however, it seems that many economic reports in existence today (including accounting reports) which purport to contain information, merely contain irrelevant data. For example, Goetz goes on to say that "accountants . . . have often behaved as if relevancy were irrelevant".[11] Tuthill also mentions the problem of endeavouring to keep irrelevant data from hampering top management.[12] The question of relevancy, as far as it affects the accounting discipline, will be considered further later.

Holmes also stated above that *information is useful data*. It can scarcely be denied that information which satisfies the criteria specified above will be useful. However, some writers prefer to differentiate between the terms "information" and "data". Joplin, for example, states that "a distinction must be made between data and information".[13] Bedford and Onsi and Prince[14] have also stated this view. These writers contend that the term "information" applies exclusively to messages that satisfy the specified requirements of the information concept. Messages which do not satisfy the requirements of the information concept are not information, and may be termed data. Since probably most information theorists make this differentiation between the terms "information" and "data", and since the distinction is a useful one, it will be made throughout the remainder of this discussion.

Another characteristic of information mentioned by Holmes above was that the "informational content of a message is its potential to evoke a response i.e. to bring about a change in the state of mind of the decision-maker in a specific situation." This statement implies that there will be a different degree or amount of information in different messages, depending on the extent to which a decision maker's state of mind is changed in relation to a decision. As Chambers points out, this does not mean that information will always, or even often, tell the decision maker exactly what to do.[15] However, it does mean that information should modify "the actor's predisposition to act in a certain way by virtue of increased knowledge or reduced doubt".[16] The amount of information in a message depends on the extent to which an "actor's" doubt is reduced or, in other words, knowledge increased, in relation to a decision.

Bedford and Onsi make the same point when they say that the " 'amount' of information [in a message] is equal to the reduction of uncertainty"[17] produced by the message in relation to a decision. Thus, the greater the uncertainty surrounding a particular decision, the greater the informational content of a useful message can be. The amount of information in a message is also, therefore, a function of the "unexpectedness of an event"[18] which has a bearing on the decision and which is reported.

It has been stated that in information theory the amount of information contained in a message is a function of the extent to which it reduces the uncertainty surrounding a decision. It follows that, if uncertainty can be measured, so can information. The question arises, then, as to whether a decision maker's uncertainty can be quantified. Probability theory is concerned with the "relationship between certainty and uncertainty".[19] Of more specific relevance to the problem here is the branch of probability theory commonly known as the Bayesian approach. The Bayesian probability approach is based on the use of subjective probabilities which, in the words of Officer, are concerned with "the degree of belief an individual has in a particular proposition".[20] The possible relevance of the Bayesian approach to the problem becomes immediately apparent, and in fact it is this approach which information theorists claim can be used to obtain valid measures of the informational content of messages. They claim that, using this approach, it is possible not only to measure the amount of information, but also its value. To incorporate the technique into an information system, it is understandably necessary to develop the system on a probability basis. If this is done, then the informational content of a message reporting the occurrence of an event having a bearing on a decision depends on the subjective probability of that event occurring. However, the models developed by information theorists to measure the amount and value of information will not be considered in this study. They are neither within the scope of the study nor relevant to the consideration of the meaning of the term "information". Sufficient is it to say that models have been developed by information theorists which *may* enable the measurement of the amount and value of information.

The above discussion concerning the amount and value of information has certain implications which should be spelt out. Firstly, the informational content of a message will vary from individual to individual. This will be so even if the individuals have the same decision to make. The reason is that different decision makers have different decision-making abilities. They quite understandably also have different abilities to appreciate the significance of a particular piece of information for a decision. It follows, therefore, that the extent to which information reduces the uncertainty surrounding a decision will vary depending on the individual decision maker. Another possible reason for the amount and value of information varying with the recipient is that different individuals have different goals. It is possible that the degree of relevance of a message for a decision will depend on the goals of the particular decision maker. For example, in a decision regarding the pricing of a product, a message giving information of a recent price change by a competitor may have a different informational content for a decision maker imbued with a strong sense of social responsibility from that for a decision maker whose prime concern is maximizing his personal profits.

A second implication of the discussion concerning the amount and value of information arises from the fact that often a piece of information produced by an information system is used for several different decisions, and frequently by several (sometimes innumerable) different decision makers. Thus the total value of the piece of information is the sum of its values in each decision. However, *all* the uses that will be made of information are often not known at the time it is collected. Some of these uses may be a considerable distance in the future.

The above two factors combine to make the measurement of the amount and value of information very difficult in practice. It can be seen from the discussion of these factors that a particular message contains no inherent amount of information. The same piece of information can vary widely in informational content over time. The amount of information contained in a message depends on its recipients (present and future). More specifically, it depends on the abilities of these recipients and on their goals and on the uses they make of the information, both at present and in the future. As an independent information processor does not usually know the abilities or goals of *all* of the recipients of his product, nor *all* the uses that will be made of the information, it may be claimed by some that it is impossible for him to quantify the property "information". Others may claim that the amount and value of information can only be measured by its recipients themselves, who should be aware of their abilities, their goals, and have a reasonable idea of the present and future uses to be made of the information. However, as has been pointed out, the question of whether "information" can be measured in practice, and if so, by whom, will not be considered in this study. These practical difficulties are not considered to affect the validity of the conceptual notion of the property "information" having a value.

Some authors claim that a further characteristic of information is that its value should be greater than its cost. For example, Simon says that "information should be gathered up to the point where the incremental cost of additional information is equal to the incremental profit that be earned having it".[21] In other words, whilst "additional information is nearly always obtainable—at a price",[22] its acquisition cannot be justified if the cost of the information exceeds its value. Bedford and Onsi, Diebold and Associates, and Moravec[23] have also expressed this view. Other writers on the subject of information theory, however, do not mention this as an essential characteristic. Whilst it can scarcely be denied that information does not warrant collection when its cost exceeds its value, this latter group presumably consider the criterion a practical matter rather than one of concept. In fact, as far as accounting information is concerned, McDonald specifically states that he regards the cost value comparison as a feasibility (practical) criterion and not a conceptual one.[24] However, this writer agrees with Simon (and others). It is considered that the criterion is a "general notion"[25] applying to the discipline as a whole and is thus conceptual rather than practical in nature.

But if this concept is to be incorporated into practice, the property "information" must be capable of measurement or at least reasonable estimation. In order to do this, the practical problems mentioned above regarding the valuation of information must be overcome. In addition, the cost of obtaining the information must be measured or estimated. Whilst, as McDonald and Diebold and Associates[26] have pointed out, little has been done in this direction to date, it would not seem to be an unapproachable problem. The cost of obtaining information could be estimated with little difficulty using techniques employed by the accountant in his everyday work.

This completes the examination of the general principles of information theory relating to the meaning of the term "information". The concept of information in this theory can be summarized as follows:

> Information refers to a message which is new, relevant, and useful to a decision maker in relation to a decision, and whose value is greater than its cost. The informational content of a message is its potential to evoke a response in the decision maker.

With this useful concept in mind, it is now proposed to consider the question of the meaning that should be attributed to the term "information" in accounting.

Information in accounting

This writer believes that the information concept in accounting should be the same as that in information theory. The reasons underlying this belief are as follows. It is considered that data which is not new, relevant, and useful to decision makers does not warrant collection by accountants. Further, it is considered that if the cost of an accounting message is greater than its value to the decision makers, once again its collection has not been warranted. Practical difficulties in valuing information do not invalidate this conceptual notion. It is also believed that the informational content of an accounting message is its potential to evoke a response in decision makers. In other words, the amount of information in a message depends on the extent to which the message reduces the uncertainty surrounding a decision. Thus it can be seen the writer believes that all the requirements of the information concept are desirable characteristics of accounting information. It is, therefore, contended that in accounting, the term "information" should only be applied to messages which satisfy the requirements of the concept. Messages which do not satisfy these requirements are not information and should be termed data.

It should be noted, however, that accounting will not be concerned with *all* messages that satisfy the information concept. The concept applies to information in general, whereas accounting is merely concerned with a particular type of information. The particular *type* of information within the scope of the accounting discipline will be examined in section 6. It is, therefore, contended that accounting should be concerned with all messages of a given *type* which comply with conditions specified in the information concept.

A recent committee of the American Accounting Association agrees with the writer's belief that the information concept of information theory should be applied in accounting. They state:

> Essentially, accounting is an information system. More precisely, it is an application of a general theory of information . . .[27]

In the application of this theory to accounting, one of the first concepts which would be applied would be the information concept. The committee also stated that it considered that information theory was one of the major areas which would "influence accounting in the future".[28]

Since this writer considers that the information concept of information theory should be applied in accounting, when the term "information" is used in the statement of accounting objectives to be recommended, its meaning will be derived from this concept. In other words, the meaning will be as follows:

> Information refers to a message which is new, relevant, and useful to a decision maker and whose value is greater than its cost. The informational content of a message is its potential to evoke a response in the decision maker.

The recommended objectives will, amongst other things, also specify the general *type* of information included within the scope of the accounting discipline.

IV. USES, GOALS, AND BEHAVIOUR

It has been established that, in stating the objectives of accounting in an accounting theory based on deductive methodology, it is necessary to specify the *general scope* or domain of the discipline.[1] It has further been established[2] that, in setting this general scope, one of the questions that arises is whether accounting theory need be concerned with the specific *uses* made of accounting information and with the specific *goals* and *behaviour*[3] of decision makers and entities.[4] However, as has already been demonstrated, there is disagreement among accountants regarding this question.[5] Since the aim of this study is to derive accounting objectives, the question will, therefore, be examined in this section. Uses, goals, and behaviour are considered together in this section because they are related to some extent. This is clearly demonstrated in the following quotations:

> Use depends on evaluations of ends [goals] . . .[6]
>
> Individuals have goals and human behaviour is clearly goal-directed.[7]
>
> Usefulness implies a relationship to a purpose or a goal . . .[8]

It should be stated at the outset, however, that the aim of this section is merely to establish whether the scope of accounting should *include* the behaviour and specific goals of decision makers and entities, and the specific uses made of accounting information. If it is decided that they should be included, no attempt will be made to consider what *are* the goals and behaviour of decision makers and entities, and what *are* the specific uses made of accounting information. Such a consideration does not belong in an investigation of accounting objectives. The objectives of accounting in an accounting theory based on deductive methodology "direct the kinds of questions one should ask about the environment"[9] in order to derive postulates. Thus, if it is decided that uses, goals, and behaviour should be included within the scope of accounting, questions regarding these matters would be asked about the environment when establishing accounting postulates. As a result, postulates concerning uses, goals, and behaviour would be set down. The postulates of accounting are not, however, the concern of this study. The following investigation will, therefore, be limited to an endeavour to ascertain whether the behaviour and specific goals of decision makers and entities and the specific uses made of accounting information are a valid part of the scope of accounting.

It is proposed to consider in turn the viewpoint of traditional theory and other viewpoints expressed by contemporary writers on this matter. Following a description of the various viewpoints, they will be evaluated. The aim of this evaluation will be to derive the best approach to the matter.

Traditional theory

Traditional accounting theory is silent on the issue of whether the specific uses of accounting information and the behaviour and specific goals of decision makers and entities are part of the scope of accounting. For example, a scrutiny of Grady's *Inventory of Generally Accepted Accounting Principles for Business Enterprises* will find no mention of these matters.

As Grady points out, traditional accounting theory is based on the pragmatic approach.[10] "As applied to accounting theory, the pragmatic approach involves the selection of accounting concepts and techniques based on their utility",[11] i.e. their usefulness. This may lead some people to believe that traditional theory will be concerned with specific uses. However, this is not the case. In traditional theory usefulness "is assumed by general acceptance".[12] As a result, accounting principles and procedures are selected or rejected on the basis of their "general acceptance"[13] rather than their utility in specific cases.

On the subject of behaviour, the comment made by Caplan that "nowhere in the literature of accounting is there a formal statement of the behavioral assumptions of the management accounting model of the firm"[14] is certainly true as far as traditional accounting theory is concerned. In fact, as has already been pointed out, in traditional theory the same situation exists (i.e. there is no explicit statement of assumptions) in respect of the behaviour of individual decision makers, the specific goals of decision makers and firms, and in respect of financial accounting as well as managerial accounting.

Since traditional accounting theory is silent on the question of whether behaviour and specific uses and goals are a valid part of the scope of the discipline, and since these matters are not explicitly included in this theory, one must assume that traditional theorists consider the matters to be *outside* the scope of accounting. However, some contemporary theorists do not agree with this view that behaviour and specific uses and goals should be excluded from the domain of the accounting discipline. In fact, some of these writers have stated that any *managerial* accounting theory must, of necessity, have assumptions regarding individual and entity behaviour. They contend that, if the behavioural assumptions are not explicitly stated, they are implied. Birnberg and Nath, for example, have said that "too often the behavioral dimension of any accounting problem is discernible only by implication".[15] Caplan, who shares this view, has set down what he believes to be the implicit behavioural assumptions of traditional managerial accounting.[16] Whilst the writer is unaware of any contemporary theorists having contended that the same situation applies to *financial* accounting, as will be seen later in the section,[17] this writer considers that this is so, i.e. it is believed that in financial accounting as well as managerial accounting behavioural assumptions must, of necessity, be made. If the assumptions are not stated, they are implied. The viewpoints of contemporary theorists who do not agree with the approach by traditional theory to the question of uses, goals, and behaviour will now be examined.

Other viewpoints

Professor Chambers believes that individual and entity behaviour must be included within the scope of accounting. This is clearly indicated in the following quotations:

> . . . accounting is concerned with the behavior of men as individuals and as members of groups.[18]
>
> We [Chambers] wish to discover what *function*, in relation to the *behavior* of men, accounting performs. Again, the answer will be sought in the universe of experience. We select, from the statements which specify the system in which accounting is found, a number of statements which when arranged systematically will represent the manner in which accounting is systematically linked with human behavior within the specified system.[19]

In other words, Chambers says that, since accounting is concerned with the behaviour of men as individuals and as members of entities, it is necessary, in deriving an accounting theory, to set down behavioural postulates. He says that this is done by selecting from the system in which the sub-system accounting operates, statements which depict the manner in which accounting is "linked with human behavior". Thus it can be seen that Chambers considers individual and entity behaviour to be a valid and necessary part of the scope or domain of the accounting discipline.

Chambers does not, however, believe that specific uses and goals are a valid part of the domain of accounting. He distinguishes between "information relevant in general" and "information relevant in particular".[20] Information relevant in general is described as information which is relevant to:

> . . . any and all of the actions [uses] available to an actor at a given time.[21]
>
> . . . every course of action [use] but to no course in particular . . .[22]
>
> . . . every such possible action [use] and end [goal], but particularly relevant to none.[23]

Chambers also states that information relevant in general should be neutral where "neutrality is the property by virtue of which a statement, singular or aggregative, is relevant whatever ends are selected by the actor for consideration".[24] Thus, by definition, information relevant in general should be related to every course of action (use) an actor may contemplate, and relevant whatever the actor's ends (goals). Information relevant in particular, on the other hand, is information which is relevant to some uses and goals but not relevant to all uses or whatever (i.e. all) the goals. An example of information relevant in particular was given in section 1.[25] In this example, it was pointed out that information regarding safety and employment promotions in an entity is relevant to some of the goals and decisions of the employees of the entity. Yet such information would clearly not be relevant to all the goals and decisions of the employees. Further, such information would probably have little or no relevance to the goals and decisions of other entity participants. Since this information is relevant to *some* uses and goals, but not relevant to *all* uses and goals, it is relevant in particular rather than relevant in general.[26]

Having distinguished between information relevant in particular and information relevant in general, Chambers excludes the former from the scope of accounting which, consequently, is limited to information relevant in general. In this regard Chambers says:

> Specific ends [goals] and the ranking of specific ends are beyond enquiry.[27]

Accounting information should be:

> . . . uncolored by any presupposition regarding its specific use.[28]

His reasons for excluding information relevant in particular and hence specific uses and goals from the scope of accounting are as follows:

> . . . it is not possible to predict the use which any user may make of an object . . . Use depends on evaluations of ends [goals], which we have contended are variable for any person and beyond the knowledge of other persons.[29]
>
> . . . neutrality is a necessary criterion because of the variety and unpredictability of the specific courses of action [uses] and ends [goals] which an actor may entertain.[30]

In other words, Chambers believes that since specific goals and specific uses made of information are variable from actor to actor and variable for a given actor over time, they cannot be known or predicted by an information processor. He therefore believes that specific goals and uses must be excluded from the scope of the accounting discipline.[31]

As was pointed out earlier in the section, some writers[32] in the area of *managerial* accounting have contended that any accounting theory concerned with this subject must, of necessity, make assumptions regarding individual and entity behaviour. They argue that, if the assumptions are not stated, they are implied.[33] Caplan, the most notable of these writers, makes the following remarks in this regard:

> It also seems clear that the entire management accounting process can be viewed from the standpoint of attempting to influence the behavior of others. It follows, therefore, that they must perform these functions with certain expectations with respect to the reactions of others to what they do. In other words, their model of the firm *must* involve some set of *explicit or implicit* assumptions about human behavior in organizations . . . the management accounting function does *by necessity* involve assumptions about behavior . . .[34]

In other words, Caplan contends that, whether accountants like it or not, there are behavioural assumptions in managerial accounting, and there is not, therefore, really any option as to whether behaviour is included in the scope of this part of the accounting discipline. It must, of necessity, be included. If behavioural assumptions are not explicitly stated, they are implied. Caplan does, in fact, set down what he believes to be the implicit behavioural assumptions of traditional managerial accounting and has supported his beliefs to some extent with empirical research.[35] He has further set down a list of behavioural assumptions based on "Modern Organization Theory".[36] However, the question of which of these two sets of assumptions is the most appropriate for inclusion in accounting theory is the concern of accounting postulates, and is, therefore, outside the scope of this study.

A recent committee of the American Accounting Association[37] agrees with Chambers and Caplan that behaviour must be included in the scope of the accounting discipline. For example, in discussing the "Scope of the Discipline" in a possible structure of future accounting theory, they say that behavioural science is one of the "underlying disciplines used in performing the accounting function".[38] They also say that knowledge of human behaviour is one of the "major areas in which changes are occurring which will influence accounting in the future".[39]

The committee does *not*, however, agree with Chambers that specific goals and uses should be excluded from the scope of the discipline. In respect of specific uses, the committee expressed the following views:

> The accounting function should, under many circumstances, provide information with a high degree of relevance to a *specific* intended *use* although it may have little relevance to any other.[40]
>
> . . . the committee advocates the reporting of *all* information that is believed to be relevant to the judgments and decisions of any substantial group of users.[41]

Further, one of the committee's five "Guidelines for Communicating Accounting Information" is entitled "Appropriateness to Expected Use".[42] In the discussion of this guideline, it is stated that accounting may serve "very special or even unique needs".[43] From these quotations it is clear the committee advocates that accounting should report information relevant to *particular uses*.

In establishing the committee's position on the subject of goals, the following quotations are relevant:

> . . . accounting not only aids in formulating plans and guiding decisions made to achieve objectives [goals]; it also assists in the *setting of goals* and in the evaluation of the reasonableness of the objectives themselves.[44]
>
> *Relevance* is the primary standard and requires that the information must bear upon or be usefully associated with actions it is designed to facilitate [uses] or results desired to be produced [goals].[45]
>
> The information appropriate to a specific decision [use] can be determined only after the objectives [goals] have been specified . . .[46]
>
> Not only can information influence the decision process but the decision process influences the information required.[47]

The committee also talks of accounting providing "relevant information in an economy motivated by multiple objectives [goals]".[48]

Thus it can be seen the committee recognizes that, in the words of one of the committee members, "most individuals and organizations have a variety of goals".[49] The committee believes that accounting should provide information to assist in the setting of these goals. In order to do this, it would be necessary to take into account the particular goals concerned. It is also pointed out that the decision process influences the information relevant to a particular decision. Part of the reason[50] is that specific goals are an important factor in a decision process. However, since organizations and entities have a variety of goals, and since "measurements appropriate for one objective [goal] may be inappropriate for another",[51] the information relevant to a specific decision can be determined only after the particular goals to be incorporated in the particular decision process have been specified. Once again a need for the accountant to be interested in specific goals is indicated.

However, the committee acknowledges that much research remains to be done by accountants on the subject of goals.[52] Such research is considered necessary to gain a better understanding of the nature and relative importance of the various goals of decision makers, and to "throw light on accounting needs under different conditions and in pursuit of different goals".[53]

The above discussion clearly indicates the committee believes that specific uses and goals should be included within the scope of the accounting discipline. In other words, it is believed that accounting should provide information relevant in particular. As was seen in section 1,[54] Ijiri also holds this view.

Having thus described the viewpoints of traditional theory and various contemporary theorists on the question of whether the scope of accounting should encompass the behaviour and specific goals of decision makers and entities, and the specific uses made of accounting information, it is now proposed to evaluate the viewpoints as a basis for making a recommendation on the issue.

Evaluation and recommendation

Whilst it seems that traditional accounting theory implicitly considers the matter of behaviour to be outside the scope of accounting, all the contemporary writers whose views were presented in this section consider the matter to be within the scope of the discipline. This writer agrees with these contemporary theorists. It is believed that "since accounting is concerned with the behaviour of men as individuals and as members of entities, it is necessary, in deriving an accounting theory, to set down behavioural postulates".[55] The writer considers that behaviour has an important influence on what information is relevant to a particular decision maker. Several other writers have also expressed this view. For example, a committee of the American Accounting Association has said that "the decision process influences the information required".[56] As was pointed out earlier in the discussion,[57] behaviour is an important factor in the decision process of a decision maker. Leftwich also talks of "the links between the behaviour of individuals, the behaviour of entities, and information requirements of individuals".[58] If accountants are, therefore, to provide information relevant to decision makers in making decisions regarding entities, they should take into account "the behaviour of men as individuals and as members of entities".

A further factor causing the writer to believe the domain of accounting should include individual and entity behaviour, is that behavioural theorists[59] have demonstrated that "every system of thought involved with human and social control"[60] and motivation should, if it is to operate as successfully as possible, take behaviour into account. Since managerial accounting is concerned with the motivation and control of individuals in entities through budgets, standards, and responsibility accounting, it is once again considered that accounting should recognize "the behaviour of men".

In fact, the writer believes that accounting *must*, *of necessity*, make assumptions regarding individual and entity behaviour. In both managerial *and* financial accounting, in order to decide what information is relevant to a decision maker, assumptions (explicit or implicit) regarding human behaviour *must* be made. For example, if under a financial accounting model decision makers are reported the net realizable value of fixed assets, then the writer believes that an assumption of flexible behaviour on the part of the decision makers has been made, whether this is stated or not. Only if a decision maker's behaviour is flexible will he continually contemplate the sale of his fixed assets. Further, since managerial accounting is concerned with human motivation and control, once again behavioural assumptions are unavoidable. There is not, therefore, really any option as to whether behaviour is included in the scope of the accounting discipline. If, in any accounting model (managerial or financial), behavioural assumptions are not stated, they are implied. However, in an accounting theory based on deductive methodology the assumptions must be explicit rather than implicit. Further, it is considered that, if the output of the accounting discipline "is to be relevant to man in his environment", the assumptions should be "consistent with observations of man's behaviour in his environment".[61] The behavioural theorists mentioned above have been carrying out research on this subject and have agreed on many generalizations concerning human behaviour.

However, in order to incorporate the most appropriate behavioural assumptions into an accounting theory, it is acknowledged that much more empirical research is urgently needed.[62] It is believed that the profession should give utmost priority to such research.

On the subject of *specific goals and uses*, it has been established that, whilst traditional theory (implicitly) and Chambers (explicitly) have excluded these from the scope of accounting, Ijiri and a committee of the American Accounting Association explicitly include them. This writer agrees with Ijiri and the committee of the American Accounting Association. It is believed that the users of accounting information have a definite need for information relevant in particular. It is considered that not only is there a definite need for information relevant to specific uses and goals, but in addition, there is a definite need for information to assist in the setting of goals. In order to meet these needs, it is necessary to take specific uses and goals into account. Further, in managerial accounting, if "the budget [and the standard] is to be used as a control device . . . as well as a motivating device, then it clearly should be tied to the level of aspiration cycle rather than to a time schedule".[63] Since a level of aspiration "describes a goal for future attainment",[64] once again a need is indicated for the scope of accounting to encompass specific goals.

Chambers would probably not deny that decision makers have a need for information relevant in particular. However, he believes that there are factors which make it impossible for accounting to provide such information. He would probably also believe that the same factors would preclude the tying of budgets and standards to aspiration levels.[65] The factors referred to are as follows:

a) There are many different uses of accounting information and the accountant will often not know for what uses information is required at a particular moment in time.
b) Different decision makers have different goals, and the accountant will often be unaware of all the goals of a decision maker at a given moment in time.
c) The decision maker often does not know what information is capable of being produced by an accounting system.

Chambers contends that, because of these factors, the accountant cannot know precisely what information is relevant in particular at a particular moment in time and the decision maker cannot know what is available. He says:

> There can be no presumption that an actor can, out of his experience, instruct an accountant as to the information he needs which an accounting system can produce; nor that an accountant can, out of his experience alone, determine the information which an actor needs . . .[66]

Chambers would probably acknowledge that the accountant has *some idea* of what information is relevant in particular. It seems only reasonable to assume the accountant will have an approximate notion of the actor's goals and of his uses of information, and, therefore, should have an approximate notion of what information is relevant in particular. Also, the actor will usually have an idea of what information is available. However, Chambers would probably argue that approximations and ideas are not good enough to produce relevant information.

This writer does not dispute the existence of the above-mentioned factors which caused Chambers to exclude information relevant in particular from the domain of his accounting model. Nevertheless, the writer does not agree with Chambers that they present insurmountable barriers to the provision of such information. It is believed that they could be adequately met with the aid of a two-way communication system and with research. A two-way communication system between the accountant and decision makers would enable the accountant to ascertain, with a reasonable degree of certainty, the specific goals of the decision makers and the specific uses they wished to make of accounting information. The system would also allow a decision maker to enquire whether information which would be relevant to him could be provided by the accounting system. All this would enable the accountant to judge what information was relevant in particular to a decision maker at a particular moment in time. After the information had been provided, there would be feedback from the decision maker to the accountant as to how relevant the information in fact was. This feedback would enable the accountant to make better judgments in the future as to what information would be relevant to the decision maker.

Chambers does, in fact, include a two-way communication system in his accounting model.[67] This writer, however, wonders whether such a system is actually appropriate to Chambers' model. Chambers restricts his model to information relevant in general. If it is assumed that the model provides information relevant in general, then this information should be "related to every course of action (use) an actor may contemplate and relevant whatever the actor's ends (goals)".[68] In such a case it is doubtful if the communication system is necessary, since it is designed to assist in the provision of information relevant to an actor's *particular* uses and goals. If, on the other hand, it *is* desired to provide information relevant in particular, as does this writer, the system is necessary.

As was pointed out above, accounting research is also considered necessary to meet the problems of providing information relevant in particular. It is believed that continuing research into the specific uses of accounting information and into the goals of decision makers would better equip the accountant to provide information relevant to these uses and goals. A committee of the American Accounting Association who, it was seen earlier,[69] favour the reporting of information relevant in particular, has also expressed the need for such research. When suggesting areas for future basic research, the committee stated:

> The greatest accounting need both at present and in the future is the determination of the nature of the information needs of users of accounting communications . . . But, more important, there is a need for research on organizational goals in relation to the goals of individuals.[70]

Whilst this writer believes that a two-way communication system, coupled with continuing accounting research, will adequately meet the problems of providing information relevant in particular, it is acknowledged that they will not yield precise results. They will still not enable the accountant to determine, with absolute precision, what information is relevant to a particular decision maker at a particular moment in time. Yet, despite this, the writer believes that a two-way communication system and accounting research are not only the best means of meeting the problems, but in addition, provide a *satisfactory* solution to them, i.e. they will result in information relevant in particular being supplied to most decision makers.

It is further acknowledged that a two-way communication system will not operate nearly as effectively in respect of external reporting as in the case of internal reporting.[71] In internal reporting the close relationship between the accountant and the decision maker makes communication between them relatively easy. But the accountant is far removed from most external users and consequently, in this case, communication is difficult. Nevertheless, the writer believes that not only is at least some communication possible between the accountant and external users, but in addition, the accountant should endeavour to create as much of such communication as is practical. The greater the communication developed, the more is the accountant likely to be able to assess the particular informational needs of external users. However, since such communication is difficult, the more critical is continuing research into the specific uses and goals of external users.

Thus it has been established that the writer believes accounting should not only provide information relevant in general,[72] but in addition, information relevant in particular. In fact, the writer agrees with a committee of the American Accounting Association that accounting should report "*all* information that is believed to be relevant to the judgments and decisions of any substantial group of users".[73] It is considered that the users of accounting information have a definite need for information relevant in particular and that the accounting discipline can and should endeavour to meet this need. In order to do so, it will be necessary to include specific uses and goals in the scope of the discipline. Further, it is believed that, if managerial accounting is to be as effective as possible in the motivation and control of individuals within an entity, then once again there is a need to include goals in the scope of accounting. However, as in the case of behaviour, there is a need for empirical research in the area of specific goals and uses.

The conclusions of the foregoing analysis can now be summarized in the following recommendation. It is considered that the *general scope*, and hence the objectives, of the accounting discipline must encompass the behaviour and specific goals of decision makers and entities, and the specific uses made of accounting information. In an accounting theory based on deductive methodology, questions regarding these matters would, therefore, "be asked about the environment when establishing accounting postulates".[74] Consequently, postulates concerning uses, goals and behaviour would be developed.

V. THE RECIPIENTS OF ACCOUNTING INFORMATION

In the previous section it was established that the writer considers the objectives of accounting should include the provision of "information relevant in particular". It is considered, however, that if it is desired to provide "information relevant in particular", then the *objectives* of the discipline should also specify the *recipients* of such information, i.e. the groups to whom it is intended this information should be provided. The reason is that different recipient groups have different goals and different decisions to make (i.e. uses of information), and it is, therefore, unlikely their particular informational requirements will be identical. An example demonstrating this point was given in section 1.[1] Because different recipient groups have different requirements for information relevant in particular, if accounting is to provide such information, the recipients must be specified in order that their specific informational needs can be investigated and met. Those parties (if any) not included among the recipients, and yet who make use of accounting information, will still undoubtedly find much information of relevance to their needs in accounting reports, for much information is relevant to *all* users. However, it is unlikely that *all* their *particular* informational needs will be satisfied.

Since the accounting objectives to be recommended in this study include the provision of information relevant to the particular needs of decision makers, they must also state the recipients of this information. It is, therefore, proposed now to investigate the question of to whom accounting should specifically report. The aim of the investigation will be to state who the writer considers should be the recipients of information relevant in particular. It should be pointed out that such a statement should be specific as to who the parties are. No such vague notions as "owners, creditors, government, and *others*"[2] will suffice. Only if the recipients are clearly specified will it be possible to ensure that their individual informational needs, both general and specific, can be investigated and met.

It is proposed to consider, firstly, the viewpoints of traditional accounting theory and contemporary writers on the subject. Following this, relevant factors will be analysed with the aim of deriving the writer's position on the matter.

Unfortunately, very few writers have considered the question of to whom accounting should provide information relevant in particular. Many have stated whom they consider to be the *users* of accounting information. However, this is a different matter from the specification of *recipients of information relevant in particular*. As was pointed out above, much information is relevant to *all* users, and hence a decision maker is likely to find some information in an accounting report relevant to his needs, even if the report was not designed for his use. In other words, decision makers could be classed as users of accounting information, even if it was not intended to provide them with information relevant in particular. On the other hand, decision makers specified as recipients of information relevant in particular should be provided with reports designed to contain information relevant to their particular goals and uses.

Possibly the reason many accounting theorists are silent on the question of to whom accounting should provide information relevant in particular, is that they do not consider such information to be within the scope of accounting. This may explain the silence of traditional accounting theory on the issue, for, as was pointed out in the previous section,[3] it does not seem that this information is included in the scope of traditional theory.

However, a recent committee of the American Accounting Association[4] and Professor Goetz[5] have advocated that accounting should report information relevant in particular, and it is, therefore, proposed to examine their views on the question of what recipients should be reported this information. The committee of the American Accounting Association

> . . . advocates the reporting of all [i.e., including information relevant in particular] information that is believed to be relevant to the judgments and decisions of any *substantial group of users*.[6]

The committee considered the substantial user groups to be: management, "present and potential investors, creditors, employees, stock exchanges, governmental units, customers, and others", and the "representatives of these users, such as security analysts, trade associations, credit rating bureaus, and trade union officers".[7] Thus it can be seen that the committee's answer to the question can be criticized on the grounds of its vagueness. There is no way of knowing what specific recipients are included in the expression "and others".

Professor Goetz considers that accounting reports (he would include in these information relevant in particular) should have "as wide a distribution as is feasible".[8] He specifically mentions the following external recipients: "customers, employees, suppliers, governments, neighbors, bankers, stockholders".[9] (He would, of course, also regard management as a recipient.) However, this list also is not a comprehensive one. For example, stock exchanges are not included, yet it is unlikely that Goetz would wish to exclude this important recipient group.

Having thus briefly examined the viewpoints of some contemporary theorists on the question of to whom accounting should specifically report, and having found their answers to the question deficient in certain respects, it is now proposed to endeavour to establish what this writer considers the answer to the question should be.

The writer believes that, in considering the question of to whom accounting should specifically report, it is necessary to distinguish between the position as it actually *is* in practice and the position as one might think it *should be*. The reason this distinction is considered necessary is that this is a matter where, in the short run, the accounting profession cannot *force* the adoption of anything other than the current reporting situation. The accountant employed by an organization cannot force his wishes upon his employers, and so long as an organization is complying with the law, neither can the auditor. Nevertheless, if the current situation does not correspond with the position the profession believes should exist, then it can endeavour to *persuade* those who control organizations to adopt this position and/or endeavour to persuade the government to legislate to this effect. Accountants must make the best they can of the current position and at the same time, if another position is thought more desirable, strive to attain the acceptance of necessary improvements.

What, then, is the position *in existence* at the moment regarding the recipients of accounting information relevant in particular? Whilst the situation would seem to be quite complex, an attempt will be made to describe it in general terms. Firstly, it can be said that those who control organizations, through their controlling authority, can obtain all the information they require (and which accounting can provide). The writer would regard the management of an organization as those who control it. Consequently, it is believed that many managements are, today, obtaining information relevant to their particular needs. Similarly, some other parties have the power to ensure that their particular informational needs are met. Many government departments (e.g. the Taxation Department) have this power. The stock exchanges also have such authority in respect of entities coming within their control. However, many recipients do not have formal authority to ensure that information is supplied to them. These parties are, therefore, assisted in many cases by the government and the stock exchanges which use their authority to ensure that, in certain cases, certain information is made public, and hence is available to all parties. The question of what parties, other than management, the government, and the stock exchange, are provided with information relevant in particular in existing practice, will now be briefly considered.

In respect of companies registered under the Australian Companies Acts (and generally excluding exempt proprietary companies), certain information specified in the Acts must be made public. Further, the Acts provide that information reported by companies must give a true and fair view of the state of their affairs. Since this information is made public, it is available for *all* who wish to use it. However, this does not mean that the information will meet the *particular* informational needs of all recipients. What parties *are*, then, provided with information relevant in particular when a company reports the minimum information required under the Acts? (Many companies do just this.) If a company provides this minimum information, then its reports must disclose the information specified in the ninth schedule of the Acts, and must present a true and fair view. As Baxt points out, the courts have interpreted the words "true and fair view" in accordance with "the principles enunciated by accountants"[10] or, in other words, in accordance with "generally accepted accounting principles".[11] However, as many academic accountants have demonstrated,[12] these so-called "principles" do not result in a true and fair view in the literal sense of the words. Further, the quantity of disclosure required under the ninth schedule cannot be regarded as anything but meagre. Yet it is a fact that companies can comply with the law by keeping their accounts in accordance with generally accepted accounting principles and reporting the mere minimum information required under the Acts. However, in view of the above-mentioned limitations of the "principles" and disclosure provisions of the Acts, the writer is forced to conclude that such reports merely provide a small amount of general information. Consequently, it is contended that company reports which meet only the minimum requirements of the Australian Companies Acts do not really provide information relevant in particular to any recipient.

Although many companies provide external recipients, other than the government and the stock exchange, with no more than this minimum of information, it should be recognized that some of these external recipients are sometimes provided with additional information. The reason is that some company managements permit the reporting of much more information than the minimum required under the Acts. Further, some recipients are able to obtain additional information as a result of their bargaining strength. For example, when an organization is negotiating a loan with a bank, the bank will often be able to obtain much additional information as a result of its bargaining position. This information would be relevant in particular. However, since the bargaining power of recipients and the generosity of managements (i.e. in voluntarily providing additional information) are extremely variant, it is impossible to generalize about what specific parties receive information relevant in particular in these cases.

In respect of exempt proprietary companies and unincorporated entities, the government does not generally require information to be made public. But, just as external participants in public companies are sometimes provided with additional information, so, too, external participants in these entities are sometimes provided with information. However, once again whether information relevant in particular is given and, if so, how much is given, would seem to depend on the particular participants' bargaining strength and/or the generosity of the management concerned. It is, therefore, impossible to generalize regarding who are the specific recipients.

As was mentioned earlier, not only the government but also the stock exchanges ensure that certain information regarding certain entities is made public. The stock exchanges require that all listed companies must make public certain information in addition to that required under the Companies Acts. Unfortunately, however, this additional information suffers from the same limitations as the information required under the Companies Acts, and, therefore, cannot really be regarded as specifically reporting to anyone.

The conclusions of this investigation of the existing position regarding the recipients of information relevant in particular can now be briefly summarized as follows. It would seem that managements, the government, and stock exchanges are often provided with such information. Other external recipients, on the other hand, are frequently not supplied with this information. Nevertheless, *some* of these external recipients are sometimes provided with information relevant to their particular needs. When this occurs, it is either the result of the particular recipient's bargaining power, or of the generosity of management. However, since these factors vary from entity to entity and from recipient to recipient, it is impossible to generalize regarding who the specific recipients are in these cases.

Having thus completed the investigation of the *existing* situation in practice concerning the recipients of information relevant in particular, there now remains to be established the position as this writer considers it *should be*. In order to establish this position, it is firstly proposed to compile a comprehensive list of users of accounting information. Following this, the question of which of these users should become recipients of information relevant in particular will be considered.

Probably all accountants would agree that management, existing shareholders, creditors, and the government are users of accounting information. There are various types of creditors, such as debenture holders, unsecured note holders, bankers, and trade creditors, whilst "the government" would include the Taxation Department, the Companies' Office and the Bureau of Census and Statistics. Many accountants would also include employees and the general public in the user group. In a survey of top managements in the United States of America concerning the users of accounting reports, the following results were obtained:[13]

Question: To whom do you send your annual reports?

Answer:

	Number of Companies Replying	*Percent of Total Replying*
Stockholders	203	99.0%
General Public	194	94.6%
Government	147	71.7%
Creditors	144	70.2%
Employees	117	57.0%

Some writers[14] have also mentioned the following as specific users: prospective shareholders, customers, statisticians, economists, security analysts, stock exchanges, trade associations, financial press, credit bureaus, association members, contributors to welfare institutions, consumer groups, investigating committees, engineers, lawyers, and trade unions. Having established a list of users of accounting information, the question is: To which of these users should accounting endeavour to provide information relevant in particular?

An examination of the list shows that some parties are merely representatives of others. For example, security analysts assist shareholders (present and prospective) and creditors, who are really the ultimate users of the information. Of all the users mentioned above, the following also play merely an intermediary role: statisticians, trade associations, financial press, credit bureaus, consumer groups, investigating committees, economists, engineers, lawyers, and trade unions. In specifying the specific recipients of accounting information in order to establish their particular informational needs, these intermediary groups need not be considered individually. The reason is that their needs arise out of the needs of the parties whom they assist. Whilst the intermediaries will usually be more sophisticated than the *average* ultimate user, their expertise will often be no greater than that of an expert ultimate user. To the extent this is so, their informational requirements will be the same as those of an expert ultimate user. To the extent that the intermediaries have greater sophistication than such a user, their informational requirements will probably be greater. However, these additional informational requirements still arise out of the decision-making needs of the ultimate users, and really have no meaning apart from these needs. Consequently, this writer considers that the intermediaries are best considered, not as individual users themselves, but in association with the needs of the ultimate users. The elimination of the intermediaries as individual users of accounting information leaves the list of users as follows: shareholders (present and potential), management, government, creditors, employees, customers, stock exchanges, association members, contributors to welfare institutions, and the general public.

This writer believes that the accounting discipline can, and should, provide all these remaining users with information relevant to their particular needs, i.e. it is believed that all should become recipients of information relevant in particular. The reasons underlying this belief are that all these parties have a definite need for information relevant in particular. Only if this information is supplied to them will their respective decisions be as efficient as possible. Since these decisions have an important influence on the flow of capital in our economy, only if the information is supplied will the economy operate as efficiently as possible.

The committee of the American Accounting Association referred to earlier would probably agree with the writer's recommended list of recipients of information relevant in particular. It was seen that the committee advocates the reporting of such information to all substantial groups of users.[15] It was also seen that the committee, unfortunately, only specifically mentioned some of the substantial user groups and covered the remainder with the expression "and others". Since this writer considers that all the recommended recipients are substantial user groups, and that there are no other groups within this category, he considers that the recommendation is in accord with the committee's view. The recommendation does not, however, suffer from the vagueness associated with the committee's treatment of the matter.

It will be apparent that the recommendation involves a considerable extension of the present situation in practice. As was pointed out earlier,[16] this extension will not be capable of immediate implementation. Nevertheless, it is believed that the recommendation should provide a goal which accountants should gradually work towards. The managements of entities and governments should be gradually persuaded to broaden their outlooks on the matter. In respect of parties not, for the time being, regarded as rightful recipients in practice, accounting will still provide *some* relevant information. As the above committee of the American Accounting Association has pointed out, "certain classes of information are relevant to many decisions".[17] However, in this case, it is unlikely that *all* their particular informational requirements will be met. But, although certain recommended recipients may not be regarded as such in practice, it is considered that accountants should still explore their particular informational needs. For, although *all* managements may not wish to provide these recipients with information relevant in particular, *some* managements may, from time to time. When this occurs, the accountant should be fully aware of the individual recipient's specific needs.

In conclusion, then, it can be stated that the writer considers the objectives of accounting should include the provision of information relevant in particular to the following recipients: management, shareholders (present and potential), government, creditors, employees, customers, stock exchanges, association members, contributors to welfare institutions, and the general public. This statement will, therefore, be incorporated in the statement of accounting objectives to be recommended.

VI. THE TYPE OF INFORMATION

In very general terms, the objective of accounting is to provide information for decision making regarding entities. However, the accounting discipline is not, and undoubtedly never will be, concerned with *all* forms of information. The scope of accounting is limited to a certain class of information. More precisely, then, the objective of accounting is to provide a certain *type* of information, and any precise statement of accounting objectives must, therefore, specify this type of information. Consequently, the matter will be investigated in this section. The aim of the investigation will be to specify the type of information to be included in the statement of accounting objectives to be recommended.

Unfortunately, however, there is considerable dispute amongst accountants about what general type of information should be included within the scope of accounting. There appear to be two major issues involved. These are set out by Rappaport when he says:

> What should be the proper limits of the field, e.g., measurement exclusively in financial terms versus measurement in any quantitative terms; *ex post* measurement versus *ex post* and *ex ante* measurements?[1]

In other words, the issues are, firstly, whether anticipatory calculation should be included in the scope of the discipline, and secondly, whether the scope should be limited to monetary calculation or whether other forms of information should also be included. Further, if in the latter case it is decided that other forms of information should be included, what precisely are these other forms of information? These questions will now be investigated in turn.

Anticipatory calculation

In traditional accounting theory, anticipatory calculation plays a small but definite role. For example, provisions for doubtful debts and depreciation involve predictions of the future. It is also generally considered that budgets and standard costs have a legitimate place in traditional managerial accounting. However, because of the prominence of the historical record assumption[2] in traditional theory, anticipatory calculation is reduced to a minimum.

Chambers believes that anticipatory calculation should be completely eliminated from the scope of accounting.[3] Whilst he agrees that "anticipatory calculations are essential to reasoned choice",[4] and that the object of all monetary calculation "is to provide beliefs on which a future course of action may be based",[5] he excludes anticipatory calculations from the scope of accounting for the following reasons:

1. They are "hypothetical and subjective; they are neither measurable nor verifiable"[6] and, therefore, "cannot be regarded as present knowledge".[7] "Calculations relating to the past and present are the only calculations which are capable of independent corroboration."[8]
2. ". . . the weights assigned to nonprice factors . . . will vary from person to person."[9]
3. "But because future actions are very much a matter of optimism and the impulse to push a chosen course of action to a successful outcome, and because their

choice involves so much guesswork, it is difficult to say how useful any particular form of anticipatory calculation will be."[10]

4. Further, he says that to "speak about accounting for the future is abuse of the language". The meaning of the word "account" is "to give a report of or to relate something that has happened. Now no one can give an account of something that has not yet happened . . ."[11]

For these reasons, then, Chambers excludes anticipatory calculation from the domain of accounting.

However, as Holmes points out, there "are many who would not agree with Chamber's [*sic*] narrow definition of the scope of accounting", and who would include what Holmes calls "predictive accounting" (i.e. anticipatory calculation).[12] In fact many of the world's leading accountants hold this view.[13] The arguments in favour of including prediction within the accounting discipline are as follows.

No matter who the decision maker is, decisions always relate to the future and, in making these decisions, therefore, predictions of the future are essential. Results of the past, current position, and estimates of the future can be used to make these predictions, and accounting can, and should, help the decision maker in all respects. Results of the past and current position alone are not sufficient for optimum decision making.

In managerial accounting, the considerable use over the years of forecasting models, such as budgets, standards, and, more recently, inventory control models, simulation models, etc., demonstrates that accounting can increase management's predictive capacity. Anticipatory calculation, even though not completely objective, provides much of the crucial foundation "out of which executive decisions often are carved".[14]

Decision makers external to the firm also have a need for predictive accounting. In fact, Goetz states that "recipients of the annual report are likely to be more interested in the future than in the past".[15] Mr. J. V. Hackett, former manager of the Brisbane Stock Exchange, expresses the sentiments of probably most external decision makers when he says:

> I am very interested in the future. That is where I expect to spend most of my time.
>
> . . . it's tomorrow that gives the answer of higher or lower profits.[16]

An important factor underlying the need of external parties for anticipatory calculation is that they do not generally have a detailed knowledge of management's intentions and plans. Quantifications of these become "information" to the external decision makers, and accountants are the only people with the professional training to carry out such quantifications and to present their effects on the financial position of an organization. As Hirsch has pointed out, managerial intentions, subjective as they may be, exist whether we like it or not, and in the future will be transmitted into action. He goes on to say:

> It is more realistic and certainly more beneficial to attempt to describe the status of conditions as well as they are capable of being described, than it is to say they are incapable of description on objective grounds.[17]

In other words, because external decision makers are not generally fully aware of management's intentions and plans, they require predictive accounting which reflects these intentions and plans. The resultant information, even though not completely objective, is likely to be more relevant than any present or past information which reflects conditions unlikely to be operating in the future. This need of external recipients for information relating to the future is demonstrated by complaints from security analysts concerning the present lack of such information.[18]

Past data can be used to give trends, but as Tigges points out:

> .. projections of the future hold more promise. Forecasts, plans, or budgets permit a realistic interpretation of the potential effects of various actions on future results.[19]

Goetz presents a similar argument when he says:

> The accountants seem to have learned nothing of the *relativity* of cost and financial data. They seem to seek a mystical absolute *Truth*, a set of figures true through changing circumstances (such as changing load factors), and for all managerial and financial problems. They seem unaware of such costs, of the multi-dimensionality of costs, of the drastic changes wrought by the different time horizons of a vast variety of managerial problems.[20]

In other words, past and trend data are only of limited use to decision makers because of changing circumstances which will operate in the future when the decisions are effected. It is better to try to predict these changing circumstances than to base decisions on irrelevant data.

Likewise, the economists Edwards and Bell criticize the accountant's traditional preoccupation with objectivity, often at the expense of relevance.[21] Further, Carrington points out that economists in general are concerned over the accountant's "scant regard for the future".[22]

Some accountants not only favour the inclusion of anticipatory calculation in the domain of accounting, but in addition expect its use to increase in the future. Holmes says:

> Increasingly members of the accounting profession are becoming engaged in predictive accounting and in increasingly sophisticated investigational work . . . It is precisely in this area of predictive accounting that some of the most significant developments in accounting in recent years have taken place . . . In view of these and other developments to be discussed later in this paper, and the importance of these developments, one would anticipate a steady increase in the number of accountants who will be engaged in predictive accounting and related activities in the years ahead.[23]

Several other accountants[24] have also expressed this view.

This writer agrees wholeheartedly with those who desire to include anticipatory calculation within the scope of accounting. It is considered that their arguments, presented above, adequately answer all but one of Chambers' arguments. This remaining point is that to speak about accounting for the future is an abuse of the language. This is successfully answered by Holmes when he says that this would seem "to disregard the present facts and the trend of accounting practice, as well as the subtle changes in the meaning of words which must occur in the wake of progress".[25]

Decision makers, both inside and outside entities, have a demonstrable need for anticipatory calculation.[26] It is believed that this need can best be met by the accounting discipline. Retrospective, contemporary, and anticipatory calculations are all similar in form and interrelated to some extent. It is, therefore, not only logical, but also desirable from the point of view of economy, convenience, and efficiency, that they all be performed by the one person. Since they are all performed by the accountant at the moment, the writer can see no reason why this should change in the future. The accountant, because of his professional training and experience, is the best equipped to carry out these calculations. Even though anticipatory calculation cannot be completely objective, it can be sufficiently accurate to be extremely relevant to decision makers. Further, the writer believes that the rapid advances being made in the use of sophisticated quantitative predictive techniques (such as probability theory, sensitivity analysis, and simulation techniques), will, in the not too distant future, make possible anticipatory calculation of a higher degree of precision than at present. In fact, the writer believes that the use of predictive accounting should increase in the future. Whilst accountants are performing anticipatory calculation at the moment, much of the need of decision makers for such calculation is still unsatisfied. This is evidenced in the criticisms of accountants by Goetz, Edwards, and Bell, and others mentioned above. The writer believes that the accounting discipline should endeavour to meet more fully the need of decision makers for anticipatory calculation. The sophisticated predictive techniques mentioned above will help in this regard.

Thus it can be seen that, rather than eliminate anticipatory calculation from the scope of accounting, this writer would increase its inclusion. Consequently, the scope would not be limited merely to information of absolute objectivity. However, this does not mean that *every* anticipatory calculation should be included. The writer considers that accounting information must be based on informed and rational belief and not on fancy. If the information were found to be reliable in some cases and completely unreliable in others, decision makers would not know what reliance to place on a particular piece of information. Consequently, their confidence in the discipline would diminish. They might even regard accounting as too unreliable and uncertain to be of any use. Thus it is believed that accounting information must have *some* degree of certainty, even though it need not be absolutely objective. However, what comprises "some degree of certainty"? This is a difficult problem for which there is no definite answer.

It is probably not possible to devise a better solution to the problem than the approach put forward by a recent committee of the American Accounting Association.[27] This committee recommended four basic standards "as providing criteria to be used in evaluating potential accounting information: relevance, verifiability, freedom from bias, and quantifiability".[28] The standards with relevance to this discussion are "relevance",[29] "verifiability", and "freedom from bias". These are defined as follows:

> *Relevance* is the primary standard and requires that the information must bear upon or be usefully associated with actions it is designed to facilitate or results desired to be produced. Known or assumed informational needs of potential users are of paramount importance in applying this standard.
>
> *Verifiability* requires that essentially similar measures or conclusions would be reached if two or more qualified persons examined the same data. It is important because accounting information is commonly used by persons who have limited access to the data. The less the proximity to the data, the greater the desirable degree of verifiability becomes. Verifiability is also important because users of accounting information sometimes have opposing interests.
>
> *Freedom from bias* means that facts have been impartially determined and reported. It also means that techniques used in developing data should be free of built-in bias. Biased information may be quite useful and tolerable internally but it is rarely acceptable for external reporting.[30]

It should be noted that the standard of verifiability does not require absolute objectivity, but merely "essentially similar measures". The committee further stated that, in practice, it may be possible merely to obtain partial adherence to some, or perhaps all, of the standards. It should also be noted that "*relevance* is the primary standard" and hence takes precedence over the other two. In other words, the primary objective of accounting must be to provide relevant information. Verifiability and freedom from bias cannot be justified as ends in themselves. Nevertheless, as pointed out earlier in the discussion, it is desirable that accounting information should have *some* degree of certainty, and hence some degree of verifiability and freedom from bias. However, it is undeniable that applying the standards in practice will be difficult and in this regard the committee stated that "as with all standards, exercise of judgment as to the adequacy with which they are met is essential".[31]

A further recommendation of the committee, which the writer considers would assist decision makers in assessing the reliability of information, is that environmental information should be disclosed. They describe environmental information as follows:

> In the context of communication theory, "environmental information" is best considered as that which describes the conditions under which the data were collected and the message prepared, along with the sender's assumption as to intended use of the information. In accounting reports this requires that the circumstances and the methods used be disclosed if there can be any reasonable doubt about such matters in the mind of the recipient of the information.[32]

This writer agrees that, where possible, accounting should disclose the source of information (e.g. the market, historical record, or estimation of management). It is considered that this would afford the decision maker some basis for estimating the degree of certainty of the information concerned. It is also believed that important estimates "could usefully be expressed in probabilistic terms".[33] Even though these probabilities would, of necessity, be subjective, they would at least describe the manager's and/or the accountant's degree of belief in an estimate, and as such, be useful in helping a decision maker form his own beliefs. This approach would seem to be better than merely providing an expected value with no indication whatever that it be, say, 99 per cent or 40 per cent probable of attainment. Information relating to "the nature and degree of the uncertainty" is very relevant to decision makers "and accounting should not shy away from facing this responsibility".[34]

Having thus established that the writer considers anticipatory calculation should be included within the scope of accounting, and having considered the extent of its inclusion, it is now proposed to consider whether the scope should be limited to monetary calculation.

Monetary calculation only ?

As was pointed out earlier in this section, there are differing opinions amongst accountants as to whether the scope of accounting should be extended beyond monetary calculation, and if so, as to the nature of the extension. The *major* viewpoints will be examined in turn.

1. Traditional accounting theory is based, among other things, on the "monetary assumption", and as a result, the monetary unit is the only unit of measure employed. The information reported by the discipline is thereby limited to monetary (or "financial", as it is sometimes called)[35] information. Other economic, quantitative, and non-quantitative information which cannot be expressed in terms of the monetary unit is excluded.

Some contemporary writers consider that monetary information is still the only rightful domain of accounting. Chambers, for example, defines accounting as follows:

> Accounting is a systematic method of retrospective and contemporary *monetary* calculation the purpose of which is to provide a continuous source of *financial* information as a guide to future action in markets.[36]

Mattessich also considers the scope of accounting should be limited to monetary calculation.[37]

Other writers, however, do not agree. For example, a committee of the American Accounting Association has stated that there is "no reason why the only measure applied should be 'value' in terms of dollars. It is entirely conceivable that accounting should deal with various measures".[38]

2. This brings the discussion to the next viewpoint. Protagonists of this view contend that the scope of accounting should embrace *all* the *quantitative economic* information concerning a particular entity. For example, Anderson states that:

> The future accountant must accept the fact that *all* phases of measurement and communication of *economic* data are within the scope of his operation.[39]

Gordon and Shillinglaw and Holmes[40] are among others who have also expressed this opinion. The view is an extension of that set out in (1) in several respects. These are as follows:

a) Firstly, the viewpoint encompasses not only monetary information, but calculation in other units as well, e.g., tons, hours, feet, man-hours, pure numerics.[41]

b) Secondly, the information may be external to the entity, as well as internal. Examples of external information would be all economic statistics, competitive information and, as Emond[42] points out, industrial statistics.

c) Further, a committee of the American Accounting Association[43] has pointed out that, in addition to single-unit calculations, ranges and probability distributions provide fruitful areas of extension.

If the scope of accounting were to encompass this broader range of information, the discipline would be able to provide all the input data required by operations research and other economic planning models. As Carrington and Churchill and Stedry[44] have noted, this is more than traditional accounting is able to do.

In respect of this viewpoint, two final factors should be noted. Firstly, accounting would no longer be *solely* a double entry system. The *new* units of measurement would not fit into this structure, but would require another form of statistical recording. Secondly, as will be seen below, the discipline would still not provide *all* the informational needs of management. It would still be only part of the complete management information system.

3. Some accountants consider that the scope of accounting should encompass *all quantitative* information relating to a particular entity. This view is an extension of the previous one in that it includes some quantitative information that would not normally be regarded as "economic information". For example, "measures of managerial leadership, creativity, and employee morale",[45] "goal perceptions, sub-goal versus overall goal conflicts, audit criteria, and behavioral response to audits and budgetary controls",[46] would not normally be regarded as economic information, but would be included within this definition. (This information could, however, be considered by some to come within a broad interpretation of the term "economic".)

This view is basically the one adopted by a committee of the American Accounting Association in *A Statement of Basic Accounting Theory*. The committee said that "there is no *prima facie* reason why a narrow economic significance should be the only attribute measured by accounting".[47] Further, the committee's "quantifiability" standard virtually eliminates non-quantified information from their accounting model. In this regard they state:

> . . . it can be said that the primary, if not the total concern of accountants, is with quantification and quantified data.[48]

4. Finally, there is the view that the scope of accounting should embrace the total informational requirements of an entity (quantitative and non-quantitative). Protagonists of this viewpoint contend that there should be no restriction on the type of information provided by accounting for decision making regarding entities. Again this view is an extension of the previous one. In this case, in addition to quantitative information, the scope of accounting would include non-quantified information. Whilst this view would involve a considerable extension of present-day accounting, several writers[49] believe that the step can, and should, be taken. Charnes and Cooper, for example, say that accounting should "deal with *all* aspects of business information".[50] The American Institute of Certified Public Accountants seems to adopt this view in their "Description of the Professional Practice of Certified Public Accountants", which they have adopted as an official statement of policy. They state:

> Accounting is a discipline which provides financial and other information essential to the efficient conduct and evaluation of the activities of any organization . . .
> The data may be expressed in monetary or other quantitative terms, or in symbolic or verbal forms.[51]

Having thus examined the major viewpoints on the question of extending the scope of accounting beyond monetary calculation, it is now proposed to consider the writer's view on the matter. The writer prefers the fourth viewpoint discussed above. He considers that the users of accounting information have a demonstrable *need* for quantitative information that is neither provided by traditional accounting nor encompassed within the normal conception of economic information. It is also considered there is a demonstrable need for some non-quantitative information. Churchill and Stedry point this out when they say:

> Indeed, each of the research findings cited above indicates a *need* for some data of a kind not normally collected in organizations . . . e.g., on goal perceptions, sub-goal versus overall goal conflicts, audit criteria, and behavioral response to audits and budgetary controls . . .[52]

Carrington[53] made the same point above regarding the input requirements of operations research. The need was also demonstrated by Mautz and Sharaf when they examined the literature of security analysts. They concluded:

> It seems apparent from the statements of financial analysts quoted in this chapter that typical financial statements do not, in themselves, provide adequate information for investment decisions.[54]

Research carried out by the Accountancy Research Foundation in Australia resulted in similar conclusions.[55] Shillinglaw and Goetz[56] also give examples of information (quantitative and non-quantitative) that they consider would be of relevance to decision makers, but which is outside the scope of the first three views discussed above. This writer and many others,[57] believe that accounting can, and should, meet these needs by expanding its scope to include the information included in the fourth view above.

It is considered that the additional information encompassed by the fourth viewpoint can best be provided by the accounting discipline because accountants are by far the most trained and experienced information processors, and accounting is by far the most important information processing system in economic practice. In fact, no other information processing system even approaches accounting's stage of development. It is, therefore, not only logical, but also desirable, from the point of view of economy, convenience, and efficiency, that accounting should expand its scope to meet the additional informational needs of decision makers. Whilst one of the less developed information systems in existence, or even perhaps a special new system, *could* provide the information concerned, the writer believes that this would not only be a far more expensive and less efficient approach, but would also require much more organizational effort on the part of an individual entity. Jasper makes this point:

> It would be much better if this function could be developed systematically by one part of the organization without the incompleteness and haphazardness of the present trend. The accountant has always been involved in the process of gathering, measuring, processing, and disseminating information; it would be logical for him to extend his sphere of activity and influence to include this broader information role now needed in business and the economy.[58]

In fact, research seems to indicate that, at the moment at least, other information systems within entities are much inferior to accounting in their ability to process information. Whilst the results were not conclusive, researchers[59] have found that accounting is the only reliable information system in organizations.

Goetz has speculated about the possible consequences if accounting continues to ignore the needs of management and external parties for information relating to an organization which is not provided by traditional accounting. He says:

> Accountants seem to be among those most anxious to fasten blinders on accountants, to restrict their value to their companies and to society. Soon or late, someone *will* concern himself with this expanded range of information. If the accountants will not, someone else will; and he will be the accountant's boss since accounting data [traditionally] is but a subset of the larger set.[60]

This writer agrees with Goetz that some time in the future, whether the accountant likes it or not, decision makers will ensure that they obtain the additional information they require. It is considered, however, that accounting should meet the need *now*. The reasons underlying this contention have been presented above.

However, if the accountant's scope is to broaden in the manner recommended above, his education, also, must broaden. The accountant will not be able to supply these new services proficiently with merely his traditional education. This contention is supported by the findings of a recent research study commissioned by the American Institute of Certified Public Accountants[61] to enquire into the educational requirements of all future accountants. This writer agrees with the study's extensive list of educational requirements which include:

. . . a knowledge of the functions of accounting, accounting theory, accounting concepts, logic and ethics, written and spoken English, micro-economics, macro-economics, organizational theory, psychology and sociology in organisations, business law, a general understanding (only) of the area of taxation, a heavy emphasis on mathematics, statistics, probability and sampling theory, business finance and the financial environment, production, plus a little marketing and personnel management. With regard to the computer, the recommendations include a basic knowledge of at least one computer system, at least one computer language (e.g. COBOL), the ability to chart an information system of modest complexity, and the ability to design an information system, prepare a program for it and carry the work through the stages of debugging and testing.[62]

Although it is considered the accountant should have a knowledge in these areas, this does not mean that he must be an *expert* in *all* areas. As Professor Edey is reported to have said, "accountants need not be expert but they must be knowledgeable".[63] The accountant requires a knowledge of some of the areas (e.g. marketing) merely in order that he should understand the informational requirements of particular decision makers. Of course the accountant, in his role as accountant, does not become the decision maker. He merely reports information which is used by others in the making of decisions.

Conclusion

It has been established that the writer considers the scope of accounting should embrace any type of information needed for decision making regarding entities, i.e. retrospective, contemporary, and anticipatory; monetary and non-monetary; economic and non-economic; quantitative and non-quantitative; information should be provided depending on the needs of the decision makers. Consequently, the only general constraints on the type of information included in the domain of accounting would be:

a) The information should comply with the requirements of the information concept defined in section 3.[64]
b) The information should be relevant for decision making regarding entities.

Whilst this recommendation involves a considerable expansion of the scope of traditional accounting, this is considered desirable on the grounds that decision makers have a demonstrable need for the additional information concerned, and that this need can best be met by the accounting discipline.

However, as was pointed out in section 2,[65] this information must be based on a basic accounting concept. It was seen in that section[66] that this writer believes the information should be based on the entity concept. It is considered that, in an economy such as ours in which all the production, distribution, and service functions are carried out by entities, accounting information must be based on this concept if it is to be really relevant for decision making regarding these entities.

VII. THE QUANTITY OF INFORMATION

It has been established that, in stating the objectives of accounting in an accounting theory based on deductive methodology, it is necessary to specify the general scope or domain of the discipline.[1] In determining this scope, one of the questions that arises is whether the quantity of information provided by accounting should be *less* than the quantity of information obtained through the application of the information concept[2] to the type of information included in the scope of accounting.

The information concept sets the theoretical *maximum limit* to the quantity of information which can be provided by accounting because, by definition, anything not satisfying the concept is *not* information but data. Data not satisfying the concept cannot be justifiably collected, for it is either irrelevant to decision makers or its cost is greater than its value. A further reason such data should not be reported is that, as Hendriksen points out, the reporting of irrelevant data "is harmful in that the presentation of unimportant details hides the significant information".[3]

Some accountants, however, believe that the scope of accounting should be restricted to the provision of a *smaller* quantity of information than that encompassed by the information concept. It is, therefore, proposed to consider in this section the question of how much information should be provided by accounting. The aim is to arrive at what the writer believes is the best answer to the question.

The quantity of information provided by accounting will be affected, to some extent, by the *general type* of information included in the discipline. It would seem that the broader the type of information, the greater the quantity of information will tend to be. However, the issues to be considered in this section are general in nature and apply regardless of the type of information included in the discipline. It will, therefore, be assumed in the following discussion, that the *type* of information is given. Further, it is believed that the issues relating to internal reporting are sufficiently different from those relating to external reporting to warrant separate treatment of each. They will now be considered in turn.

Internal reporting

Traditional accounting theory is silent on the issue of the quantity of information to be reported to management. Possibly this is an example of the fact that "accounting theory has evidenced relatively less concern for the managerial area"[4] than for financial accounting. Because traditional accounting theory does not mention this matter, it is proposed to have a brief look at existing practice in an endeavour to ascertain if there are any *implicit* assumptions in traditional theory regarding this question of the quantity of information to be reported to management. This is not meant to imply that what is done in practice is a clear reflection of traditional theory. Theory is often not precisely applied in practice due to practical difficulties in the environment and/or inefficiency on the part of the practitioner concerned. Further, *some* organizations are attempting to implement contemporary theories rather than traditional theory. However, most organizations are applying traditional theory, and it is often possible to determine the relevant implicit assumptions in this theory by observing existing practice.

Unfortunately, however, there is little empirical research in this area, and resort must, therefore, be made to the observations of the few writers who have seen fit to comment on the matter, and to this writer's own observations. Some writers have observed that, in some companies, especially those using computers, management receives too much data. Tuthill, for example, says:

> The information [data] which pours onto management desks has been compared to a daily newspaper printed without headlines, capital letters, or spacing between lines and words—in effect, an incomprehensible *mess* and not a message! The vital news may be there, but it lies buried almost beyond human retrieval.[5]

B. L. J. Hart has made a similar observation.[6] Part of this excessive data, at least, would be encompassed within the scope of traditional accounting theory. Possible specific examples would be detailed sales and cost analyses. However, whilst some managers receive too much data, the writer's own observations indicate that many managers are not supplied with sufficient accounting information to enable them to make their decisions regarding the planning and controlling of their organizations. In fact, it would seem that some accounting systems provide little more than the information needed for external reporting. Yet most managements require much more information than this to enable them to plan and control effectively. It would also seem probable that, in many organizations, a combination of the two above-mentioned situations would exist. In other words, within a particular organization, management receives too much data in some areas; in other areas, too little information; and perhaps in some areas, the right quantity of information. For example, given the type of information included in the domain of traditional accounting, some managements are supplied with all of this information they need for control purposes. They are, however, often given insufficient information for planning.

Thus it would seem that the existing situation in practice is considerably diverse. The major causes of this situation are probably inefficiency on the part of many accountants, the accountant not knowing precisely what information management needs, and management not knowing precisely what information is available. What conclusions can then be drawn from existing practice regarding its implicit assumptions concerning the quantity of information to be reported to management? From the diverse situation that exists, it is not possible to see any definite answer to this question. However, it is also not possible to detect any clear pattern which might suggest a conceptual limit of scope. This leads the writer to the conclusion that the most probable implicit assumption in traditional accounting regarding the quantity of information to be reported to management, is that management should be provided with *all* the information (of the type included in traditional accounting) they need for their decision making concerning their organization. This is considered to be a reasonable conclusion not only because it is impossible to discern, in existing practice, any definite intention to restrict the quantity of information, but further, because it is believed that the great majority of accountants would think it desirable that management should be given *all* the information it needs. This objective is essential if management is to be able to manage as effectively as possible. It would seem that divergencies between practice and this objective are due to practical difficulties rather than to any conceptual desire to restrict the quantity of information reported to management.

The position of traditional theory on the quantity of information to be reported to management having thus been examined, the views of contemporary writers on the matter should now be considered. The situation in this case is similar to traditional theory in that most writers do not mention the subject. Those who do, however, state that managers should be provided with all the information they need. A committee of the American Accounting Association, for example, has stated that:

> . . . the committee advocates the reporting of *all* information that is believed to be relevant to the judgments and decisions of any substantial group of users.[7]

It is clear that management would be regarded as a "substantial user group". Whilst most contemporary writers do not discuss the question of the quantity of information to be reported to management, this writer believes that most, if not all, would agree that there should be no restriction in this regard. Some possibly consider this too obvious to be worth stating. However, in deductive methodology, objectives and postulates must be explicitly stated no matter how obvious they are, in order that principles and rules may be deduced from them.

This writer wholeheartedly agrees that there should be no restriction on the quantity of information provided to management. He considers this desirable as it affords management as sound a basis as possible for their decision making. Thus it is believed that, in the ideal, the quantity of information provided to management should be determined by the information concept (as applied to the general type of information stated in section 6 to be the appropriate domain of accounting). *All* information encompassed by the concept should be reported to satisfy the need of management for a sound foundation for their decision-making function. Anything not encompassed by the concept should be termed data rather than information, and should not be reported, as it is either irrelevant to the decision maker (and could be detrimental to him by obscuring the significant information) or its cost of collection is greater than its value.

However, in contending that, in the ideal, management should be provided with all of the given type of information they need, the writer recognizes that there are difficulties in this regard. It was pointed out in section 4[8] that there is a problem in providing a decision maker with *all* the information relevant to his particular needs. This problem arises out of the fact that the accountant often does not know all the goals of a decision maker or all the uses he has for information. Consequently, the accountant often does not know precisely what information is relevant to a decision maker's particular needs at a particular moment in time. Further, the decision maker often cannot tell the accountant since he frequently does not know what information is capable of being produced by an accounting system. However, whilst it is acknowledged that there is no perfect solution to this problem, as was pointed out in section 4, the writer considers there is a satisfactory solution. It was seen in that section that the writer believes the problem can be adequately met with the aid of a two-way communication system and accounting research.[9]

Having thus decided that, in internal reporting, the accountant should provide management with *all* of the given type of information (included in the scope of accounting) that they need for their decision making concerning their entity, it is now proposed to consider the question of the quantity of information to be provided in *external* reporting.

External reporting

Writers in the area of traditional accounting theory generally deal with the question of the quantity of information to be provided in external reports under the headings of disclosure and/or materiality. Disclosure and materiality are regarded as concepts[10] or doctrines[11] in traditional theory. Whilst each relates to more than just the question of the quantity of information to be reported,[12] this is the only aspect of them that is relevant to the discussion here.

It should be noted, however, that the approaches of the various traditional theorists to the question under consideration are not entirely uniform. Some discuss the matter under the heading of materiality,[13] others under the heading of disclosure,[14] and still others combine these two approaches by contending that what should be disclosed depends on materiality.[15] Nevertheless, all the approaches have a major similarity in that, when considering the extent of disclosure or what is material, they assume a hypothetical person from whose point of view these questions should be judged. But in specifying this hypothetical person, differences arise once again. The writer has found in the literature four different terms—an "average prudent investor",[16] an "informed investor",[17] a "reasonably informed investor",[18] and a "standard reader".[19] In assessing the extent of these differences, it is necessary to judge whether they are differences in concept or whether they are merely different names for the same concept. To the writer's knowledge, this question has not been explicitly explored. This writer believes that probably all four terms are approximately the same in concept. However, as the writings concerning them are not very explicit, it is impossible to say this with any degree of certainty. Only one thing is really certain. That is, that *all terms assume a person lying somewhere in the range of knowledge between the uninformed and the expert.*

Having assumed some form of hypothetical person between the uninformed and the expert, traditional accounting theory then deals with the question of the quantity of information to be provided in external reporting by stating that all information that would be of relevance to this person should be disclosed, and that data not relevant should not be disclosed.[20] The result of the application of this approach is that a user whose needs approximate those of the hypothetical person will be provided with all the information he needs. However, the informational needs of an expert user will be largely unsatisfied, while an uninformed user will be provided with more detail than his needs require. This consequence will be discussed further later.

Another problem regarding the quantity of information to be provided in external reporting concerns confidential information. Mautz and Sharaf refer to this problem when they say:

> It seems reasonable that disclosure of certain information about a company which may be useful to financial statement readers conceivably could do serious injury to the company and thus the various interests in it. Secret processes, research in progress, formulas, perhaps even planned advertising programs may be such that their disclosure would be more detrimental to the company than beneficial to legitimate readers of the statements. Thus excessive disclosure as well as inadequate disclosure seems to be a real possibility.[21]

Thus there is difficulty in reporting to external parties in that certain information which would be useful to them would also be useful to the organization's competitors. Since the provision of this information would consequently be detrimental to the firm, it can be argued that the information should be regarded as confidential and should not be disclosed.

Traditional accounting theory deals with the problem of confidential information simply by stating that:

> Disclosure should not be considered to require publicizing certain kinds of information that would be detrimental to the company or its stockholders.[22]

No guidelines are provided apart from this very general statement. Consequently, there is considerable diversity in practice on the quantity of information provided in external reports. Many managers use confidentiality as an excuse for reporting very little information.

Having now completed a consideration of the treatment which traditional accounting theory gives to the question of the quantity of information to be provided in external reporting, the next step is to examine what contemporary writers have to say on the matter. Some of them agree with traditional theory. For example, Moonitz has stated that the "fiction of an 'informed investor' is a useful one".[23] Further, on the subject of confidential information, a recent committee of the American Accounting Association has contended that the accountant "is required to balance the disclosure of relevant information with the need for concealment of 'sensitive' details".[24]

Other contemporary writers, however, consider that the traditional approach suffers from serious inadequacies. Mautz and Sharaf are two writers who hold such a view.[25] In order to assess the validity of assuming a hypothetical person somewhere between the expert and the uninformed, these two writers have carried out an investigation of the bases of the decisions of external parties. They have found that most external parties either act on expert advice or are experts themselves. Some external parties, such as stock exchanges, governments, "large labor unions, trust companies, insurance companies, and other institutional investors",[26] actually employ expert financial analysts. Others, such as the small investor, who cannot afford to employ these experts, obtain expert advice from stockbrokers[27] or investment counsellors. They go on to say:

> Instead of investment decisions by individuals who read published data and make their own investment decisions, we have important investment decisions made on the advice of professionally trained and responsible specialists.[28]
>
> . . . relatively few investors find themselves without expert guidance readily available.[29]

Horngren expresses a similar view when he states:

> . . . financial analysts are the major consumers of the published data . . .[30]
>
> Professional security analysts represent, dollarwise, probably a very large percentage of existing investment capital.[31]

In view of their contention that relatively few decisions by external parties are uninformed, Mautz and Sharaf go on to consider the implications of the assumption in traditional accounting theory that external reports should be directed towards some hypothetical person, such as a "reasonably informed investor". The writers conclude:

> Obviously, skilled financial analysts and investment counselors will require more in the way of information than might an individual investor, unable to comprehend and utilize any great quantity of information.[32]

Hence, if only the information relevant to a "reasonably informed investor" is reported, the expert financial analyst will be denied much information that he can use, and needs, if he is to make the best use of his ability. There is evidence to support this contention in existing practice. Existing practice is based largely on traditional accounting theory and, consequently, the quantity of information disclosed in existing external reports is generally based on what would be relevant to, say, a "reasonably informed investor". But, as would be expected from the above discussion, financial analysts find the disclosed information inadequate for their needs. Mautz and Sharaf have carried out a survey of the literature of financial analysts, and have concluded that:

> Their literature indicates that they are not satisfied with the information found in the traditional accounting statements, but that they desire additional data [information] . . .[33]

As a result of the financial analyst not being provided with all the information he needs to make maximum use of his ability, the decisions in which he plays a part may suffer. Halkerston elaborates this point when he says:

> To the extent that inadequate information in the financial statements does not allow the analyst to either make decisions on the above lines or to make incorrect decisions then faulty investment judgments may be made. This in turn, in addition to affecting the individual investor's position, can lead to a misdirection of capital resources in the economy, so far as such resources are guided by the public securities' markets.[34]

Whilst Halkerston's remark only mentions investors, the same situation exists with other external parties.

Mautz and Sharaf consider these consequences of the application of traditional accounting theory to be undesirable. They reject, therefore, the notion of any hypothetical person with less expertise than the expert, and instead, recommend "disclosure of the information which a thoroughly competent and skilled analyst can use and must have to discharge his professional responsibility to those who rely on his judgment".[35]

On the question of confidential information, Mautz and Sharaf again seem to differ from traditional accounting theory. Whilst they acknowledge that certain information cannot be disclosed for reasons of confidentiality,[36] they seem to give much less weight to the matter than does traditional theory. For example, they state that

> . . . there are relatively few business secrets and to keep information from the legitimate interests in the enterprise is to do them a real disservice when, at the same time, those who want that same information for improper purposes have ways of obtaining it . . . The attempts of corporations to keep operating information secret from competitors or from labor unions, a fairly traditional attitude of the past, are almost certain to fail.[37]

Thus, while they would seem to agree that certain information must be kept secret (e.g. secret processes, research in progress), they would not seem to agree with the concealment of operating information, such as sales results. Hendriksen also gives less weight to confidentiality than traditional theory. In fact, he may even go further than Mautz and Sharaf when he says:

> Frequently, the comment is made that certain types of information should not be disclosed . . . because it might be useful to the wrong parties. For example, the sales volume of a specific product in a given territory might be useful information to competitors . . . But the failure to disclose material information for this reason alone is generally not thought to be justified as frequently as it was . . . The large corporations of today have a responsibility to investors and the general public to disclose a proper amount of material information even though the reaction to the information may be unfavorable to the corporation.[38]

A recent committee of the American Accounting Association has also adopted an approach different from that of traditional theory on the question of the quantity of information to be provided in external reporting:

> . . . the committee advocates the reporting of *all* information that is believed to be relevant to the judgments and decisions of any substantial group of users.[39]

As has been pointed out above, most of the "decisions of any substantial group of users" will be based on expert advice. Thus, if "all information that is believed to be relevant" to these decisions were provided, it would encompass *all* the information needed by expert financial analysts. Hence, under the committee's approach, much more information would be provided than under traditional theory where only the information needed by some form of "reasonably informed investor" is reported.

This completes the consideration of the views of contemporary writers on the quantity of information to be reported externally. Finally, it is proposed to discuss this writer's views on the matter.

This writer does not agree with the traditional approach to the question, wherein a hypothetical person whose knowledge is somewhere between the expert and the uninformed is assumed. One reason is that the approach, or at least all the expositions of it, is rather vague. None of the writings give even an approximate idea as to where, in the range of knowledge between the expert and the uninformed, the assumed person lies.

Another and more important reason why the writer disagrees with the traditional approach is that he agrees with Mautz and Sharaf that most external parties are either financial experts themselves or obtain expert advice. Many external parties, such as stock exchanges, stockbrokers, governments, creditors, labour unions, customers, and institutional investors actually employ financial experts (security analysts and/or accountants). Others obtain expert advice on a consultative basis. For example, many small investors obtain expert advice from stockbrokers or investment counsellors. Stockbrokers who are not themselves, or who do not employ, financial experts, also consult investment counsellors. But traditional accounting, in providing information for an assumed person of lesser knowledge than the expert, does not provide all the information these experts need if they are to make maximum use of their abilities. In fact, evidence exists in practice that the informational needs of the financial analysts are largely unsatisfied at the moment.[40]

Because traditional accounting does not supply the financial experts with all the information they need to make full use of their abilities, the decisions of external parties may suffer. Not only may individuals make incorrect decisions, but as a result the allocation of resources in the economy may be misdirected. To appreciate fully the importance of this consequence, one must remember the role which the financial expert plays in the economy. It has been pointed out that the writer believes the majority of decisions are based on expert financial analysis. However, if the value, rather than just the number, of decisions is taken into consideration, then the significance of those based on expert analysis will be much greater. The reason is that most large value decisions are made by large organizations. It seems reasonable to assume that *all* such organizations would employ personnel skilled in financial analysis. Thus it would seem that traditional accounting, in limiting the quantity of information contained in external reports to that needed by, say, a "reasonably informed investor", places important restrictions on the efficiency of decision making in the economy.

The writer agrees with Mautz and Sharaf that these consequences of the application of traditional theory are undesirable. He therefore agrees with their rejection of the traditional approach. He does not, however, entirely agree with their recommended substitute approach. This approach advocates the "disclosure of the information which a thoroughly competent and skilled analyst can use and must have to discharge his professional responsibility to those who rely on his judgment".[41] Whilst the writer agrees that the skilled analyst should be provided with all the information he needs, he does not believe that those with less knowledge than the expert should be forgotten, as the Mautz and Sharaf approach may be inclined to do. Although it is unlikely that the non-expert will require different information from the expert, he will not require as much detail. Some of the detail relevant to the expert will not only be irrelevant to the less skilled, but, as Hendriksen points out, may be harmful to them "in that the presentation of unimportant detail hides the significant information".[42] Thus reports designed for the expert may be so detailed as to be incomprehensible to the less informed users. Whilst the writer agrees with Mautz and Sharaf that the majority of decisions and most important ones in the economy are based on expert analysis, and that accounting should, therefore, meet the needs of the expert analysts, he also acknowledges that some non-expert decision makers do make their decisions without seeking expert advice. Such people need some information as a basis for their decisions (albeit a lesser quantity than the expert). It is, therefore, believed that the non-expert should not be ignored by accounting.

The writer consequently prefers the approach recommended by the committee of the American Accounting Association. On the question of the quantity of information to be reported, the committee recommends:

> . . . the reporting of *all* information that is believed to be relevant to the judgments and decisions of any substantial group of users.[43]

Included in each substantial group of users will be experts and the not so skilled. Ideally, the approach aims at meeting the needs of all these people. It was pointed out in section 5 that the writer considers the substantial user groups are: shareholders (present and potential), governments, creditors, employees, customers, stock exchanges, association members, contributors to welfare institutions, and the general public. It is, therefore, believed that, apart from the restriction of confidentiality (to be discussed shortly), there should be no limitation on the quantity of information (of the given type included in the domain of accounting) reported to these external recipients. Hence, as in the case of internal reporting, the quantity provided would ideally be determined by the information concept which, it has been established, sets the theoretical maximum limit to the quantity that could be provided.[44]

However, once again there are difficulties in implementing this theoretical ideal. One practical difficulty arises from the fact that there is considerable heterogeneity, and hence differences in financial knowledge, among external users. Consequently, if the accountant were to present every user with precisely the quantity of information relevant to him, it would be necessary to prepare a very large number of reports. Clearly this is impractical. The writer believes that probably the best approach to the problem is one that is being employed by some companies today. Under this approach, financial statements are prepared which contain a quantity of detail similar to the statements currently prepared under traditional accounting. In addition to these statements, a report is presented which gives a "brief summary of salient figures under a heading such as 'Highlights of Operations' ".[45] Further, detailed information of interest only to the expert is contained in appended schedules. The aim of the approach is to present, in the summary report, information comprehensible to a relatively uninformed user, and in the financial statements, information of use to a person with greater knowledge than this, but less knowledge than the expert. Finally, the aim is to include overall in all statements and schedules, all the information needed by the financial expert. However, this approach is clearly not an ideal answer to the problem. The approach splits the detail included in an overall report into a three stage development (summary; financial statements; supporting schedules). The skills of external readers are generally too diverse to fit readily into such a simple classification. Nevertheless, the writer believes that this is probably the best way of meeting the problem in practice. Even though it cannot hope to do it precisely, the approach endeavours to meet the informational needs of both expert and non-expert external user.

Another difficulty in implementing the theoretical ideal of providing external parties with all the information they need, is as follows. As in internal reporting, the accountant is not precisely sure of what information (and hence what quantity of information) is relevant at a particular moment in time, and the users are not sure of what information is available. The problem has been considered in detail in section 4[46], as in the case of internal reporting. It was concluded there that, whilst there is not a perfect solution to the problem, the writer believes that it can be adequately met with the aid of a two-way communication system and accounting research.

Finally, it is proposed to consider the writer's views on the question of confidential information. The writer believes that there is not much doubt that certain information must be regarded as confidential and cannot be disclosed. Examples of this type of information would be secret processes, research in progress, formulas, and planned advertising programmes. However, it is believed that confidentiality is abused in practice in that it is used as an excuse by management for non-disclosure of some information the reporting of which would not really harm the firm. For example, many managers contend that confidentiality is their reason for not disclosing sales figures. This writer disputes the validity of this contention. He agrees with Halkerston when he says:

> . . . the management of one company almost always seems to have a good idea of its competitor's share of the market and, if this is so, it is a "head in the sand" notion to believe that the competitor is not just as knowledgeable.[47]

Halkerston goes on to support this argument by pointing out that some companies in the most competitive fields disclose sales figures with no apparent detrimental effect. It is believed that the reason confidentiality is abused in practice is that traditional theory merely states that there is no need to disclose in external reports "information that would be detrimental to the company or its stockholders".[48] The theory does not give any guidance apart from this very general statement, but leaves it to the individual accountant (and management) to decide what would be detrimental to a particular company or its stockholders. There is, therefore, room for considerable difference in interpretation of this statement and many managements interpret it in such a way that very little information is disclosed.

The writer believes that such a situation is undesirable. However, he would not go as far as Hendriksen in advocating disclosure. As was pointed out earlier, Hendriksen advocates disclosure of

> . . . a proper amount of material information even though the reaction to the information may be unfavorable to the corporation.[49]

If Hendriksen is implying by this statement that some relevant information should be disclosed, even though it may be harmful to the firm, then the writer must disagree. The writer believes that, ideally, information should only be disclosed externally if its value to valid (e.g. excluding competitors) external recipients is greater than the value of any detrimental effects that might be caused by its disclosure. If the value to valid recipients is greater than the value of detrimental effects, then the firm's participants as a whole will be better off by the disclosure of the information. However, it must be pointed out that this theoretical ideal is incapable of practical implementation. The reasons are, firstly (as was explained in section 3), that information is very difficult to value in practice. In fact, in this case, where numerous heterogeneous recipients are involved, it would undoubtedly be impossible. Secondly, it would be very difficult in practice to estimate the value of detrimental effects. For example, how would one value the harm to a company as a result of a competitor learning of a planned advertising campaign? But, although this ideal may not be practical, the writer believes that it should remain the ideal. He further believes that it should form the basis of practical accounting rules which will give guidance to the practitioner on the question of confidentiality.

Conclusion

In stating the objectives of accounting in an accounting theory based on deductive methodology, it is necessary to specify the *general scope* of the discipline. As has been pointed out,[50] in determining this scope, one of the questions that arises is whether the *quantity* of information provided by accounting should be *less* than the quantity of information obtained through the application of the information concept to the type of information included in the scope of accounting. This question was, therefore, examined in this section. The matter has now been considered in detail, and the writer's conclusions have been stated as the discussion has proceeded. The conclusions are, however, re-presented here in order to give a unified statement on the subject.

Given the type of information included in the domain of accounting, it has been concluded that, in respect of internal reporting, the quantity of information provided by the discipline should not be restricted in any way, but should be determined by the application of the information concept. Similarly, in external reporting, the information concept should be applied, but in this case, a restriction in respect of confidential information must be imposed. In external reporting, information should be regarded as confidential and not disclosed if the value of the information to valid external recipients is less than the value of detrimental effects that would result from disclosure. Practical difficulties in implementing these conclusions have been recognized and discussed. However, the practical difficulties do not affect the validity of the conclusions as theoretical ideals.

As has been pointed out, these conclusions will now form part of the recommended general scope of accounting, and hence, part of the recommended objectives of the discipline.

VIII. COMMUNICATION

> Communication has been defined as the process of transmitting and receiving information. But communication is more than a mere handling of information. It involves an exchange of meaning. An exchange of meaning is essential since communication is always purposeful.[1]

> Communication between persons is a matter of transmitting significances, of establishing in the mind of another what one has observed, or the product of what one has observed, recorded, and otherwise processed.[2]

In these words Collins and Chambers describe in very general terms the subject of communication. It can be seen from these statements that communication involves the transfer of a message from one person to another. This message should convey a meaning to the receiver—a meaning which, ideally, would "evoke in the receiver the same responses as would direct experience of the events which are the subject of the communication".[3]

As was pointed out in section 1,[4] the communication of accounting information to its users is an essential part of the objectives of the accounting discipline. It was stated that the final stage[5] in the operation of the accounting information system was the communication of the information to the decision makers who use it, and that it was the objective of the discipline to communicate this information as effectively as possible. The reason advanced to support this argument was that unless the information is effectively communicated to its recipients it will not be helpful to them.

It is thought that few accountants would disagree with this contention that communication should be included in accounting objectives. Since information will not be useful to its recipients unless it is communicated to them, it seems only reasonable that this should be so. Among those who explicitly agree with the contention are Baladouni and a recent committee of the American Accounting Association. This is evidenced in the following quotations:

> . . . effective communication is the ultimate purpose [objective] of the accounting universe . . .[6]

> The development of accounting information is only part of the accounting function [objectives]. A necessary companion aspect of the function is the development of the communication process so that information can be transmitted and so that those to whom information is provided understand it and its potential usefulness.[7]

Other contemporary writers who have expressed such a view are Birkett, Chambers, Bedford, Beckett, Goldberg, and Jasper.[8] Traditional accounting theory does not explicitly state whether or not accounting should be specifically concerned with communication. However, this writer believes that communication is implied in the theory. Grady, in his exposition of traditional theory, includes in his definition of accounting "the summarizing and interpreting of such data [information] . . . in reports".[9] Summarizing and interpreting information in reports implies that the information should be communicated to the users of the reports. Goldberg says:

> The reporting function is obviously and directly one of communicating information by or on behalf of one party or body to another.[10]

He goes on to say that the "interpretative function is equally an obvious instance"[11] requiring communication. This writer further believes that the efforts of the professional bodies[12] (whose recommendations express traditional theory) regarding terminology, also indicate an objective on the part of traditional theory to communicate to the users of accounting information. As will be seen later, terminology is an important element in effective communication.

The communication of accounting information to the users of that information is considered by this writer to be not just an element, but a *very important* element, in accounting objectives. The reason is that even the best information will not be helpful to its users unless it conveys to them a meaning—a meaning which, ideally, would evoke in them the same responses as direct observation of the events reported upon by the information. Unless this meaning is transmitted, "the accountant has accomplished nothing useful",[13] and "all of his other efforts will be for naught".[14] Since the purpose of communication of information is to convey such a meaning, it can be seen that communication "is a vital link in accounting activity".[15]

However, despite the importance of communication, it appears that existing accounting practice is rather unsuccessful in this respect. Birkett, for example, has examined the product of existing accounting practice and the writings of its users, and has concluded that accounting reports "do not communicate to either the laity or the expert".[16] Goldberg, Beckett, and the General Council of the Australian Society of Accountants[17] have expressed similar viewpoints. The reason for this relative failure on the part of accountants to communicate probably arises from the fact that "the basic theory of communication has hitherto attracted so little of the attention of accountants".[18] In the writer's opinion, this is probably due to one or more of the following factors:

1. The objectives of accounting are not laid down. Very few accountants have considered the matter.
2. It has not occurred to most accountants that their reports are not communicating to their recipients.
3. Most accountants do not appreciate what is involved in the effective transmission of information.
4. Most accountants do not know that there is basic communication theory which is of considerable usefulness in devising practical communication systems.

Because of this failure on the part of accountants to communicate effectively, and because of the importance of communication in accounting objectives, it is necessary to have a closer look at the meaning of the term "communication". Consequently, basic communication theory will be briefly examined to the extent that it relates to the transmission of accounting information. The following discussion will first consider the communication process and then the accounting language.

The communication process

There are various forms of human communication. However, regardless of the form the communication may take, the process involved may be described in general terms as follows:

> Human communication is purposive; it involves the transfer of a *message*, a systematic set of physical signals or symbols, from one person, designated the *source*, to another person, designated the *receiver* . . .[19]

Various writers have constructed models of this communication process. Whilst these models have some differences, a close examination of them shows that the differences are superficial rather than fundamental. The writer believes that a model of the communication process appropriate to the communication of accounting information has been presented by Collins. Collins depicts his model diagrammatically showing the various elements and their relationship as follows:[20]

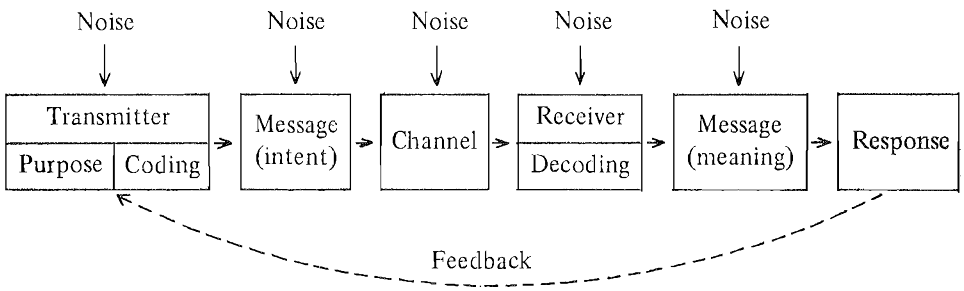

Fig. 2.—The communication process

With the aid of this diagram the communication process will now be explained. The transmitter or source, in the case of the communication of accounting information, is the accountant. The accountant will have certain information which he wishes to communicate to a receiver. The purpose of the accountant, as far as the communication process is concerned, will be to communicate the information to the receiver, such that the response evoked in the receiver is the same as the response would have been if the receiver himself had directly observed the events reported upon (and had the necessary skill to interpret them in financial terms). In order to communicate the information to the receiver, the accountant must encode the information into a message. This encoding process involves the expression of the information in a language. A language is a set of signs, signals or codes, together with a set of rules for relating the signs to each other. The accountant encodes his messages in the accounting language which comprises technical terms, numerical figures, and rules for relating these to each other.

When the message has been encoded, it must be transmitted to the receiver via some medium or channel. Common examples of communication channels are "the spoken word via air waves" and "the written word via paper and light waves".[21] In the case of accounting, the channel used is usually the latter. On receiving the message from the accountant via the channel, the receiver must decode it and attach meaning to it. Collins describes this process as follows:

> The receiver picks up the message through his sense organs and his coding apparatus acts to decode the actual visual or auditory signals received into a message and to attach meaning to the message.[22]

Having attached meaning to the message, the receiver will generally respond in some way. Collins goes on to say:

> His [the receiver's] response may be verbal (O.K., Roger); written (a report); or behavioural (a shrug of the shoulders, a nod, a frown, walking off the job, or actions in compliance with the message). This response is available to the transmitter in the form of feedback and it completes the process. The feedback may lead to the initiation of another communication in which the process is repeated.[23]

More will be said about feedback later in the section, where it will be seen that, amongst other things, it can help the transmitter assess "the success of any attempt to communicate".[24]

As can be seen from the diagram of the communication process, this process can be affected by noise, or interference as it is otherwise known. Collins describes the phenomenon of noise as follows:

> Noise (a term borrowed from communication engineering) is any error or distortion in a message . . . noise interferes with the transmission of information. Noise may enter at any stage of the process. It may simply distort the message or it may block the transmission altogether.[25]

Noise will occur in the communication of accounting information if, for example:

> . . . the signs do not have or cease to have unique referents or if a given message includes mutually inconsistent signs; or if the processing of signs is logically illegitimate; or if the signs in the memory of the system fail to be modified on the occurrence of events which make the original signs irrelevant.[26]

Since an objective of accounting is to communicate information to its recipients as effectively as possible, and since noise interferes with the communication of information, the accountant should, in the design and operation of his communication system, attempt to keep noise to a minimum. In order to do this, he must firstly appreciate that such a thing as noise exists, and secondly, be aware of where and how noise can arise in his communication system. Knowledge of these factors should enable the accountant to build "screening devices"[27] into the system to guard against, and thereby minimize, noise. Collins points out that one such device is the feedback mechanism shown on the diagram of the communication process above. The feedback mechanism may help "direct attention to the presence of noise"[28] in a communication system, and consequently, assist in its elimination.

It can be seen from the above examination of the communication process that the function of a *language* in this process is a very important one. In order to communicate information to a receiver, a transmitter must encode the information with the aid of some language. When the receiver receives the encoded information, he must decode the language in which it is expressed into thought or meaning. This meaning should be the same as if the receiver had directly observed the events reported upon by the information. Unless such a meaning is conveyed to the receiver, the communication will not have been successful. The essential requirements in a language in order to convey intended meanings must, therefore, now be considered. Particular attention will be paid to the accounting language.

The language

Baladouni points out that all "human communication must include the use of some language".[29] In general terms, a language may be defined as "any system that has a set of symbols [semantics] and a set of rules relating to the operations of these symbols [syntactics]".[30] Since accounting is concerned with human communication it is not surprising that it does so with the aid of a language.[31] Further, like all languages, the accounting language has a set of symbols (also known as signs or signals) and a set of rules for relating the symbols to each other. As was pointed out earlier,[32] technical terms and numerical figures comprise accounting semantics.

A language may perform a variety of functions. Some of those which have been suggested are "dynamic, emotive, and aesthetic; prescriptive, appraisive, and incitive",[33] and, of course, informative functions. However, as stated by Chambers,[34] the accounting language is concerned with only the informative function. The objective of accounting is to communicate information to its users. The discipline "has no political, hortative, directive, or aesthetic functions".[35] Consequently, the following discussion will be restricted to consideration of the informative function of a language.

In considering the use of a language for informative purposes, it should be stated at the outset that a language can only present a symbolic representation of reality.

It can never present reality itself. This is aptly put in an accounting context by Bedford and Baladouni:

> It must be remembered, however, that while accounting statements are concerned with the world of a firm's economic events, they can never reproduce the dynamic activities themselves. An accounting statement simply attempts to produce a still picture of a firm's dynamic economic activity. In so doing, accounting arrests the dynamics of the economic activity and merely symbolizes that reality at some level of abstraction. No matter how adequate and useful the language of accounting, it must be borne in mind that accounting is only a tool, a means of referring to some economic reality. As Korzybski says, "If we reflect upon our languages, we find that at best they must be considered *only as maps*."[36]

In order to examine a language designed for informative purposes, such as the accounting language, it is necessary to consider not only its semantic and syntactic rules, but also its pragmatic rules.[37] This is so because:

> Any language, which will enable effective communication, requires a consensus on the part of both source and receiver about the syntactic, semantic, and pragmatic rules which are to govern its usage.[38]

These three matters will, therefore, now be considered in turn. Whilst each will be discussed separately, it is acknowledged that "in the context of a discussion of human communication, semantical, syntactical, and pragmatical considerations are necessarily interwoven".[39]

Semantic rules

Semantic rules are those which relate to the symbols or signs employed in a language. Signs are defined in general terms by Chambers as "words and numbers, and the forms in which words and numbers are cast".[40] The accounting language uses as signs technical terms, numbers, and forms, such as the balance sheet and profit and loss statement.

It is considered that there are two major semantic rules with which the accounting language must comply if it is to communicate as effectively as possible. Firstly, terms used in the language should be operationally defined. This is explained by Birkett as follows:

> Operational definition involves denotation of the existent criteria which must be present for a particular usage of a word to be legitimate in a specific context.[41]

Birkett goes on to say that in "technical or scientific languages [the accounting language is a technical language] words which are not operationally defined are regarded as meaningless".[42] Operational definition facilitates effective communication because it makes explicit the meaning of terms. Consequently, common usage by both source and receiver, and hence communication between them, is facilitated.

The second semantic rule considered necessary for effective communication is that signs of the technical language should have unique referents. For example, if a term does not have a unique referent in the technical language, then a receiver, on receipt of a message containing the term, will not know precisely which referent is involved. Consequently, communication is unlikely to be effective. Further, if the same term exists in the technical language and in the vernacular, it should have the same meaning in both languages. This should be so because a receiver not completely familiar with the technical language, on receipt of a message containing a term having different referents in the technical language and the vernacular is likely to interpret the term in accordance with its meaning in the vernacular. Once again, communication is unlikely to be successful. Similarly, a form should not be used in a technical language if it has a different meaning in the vernacular.

Unfortunately, terms and forms now used in accounting do not have unique referents. Wixon, for example, has pointed out that many accounting terms "are in common use, sometimes in different senses from those attaching to them in technical practice".[43] Research staff of the National Association of Accountants have commented that "many terms used in accounting connote a wide variety of different concepts".[44] Further, Chambers demonstrates that some existing accounting forms have different meanings in accounting and in the vernacular.[45] Consequently, the comment made earlier in this chapter that "existing accounting practice is rather unsuccessful"[46] in communication, is not surprising. It is considered that, if existing accounting is to improve the efficiency with which it communicates information to its users, it must pay close attention to the above-mentioned semantic rules.

Syntactic rules

The syntactic rules of a language are those which designate the manner in which the signs of the language may be related to each other:

> If communication is to be effective, it is no less necessary that the signs employed shall be related to one another in accordance with syntactical rules than that they shall individually conform with semantical rules.[47]

The major requirement of the syntactic rules of a language is that they should relate signs in a manner which corresponds with the relationships between the designata of the signs. This requirement is described by Chambers:

> The efficiency of communication varies directly with the capacity of the syntax of the technical language to generate statements such that the relations between the signs used in those statements correspond with the relations between their designata, that is, with adherence to syntactical rules.[48]

Unfortunately, the existent syntactic rules of the accounting language do not relate signs in a manner which corresponds with the relations between their designata. Just one example is the operation of summation in the balance sheet. It is a logical rule that, if objects or properties are to be added, they must be alike. However, existent accounting balance sheets aggregate purchase prices which are not alike under the current conditions of changing prices:

> Nevertheless, the recipient of the message, which is the balance sheet, will respond as if the rule [the logical summation rule] had been satisfied; his response cannot be the response which the designata . . . themselves would evoke.[49]

Consequently, accounting communication is not effective.

It is, therefore, considered that, if accounting is to communicate its information as efficiently as possible, it must pay closer attention, not only to its semantic rules, but to its syntactic rules as well.

Pragmatic rules

The term pragmatics refers to "that branch of the theory of signs"[50] concerned with the communication of *meaning*. As was stated earlier in this chapter, an objective of accounting is to communicate information to its users, such that the *meaning* conveyed to them is the same as if they had directly observed the events reported upon by the information. The accounting language must, therefore, be concerned with pragmatics, in addition to semantics and syntax.

As Collins points out, how "the individual attaches meaning to a particular stimulus (item of information) has been the focus of much psychological research".[51] Behavioural scientists have found that:

> Meaning is something that is found within human organisms . . . meanings are not found in words, statements, messages.[52]

Further, it has been found that:

> All messages received are filtered through an individual's value system; messages are evaluated and judged, and altered by such treatment.[53]

Since different individuals have different value systems, it follows that there is no necessary relationship between any two persons' associations of signs with objects. In other words, as far as accounting is concerned:

> Actor and information processor being different persons, their associations of objects with signs and signs with objects may differ.[54]

How, then, can an accountant communicate information to a decision maker which will have the same meaning to the decision maker as if he himself had observed the events reported upon? Chambers has considered this question and has concluded that the accountant can communicate effectively "given appropriate pragmatical rules".[55] He goes on to state such rules:

> If, as we have argued, the message is to evoke the same response in the actor as the designata themselves would evoke, the author of the message has simply to discover what statements will serve as surrogates for direct experience or observation on the part of the actor, and to employ those statements and no others. It is immaterial that the actor and his accountant may have different individual experiences of a given object . . .[56]

Chambers contends that the accountant can discover these surrogates (i.e. the actor's rules of usage of signs) with the aid of a feedback mechanism.[57] He argues that a feedback mechanism will enable the accountant to observe, and hence discover, the rules of usage of signs of an actor.

This writer agrees with Chambers that a feedback mechanism is the best means an accountant has to discover an actor's usage of terms. It is believed, therefore, that, where possible, such a mechanism should be used to obtain efficient communication. However, it is acknowledged that there are practical difficulties in employing a feedback mechanism in external reporting. Because there are often large numbers of actors external to an entity, and because they are often not closely associated with the entity, communication between them and the accountant is often impossible. Further, an accountant often provides only one report for use by many actors. It is impossible to incorporate in such a report every actor's usage of terms. Consequently, to the extent that feedback between actor and accountant is impractical, and to the extent that only one report is provided for many actors, the accountant must rely on generalizations as to the meaning of terms. As Boyle points out when considering this problem, fortunately "techniques have been developed for generalising about beliefs and attitudes"[58] and hence about the meanings signs connote in individuals.

Unfortunately, the existing accounting language ignores pragmatic considerations. As in the case of semantics and syntax, it is considered that much more attention to this matter is necessary if the efficiency with which accountants communicate information to its users is to be improved.

Conclusion

The term "communication" refers to the transfer of a message from one person to another with the objective that the meaning conveyed to the receiver is the same as if he had observed the designata of the message himself.

Communication is considered to be a very important part of accounting objectives. This is so because even the best information will not be useful to its recipients unless it is effectively transmitted to them. However, despite this importance, it has been demonstrated that existing accounting does not effectively communicate information to its users. Because of this breakdown, and because of the importance of communication in accounting objectives, this section has had a closer look at the meaning of the term "communication" and hence a brief examination of the basic theory of communication.

The communication process has been described in general terms. It was seen that noise, which interferes with the effective transmission of information, can enter this process at any stage. Since noise may consequently defeat the purpose of communication, the accountant should build devices into his system to guard against it.

It has also been stated that the function of a language in the communication process is a very important one. Consequently, the requirements in a language—particularly the accounting language—for effective transmission of information were considered. In brief, the major requirements were that the language must pay close attention to the syntactic, semantic, and pragmatic rules which govern its usage. It was demonstrated that the existing accounting language has little regard for these rules and consequently, it is not surprising that accountants do not communicate effectively at present.

If accounting is to achieve its objective of effective communication of its information, it is considered that accountants must give far greater attention to this phase of their endeavour than they have done in the past. It is believed that the basic theory of communication will be of considerable assistance in this regard. A brief outline of how this theory might be applied in accounting was given above.

IX. CONCLUSION

The aim of this study was to create a statement of the objectives of accounting which would be capable of forming part of the foundation of a general theory of accounting to be derived by deductive methodology. This purpose arose out of the following factors:

1. the importance of deductive methodology to accounting theorists and in future accounting research,
2. the importance of a statement of accounting objectives for accounting theory in general, and in particular, in the use of deductive methodology in accounting,
3. the lack of research on the subject,
4. the inadequacies in such statements that do exist, and
5. the considerable disagreement on matters having a bearing on accounting objectives.

Consideration was first given to the *place* of a statement of objectives in an accounting theory based on deductive methodology. It was contended that the first step in such a theory is the specification of the basic concepts of accounting. The next step, which is to some extent dependent on the first, is the statement of objectives. Following this, postulates, which are again dependent on the previous step (i.e. the statement of objectives) are stated. Principles, and rules and procedures are then deduced from the postulates by deductive logic. The resultant rules and procedures can then be applied in practice to produce results. These results should meet the test of accomplishing the stated objectives.

The meaning of the term "objectives", when used in deductive methodology, was then subjected to closer examination. It was seen that the term is used as being synonymous with "purpose", "aim", "raison d'être", and "function". However, a distinction was made between the objectives or function of an object, the functioning of an object, and the object itself. It was further seen that accounting objectives in deductive methodology must specify the *general scope* of the discipline.

After establishing the need for a statement of accounting objectives, and discovering an almost complete absence of satisfactory research on the subject, attention was more closely directed to the aim of the study—the creation of a statement of the objectives of accounting. It was noted that, whilst all accountants would probably agree that the function of accounting is to provide information for decision making regarding entities, in making this extremely general objective more specific, several questions must be answered. These questions were considered to be:

1. What is *information*?
2. Should the general scope of accounting take into account the specific *uses* of accounting information, the *goals* of decision makers, and the *behaviour* of decision makers and entities?
3. *To whom* should the information be provided?
4. What general *type* of information should be provided?
5. *How much* information should be provided?
6. How should the information be provided (i.e. *communication*)?

However, before these questions were considered, the basic concepts of accounting were briefly examined. This examination was considered necessary because of the influence of the basic concepts on accounting objectives. The scope of the study prevented a detailed investigation of the concepts. However, the two major viewpoints —the proprietary and entity concepts—were considered. It was noted that an individual's viewpoint on these matters will be influenced by behavioural factors. Following an explanation of the two concepts, it was pointed out that this writer perceived the shareholders, creditors, and other external parties as being outside the organization, and consequently held the entity concept. The reasons for this viewpoint were given. Finally it was stated that in this research the objectives of accounting would be based on the entity concept.

Having established this foundation for the following investigation, attention was directed to the above six questions. Each was considered in turn. Briefly, the methodology employed in respect of each question was, firstly, to analyse and evaluate the viewpoint of traditional theory, major contemporary viewpoints, and any other factors relevant to the issue. Not only the viewpoints were analysed, but also their underlying rationale. Because of the inadequacies in research into accounting objectives, it was found necessary to examine fragments of discussion from many articles and books in order to piece together an adequate consideration of the various issues. Following the analysis and evaluation, a synthesis of the results obtained was used to establish the writer's view on each question. The reasons for the view adopted were given in each case.[1]

The conclusions on each question have now been reached and stated in the respective sections. These conclusions can now be integrated to form a recommended definition of the objectives of accounting. However, "it should be recognized that any terse definition necessarily has limitations, particularly where the subject is a broad and complex one".[2] In definition, specificity must suffer in the cause of brevity. Consequently, the following statement of the objectives of accounting should be read in conjunction with the foregoing discussion from whence it was derived.

The objectives of accounting

The objectives of accounting are to communicate information to decision makers to aid in their decisions regarding entities. In explication of this general statement, the following points should be made. They form part of the definition.

1. *Communication* refers to the transmission of the information from the accountant to the decision maker, such that the information conveys to the decision maker a meaning—a meaning the same as if he had observed the designata of the message himself.
2. *Information* refers to a message which is new, relevant, and useful to a decision maker and whose value is greater than its cost. The informational content of a message is its potential to evoke a response in the decision maker.

3. The information should be relevant to the *uses* and *goals* (both general and specific) of the decision maker and relevant having regard to his and the entity's *behaviour*.

4. *Any type of information* needed for decision making regarding entities should be provided, i.e. retrospective, contemporary, and anticipatory; monetary and non-monetary; economic and non-economic; quantitative and non-quantitative; information should be provided depending on the needs of the decision makers. Consequently, the only general constraints on the type of information included in the scope of accounting would be that the information should comply with the information concept expressed in (2) above, and that it should be relevant for decision making regarding entities. This information should be based on the entity concept.

5. In internal reporting, the *quantity of information* provided should not be restricted in any way, but should be determined by the application of the information concept stated in (2) above, i.e. all relevant information should be communicated. Similarly, in external reporting, the information concept should be applied, but in this case, a restriction in respect of confidential information must be imposed. Information should be regarded as confidential and not disclosed if the value of the information to valid external recipients is less than the value of detrimental effects that would result from disclosure.

6. The decision makers (i.e. recipients) referred to are: management, shareholders (present and potential), governments, creditors, employees, customers, stock exchanges, association members, contributors to welfare institutions, and the general public.

The writer believes that, in a general accounting theory based on deductive methodology, this statement of objectives would provide a sound foundation for accounting postulates, principles, and rules. It is considered that the definition clearly indicates the general scope of the accounting discipline. Consequently, it would adequately "direct the kinds of questions one should ask about the environment"[3] in order to derive postulates. It is also believed that the stated objectives provide a means of testing resultant theory.

The writer further considers that the stated objectives are those which *should* be pursued by the accounting discipline. They clearly are not, however, the objectives which *are* being pursued by the discipline at the moment. The defined objectives considerably broaden the scope of accounting. Just one example is the fact that traditional accounting theory is restricted to the provision of financial information, whereas the above objectives are not so restricted. This extension of the scope of accounting is considered desirable on the grounds that there is a definite need for an extended service to the users of accounting, and that (if it will accept the responsibility and increased educational requirements) the accounting discipline is the most competent to provide this service.

If, because of the breadth of the stated objectives, and because of the limitations of man, there are practical difficulties in building *one* all-embracing theory on the objectives, then they could be easily divided into segments. Accounting models could then be built on each segment, such that, together, the models meet the overall objectives.

A recent committee of the American Accounting Association has supported the need for broader accounting theory. Bedford, one of the committee members, has stated:

> . . . it seems fair to state that the Committee believes there will be a need for a much broader conception of accounting theory than has heretofore been espoused by any authoritative accounting document—and it seeks to encourage academic research directed to the development of that future structure of accounting theory.[4]

The writer hopes that, in some small way, this study will contribute to such research.

BIBLIOGRAPHY

Books

BARNARD, CHESTER I. *The Functions of the Executive.* Cambridge, Massachusetts: Harvard University Press, 1962.

CHAMBERS, RAYMOND J. *Accounting, Evaluation and Economic Behavior.* Englewood Cliffs, New Jersey: Prentice-Hall, 1966.

CHURCHILL, NEIL C., and STEDRY, ANDREW C. "Some Developments in Management Science and Information Systems with Respect to Measurement in Accounting." In *Research in Accounting Measurement*, edited by Robert K. Jaedicke; Yuji Ijiri; and Oswald Nielsen. Evanston, Illinois: American Accounting Association, 1966.

COLLINS, A. K. *The Dynamics of Organization.* Melbourne: Sun Books, 1968.

COMMITTEE ON ACCOUNTING CONCEPTS AND STANDARDS. *Accounting and Reporting Standards for Corporate Financial Statements and Preceding Statements and Supplements.* Iowa City: American Accounting Association, 1957.

COMMITTEE ON TERMINOLOGY. *Accounting Research and Terminology Bulletins.* Final ed. New York: American Institute of Certified Public Accountants, 1961.

COMMITTEE TO PREPARE A STATEMENT OF BASIC ACCOUNTING THEORY. *A Statement of Basic Accounting Theory.* Evanston, Illinois: American Accounting Association, 1966.

CYERT, RICHARD M., and MARCH, JAMES G. *A Behavioral Theory of the Firm.* Englewood Cliffs, New Jersey: Prentice-Hall, 1963.

DUTCH, ROBERT A., ed. *Roget's Thesaurus of English Words and Phrases.* Rev. ed. London: Longmans, Green and Co., 1962.

EDWARDS, EDGAR O., and BELL, PHILIP W. *The Theory and Measurement of Business Income.* Berkeley: University of California Press, 1965.

FOWLER, H. W., and FOWLER, F. G., eds. *The Concise Oxford Dictionary of Current English.* 5th ed. London: Oxford University Press, 1964.

GENERAL COUNCIL OF THE AUSTRALIAN SOCIETY OF ACCOUNTANTS. *Accounting Principles and Practices Discussed in Reports on Company Failures.* Melbourne: Australian Society of Accountants, 1966.

GILMAN, STEPHEN. *Accounting Concepts of Profit.* New York: Ronald Press Co., 1939.

GOLDBERG, LOUIS. *An Inquiry Into the Nature of Accounting.* Iowa City: American Accounting Association, 1965.

GORDON, MYRON J., and SHILLINGLAW, GORDON. *Accounting: A Management Approach.* 3rd ed. Homewood, Illinois: Richard D. Irwin, 1964.

GOVE, PHILIP BABCOCK, ed. *Webster's Third New International Dictionary of the English Language Unabridged.* Springfield, Massachusetts: G. & C. Merriam Co., 1961.

GRADY, PAUL. *Inventory of Generally Accepted Accounting Principles for Business Enterprises.* New York: American Institute of Certified Public Accountants, 1965.

GRIFFIN, CHARLES H., and WILLIAMS, THOMAS H. "Measuring Adequate Disclosure." In *Independent Auditing Standards*, edited by J. C. Ray. New York: Holt, Rinehart & Winston, 1964.

HART, BENJAMIN LOUIS JOHN. *Dynamic Systems Design.* London: Business Publications, 1964.

HENDRIKSEN, ELDON S. *Accounting Theory.* Homewood, Illinois: Richard D. Irwin, 1965.

HORNGREN, CHARLES T. "Disclosure: What Next?" In *Independent Auditing Standards*, edited by J. C. Ray. New York: Holt, Rinehart & Winston, 1964.

———. *Cost Accounting: A Managerial Emphasis.* 2nd ed. Englewood Cliffs, New Jersey: Prentice-Hall, 1967.

IJIRI, YUJI. "Physical Measures and Multi-Dimensional Accounting." In *Research in Accounting Measurement*, edited by Robert K. Jaedicke; Yuji Ijiri; and Oswald Nielsen. Evanston, Illinois: American Accounting Association, 1966.

INSTITUTE OF CHARTERED ACCOUNTANTS IN AUSTRALIA. *Recommendations on Accounting Principles.* Sydney: Institute of Chartered Accountants in Australia, 1965.

INSTITUTE OF CHARTERED ACCOUNTANTS IN ENGLAND AND WALES. *Recommendations on Accounting Principles.* London: Institute of Chartered Accountants in England and Wales, 1960.

———. *Terms Used in Published Accounts of Limited Companies.* London: Institute of Chartered Accountants in England and Wales, 1962.

JOHNSTON, TREVOR R., and JAGER, MARTIN O. *The Law and Practice of Company Accounting in Australia.* 2nd ed. Sydney: Butterworth & Co. (Australia), 1966.

LADD, DWIGHT R. *Contemporary Corporate Accounting and the Public.* Homewood, Illinois: Richard D. Irwin, 1963.

McRAE, T. W. *The Impact of Computers on Accounting.* London: John Wiley & Sons, 1964.

MATHEWS, RUSSELL. *Accounting for Economists.* Melbourne: F. W. Cheshire, 1962.

MATTESSICH, RICHARD. *Accounting and Analytical Methods.* Homewood, Illinois: Richard D. Irwin, 1964.

MAUTZ, R. K., and SHARAF, HUSSEIN A. *The Philosophy of Auditing.* Iowa City: American Accounting Association, 1961.

MOONITZ, MAURICE. *The Basic Postulates of Accounting.* New York: American Institute of Certified Public Accountants, 1961.

MOONITZ, MAURICE, and JORDON, LOUIS H. *Accounting: An Analysis of Its Problems.* Vol. 1. Rev. ed. New York: Holt, Rinehart & Winston, 1963.
MORAVEC, ADOLPH F. "Designing a Fundamental Information System." In *Accounting and the Computer*, edited by Peter F. Kerr. New York: American Institute of Certified Public Accountants, 1966.
PATON, W. A., and LITTLETON, A. C. *An Introduction to Corporate Accounting Standards.* Iowa City: American Accounting Association, 1964.
PRINCE, THOMAS R. *Extension of the Boundaries of Accounting Theory.* Cincinnati: South-Western Publishing Co., 1963.
RAY, J. C., ed. *Independent Auditing Standards.* New York: Holt, Rinehart & Winston, 1964.
ROY, ROBERT H., and MACNEILL, JAMES H. *Horizons for a Profession.* New York: American Institute of Certified Public Accountants, 1967.
SANDS, J. E. *Wealth, Income, and Intangibles.* Toronto: University of Toronto Press, 1963.
SIMON, HERBERT A. *Administrative Behavior.* 2nd ed. New York: Macmillan Co., 1961.
SPROUSE, ROBERT T., and MOONITZ, MAURICE. *A Tentative Set of Broad Accounting Principles for Business Enterprises.* New York: American Institute of Certified Public Accountants, 1962.
STUDY GROUP AT THE UNIVERSITY OF ILLINOIS. *A Statement of Basic Accounting Postulates and Principles.* Urbana: University of Illinois, 1964.
WIXON, RUFUS, ed. *Accountants' Handbook.* 4th ed. New York: Ronald Press Co., 1962.
WOOLSEY, SAM M. "Judging Materiality in Determining Requirements for Full Disclosure." In *Independent Auditing Standards*, edited by J. C. Ray. New York: Holt, Rinehart & Winston, 1964.
YORSTON, R. KEITH; SMYTH, E. BRYAN; and BROWN, S. R. *Advanced Accounting.* Vol. 1. 4th ed. Sydney: Law Book Co. of Australasia, 1957.

Journal articles

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS. "A Description of the Professional Practice of Certified Public Accountants." *Journal of Accountancy* 122 (December 1966): 61.
ANDERSON, J. "Accounting as an Aid to Management." *Australian Accountant* 38: 422-27.
Australian Accountant 38:421 (Editorial).
BALADOUNI, VAHE. "The Accounting Perspective Re-Examined." *Accounting Review* 41: 215-25.
BECKER, SELWYN, and GREEN, DAVID, JR. "Budgeting and Employee Behavior." *Journal of Business* 35: 392-402.
BECKETT, JOHN A. "The Accountant of the Future: His Skills, His Role, His Philosophy of Management." *Cost and Management* 41 (February 1967): 12-16.
BEDFORD, NORTON M. "The Nature of Future Accounting Theory." *Accounting Review*, 42: 82-85.
BEDFORD, NORTON M., and BALADOUNI, VAHE. "A Communication Theory Approach to Accountancy." *Accounting Review* 37: 650-59.
BEDFORD, NORTON M., and ONSI, MOHAMED. "Measuring the Value of Information—An Information Theory Approach." *Management Services* 3 (January-February 1966): 15-22.
BIRKETT, W. P. "Communication—The Profession and Its Clients." *Chartered Accountant in Australia* 38: 642-56.
BIRNBERG, JACOB G., and NATH, RAGHU. "Implications of Behavioral Science for Managerial Accounting." *Accounting Review* 42: 468-79.
BOYLE, ANTHONY. "Improving a Communications System." *Scientific Business* 4: 127-34.
BUCKLEY, JOHN W.; KIRCHER, PAUL; and MATHEWS, RUSSELL L. "Methodology in Accounting Theory." *Accounting Review* 43: 274-83.
CAPLAN, EDWIN H. "Behavioral Assumptions of Management Accounting." *Accounting Review* 41: 496-509.
———. "Behavioral Assumptions of Management Accounting—Report of a Field Study." *Accounting Review* 43: 342-62.
CAREY, JOHN L. "Accounting Legislation of the Future." *Journal of Accountancy* 123 (January 1967): 46-51.
CARRINGTON, A. S. "'Certainty' or Realism in Accounting—I." *Accountant* 152: 510-14.
CHAMBERS, R[AYMOND] J. "Blueprint for a Theory of Accounting." *Australian Accountant* 25: 379-86.
———. "Financial Information and the Securities Market." *Abacus* 1: 3-30.
———. "Accounting and Analytical Methods: A Review Article." *Journal of Accounting Research* 4: 101-18.
CHARNES, ABRAHAM, and COOPER, WILLIAM W. Critique of "Use of Accounting Data in Decision Making", by Kenneth E. Tigges. *Management Services* 3 (November-December 1966): 31.
DAINES, H. C. "The Changing Objectives of Accounting." *Accounting Review* 4: 94-110.
DEVINE, CARL THOMAS. "Research Methodology and Accounting Theory Formation." *Accounting Review* 35: 387-99.
DIEBOLD, JOHN, AND ASSOCIATES. "Information—Its Cost and Value." *Data and Control Systems*, April 1967, pp. 34-35.

EMOND, LIONEL J. "Management Reporting for the Accountant." *Cost and Management* 41 (April 1967): 13-17.
GOETZ, BILLY E. "Professorial Obsolescence." *Accounting Review* 42: 53-61.
———. "Transfer Prices: An Exercise in Relevancy and Goal Congruence." *Accounting Review* 42: 435-40.
GOLDBERG, L[OUIS]. "Communication." *Australian Accountant* 38: 361-62.
GYNTHER, REGINALD S. "Accounting Concepts and Behavioral Hypotheses." *Accounting Review* 42: 274-90.
———. "The Future of the Accountant and the Accountant of the Future." *Accounting Bulletin* 11: 1-15.
HACKETT, J. V. "Improving Companies' Published Accounts." *Brisbane Stock Exchange Journal*, July 1967, pp. 1-6.
HALKERSTON, K. W. "What the Investing Public Needs (No. 1)." *Australian Accountant* 24: 625-31.
HIRSCH, A. JAY. "Accounting for Fixed Assets: A New Perspective." *Accounting Review* 39: 972-78.
HUSBAND, GEORGE R. "Accounting Postulates: An Analysis of the Tentative Statement of Accounting Principles." *Accounting Review* 12: 386-401.
ISELIN, ERROL R. "Chambers on Accounting Theory." *Accounting Review* 43: 231-38.
JASPER, HAROLD W. "Future Role of the Accountant." *Management Services* 3 (January-February 1966): 51-56.
JOPLIN, H. BRUCE. "The Accountant's Role in Management Information Systems." *Journal of Accountancy* 121 (March 1966): 43-46.
KNOWLES, HENRY P., and SAXBERG, BORJE O. "Human Relations and the Nature of Man." *Harvard Business Review* 45 (March-April 1967): 22-178.
LI, DAVID H. "The Semantic Aspect of Communication Theory and Accountancy." *Journal of Accounting Research* 1: 102-7.
LITTLETON, A. C. "Suggestions for the Revision of the Tentative Statement of Accounting Principles." *Accounting Review* 14: 57-64.
McDONALD, DANIEL L. "Feasibility Criteria for Accounting Measures." *Accounting Review* 42: 662-79.
PRINCE, THOMAS R. "Information Systems for Management Control." *Accounting Review* 39: 467-72.
RAPPAPORT, ALFRED. "Establishing Objectives for Published Corporate Accounting Reports." *Accounting Review* 39: 951-62.
RESEARCH STAFF OF THE NATIONAL ASSOCIATION OF ACCOUNTANTS. "The Field of Management Accounting." *N.A.A. Bulletin* 44, sec. 3: 1-23.
SHILLINGLAW, GORDON. Critique of "Use of Accounting Data in Decision Making", by Kenneth E. Tigges. *Management Services* 3 (November-December 1966): 30.
SOLOMON, EZRA. "Accounting in the Next Decade." *Journal of Accountancy* 119: 22-26.
TIGGES, KENNETH E. "Use of Accounting Data in Decision Making." *Management Services* 3 (November-December 1966): 26-32.
TUTHILL, OLIVER W. "The Thrust of Information Technology on Management." *Financial Executive* 34 (January 1966): 18-29.
VATTER, WILLIAM J. "Postulates and Principles." *Journal of Accounting Research* 1: 179-97.
———. Critique of "Use of Accounting Data in Decision Making", by Kenneth E. Tigges. *Management Services* 3 (November-December 1966): 30-31.
WRIGHT, F. K. "A Theory of Inventory Measurement." *Abacus* 1: 150-55.
———. "Capacity for Adaptation and the Asset Measurement Problem." *Abacus* 3: 74-79.

Others

BAXT, R. "True and Fair View—A Legal Analysis." *Papers Presented at A.A.U.T.A. Convention 1967.* Australasian Association of University Teachers of Accounting, 1967.
BRANFORD, B. L. "Accounting in Micro-Economics: Determination of Financial Position." Unpublished paper, Department of Accountancy, University of Queensland, 1967.
CHAMBERS, R[AYMOND] J. "The Moonitz and Sprouse Studies on Postulates and Principles." *Papers Presented at A.A.U.T.A. Conferences 1962 and 1964.* Australasian Association of University Teachers of Accounting, 1964.
GOLDBERG, L[OUIS]. "The Present State of Accounting Theory." *Papers Presented at A.A.U.T.A. Conferences 1962 and 1964.* Australasian Association of University Teachers of Accounting, 1964.
HACKETT, J. V. "What Next for the Big Miners?" *Sunday Mail*, 4 February 1968.
HOLMES, E. McL. "Accounting and Information Science." *Papers Presented at A.A.U.T.A. Conference 1966.* Australasian Association of University Teachers of Accounting, 1966.
"Laws May Cut Flow of New Directors." *Australian*, 28 December 1967.
LEFTWICH, RICHARD W. "A Critical Analysis of Some Behavioural Assumptions Underlying R. J. Chambers' *Accounting, Evaluation and Economic Behavior*." University of Queensland, Department of Accountancy Paper, vol. 1, no. 7, 1969.
"Many Managers Misusing Computers." *Australian*, 23 May 1968.
OFFICER, R. R. "Decision Making under Risk: A Brief Examination of the Bayesian Approach and an Empirical Study of Utility Analysis in Agriculture." Master's thesis, Department of Farm Management, University of New England, 1967.

NOTES TO THE TEXT

I. Introduction

1 The term "methodology" has been defined as "a body of methods . . . a particular procedure or set of procedures" (*Webster's Third New International Dictionary of the English Language Unabridged*, s.v. "methodology").

2 For a discussion of methodologies, see Eldon S. Hendriksen, *Accounting Theory* (Homewood, Illinois: Richard D. Irwin, 1965), pp. 2-11, or John W. Buckley, Paul Kircher, and Russell L. Mathews, "Methodology in Accounting Theory", *Accounting Review* 43 (April 1968): 274-83.

3 Adapted from a diagram in Buckley, Kircher, and Mathews, "Methodology in Accounting Theory", p. 280.

4 Most writers do not show this as being the first step in an accounting theory based on deductive methodology. Most completely ignore the matter, and contend that the first step is the assertion of objectives. This writer, however, agrees with Gynther that the concepts lie at the very base of accounting theory. (Reginald S. Gynther, "Accounting Concepts and Behavioral Hypotheses", *Accounting Review* 42 [April 1967]: 274-90.) As will be seen later in the section, it is believed that they have some bearing on the statement of objectives. It is, therefore, contended that the specification of the basic concepts of accounting is, of necessity, the first step in the derivation of an accounting theory.

5 Buckley, Kircher, and Mathews, "Methodology in Accounting Theory", p. 281.

6 Hendriksen, *Accounting Theory*, p. 12.

7 *Ibid.*, p. 3.

8 Raymond J. Chambers, *Accounting, Evaluation and Economic Behavior* (Englewood Cliffs, New Jersey: Prentice-Hall, 1966), p. 6.

9 The statement of objectives is a necessary part of most methodologies. However, in some methodologies the form of such a statement is considerably different from that in deductive methodology. For example, in the pragmatic approach the objectives are simply "usefulness". In the ethical approach they are simply "justice, truth, and fairness". Whilst it is not denied that accounting information should be useful, just, true, and fair, it will be seen in this study that objectives in an accounting theory based on deductive methodology encompass much more than this. It has been stated that the aim of this study is to produce a statement of objectives relevant for deductive methodology. Such a statement will, therefore, not necessarily be relevant to other methodologies.

10 In fact, Chambers uses the term "function" rather than "objectives". (For example see Chambers, *Accounting, Evaluation and Economic Behavior*, p. 99.)

11 For example, *Roget's Thesaurus of English Words and Phrases*, s. v. "objectives"; *Webster's Third New International Dictionary*, s.v. "objectives".

12 R[aymond] J. Chambers, "The Moonitz and Sprouse Studies on Postulates and Principles", in *Papers Presented at A.A.U.T.A. Conferences 1962 and 1964* (Australasian Association of University Teachers of Accounting, 1964), p. 36.

13 See below, p. 14.

14 L[ouis] Goldberg, "The Present State of Accounting Theory", in *Papers Presented at A.A.U.T.A. Conferences 1962 and 1964* (Australasian Association of University Teachers of Accounting, 1964), p. 2.

15 This matter will be reconsidered in section 6 when the type of information to be included in the scope of accounting is discussed.

16 Hendriksen, *Accounting Theory*, p. 86.

17 *Ibid.*, p. 81.

18 *Ibid.*, p. 84.

19 Chambers, "The Moonitz and Sprouse Studies on Postulates and Principles", p. 36.

20 *Ibid.*

21 See above, p. 7.

22 See above, p. 6.

23 Hendriksen, *Accounting Theory*, p. 81.

24 See above, p. 7.

25 Research Staff of the National Association of Accountants, "The Field of Management Accounting", *N. A. A. Bulletin* 44, sec. 3 (June 1963): 15.

26 See above, p. 8.

27 Thomas R. Prince, *Extension of the Boundaries of Accounting Theory* (Cincinnati: South-Western Publishing Co., 1963), p. 34.

28 Hendriksen, *Accounting Theory*, p. 81; J. E. Sands, *Wealth, Income, and Intangibles* (Toronto: University of Toronto Press, 1963), pp. 3-4; Benjamin Louis John Hart, *Dynamic Systems Design* (London: Business Publications, 1964), p. 12; Carl Thomas Devine, "Research Methodology and Accounting Theory Formation", *Accounting Review* 35 (July 1960): 399; William J. Vatter, "Postulates and Principles", *Journal of Accounting Research* 1 (Autumn 1963): 183; George R. Husband, "Accounting Postulates: An Analysis of the Tentative Statement of Accounting Principles", *Accounting Review* 12 (December 1937): 386; A. C. Littleton, "Suggestions for the Revision of the Tentative Statement of Accounting Principles", *Accounting Review* 14 (March 1939): 57; Alfred Rappaport, "Establishing Objectives for Published Corporate Accounting Reports", *Accounting Review* 39 (October 1964): 962.

29 See above, p. 8.
30 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 7.
31 Rappaport, "Establishing Objectives for Published Corporate Accounting Reports", p. 952.
32 Paul Grady, *Inventory of Generally Accepted Accounting Principles for Business Enterprises* (New York: American Institute of Certified Public Accountants, 1965), p. 2; H. C. Daines, "The Changing Objectives of Accounting", *Accounting Review* 4 (June 1929): 94.
33 Louis Goldberg, *An Inquiry into the Nature of Accounting* (Iowa City: American Accounting Association, 1965), pp. 24-26.
34 R[aymond] J. Chambers, "Accounting and Analytical Methods: A Review Article", *Journal of Accounting Research* 4 (Spring 1966): 103.
35 A. S. Carrington, " 'Certainty' or Realism in Accounting—1", *Accountant* 152 (17 April 1965): 513.
36 Rufus Wixon, ed., *Accountants' Handbook*, 4th ed. (New York: Ronald Press Co., 1962), p. 1.1.
37 Rappaport, "Published Corporate Accounting Reports", p. 952.
38 W. A. Paton and A. C. Littleton, *An Introduction to Corporate Accounting Standards* (Iowa City: American Accounting Association, 1964), p. 1.
39 Russell Mathews, *Accounting for Economists* (Melbourne: F. W. Cheshire, 1962), p. 4.
40 Study Group at the University of Illinois, *A Statement of Basic Accounting Postulates and Principles* (Urbana: University of Illinois, 1964), pp. 1-4; Maurice Moonitz, *The Basic Postulates of Accounting* (New York: American Institute of Certified Public Accountants, 1961), p. 23; Robert T. Sprouse and Maurice Moonitz, *A Tentative Set of Broad Accounting Principles for Business Enterprises* (New York: American Institute of Certified Public Accountants, 1962), pp. 1-4.
41 Institute of Chartered Accountants in England and Wales, *Recommendations on Accounting Principles* (London: Institute of Chartered Accountants in England and Wales, 1960); Institute of Chartered Accountants in Australia, *Recommendations on Accounting Principles* (Sydney: Institute of Chartered Accountants in Australia, 1965).
42 Committee on Terminology, *Accounting Research and Terminology Bulletins,* final ed. (New York: American Institute of Certified Public Accountants, 1961), p. 9.
43 Richard Mattessich, *Accounting and Analytical Methods* (Homewood, Illinois: Richard D. Irwin, 1964), p. 17.
44 American Institute of Certified Public Accountants, "A Description of the Professional Practice of Certified Public Accountants", *Journal of Accountancy* 122 (December 1966): 61.
45 Committee to Prepare a Statement of Basic Accounting Theory, *A Statement of Basic Accounting Theory* (Evanston, Illinois: American Accounting Association, 1966), pp. 4-5.
46 Prince, *Extension of the Boundaries of Accounting Theory*, p. 38.
47 The methodology used in this study to derive a statement of accounting objectives should be distinguished from deductive methodology. Deductive methodology is used to derive a complete general theory of accounting. A statement of objectives merely comprises one element of such a theory. The various expositions of deductive methodology do not state, however, precisely how "objectives" should be derived within the approach. The writer has, therefore, been forced to create his own methodology to use in the derivation of accounting objectives.
48 If these needs are not being met in practice, then the problem is merely one of rectifying practice.
49 F. K. Wright, "A Theory of Inventory Measurement", *Abacus* 1 (December 1965): 151.
50 Buckley, Kircher, and Mathews, "Methodology in Accounting Theory", p. 277.
51 R[aymond] J. Chambers, "Blueprint for a Theory of Accounting", *Australian Accountant* 25 (September 1955): 379.
52 See above, p. 7.
53 Entities include sole proprietors, partnerships, corporations, government departments, clubs, associations, and other organizations.
54 Yuji Ijiri, "Physical Measures and Multi-Dimensional Accounting", in *Research in Accounting Measurement*, ed. Robert K. Jaedicke, Yuji Ijiri, and Oswald Nielsen (Evanston, Illinois: American Accounting Association, 1966), p. 161 (emphasis added).
55 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 56 (emphasis added).
56 *Ibid.*, p. 147 (emphasis added).
57 Wixon, *Accountants' Handbook*, p. 1.8.
58 Rappaport, "Published Corporate Accounting Reports", p. 953 (emphasis added).
59 Billy E. Goetz, "Professorial Obsolescence", *Accounting Review* 42 (January 1967): 59.
60 Rappaport, "Published Corporate Accounting Reports", p. 953 (emphasis added).
61 *Ibid.*, p. 952.

II. The basic concepts of accounting

1 Chambers defines a firm's participants as follows: "The participants of firms are all persons for which the firm is the focus of one or more of their interests. (Participants include, for example, constituents, financiers, workers, suppliers, customers)". The constituents are the "residual equity holders". (Chambers, *Accounting, Evaluation and Economic Behavior*, p. 215.)
2 Goldberg, "The Present State of Accounting Theory", p. 2.
3 See above, p. 7.

4 Gynther contends that the social responsibilities concept (which is probably the next most common view) can be encompassed within the entity concept. If this is true, further weight is lent to this limitation of discussion. (Gynther, "Accounting Concepts and Behavioral Hypotheses", p. 278.)
5 *Ibid.*, p. 289.
6 *Ibid.*
7 B. L. Branford, "Accounting in Micro-Economics: Determination of Financial Position" (Unpublished paper, Department of Accountancy, University of Queensland, 1967), p. 21.
8 Goldberg, "The Present State of Accounting Theory", p. 2.
9 Gynther, "Accounting Concepts and Behavioral Hypotheses", p. 275.
10 *Ibid.*, p. 276.
11 R. Eells and C. Walton, *Conceptual Foundations of Business*, p. 149, as quoted in Gynther, "Accounting Concepts and Behavioral Hypotheses", p. 276
12 Gynther, "Accounting Concepts and Behavioral Hypotheses", p. 275.
13 *Ibid.*, pp. 284-85.
14 Managers of both the Brisbane and the Melbourne Stock Exchanges have supported this contention. ("Laws May Cut Flow of New Directors", *Australian*, 28 December 1967, p. 10; J. V. Hackett, "Improving Companies' Published Accounts", *Brisbane Stock Exchange Journal*, July 1967, p. 2.)
15 Gynther, "Accounting Concepts and Behavioral Hypotheses", p. 289.
16 *Ibid.*
17 See above, pp. 13-15.

III. Information

1 See above, p. 13.
2 Grady, *Inventory of Generally Accepted Accounting Principles.*
3 Norton M. Bedford and Mohamed Onsi, "Measuring the Value of Information—An Information Theory Approach", *Management Services* 3 (January-February 1966): 15.
4 E. McL. Holmes, "Accounting and Information Science", in *Papers Presented at A.A.U.T.A. Conference 1966* (Australasian Association of University Teachers of Accounting, 1966), p. 115.
5 T. W. McRae, *The Impact of Computers on Accounting* (London: John Wiley & Sons, 1964), p. vii.
6 Holmes, "Accounting and Information Science", p. 125.
7 Jerome Rothstein, "Information, Measurement, and Quantum Mechanics", *Science* 113: 172, as quoted in Bedford and Onsi, "Measuring the Value of Information", p. 16.
8 William J. Vatter, Critique of "Use of Accounting Data in Decision Making", by Kenneth E. Tigges, in *Management Services* 3 (November-December 1966): 31.
9 Chambers, *Accounting, Evaluation, and Economic Behavior*, p. 162.
10 Billy E. Goetz, "Transfer Prices: An Exercise in Relevancy and Goal Congruence", *Accounting Review* 42 (July 1967): 435.
11 *Ibid.*
12 Oliver W. Tuthill, "The Thrust of Information Technology on Management", *Financial Executive* 34 (January 1966): 26.
13 H. Bruce Joplin, "The Accountant's Role in Management Information Systems", *Journal of Accountancy* 121 (March 1966): 43.
14 Bedford and Onsi, "Measuring the Value of Information", p. 16; Thomas R. Prince, "Information Systems for Management Control", *Accounting Review* 39 (April 1964): 469.
15 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 145.
16 *Ibid.*, p. 146.
17 Bedford and Onsi, "Measuring the Value of Information", p. 16.
18 Donald M. Mackey, "Information Theory and Human Information Systems", *Impact of Science on Society* 8: 88, as quoted in Bedford and Onsi, "Measuring the Value of Information", p. 16.
19 R. R. Officer, "Decision Making under Risk: A Brief Examination of the Bayesian Approach and an Empirical Study of Utility Analysis in Agriculture" (Master's thesis, Department of Farm Management, University of New England, 1967), p. 6.
20 *Ibid.*, pp. 9-10.
21 Herbert A. Simon, "Theories of Decision-Making in Economics and Behavioral Science", *American Economic Review* 49: 270, as quoted in Bedford and Onsi, "Measuring the Value of Information", p. 17.
22 Charles T. Horngren, *Cost Accounting: A Managerial Emphasis*, 2nd ed. (Englewood Cliffs, New Jersey: Prentice-Hall, 1967), p. 790.
23 Bedford and Onsi, "Measuring the Value of Information", p. 17; John Diebold and Associates, "Information—Its Cost and Value", *Data and Control Systems*, April 1967, p. 34; Adolph F. Moravec, "Designing a Fundamental Information System", in *Accounting and the Computer*, ed. Peter F. Kerr (New York: American Institute of Certified Public Accountants, 1966), p. 292.
24 Daniel L. McDonald, "Feasibility Criteria for Accounting Measures", *Accounting Review* 42 (October 1967): 666.
25 *Concise Oxford Dictionary of Current English*, 5th ed., p. 250.

26 McDonald, "Feasibility Criteria", p. 677; Diebold and Associates, "Information—Its Cost and Value", p. 34.
27 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 64.
28 *Ibid.*, p. 63.

IV. Uses, goals, and behaviour

1 See above, p. 8.
2 See above, p. 13.
3 It has previously been pointed out in section 2 that the *basic concepts* of accounting (which underlie accounting objectives) have behavioural sources. The question to be considered in this section, however, is whether the scope of accounting is such that *postulates* regarding human behaviour should be included in an accounting theory based on deductive methodology.
4 It should be noted that, strictly speaking, entities do not have goals. Caplan succinctly explains this as follows:

> "A. Organizations are coalitions of individual participants. Strictly speaking, the organization itself, which is 'mindless', cannot have goals—only the individuals can have goals.
> B. Those objectives which are usually viewed as organizational goals are, in fact, the objectives of the dominant members of the coalition, subject to whatever constraints are imposed by the other participants and by the external environment of the organization."

(Edwin H. Caplan, "Behavioral Assumptions of Management Accounting", *Accounting Review* 41 [July 1966]: 498.) Similarly, the behaviour of entities is determined by its participants.
5 See above, p. 13.
6 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 97.
7 A. K. Collins, *The Dynamics of Organization* (Melbourne: Sun Books, 1968), p. 38.
8 Bedford and Onsi, "Measuring the Value of Information", p. 17.
9 Chambers, "The Moonitz and Sprouse Studies on Postulates and Principles", p. 36.
10 Grady, *Inventory of Generally Accepted Accounting Principles*, p. 54.
11 Hendriksen, *Accounting Theory*, p. 6.
12 *Ibid.*, p. 7.
13 Some accountants have criticized traditional theory on the grounds that "general acceptance" is not necessarily related to usefulness. For example, Hendriksen says that "a significant limitation of the pragmatic approach is that generally accepted practice is not necessarily the most useful from the point of view of providing information relevant to good decision making". (*Ibid.*, p. 7.) Nevertheless, the fact remains that in traditional theory "general acceptance" *is* the test for usefulness and specific uses are ignored.
14 Caplan, "Behavioral Assumptions of Management Accounting", p. 499.
15 Jacob G. Birnberg and Raghu Nath, "Implications of Behavioral Science for Managerial Accounting", *Accounting Review* 42 (July 1967): 468.
16 Caplan, "Behavioral Assumptions of Management Accounting", p. 497.
17 See above, pp. 26-27.
18 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 14.
19 *Ibid.*, pp. 6-7 (emphasis added).
20 *Ibid.*, pp. 154-56.
21 *Ibid.*, p. 149.
22 *Ibid.*, p. 155.
23 *Ibid.*, p. 156.
24 *Ibid.*, p. 164.
25 See above, p. 14.
26 This example is not meant to imply that the writer believes employees are rightful recipients of accounting information. This matter will not be considered until the following section. The example is merely designed to illustrate the difference between information relevant in general and information relevant in particular.
27 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 56.
28 *Ibid.*, p. 147.
29 *Ibid.*, p. 97.
30 *Ibid.*, p. 156.
31 Some (including this writer) would dispute that Chambers' model actually produces information relevant in general. However, since the aim of this section (see p. 22) is merely to ascertain whether behaviour and specific uses and goals are a valid part of the scope of accounting, this matter will not be pursued here. For a critical examination of the matter, see Richard W. Leftwich, *A Critical Analysis of Some Behavioural Assumptions Underlying R. J. Chambers' "Accounting, Evaluation and Economic Behavior"* (University of Queensland Department of Accountancy Paper, vol. 1, no. 7, 1969).
32 For example, Caplan, "Behavioral Assumptions of Management Accounting"; Birnberg and Nath, "Implications of Behavioral Science".
33 These writers have confined their attention to management accounting and do not say whether or not their arguments apply to financial accounting. As will be seen later in the section (pp. 26-27),

this writer contends that their argument (that behavioural assumptions are implied if they are not explicitly stated) applies to the *whole* accounting discipline, i.e. financial accounting as well as management accounting.
34 Caplan, "Behavioral Assumptions of Management Accounting", p. 499 (emphasis added).
35 Edwin H. Caplan, "Behavioral Assumptions of Management Accounting—Report of a Field Study", *Accounting Review* 43 (April 1968).
36 *Ibid.*, p. 355.
37 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory.*
38 *Ibid.*, p. 68.
39 *Ibid.*, p. 63.
40 *Ibid.*, p. 9 (emphasis added).
41 *Ibid.*, p. 22 (emphasis added).
42 *Ibid.*, p. 14.
43 *Ibid.*
44 *Ibid.*, p. 42 (emphasis added).
45 *Ibid.*, p. 7.
46 *Ibid.*, p. 4.
47 *Ibid.*, p. 70.
48 *Ibid.*, p. 66.
49 Norton M. Bedford, "The Nature of Future Accounting Theory", *Accounting Review* 42 (January 1967): 85.
50 Another factor in a decision process which causes the information relevant to a decision to depend on the process is the behaviour of the decision maker. It has already been pointed out that the committee believes behaviour to be a valid part of the scope of accounting. For a discussion of the effect of behaviour on the relevancy of information, see Leftwich, *A Critical Analysis of Some Behavioural Assumptions Underlying R. J. Chambers' "Accounting, Evaluation and Economic Behavior"*.
51 Bedford, "The Nature of Future Accounting Theory", p. 83.
52 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 69.
53 *Ibid.*, p. 70.
54 See above, p. 13.
55 See above, p. 23.
56 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 69.
57 See above, p. 25.
58 Leftwich, p. 236.
59 For example, Chester I. Barnard, *The Functions of the Executive* (Cambridge, Massachusetts: Harvard University Press, 1962); Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm* (Englewood Cliffs, New Jersey: Prentice-Hall, 1963); Herbert A. Simon, *Administrative Behavior*, 2nd ed. (New York: Macmillan Co., 1961).
60 Henry P. Knowles and Borje O. Saxberg, "Human Relations and the Nature of Man", *Harvard Business Review* 45 (March-April 1967): 23.
61 Leftwich, *Some Behavioural Assumptions*, p. 220.
62 Caplan "Behavioral Assumptions of Management Accounting", p. 509.
63 Selwyn Becker and David Green, Jr., "Budgeting and Employee Behavior", *Journal of Business* 35 (October 1962): 402.
64 *Ibid.*, p. 399.
65 As will be seen in section 6, Chambers also excludes budgets and standards from the scope of accounting.
66 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 162.
67 *Ibid.*, pp. 161-62.
68 See above, p. 24.
69 See above, p. 25.
70 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 69.
71 It will be seen in the following section that accounting reports to decision makers both inside and outside entities.
72 Some people may question that information relevant in general even exists. Such a contention does not, nevertheless, affect the conclusions of this study, for if it were true, *all* information would be relevant in particular. This study has included such information within the scope of accounting. A consideration of the question of whether information relevant in general actually exists is, however, outside the scope of this research.
73 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 22 (emphasis added).
74 See above, p. 22.

V. The recipients of accounting information

1 See above, p. 14.
2 Sprouse and Moonitz, *A Tentative Set of Broad Accounting Principles*, p. 1 (emphasis added).

3 See above, p. 23.
4 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*. It was demonstrated in the previous section (p. 25) that the committee advocated the reporting of information relevant in particular.
5 Goetz, "Professorial Obsolescence", pp. 58-61. Goetz does not actually use the term "information relevant in particular". He does, however, advocate the reporting of this information. For example, he says that accounting should report "the information that each group of recipients desires". (*Ibid.*, p. 58.) He then gives examples of the information he considers each group desires. These contain much information relevant in particular.
6 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 22 (emphasis added).
7 *Ibid.*, p. 20.
8 Goetz, "Professorial Obsolescence", p. 58.
9 *Ibid.*
10 R. Baxt, "True and Fair View—A Legal Analysis", in *Papers Presented at A.A.U.T.A. Convention 1967* (Australasian Association of University Teachers of Accounting, 1967), p. 37.
11 *Ibid.*, p. 42.
12 For example, see R[aymond] J. Chambers, "Financial Information and the Securities Market", *Abacus* 1 (September 1965): 3-30.
13 Robert D. Hay, "Management Thinking Concerning Corporate Annual Reports", *Accounting Review* 30: 444, as quoted in R. K. Mautz and Hussein A. Sharaf, *The Philosophy of Auditing* (Iowa City: American Accounting Association, 1961), p. 193.
14 Stephen Gilman, *Accounting Concepts of Profit* (New York: Ronald Press Co., 1939), p. 12; Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 20; Goetz, "Professorial Obsolescence", p. 58; Hackett, "Improving Companies' Published Accounts", p. 1; American Institute of Certified Public Accountants, "A Description of the Professional Practice of Certified Public Accountants", p. 61.
15 See above, p. 30.
16 See above, p. 22.
17 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 19.

VI. The type of information

1 Rappaport, "Published Corporate Accounting Reports", p. 953. It should be noted that Rappaport uses the term "measurement" rather loosely in this quotation. Strictly speaking, *ex ante* calculation involves valuation or estimation rather than measurement. For a detailed discussion of this matter, see Chambers, *Accounting, Evaluation and Economic Behavior*, pp. 83-88. However, the issues to which Rappaport is referring are clear.
2 The historical record assumption "postulates that transactions are to be recorded objectively as historical events". (Mathews, *Accounting for Economists*, p. 113.)
3 Chambers, *Accounting, Evaluation and Economic Behavior*, pp. 78-102. It should be noted that, whilst Chambers says he has excluded anticipatory calculation from his model, there are some (including this writer) who consider that, in actual fact, he has not. For the arguments supporting this contention, see Errol R. Iselin, "Chambers on Accounting Theory", *Accounting Review* 43 (April 1968): 231-38, and F. K. Wright, "Capacity for Adaptation and the Asset Measurement Problem", *Abacus* 3 (August 1967): 78.
4 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 97.
5 *Ibid.*, p. 80.
6 *Ibid.*, p. 101.
7 *Ibid.*, p. 96.
8 *Ibid.*, p. 84. It should be noted that, whilst there is, strictly speaking, no "present" (one minute ago being the past and one minute from now being the future), Chambers has stated that he considers the present to be the "immediate past". (*Ibid.*, p. 81.)
9 *Ibid.*, p. 83.
10 *Ibid.*, p. 97.
11 *Ibid.*, p. 98.
12 Holmes, "Accounting and Information Science", p. 121.
13 For example, Dwight R. Ladd, *Contemporary Corporate Accounting and the Public* (Homewood, Illinois: Richard D. Irwin, 1963), p. 11; Myron J. Gordon and Gordon Shillinglaw, *Accounting: A Management Approach*, 3rd ed. (Homewood, Illinois: Richard D. Irwin, 1964), p. 20; Maurice Moonitz and Louis H. Jordan, *Accounting: An Analysis of Its Problems*, rev. ed. (New York: Holt, Rinehart and Winston, 1963), 1:4; American Institute of Certified Public Accountants, "A Description of the Professional Practice of Certified Public Accountants", p. 61; Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 5; Research Staff of the National Association of Accountants, "The Field of Management Accounting", p. 6.
14 Tuthill, "The Thrust of Information Technology on Management", p. 26.
15 Goetz, "Professorial Obsolescence", p. 59.
16 J. V. Hackett, "What Next for the Big Miners?" *Sunday Mail*, 4 February 1968, p. 28.

17 A. Jay Hirsch, "Accounting for Fixed Assets: A New Perspective", *Accounting Review* 39 (October 1964): 978.
18 For example see William G. Maas, "What to Tell Security Analysts", *Public Relations Journal*, March 1955, pp. 5-6, as quoted in Mautz and Sharaf, *The Philosophy of Auditing*, p. 180, and Sidney A. Hunt, "Successful Corporate Relations with the Investment Community", *Commercial and Financial Chronicle* 188: 414, as quoted in Mautz and Sharaf, *The Philosophy of Auditing*, p. 187.
19 Kenneth E. Tigges, "Use of Accounting Data in Decision Making", *Management Services* 3 (November-December 1966): 27.
20 Goetz, "Professorial Obsolescence", p. 57.
21 Edgar O. Edwards and Philip W. Bell, *The Theory and Measurement of Business Income* (Berkeley: University of California Press, 1965), pp. 283-84.
22 Carrington, " 'Certainty' or Realism in Accounting—I", p. 510.
23 Holmes, "Accounting and Information Science", p. 122.
24 For example, Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, pp. 5, 63; Harold W. Jasper, "Future Role of the Accountant", *Management Services* 3 (January-February 1966): 55; Neil C. Churchill and Andrew C. Stedry, "Some Developments in Management Science and Information Systems with Respect to Measurement in Accounting", in *Research in Accounting Measurement*, ed. Robert K. Jaedicke, Yuji Ijiri, and Oswald Nielsen (Evanston, Illinois: American Accounting Association, 1966), p. 44; Ezra Solomon, "Accounting in the Next Decade", *Journal of Accountancy* 119 (January 1965): 24-25.
25 Holmes, "Accounting and Information Science", p. 122.
26 This need was demonstrated in the above discussion.
27 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*.
28 *Ibid.*, p. 7.
29 The writer considers that "relevance", rather than being a standard of *accounting* information, is more correctly a basic concept of *all* information. As has been pointed out in section 3, the word "information" used in the technical sense should imply "relevance". There should, therefore, be no need to specify it as a standard.
30 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 7.
31 *Ibid.*
32 *Ibid.*, p. 16.
33 *Ibid.*, p. 55.
34 *Ibid.*
35 *Roget's Thesaurus* shows "financial" and "monetary" as being synonymous.
36 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 102 (emphasis added).
37 Mattessich, *Accounting and Analytical Methods*, p. 17.
38 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, pp. 12-13.
39 J. Anderson, "Accounting as an Aid to Management", *Australian Accountant* 38 (August 1968): 427 (emphasis added).
40 Gordon and Shillinglaw, *Accounting: A Management Approach*, p. 3; Holmes, "Accounting and Information Science", p. 126.
41 For further examples see Goetz, "Professorial Obsolescence", pp. 58-59, and Gordon Shillinglaw, Critique of "Use of Accounting Data in Decision Making", by Kenneth E. Tigges, in *Management Services* 3 (November-December 1966): 30.
42 Lionel J. Emond, "Management Reporting for the Accountant", *Cost and Management* 41 (April 1967): 15.
43 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 38.
44 Carrington, " 'Certainty' or Realism in Accounting—I", p. 510; Churchill and Stedry, "Some Developments in Management Science and Information Systems", in *Research in Accounting Measurement*, pp. 30-32.
45 Shillinglaw, Critique of "Use of Accounting Data in Decision Making", p. 30.
46 Churchill and Stedry, "Some Developments in Management Science and Information Systems", in *Research in Accounting Measurement*, p. 40.
47 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 12.
48 *Ibid.*
49 For example, Jasper, "Future Role of the Accountant"; Abraham Charnes and William W. Cooper, Critique of "Use of Accounting Data in Decision Making", by Kenneth E. Tigges, in *Management Services* 3 (November-December 1966): 31; John L. Carey, "Accounting Legislation of the Future", *Journal of Accountancy* 123 (January 1967): 46-51.
50 Charnes and Cooper, Critique of "Use of Accounting Data in Decision Making", p. 31.
51 American Institute of Certified Public Accountants, "A Description of the Professional Practice of Certified Public Accountants", p. 61.
52 Churchill and Stedry, "Some Developments in Management Science and Information Systems", in *Research in Accounting Measurement*, p. 40.
53 Carrington, " 'Certainty' or Realism in Accounting—I", p. 510.
54 Mautz and Sharaf, *The Philosophy of Auditing*, p. 196.
55 Editorial, *Australian Accountant* 38 (August 1968): 421.

56 Shillinglaw, Critique of "Use of Accounting Data in Decision Making", p. 30; Goetz, "Professorial Obsolescence", pp. 58-59.
57 For example, Jasper, "Future Role of the Accountant", p. 55; Charnes and Cooper, Critique of "Use of Accounting Data in Decision Making", p. 31; Carey, "Accounting Legislation in the Future", pp. 46-51; American Institute of Certified Public Accountants, "A Description of the Professional Practice of Certified Public Accountants", p. 61.
58 Jasper, "Future Role of the Accountant", p. 52.
59 Churchill and Stedry, "Some Developments in Management Science and Information Systems", in *Research in Accounting Measurement*, p. 40.
60 Goetz, "Professorial Obsolescence", p. 60.
61 Robert H. Roy and James H. MacNeill, *Horizons for a Profession* (New York: American Institute of Certified Public Accountants, 1967).
62 *Ibid.*, pp. 44-49, as cited by Reginald S. Gynther, "The Future of the Accountant and the Accountant of the Future", *Accounting Bulletin* 11 (May 1967): 5.
63 McRae, *The Impact of Computers on Accounting*, p. 233.
64 See above, p. 22.
65 See above, p. 15.
66 See above, p. 17.

VII. The quantity of information

1 See above, p. 8.
2 For the definition of this concept, see above, p. 21.
3 Hendriksen, *Accounting Theory*, p. 452.
4 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 38.
5 Tuthill, "The Thrust of Information Technology on Management", p. 22.
6 "Many Managers Misusing Computers", *Australian*, 23 May 1968, p. 11.
7. Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 22 (emphasis added).
8 See above, pp. 27-28.
9 For a detailed consideration of the problem, and means of meeting it, see pp. 27-28.
10 Charles H. Griffin and Thomas H. Williams, "Measuring Adequate Disclosure", in *Independent Auditing Standards*, ed. J. C. Ray (New York: Holt, Rinehart and Winston, 1964), p. 388.
11 R. Keith Yorston, E. Bryan Smyth, and S. R. Brown, *Advanced Accounting*, 4th ed. (Sydney: Law Book Co. of Australasia, 1957), 1: 10-11.
12 For example, the concept of materiality also covers the accuracy of recorded information. This question is considered to relate to the functioning of accounting rather than to its function and will, therefore, not be considered in this study. The concept of disclosure covers the *form* of reported information as well as the *quantity* reported. The question of form will be considered in section 8.
13 Grady, *Inventory of Generally Accepted Accounting Principles*, p. 38.
14 Mautz and Sharaf, *The Philosophy of Auditing*, p. 171; Wixon, *Accountants' Handbook*, p. 2.7.
15 Committee on Accounting Concepts and Standards, *Accounting and Reporting Standards for Corporate Financial Statements and Preceding Statements and Supplements* (Iowa City: American Accounting Association, 1957), p. 8; J. C. Ray, ed., *Independent Auditing Standards* (New York: Holt, Rinehart and Winston, 1964), p. 449; Sam M. Woolsey, "Judging Materiality in Determining Requirements for Full Disclosure", in *Independent Auditing Standards*, ed. J. C. Ray (New York: Holt, Rinehart & Winston, 1964), p. 449.
16 U.S. Securities and Exchange Commission, *Regulation S-X*, rule 1-02, as quoted in Grady, *Inventory of Generally Accepted Accounting Principles*, p. 38; Griffin and Williams, "Measuring Adequate Disclosure", in *Independent Auditing Standards*, p. 393.
17 Committee on Accounting Concepts and Standards, *Accounting and Reporting Standards*, p. 8; Wixon, *Accountants' Handbook*, p. 2.7.
18 Mautz and Sharaf, *The Philosophy of Auditing*, p. 171.
19 Rappaport, "Published Corporate Accounting Reports", p. 952.
20 The writer doubts if many published accounting reports provide sufficient information to satisfy the needs of, say, a "reasonably informed investor". However, if this is so, it merely indicates that traditional accounting theory is not, in some instances, being applied properly in practice.
21 Mautz and Sharaf, *The Philosophy of Auditing*, p. 170.
22 Grady, *Inventory of Generally Accepted Accounting Principles*, p. 350.
23 Moonitz, *The Basic Postulates of Accounting*, p. 47.
24 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 52. The committee does, however, go on to say that "this rationale should not be abused". (*Ibid.*) They would not, therefore, agree with the practice mentioned earlier, whereby many managers use confidentiality as an excuse for reporting very little information.
25 Mautz and Sharaf, *The Philosophy of Auditing*, pp. 169-200.
26 *Ibid.*, p. 182.
27 Stockbrokers who are not financial experts themselves, or who do not employ such people, also consult investment counsellors.
28 Mautz and Sharaf, *The Philosophy of Auditing*, p. 177.

29 *Ibid.*, p. 182.
30 Charles T. Horngren, "Disclosure: What Next?" in *Independent Auditing Standards*, ed. J. C. Ray (New York: Holt, Rinehart and Winston, 1964), p. 397.
31 *Ibid.*, p. 409.
32 Mautz and Sharaf, *The Philosophy of Auditing*, p. 176.
33 *Ibid.*, p. 178.
34 K. W. Halkerston, "What the Investing Public Needs (No. 1)", *Australian Accountant* 34 (November 1964): 626.
35 Mautz and Sharaf, *The Philosophy of Auditing*, p. 191.
36 See quotation above, p. 45.
37 Mautz and Sharaf, *The Philosophy of Auditing*, p. 194.
38 Hendriksen, *Accounting Theory*, pp. 455-56.
39 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 22 (emphasis added).
40 There is also evidence (Mautz and Sharaf, *The Philosophy of Auditing*, p. 176; General Council of the Australian Society of Accountants, *Accounting Principles and Practices Discussed in Reports on Company Failures* [Melbourne: Australian Society of Accountants, 1966], p. 42)that the more financially powerful external parties are sometimes able to obtain privately extra information. However, the writer believes that this extra information should be available to these parties all of the time rather than just some of the time. It is also believed that they should not have to go to the trouble of negotiating for it. Further, as will be seen later, it is believed that the extra information should be provided to *all* external parties and not just to those who are financially powerful.
41 Mautz and Sharaf, *The Philosophy of Auditing*, p. 191.
42 Hendriksen, *Accounting Theory*, p. 452.
43 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 22 (emphasis added).
44 See above, p. 41.
45 Trevor R. Johnston and Martin O. Jager, *The Law and Practice of Company Accounting in Australia*, 2nd ed. (Sydney: Butterworth & Co. [Australia], 1966), p. 325.
46 See above, p. 27.
47 Halkerston, "What the Investing Public Needs (No. 1)", p. 626.
48 Grady, *Inventory of Generally Accepted Accounting Principles*, p. 350.
49 Hendriksen, *Accounting Theory*, p. 456. For a more detailed quotation of Hendriksen's views on this matter, see above, p. 46.
50 See above, p. 41.

VIII. Communication

1 Collins, *The Dynamics of Organization*, p. 54.
2 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 167.
3 *Ibid.*, p. 184.
4 See above, p. 15.
5 Earlier stages involved the selection, collection, and recording of information.
6 Vahe Baladouni, "The Accounting Perspective Re-examined", *Accounting Review* 41 (April 1966): 223.
7 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 13.
8 W. P. Birkett, "Communication—the Profession and Its Clients", *Chartered Accountant in Australia* 38 (February 1968): 642-56; Chambers, *Accounting, Evaluation and Economic Behavior*, pp. 166-85; Norton M. Bedford and Vahe Baladouni, "A Communication Theory Approach to Accountancy", *Accounting Review* 37 (October 1962): 650-59; John A. Beckett, "The Accountant of the Future: His Skills, His Role, His Philosophy of Management", *Cost and Management* 41 (February 1967): 13; Goldberg, *An Inquiry into the Nature of Accounting*, pp. 348-69; Jasper, "Future Role of the Accountant", pp. 53-54.
9 Grady, *Inventory of Generally Accepted Accounting Principles*, p. 4.
10 Goldberg, *An Inquiry into the Nature of Accounting*, p. 348.
11 *Ibid.*
12 For example, Institute of Chartered Accountants in England and Wales, *Terms Used in Published Accounts of Limited Companies* (London: Institute of Chartered Accountants in England and Wales, 1962); Committee on Terminology, *Accounting Research and Terminology Bulletins*.
13 Research Staff of the National Association of Accountants, "The Field of Management Accounting", p. 7.
14 Jasper, "Future of the Accountant", p. 54.
15 Committee to Prepare a Statement of Basic Accounting Theory, *Basic Accounting Theory*, p. 13.
16 Birkett, "Communication—the Profession and Its Clients", p. 650.
17 L[ouis] Goldberg, "Communications", *Australian Accountant* 38 (July 1968): 362; Beckett, "The Accountant of the Future", p. 12; General Council of the Australian Society of Accountants, *Accounting Principles and Practices*, p. 42.
18 Goldberg, *An Inquiry into the Nature of Accounting*, p. 349.

19 Birkett, "Communication—the Profession and Its Clients", p. 644. The source is also referred to as the transmitter or the communicator, while the receiver is also known as the destination, the user or the communicatee.
20 Collins, *The Dynamics of Organization*, p. 58.
21 Birkett, "Communication—the Profession and Its Clients", p. 644.
22 Collins, *The Dynamics of Organization*, pp. 58-59.
23 *Ibid.*, p. 59.
24 *Ibid.*, p. 61.
25 *Ibid.*, p. 60.
26 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 182.
27 *Ibid.*
28 Collins, *The Dynamics of Organization*, p. 61.
29 Baladouni, "The Accounting Perspective Re-examined", p. 219.
30 David H. Li, "The Semantic Aspect of Communication Theory and Accountancy", *Journal of Accounting Research* 1 (Spring 1963): 107.
31 Several writers have made this point. For example Li, "The Semantic Aspect of Communication Theory and Accountancy", p. 103; Baladouni, "The Accounting Perspective Re-examined", p. 219; Birkett, "Communication—the Profession and Its Clients", p. 650.
32 See above, p. 52.
33 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 178.
34 *Ibid.*
35 *Ibid.*, pp. 178-79.
36 Bedford and Baladouni, "A Communication Theory Approach to Accountancy", p. 655.
37 Pragmatics is defined by Chambers as follows: "The taking account of, or responding to, things by the use of signs (as in a recording or reporting process) or by the mediation of signs (as in acting upon messages) is the distinctive concern of that branch of the theory of signs designated pragmatics". (Chambers, *Accounting, Evaluation and Economic Behavior*, p. 177.)
38 Birkett, "Communication—the Profession and Its Clients", p. 650.
39 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 177.
40 *Ibid.*, p. 184.
41 Birkett, "Communication—the Profession and Its Clients", p. 654.
42 *Ibid.*
43 Wixon, *Accountants' Handbook*, p. 2.4.
44 Research Staff of the National Association of Accountants, "The Field of Management Accounting", p. 17.
45 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 176.
46 See above, p. 51.
47 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 173.
48 *Ibid.*, pp. 184-85.
49 *Ibid.*, p. 173.
50 *Ibid.*, p. 177.
51 Collins, *The Dynamics of Organization*, p. 77.
52 Bedford and Baladouni, "A Communication Theory Approach to Accountancy", p. 656.
53 Birkett, "Communication—the Profession and Its Clients", p. 645.
54 Chambers, *Accounting, Evaluation and Economic Behavior*, p. 184.
55 *Ibid.*, p. 177.
56 *Ibid.*, pp. 177-78.
57 *Ibid.*, p. 178.
58 Anthony Boyle, "Improving a Communications System", *Scientific Business* 4 (Autumn 1966): 131.

IX. Conclusion

1 However, it was noted at the outset that these reasons often did not *prove* the favoured view to be correct and all others incorrect. It was acknowledged that there were often several acceptable alternative viewpoints between which it was impossible to judge using deductive logic. In these cases, all it is possible for any writer to do is to state his viewpoint and the reasons supporting it, as has been done in this study.
2 Grady, *Inventory of Generally Accepted Accounting Principles*, p. 4.
3 Chambers, "The Moonitz and Sprouse Studies on Postulates and Principles", p. 36.
4 Bedford, "The Nature of Future Accounting Theory", p. 83.