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A Critical Analysis of Some Behavioural Assumptions Underlying R. J. Chambers' *Accounting, Evaluation and Economic Behavior*

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A CRITICAL ANALYSIS OF SOME BEHAVIOURAL ASSUMPTIONS UNDERLYING R. J. CHAMBERS' ACCOUNTING, EVALUATION AND ECONOMIC BEHAVIOR

I. INTRODUCTION

The role of accounting

Irrespective of the impact of the particular society in which it functions, accounting has one dominant role—providing information for decision makers. The common purpose of accounting in different societies exists because of basic similarities in human activity. Members of all societies possess unique and dynamic want structures. The bulk of activity within all societies is oriented towards the satisfaction of those psychological and physiological wants by utilizing available resources. However, resources available are insufficient to allow satisfaction of all wants. Thus, in all societies, various mechanisms are instituted to establish criteria to assist in the selection of those wants that require satisfying, resources to be used in satisfying the wants, and methods of utilization of those resources for want satisfaction. Despite the different social, political, and economic systems of societies, and varying selection criteria they may produce, ultimately decisions must be made, either individually or collectively, by members of societies. These decisions involve choosing, and there is a need for information (either formal or informal) to assist decision makers in their choices. The need for this information is universal.

Because man's ability to observe his environment and interpret his observations is limited, numerous service disciplines have evolved to provide him with information. Accounting is one of the service disciplines providing a particular type of information for decision making. "In short, accounting is concerned with the provision of some of the facts on the basis of which one may act knowledgeably given one's ends or

purposes."¹ Just how many of these "facts" lie within the scope of the information which accountants should provide is fiercely debated. Although the role of accounting in a particular environment may be broadly discussed without fear of controversy, once attempts are made to specify the boundaries and constraints of the discipline widely divergent points of view are encountered. As an example of the differences, consider the following definitions:

Paul Grady places emphasis on transactions in accord with the traditional concept of accounting:

Accounting is the body of knowledge and functions concerned with systematic originating, authenticating, recording, classifying, processing, summarizing, analyzing, interpreting, and supplying of dependable and significant information covering transactions and events which are, in part at least, of a financial character, required for the management and operation of an entity and for the reports that have to be submitted thereon to meet fiduciary and other responsibilities.²

A broader view of the area covered by the discipline of accounting is taken by a committee of the American Accounting Association:

The committee defines accounting as the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information. The concept of economics referred to in the preceding sentence holds that economics is concerned with any situation in which a choice must be made involving scarce resources . . .

This definition of accounting is broader than that expressed in other statements of accounting theory. There is no implication that accounting information is necessarily based only on transaction data, and it will be shown that information based on various types of non-transaction data meet [*sic*] the standards for accounting information.³

An extremely restricted viewpoint is that of Basil L. Branford who refers to a . . . definition of accounting as a positive science supplying the financial information which is relevant to economic decision making . . .

and says

. . . The proposed definition constrains accounting to the field of provision of financial facts, consequently excluding the fields of non-financial technical facts (e.g. the relative horse-power of motor vehicles is regarded as engineering) and economic advice. The latter field is excluded definitionally because of the constraint that accounting is a positive science coupled with the assumptions of separation of the functions of accounting and decision-making. It will be subsequently demonstrated that only knowledge of both the financial facts and the value judgments of the decision maker (or an assumption of the value judgments of the decision maker leaving the conclusions true only if the assumption is true) will enable the rendering of economic advice as a positive science, and it is the contention of this paper that such a field does not fall within the role of accounting but is more aptly described as applied economics or financial policy advice, which is not to deny that accountants may be well equipped to operate in this field as well as accounting.⁴

The boundaries defined by Branford closely approximate those envisaged by Chambers:

We therefore define accounting functionally, as a 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.⁵

These definitions exhibit general agreement that accounting provides information for decision making, but display little consensus concerning the type of information

or the type of decisions. Branford requires accounting to be restricted to strictly objective financial data, but the American Accounting Association's Committee does not envisage any such restriction. The restrictions imposed by Grady would fall between these opposed views. The types of decisions for which the models provide also vary—Branford's decisions are a sub-set of Grady's decisions, which in turn are a sub-set of the Committee's decisions. This lack of agreement concerning the role of the discipline in the environment is puzzling. Perhaps accounting as it is practised may be of assistance in revealing the role of accounting.

Present state of accounting practice

Accounting practice provides evidence of just as much uncertainty of purpose. This uncertainty of purpose is manifested in the varying alternatives available at most stages of the accounting process.⁶ An examination of accounting practice reveals only an extremely vague and suspect framework of reasoning as its basis.⁷

The uncertainty of purpose and the insufficiencies of the accounting process could possibly be overlooked if the end products met the requirements of decision makers, but many accountants have encountered evidence of dissatisfaction with accounting reports. This dissatisfaction has now progressed to public criticism by both experts and laymen.⁸ It cannot be disputed that the fault finding reflects a widespread belief that, in practice, accounting is *not* accomplishing its basic objective of providing information for decisions.

However, the state of accounting practice is not the responsibility of accounting practitioners alone. Problems in accounting practice are of as much concern to the theorist as they are to the practitioner:

It should be recognized that practitioners and theorists have complementary functions. Both are concerned with the same materials, the same devices, the same end products; but in different ways, against different frameworks. The practitioner's framework is the immediate urgency of a single client's problems, which he must resolve in the manner commonly accepted in his field given the state of the art. The theorist's or researcher's problem is to see the field whole, without regard for immediate clients, but with high regard for the relationship of the field to all contiguous fields and to the whole enterprise of human discovery. *If theorists adopt the same reference framework as practitioners, the immediate solution of immediate problems, they no longer act as theorists.* But if theorists assert, as some do assert, that they are unconcerned with immediate problems or practical problems, they forfeit the right to be considered as theorists—dreamers perhaps, but not theorists. The challenges lie out there in the real world in the first place, not in our heads.⁹

It may be that accounting theorists *have* provided general solutions to practical problems, but that these have been ignored by practitioners. If this were the case, one would expect to find a central core of theory endorsed by the majority of these theorists.

Present state of accounting theory

No such central core of theory is widely supported. With the present diversity of opinion with regard to the role of accounting,¹⁰ it would be extremely surprising if a central theory had been discovered. The diversity of opinion among theorists is as extensive as the diversity of recommended practices available to practitioners. Until the theorists are able to present a set of consistent guidelines to practitioners, practitioners are unlikely to make any great effort to implement any of the proposed systems of accounting. Practitioners could also be expected to have little faith in future attempts to propose theories of accounting if these attempts only add to the confusion.

The literature contains a steady stream of attempts to rectify the situation by providing a complete or partial "theory of accounting";¹¹ and, although, as yet,

none of these has won extensive support, it is certain that significant improvements in accounting thought and practice have resulted.

After a decade of publications, including *Blueprint for a Theory of Accounting*¹² and *Towards a General Theory of Accounting*,¹³ Professor Chambers has produced his *Accounting, Evaluation and Economic Behavior*,¹⁴ which is considered by this writer to be the most significant contribution to accounting literature to date, because it constitutes an attempt to specifically relate accounting to the environment in which it functions, and because Chambers attempts to design his theory of accounting to meet the needs of the decision maker. The importance of Chambers' study in the literature should not be underestimated. Three features of *Accounting, Evaluation and Economic Behavior* ensure that it will become a classic in the field of accounting:

(i) From a methodological point of view, the study is an excellent example of the deductive approach to developing a theory of accounting. This attribute is enhanced by the summary presentation of argument at the conclusion of each chapter.

(ii) In keeping with the methodology he employs, Chambers makes few assumptions without prior reference to the basic tenets on which they rest. This involves him in an extensive consideration of psychological and philosophical facets of the environment and of their implications for accounting.

(iii) The theory is presented in its complete form. It is not merely a set of abstract assumptions and principles devoid of practical connotations. There are few, if any, such truly general theories of accounting in the literature.

This writer believes that, as a result of these features, future constructive developments in accounting theory will be significantly influenced by this model presented by Chambers and by his approach to developing the model.

Although there have been several reviews of Chambers' *Accounting, Evaluation and Economic Behavior* which have revealed certain defects in the theory,¹⁵ no one has yet examined what this writer considers to be the main foundations of the Chambers model, i.e. his assumptions concerning the behaviour of individuals and entities. Chambers develops a model of flexible behaviour of individuals and entities because he arrives at a concept of man that envisages him as being a completely adaptive and rational person, and one who is the decision maker in an entity through the use of the external accounting reports of that entity. The communicated output of Chambers' accounting model is designed to cater for the needs and abilities of this type of man.

If the output of Chambers' system is to be relevant to man in his environment, it is essential that Chambers' concept of man and his actions (upon which his accounting model is built) be a correct one. If it were discovered that man acts in a fashion different from that postulated by Chambers, there would no longer be any certainty that the type of information which Chambers' system provides will be universally relevant. Thus an essential part of the test of validity of Chambers' theory should be an examination of his behavioural assumptions to ensure that they are accepted as being consistent with observations of man's behaviour in his environment.

Aim of the study

This study is an attempt to test the validity of Chambers' theory by examining these behavioural assumptions to ensure that they *are* characteristic of features of man observable in the environment.

In the main, consideration is given in the study to implications of Chambers' theory for financial accounting, or rather, more specifically, for *external* reporting. This does not imply any downgrading of the importance of internal reporting, or that Chambers' theory might not be of interest to internal parties.

It is assumed that the reader has a working knowledge of *Accounting, Evaluation and Economic Behavior*, and that it is not necessary to present an explanatory synopsis of the reasoning processes employed by Chambers to demonstrate that the output of his proposed system is relevant to decision makers.

Outline of the study

The validity of the use of the process of homeostasis as a principle explaining human behaviour is analysed in section II. The origin of the term in physiology is explained and the subsequent extension of its use to psychology is traced. Criticisms of this extension are reviewed, and the limitations in Chambers' model of individual behaviour resulting from his use of the principle are investigated.

Section III delves into the other important assumption underlying Chambers' model of human behaviour—the assumption of *rational* human behaviour. Consideration is given to the possibility of using such an assumption in either a normative, idealistic, or descriptive sense, and evidence is presented to show that Chambers uses it in a descriptive sense. The concept of rationality postulated by Chambers is then analysed extensively. It is shown that his concept is inconsistent with the limitations of man and with empirical evidence of man's rationality. Flexibility of behaviour is seen to be a basic part of Chambers' model, and this is contrasted with the persistence of individual behaviour which results from man's observed reaction to uncertainty and complexity in the environment. As an alternative to Chambers' flexible maximizer, a model of behaviour is proposed in which man is a rather inflexible satisficer. The major criticism of Chambers' model, resulting from the discussion in this section, is that Chambers considers that he is attempting to deduce a theory of accounting from the environment, and yet his crucial behavioural assumptions are in open conflict with the environment.

Section IV draws on the findings of the two previous sections to relate individual behaviour to entity behaviour and to probe defects in Chambers' model of entity behaviour. As a necessary first step, the nature of an entity and its participants is investigated. This is followed by a review of the manner in which entities act in the environment. The review consists of two sections—the way in which an entity decision is made and the identification of the individual who makes an entity decision. Once again, it becomes clear that the flexibility of action of entities which Chambers describes is out of step with the inflexibility of business behaviour. Further consideration is given to the satisficing model to assist in the explanation of that inflexibility. It is apparent that Chambers also fails to differentiate between decision makers in an entity, and thereby ignores the passive role which shareholders characteristically play in entity decision making. Section IV then proceeds to examine the relationship between accounting and entity decision making. The distinctions (a) between entity decisions and personal decisions, and (b) between information and advice, are considered paramount. Finally, attention is turned to a consideration of what information is relevant to external users of accounting reports. No constructive suggestions are made. However, it is shown that, as a result of the inflexibility of behaviour of individuals and entities, the output of Chambers' proposed system of accounting *cannot* be generally relevant to external parties.

In section V a summary of the findings of this study is given, together with some suggestions for directing further research into the relationship between accounting and decision making in the environment.

II. THE PROCESS OF HOMEOSTASIS

The concept of man, the decision maker, as a homeostatic system is central to Chambers' model of individual behaviour:

The organism as a whole, therefore, is regarded as a homeostatic system, constantly adapting itself to its environment so that its capacity for functioning, its survival, is assured.¹⁶

Thus the meaning of homeostasis and the validity of its use as a mechanism for explaining human behaviour must be investigated as a necessary first step in the analysis of the behavioural foundations of Chambers' theory.

Origin of the term in physiology

Walter B. Cannon, an American physiologist, is credited with first use of the term in 1932 to describe the equilibrium of bodily conditions:

The constant conditions which are maintained in the body might be termed *equilibria*. That word, however, has come to have fairly exact meaning as applied to relatively simple physico-chemical states, in closed systems, where known forces are balanced. The coördinated physiological processes which maintain most of the steady states in the organism are so complex and so peculiar to living beings—involving, as they may, the brain and nerves, the heart, lungs, kidneys and spleen, all working coöperatively—that I have suggested a special designation for these states, *homeostasis*. The word does not imply something set and immobile, a stagnation. It means a condition—a condition which may vary, but which is relatively constant.¹⁷

The phenomena to which Cannon applied the term homeostasis had been investigated many years beforehand. Cannon acknowledged that much of his work was based on the propositions of Claude Bernard who wrote in the previous century.¹⁸ Bernard distinguished the external and internal environments of the body separated by the skin, and he postulated that constancy of the *internal* environment was a necessary precondition for survival. He contended that the physiological processes within the body were all oriented towards maintenance of this constancy:

“It is the fixity of the ‘*milieu interieur*’ which is the condition of free and independent life” . . . “all the vital mechanisms, however varied they may be, have only one object, that of preserving constant the conditions of life in the internal environment”.¹⁹

In its physiological context, homeostasis still has this original meaning of maintenance of fundamental variables within certain safety limits. Probably the most well known of the variables maintained is body temperature, which has a norm of 98.6°F, independent of external temperature variations. Other common examples include the sugar content of the blood, the pH value in the blood, and the water content of the blood. Constancy of these variables is maintained through adaptive mechanisms: when a variable moves outside its safety limits mechanisms are brought into play (involving use of the organs such as the heart, liver, kidneys and spleen) to restore that variable to a position within the safety range.²⁰ The restoring mechanisms may involve factors outside the internal environment (such as eating and drinking) to assist in returning variables to their equilibrium levels. Therefore, in such cases, the system is not self-sufficient, i.e. it is open ended.

To avoid confusion at a later stage, it is important to notice the precise meaning which Cannon attached to homeostasis. He used it to refer to the *constant state*: “It means a *condition*—a condition which may vary, but which is relatively constant”.²¹ Hence he did not apply it to the *adaptive process*. The process may be spoken of as a homeostatic process; but, in the true sense of the word, homeostasis is the state of constancy itself, not the entire adaptive cycle. The following definition would avoid this confusion:

The concept of physiological homeostasis conceives of the organism as an open biological system, in contact with its external environment, but maintaining relatively stable states of material and process within its own internal environment.²²

The validity of the concept of homeostasis in this context is not disputed. Of concern to the argument in this study is the validity of the concept in a *psychological* setting. Although inter-disciplinary exchange of concepts and models is customary, caution must be exercised in applying specific purpose models to areas for which they were not explicitly designed. The validity of a model in its subsequent use does not

necessarily follow from its validity in its former use. Of more significance is the possibility that a model, although valid in subsequent areas, may not be particularly useful as an explanatory tool because it might concentrate on unimportant aspects of a situation. It is interesting to notice that Cannon envisaged that his concept of homeostasis would be valid, and useful, in fields other than physiology:

Are there not general principles of stabilization? May not the devices developed in the animal organism for preserving steady states illustrate methods which are used, or which could be used, elsewhere? Would not a comparative study of stabilizing processes be suggestive? Might it not be useful to examine other forms of organization—industrial, domestic or social—in the light of the organization of the body?

These are tempting questions. Many times in the history of philosophy and sociology similar questions have led to an examination of the analogies between the body physiologic and the body politic . . . May not the new insight into the devices for stabilizing the human organism, which we have been examining in the foregoing chapters, offer new insight into defects of social organization and into possible modes of dealing with them? The details of bodily homeostasis are, of course, available to anyone who cares to see whether they offer any suggestions for the study of social conditions.²³

How did this extension of homeostasis involve psychology, and is the extension to psychology either valid or useful?

Extension of the concept to psychology

Fletcher was among the first to suggest that human behaviour could be explained by reference to the principle of homeostasis.²⁴ He believed that behaviour was oriented towards maintenance of a psychological equilibrium, and this enabled him to extend homeostasis to include maintenance of mental states as well. However, he warned against attempting to use it as a fundamental principle and advocated its use as an explanatory principle only:

Although homeostatic tendencies are demonstrable wherever organic adjustments take place, it is to be hoped that no one will be tempted to build a whole new system of psychology upon this fact. And yet it seems quite evident that Cannon's work can do something for the psychologist besides adding another technical term to his already padded glossary. To employ what Cannon, by years of productive research, has made out to be a master principle of interpretation in physiology, in the explanation of similar psychological phenomena will, I believe, lend a new significance to many phenomena in that field.²⁵

Fletcher revealed two important features of the psychological concept of homeostasis which distinguished it from the physiological concept of homeostasis. Firstly, physiological homeostasis applied to the maintenance of *natural* states of the organism; psychological homeostasis applied to the maintenance of *acquired* states of the individual:

It should be borne in mind that the body states with which Cannon concerned himself in exemplifying physiological homeostasis are original, or natural states, states which are inherent in the organism itself, and are essential to its existence, such, for example, as temperature, alkalinity of the blood, the supply of water, salt, etc., previously mentioned. So far as my information goes he has not made it clear whether or not he considers that there exists the same tendency to maintain an acquired status as there is to maintain what he calls 'the normal body states'. Unless the principle of homeostasis can be shown to apply to acquired states as well as to original states of the organism, it must be admitted that its explanatory value for psychology would be limited, since psychology knows very little about original states of the mental organism.²⁶

Secondly, physiological homeostatic processes were retrospective in nature, i.e. they came into play after the disturbing event; psychological homeostatic processes had to explain anticipatory actions, i.e. forces employed before the impact of the expected action was felt:

Physiological homeostasis manifests itself only when the disturbing conditions are physically present, whereas, thanks to the influence in the mental equation of that unresolved and possible unresolvable, factor of consciousness, it is possible to demonstrate the tendency to maintain status at the mental level of behavior even in anticipation of the presence of disturbing conditions.²⁷

Thus, Fletcher was able to propose a concept which was useful for explaining *certain* (but not all) categories of human behaviour.

It became obvious that, before homeostasis could ever achieve the status of a unifying concept, explaining *all* aspects of behaviour, an *extension* of the meaning of homeostasis was essential. The extension was necessary to overcome two inconsistencies involving changing equilibrium levels and non-homeostatic behaviour. Since emphasis in physiology was placed upon return to the same level of equilibrium, psychologists were reluctant to apply the same principle to behaviour which involved moving from one equilibrium level to another. In addition, psychologists were confronted with ample evidence of non-homeostatic behaviour by individuals who acted to deliberately upset their equilibrium positions: businessmen continuously striving for promotion, adventurers risking their lives, and starving artists, all exhibited this non-homeostatic behaviour.

In order to explain these apparent contradictions, Ross Stagner proposed a concept of homeostasis which, he claimed, had universal validity in the field of psychology.²⁸ He showed that the anticipatory nature of psychological processes could be explained by assuming that "the organism perceives [*sic*] minimal physiological changes as *cues* and *anticipates* the disturbance. Forestalling action therefore becomes possible".²⁹ More importantly, he proposed a dynamic concept which enabled the organism to move from one equilibrium position to another, more complex, equilibrium position.³⁰ By far Stagner's major contribution was the suggestion that apparently non-homeostatic behaviour could be explained in terms of maintenance of a concept of self:

The self-image (including the relation of self to environment) so evolved represents a "constant state" which the organism seeks to preserve. As such it may dominate the motor system and may even prevent homeostatic action based on earlier physical or social constancies. The person defending his ego-system of percepts and values may accept social ostracism or even physical disequilibrium. The mature ego, therefore, has its own constancy function; it tends to render the personality more independent of random changes in the physical or social milieu.³¹

A more explicit statement of the meaning of Stagner's concept of self has been given elsewhere:

The self can therefore be thought of as an elaborate pattern of desired constant states, which are protected if anything threatens them. Some of these are judged by the person as more important than others; to one man, physical comfort is paramount; another man may be concerned mostly about his professional prestige; and another may be motivated chiefly to maintain his record as a Don Juan.³²

The concept proposed by Stagner involved homeostatic processes at three levels: constancy of inner tissues, constancy of physical environment, and constancy of social environment.³³ This concept was designed to be more than an explanatory principle, and it has been used as a unifying principle in a theory of psychology.³⁴ A similar

extension of the concept of homeostasis was proposed by Mace for a psychological approach to a theory of values.³⁵

In summary, it is obvious that the fully developed model of homeostasis used by some psychologists is far removed from the original model used in physiology. There is really no unique model of homeostasis used in psychology (although all such models exhibit the same basic principles).³⁶ Nor are homeostatic models of undisputed validity. Despite the attempts which have been made to remove the defects of earlier models, there are still numerous criticisms of the general validity of homeostasis as a unifying concept in psychology.

Criticisms of psychological homeostasis

Although Stagner labelled his model "dynamic homeostasis",³⁷ it does not seem to be a dynamic concept. He was certainly concerned with different equilibrium *levels*, but he did not emphasize the forces causing movements from one level to another. This means that the model was expressed in terms of comparative statics, rather than in terms of dynamics. The disregard for the investigation of the restoring forces was the subject of Maze's biting criticism:

The doctrine of homeostasis at best only points to the facts of opposition and cooperation without advancing knowledge of the impulses whose activities these are; at worst, it hinders that inquiry by ignoring those impulses and concentrating on their resultant (or even on their mere equilibrium), and by offering a pseudosolution of how the more or less stable resultants are maintained.³⁸

Davis expressed doubts as to the validity of the model on different grounds.³⁹ He questioned the implication that homeostasis and adaptation were necessarily related:

The meaning of "adaptation" is none too clear in a scientific context, and even if it were established that a certain event is adaptive, it would follow only with an unknown probability that it is also homeostatic.⁴⁰

Davis also pointed to the confusion which had arisen regarding the meaning of homeostasis, as a result of which there were two possible connotations of homeostasis. It could mean "simply the existence of a certain constancy in the face of change",⁴¹ or just the existence of types of mechanisms "which act, when a change occurs, in such a manner as to minimize the change",⁴² i.e. negative feedback. He went on to show that the two uses do not necessarily have the same meaning. Evidence of return to equilibrium is not *prima facie* evidence of the existence of negative feedback, and negative feedback is not *prima facie* evidence of a resulting return to equilibrium. Davis also challenged the very idea of constancy as a meaningful concept:

The point seems general that an organism's constancy in one aspect implies variability in another. It is speaking rather loosely, therefore, to say that an organism as a whole maintains an internal constancy in spite of external variations. Rather, some features of its internal state are kept constant by homeostasis, some by simpler means, and some vary in compensatory fashion.⁴³

Thus, there are doubts as to whether an individual can ever attain the equilibrium position. It seems apparent that equilibrium of any group of variables can be achieved only at the expense of disequilibrium of other sets of variables. Emphasis on the steady state may, therefore, be out of place. Concentration on the processes of searching for and evaluating alternatives could be more productive. For this reason, Davis advocated exploration of models incorporating positive feedback techniques instead.⁴⁴ He was quite adamant in his rejection of the homeostasis model:

Returning to the original question, the answer is that homeostasis would not serve as a good all-around model for behavior. Using the word in a very broad functional sense will merely enlarge the vocabulary beyond necessity. If we use it

in the narrow sense of a negative feedback mechanism, we find that the model does not, and indeed cannot, fit all the facts. We can make it conform by adding a series of inventions to the facts observed, but there seems no reason for doing so. Homeostasis exists, of course, with respect to certain variables, and one should try to find out what these are. But it is to be understood as a special case of the more general conception of the response of systems to inputs. There is no compulsion to think that the organism is an elaborate machine for the purpose of getting itself back to the *status quo ante*, or, indeed, for any other purpose.⁴⁵

The validity of the association between homeostatic adaptation and survival was disputed by Magda Arnold.⁴⁶ As an example of a consequence of an adaptive mechanism which conflicted with survival she cited thrombosis, which can be a consequence of the bloodclotting process preventing bleeding:

Thus we have to accept the fact that some processes, though 'adaptive' in Cannon's sense because they are the result of a disturbance of the organism's equilibrium, do not contribute to the well-being of the organism as a whole.

We venture to suggest that the confusion between 'adaptive reactions' and 'survival reactions' could be avoided if we distinguished between the stimulus effect on the organism and the organism's reaction to it. Thus the formation of a blood clot in a blood vessel would be the effect of some disturbance, while the subsequent absorption would represent the organism's reaction.⁴⁷

Other evidence of conflict between survival and adaptation can be found elsewhere. Consider, for example, the behaviour of the soldier who sacrifices his life to maintain the constancy of self he has developed. Adaptation prevents survival in this case.

An entirely different attitude was adopted by Christian Weber in his criticism of homeostasis.⁴⁸ He claimed that homeostasis could account for only those aspects of behaviour dealing with routine, basic needs. It could not account for those aspects of behaviour relating to striving and creativity as individuals;⁴⁹ and all that homeostasis could explain was how life is preserved, not how it is enjoyed.⁵⁰ Weber believed that man possessed ideals of truth, beauty, and love which would never allow him to be satisfied with his present state. Thus he would continue striving for these ideals until his death, and homeostatic equilibrium could not be attained. The concept of equilibrium had no meaning to Weber since he believed that, even if it were attainable, man's nature would cause him to deliberately depart from that equilibrium position "as a last desperate resort".⁵¹ Man, he said, will never be free from searching for his ideals. Support for Weber's argument can be found in Herzberg's writings on the two dimensions of man:

To summarize, the human animal has two categories of needs. One set stems from his animal disposition, that side of him previously referred to as the Adam view of man; it is centered on the avoidance of loss of life, hunger, pain, sexual deprivation, and on other primary drives, in addition to the infinite varieties of learned fears that become attached to these basic drives. The other segment of man's nature, according to the Abraham concept of the human being, is man's compelling urge to realize his own potentiality by continuous psychological growth.⁵²

Weber would contend that the Adam concept could be described as a homeostatic process since it involves explaining only how man lives, and he would reject the contention that the Abraham concept exhibited homeostatic processes. Stagner failed to recognize the necessity to distinguish between these two basically different types of human behaviour; and he could explain the Abraham concept only in terms of a homeostatic process, i.e. maintenance of a concept of self. Herzberg demonstrated that an explanation such as that of Stagner would not be adequate because of the entirely distinct mechanisms attached to the Adam and Abraham concepts:

If man is to be understood properly, these two characteristics must be constantly viewed as having separate biological, psychological and existential origins.⁵³

Therefore, any attempt to explain man's behaviour would be required to give recognition to these different characteristics and their origins. The concept of psychological homeostatic behaviour does *not* recognize the distinction and it ignores the different behaviour mechanisms associated with the two facets of man.

In summary, the review of the literature of psychology has been sufficient to disclose evidence of dissatisfaction with the use of homeostasis as an underlying concept of psychology. The following general categories of criticisms were encountered and appear compelling:

(a) The process of homeostasis can adequately explain only part of human behaviour. When it is applied to the higher levels of human activity, it is either invalid or inadequate as a descriptive tool.

(Weber, Herzberg and Davis)

(b) It places emphasis on the successive steady states, and this results in an explanation in terms of comparative statics rather than in terms of dynamics. Of more importance would be an investigation of the nature of the restoring forces.

(Maze)

(c) Discussions of homeostasis often imply that it is synonymous with adaptation and survival. There is no such necessary relationship, and these processes can exist independently. In certain cases, survival or adaptation and homeostasis may even be opposed.

(Davis and Arnold)

(d) The human organism may be incapable of ever achieving an equilibrium position. If this is so, the principle of homeostasis cannot be of assistance in explaining human behaviour.

(Davis, Weber and Herzberg)

Implications of the criticisms for Chambers' model

Two points can be made. Firstly, the validity of the homeostasis model is not universally accepted as a general theory in psychology. Secondly, irrespective of its validity, the homeostasis model is not particularly useful as a general descriptive or explanatory tool in psychology. Chambers' model of individual behaviour is built around this principle of homeostasis, and so inherits any defects of the principle. To attempt to build a general theory of accounting on something which is not a general theory in its own discipline is a rather precarious venture.

One particularly significant defect which Chambers introduces into his model of individual behaviour through reliance on the principle of homeostasis should be noted—it causes him to postulate a continuous decision-making process on the part of an individual (an "actor"):

Because relief is sought from *all* strains, and because the valuation of the marginal unit of a specific means diminishes as the stock of it increases, a stock of heterogeneous means will tend to be so arranged that the marginal utilities of *all* specific means in the stock will be equal. At this point no exchange of one means for another, or of one unit of one means for one unit of another or others, will increase or decrease the satisfaction of an actor.⁵⁴

This continuous decision process is beyond the capabilities of actors in the environment, and it assists in producing a model of individual behaviour which is characterized by a high degree of flexibility.⁵⁵

The next section gives explicit consideration to further defects in Chambers' model concerning individual behaviour by analysing his rationality assumption and his postulated typical decision process.

III. RATIONAL HUMAN BEHAVIOUR

Professor Chambers explicitly accepts an assumption regarding rationality of human behaviour in his model:

Inasmuch as we are concerned with persons capable of deliberate action all action is deemed to be rational.⁵⁶

He cites an economist, von Mises, in support of this contention: "Human action is necessarily always rational."⁵⁷ It is indeed unfortunate that the citation is not presented in its context by Chambers because this throws a different light on the assumption:

Human action is necessarily always rational. The term "rational action" is therefore pleonastic and must be rejected as such. When applied to the ultimate ends of action, the terms rational and irrational are inappropriate and meaningless. The ultimate end of action is always the satisfaction of some desires of the acting man. Since nobody is in a position to substitute his own value judgments for those of the acting individual, it is vain to pass judgment on other people's aims and volitions.⁵⁸

Thus von Mises says that such an assumption of rationality serves no purpose because it is tautologous. An actor's decisions may be observed, but the observer has no criteria with which to judge the rationality of the decision. An action taken by an actor whose ends are beyond enquiry would, by definition, always be rational, but only by definition.

Context of the assumption of rationality

Before debating the rationality assumption which Professor Chambers uses, it is essential to appreciate that such an assumption could be made in either of three contexts. It could be used in a normative sense to describe how actors *should* act; it could be used in an idealistic sense to describe how men *would* act under a set of ideal conditions; and, finally, it could be used in a descriptive sense to describe how men *do* act. Thus the assumption must be tested in the specific context in which it is used, because for each of these three contexts there is an appropriate test of validity.

If the assumption is used in the *normative* sense, it becomes a matter of opinion as to whether such behaviour is desirable. To show that men do not act rationally does not question the assumption in this context. However, it can be questioned by showing that man, because of his very nature and because of the nature of the environment, could not hope to act in a manner always approaching rationality.

If the assumption is used in an *idealistic* sense, the validity of the assumption cannot be tested, except to ensure that the ideal conditions which are postulated as necessary to induce idealistic behaviour are such as to allow rational behaviour. Such an idealistic assumption may be debated and discarded by means of an analysis of the implications of incorporating idealistic assumptions in a theory to be applied to a non-ideal situation.

If the assumption is used in the *descriptive* sense, it can be fully tested by reference to empirical evidence of man's behaviour, especially with regard to decision making.

Normative rationality

Even if an assumption of rationality is used in a normative sense, some writers question its validity. Suppes relies on an analogy with a changed approach to mathematics which resulted from the discovery of flaws in its apparently logical base:

Recent work in decision theory has shown in similar fashion that there is no simple coherent set of principles capable of precise statement that corresponds to naive ideas of rationality. Just as research in this century in the foundations of mathematics has shown that we do not yet know exactly what mathematics is, so

the work in decision theory shows that we do not yet understand what we mean by rationality. *I mean by this not merely that we have no adequate general definition of rationality, but that, even for highly restricted circumstances, it turns out to be extremely difficult to characterize what we intuitively would want to mean by a rational choice among alternative courses of action.*⁵⁹

These objections cast grave doubts on the utility, if not also on the validity, of an assumption of rationality in a normative context because it is by no means simple to categorize the necessary conditions for rational action.

Perhaps the best criteria which are available to specify the essential characteristics of rational behaviour are those proposed by Arrow.⁶⁰ He commences by describing his concept of rationality:

The basis for the assumption of rationality is the following seemingly quite general formulation of individual behavior in a social situation: Each individual at a given moment of time is free to choose among several possible courses of action; he decides among them on the basis of their consequences. The range of actions open to him and the consequences of these actions are determined by the contemporary actions of others, by the past actions of himself and of others, and by the exogenous factors. To put it briefly, we may say that the individual can choose at any instant among a limited range of consequences according to his tastes.⁶¹

Arrow continues by establishing three conditions which are necessary to bring about this type of rationality.⁶² Firstly, he requires that the individual or group seeks to maximize some quantity. Secondly, he believes that it is essential that the decision maker select the same choice each time he encounters the same set of alternatives. Thirdly, he requires an assumption that a decision maker will prefer more or less of a particular quantity.

Even if it is accepted that the necessary conditions for rational behaviour can be specified as Arrow attempts, a further stumbling block is encountered before it can be postulated that man *should* act rationally. It is one thing to believe that man *should* act that way, but it is another matter to believe that man *could* ever act rationally. The limitations which characterize man and the uncertainty which characterizes his environment rule out any possibility of his being able to attain rational standards of behaviour.⁶³

Further discussion of the validity of a normative assumption of rationality can be dispensed with because, in the opinion of this writer, a normative assumption regarding human behaviour would be inappropriate in the reasoning process supporting Chambers' model. Chambers attempts to deduce the theory of accounting from certain assumptions concerning the environment in which accounting functions, and the assumptions must be drawn from the real world so that they are in accordance with the world as it is, not in accordance with the world as someone would like it to be. Part of the real world is occupied by man with all of his vagaries, and it is *this* man with which the theory must deal.

In summary, to those who would say that the assumption of rationality is used merely to explain how people *should* act, it can be demonstrated that:

- (i) a normative assumption about the environment has no place in Chambers' theory;
- (ii) some writers question the utility and validity of normative rationality assumptions because of problems of defining rationality;
- (iii) because of his nature and because of the nature of his environment, man *cannot* act rationally.

Idealistic rationality

Idealistic assumptions are those which ignore the imperfections of observable events in favour of more tractable hypotheses. If these assumptions are used to describe

real world phenomena, they result in a description of events which is often unrealistic because it ignores the complexities which characterize those phenomena. Thus, the use of idealistic assumptions can result in an unrealistic model because of the lack of realism involved in the assumptions.

Although all idealistic assumptions are, by their very nature, unrealistic in the sense that they can conflict, or may not be in complete harmony, with observable events, all idealistic assumptions do not necessarily lead to the downfall of a theory because of this lack of realism. It depends on why an assumption lacks reality and on how it is used in the development of the theory. Nagel distinguishes three ways in which an assumption within a theory can be unrealistic:

1. A statement can be said to be unrealistic because it does not give an "exhaustive" description of some object, so that it mentions only some traits actually characterizing the object but ignores an endless number of other traits also present . . .

2. A statement may be said to be unrealistic because it is believed to be either false or highly improbable on the available evidence . . .

3. In many sciences, relations of dependence between phenomena are often stated with reference to so-called "pure cases" or "ideal types" of the phenomena being investigated.⁶⁴

Chambers' assumption of rationality is immune from the lack of realism of the first type because it is a comprehensive description of human action. However, the rationality assumption which Chambers proposes is certainly unrealistic in the second sense because, as is pointed out below, it is contrary to empirical evidence.⁶⁵ Thus, Nagel's criticism of the resultant theory can be applied to Chambers' model:

But in any event, if by an assumption of a theory we understand one of the theory's fundamental statements . . . a theory with an unrealistic assumption (in the present sense of the word, according to which the assumption is false) is patently unsatisfactory; for such a theory entails consequences that are incompatible with observed fact, so that on pain of rejecting elementary logical canons the theory must also be rejected.⁶⁶

It might appear that Chambers' assumption can be defended on the grounds that it describes the behaviour of man under a set of idealistic conditions in accord with Nagel's third type of unrealistic assumption. However, even if Chambers does use his assumption as a "pure case", it is not valid because he neglects to set up the ideal conditions under which it holds true. The most crucial element of his non-ideal conditions is the explicit recognition of the limitations of man.⁶⁷

In Chambers' model, the use of any *idealistic* assumption with regard to human behaviour is also out of place for the very reason that the use of normative assumptions is out of place, i.e. because Chambers is attempting to deduce a theory of accounting from the environment *as it is*, not as it could or should be.⁶⁸

Therefore, there appears to be no reason to believe that Chambers uses the rationality assumption in an idealistic sense. If he does use it in this way, it is out of place in the structure of his theory; and it is in conflict with the nature of man which he accepts.

Descriptive rationality

It is contended by this writer that Chambers should, and does, use the rationality assumption in a *descriptive* sense. Chambers attempts to deduce a theory of accounting from the environment, and therefore his assumptions about features of the environment *must* be consistent with empirical evidence of the environment. Thus the assumptions must *describe* the environment as it is. Since the behavioural assumptions are among the assumptions relating to the environment, they should be *descriptive*

assumptions. There is clear evidence that Chambers accepts this argument and that he therefore purports to use the rationality assumption in a *descriptive* sense:

We conjecture further that, as accounting is a human contrivance, it has a discoverable function within the specified system. We 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. This limited set of statements will specify, or will enable us to specify, the kind of accounting which will perform the functions required of it in the specified system *within the universe of experience.*⁶⁹

With regard to methodology, Chambers also says:

The reliability of the conclusion thus depends on the validity of the argument and the consistency of the conclusion with the environment of experience.⁷⁰

Therefore it is valid, and essential, to examine Chambers' assumption of rationality in the descriptive context in which he uses it.

When analysing human behaviour characteristics in the environment to test the validity of Chambers' descriptive assumption of rationality, a very serious difficulty is encountered in specifying criteria of rationality appropriate to a particular situation. This type of difficulty is emphasized by Shelly and Bryan:

Thus for both individual and social decisions there will be times when we cannot avoid violating those constraints accepted by many as the credentials of rationality. It thus appears that there may be no language of problem solution (or no language of problem solution accepting criteria of rationality from an un-specialised language) that can always produce rational decisions. At least two implications may be consequences of this conclusion. The first is that persuading someone to accept the reasonableness of a decision must sometimes consist of more than convincing the recipient of the rationality of the choice. The second is that a description of the environment, including the human being, may be needed to "relativize" the criteria of rationality.⁷¹

It is this problem of relativizing which results in difficulties when observing human behaviour. There are no unique standards independent of the situation which enable an observer to judge the degree of rationality of a decision. In addition, it should be obvious that the criteria of the observer cannot validly be used as standards, so that the individual's actions can be judged only in terms of his standards; and it is not relevant, when evaluating the *actor's* rationality for the observer to judge those standards in terms of *his* set of values.

The particular frame of reference of the decision maker must also be taken into account because of the effects of the specific environment on each individual and on his criteria used in decision making. One of man's common failings is to judge others only in the light of his own acquired standards and to label any behaviour which does not conform to his standards as "irrational".

An example of this is the Westerner who criticizes the behaviour of some of the peoples of the Pacific who are unwilling to accept regular employment. They reject the values which the Westerner attempts to impose upon them; and, in turn, the Westerner cannot appreciate their values and so does not understand their behaviour. The effect of the environment on the decision maker is clearly central to the issue, as is pointed out by McGuire:

Men in a variety of cultures may act to forward their self-interest, and may choose among alternatives in accord with this objective, but *what* alternative they select, and *why* they select it is often culturally determined. Thus, to argue that men

behave rationally is to say little unless there is knowledge of the cultural determinants and restraints—the cultural prescriptions and patterns—on behavior.⁷²

Bearing in mind these difficulties of observing and analysing behaviour, consideration can now be given to the implications of Chambers' concept of rationality.

Chambers' concept of rationality

An important feature of Chambers' concept is that he does not require expectations to be realized as a necessary condition for judging an action to be rational, and he therefore takes some cognizance of the high degree of uncertainty which characterizes man's environment:

We take rationality as a general quality of human behavior, and regard all failures of actions to attain expected ends as the results of lack of knowledge, unforeseen events, conflicts of ends, and the like, each of which is open to further analysis.⁷³

Not only does Chambers disregard the need for expectations to be realized, he does not even require any prior extensive evaluative process:

No person is obliged to go through the lengthy processes of building up his knowledge of facts, relationships, and possibilities before acting. Nor is he required to use all his knowledge in making choices.⁷⁴

This, in itself, seems to imply a strange test of rationality because it relieves the decision maker of any responsibility to collect information or evaluate alternatives. The test is not really as lax as it may appear because Chambers concludes the above statement by saying:

He may do both. But to do so itself involves sacrifices which he may consider to be greater than the increased knowledge is worth.⁷⁵

The key to Chambers' concept of rationality revolves around this point. It still involves a process of collection and evaluation of data, but the cost of searching for alternatives and information concerning those alternatives becomes one of the elements of the decision. The decision maker, according to Chambers, must balance the expected cost of obtaining additional data against the estimated value of collecting and using any additional information:

In particular, if a man chooses as between two courses of action by tossing a coin he is no less rational than another who chooses on the basis of long deliberation. Tossing a coin or any similar process of choice entails two things; that the actor is saved delay in taking some action, and that his expectations of either course of action in the then state of his knowledge do not warrant the effort of choosing by other means.⁷⁶

In reality, what is then substituted for the original decision is another decision regarding the anticipated cost-benefit relationship of further search. However, Chambers does not propose any criteria whereby the decision maker is able to solve the substituted problem.

In view of the earlier discussions in this section concerning the influence on the decision process exerted by the environment and the decision maker's limitations,⁷⁷ it is important to relate Chambers' rationality concept to the characteristics of man and his environment which Chambers explicitly recognizes. He gives full recognition to man's limitations:

The human individual is a complex organism, having the power to sense its own condition and the impact on it of its environment, the power to change its own condition and to modify the impact of its environment, and the power to discriminate, to learn, and to reason, and consciously to direct its sensory and

motor apparatus in the light of discrimination, learning, and reasoning. *But all these powers are limited even in the case of persons who are unimpaired by unusual physiological or psychological deficiencies.*⁷⁸

The full extent of Chambers' recognition of particular limitations can be seen from the outline of the argument where he contends that all people have "limited capacity for sensation and observation", "limited experiences", "limited capacity for re-collection", (and therefore limited knowledge), and "limited capacities for action (physical and mental)".⁷⁹

It is difficult to reconcile the characteristics of rational behaviour as defined by Chambers with the limitations of man which he recognizes. Nor is it any defence to claim that Chambers has provided a model of behaviour where man can combat his limitations by avoiding a complicated evaluative process. Chambers' substituted marginal search decision in place of the original evaluation could be just as complex as the original decision process. The model Chambers proposes assumes that, since man is rational, he has a utility function or scale of preference by means of which he compares all alternatives which are selected as the result of a search process modified by the cost of searching. Thus the picture is still of an optimizing man acting to select the best alternative. Clearly this picture is invalidated by the limitations which, as Chambers admits, are common to all men. Empirical evidence also invalidates this model of behaviour.⁸⁰

Other researchers define man's limitations in terms similar to those recognized by Chambers but produce models of behaviour differing greatly from the Chambers model. The prime distinguishing feature of these other models is that they regard man as an animal who rarely resorts to decision making because of the confusion which confronts him. As a result of this, they picture man as a satisficer rather than a maximizer; and man's behaviour is shown to be predominantly inflexible rather than highly flexible.⁸¹ Many of these researchers, especially Herbert Simon and his colleagues, produce these models which can be supported by reference to empirical evidence. Attention can now be turned to these models to compare them with Chambers' model.

Empirical evidence of rationality

When examining decisions in a real world situation the basic problems which arise are due to the uncertainty surrounding any choice. The uncertainty revolves around the alternatives which are available, the consequences of those alternatives, and the cost of searching for further alternatives and for further information. These problems are compounded by the limitations of man, particularly by his lack of ability to see *all* alternatives and by his lack of ability to evaluate those alternatives which he does see. As a result of the uncertainty and his lack of ability, man approaches decision making in his own peculiar way. Consider, for example, a typical consumer attitude towards retail price maintenance. Many consumers prefer to see the same article sold at the same price in all stores, even though they realize this could result in higher prices in some places. This then relieves them of the problems of deciding on the number of stores to visit, the number of prices to obtain, and the balancing of the expected cost of searching for lower prices against the possibility and benefit of discovering those lower prices. When considering the rationale behind such consumer acceptance of retail price maintenance, the crucial factor involves determining what increases in prices would be necessary to render the situation no longer satisfactory from the point of view of those consumers.

Notice that such consumer behaviour does not represent the type of rationality to which Chambers refers because, although Chambers postulates a limited search process, he bases the limitation of the search process on a cost-benefit analysis of further search. Action similar to this type of consumer behaviour can be described as rational only if an approach is accepted which is similar to that proposed by Simon:

It is impossible for the behavior of a single, isolated individual to reach any high degree of rationality. The number of alternatives he must explore is so great, the

information he would need to evaluate them so vast that even an approximation to objective rationality is hard to conceive. Individual choice takes place in an environment of “givens”—premises that are accepted by the subject as bases for his choice; and behavior is adaptive only within the limits set by these “givens”.⁸²

Simon gives three reasons for rejecting an approach to rationality similar to Chambers’ approach and adopting the above in its stead. Firstly, man’s lack of knowledge denies him any opportunity of acting in a completely rational manner. Secondly, the consequences of the alternatives considered will be experienced in the future and man cannot value them, he can value only his anticipation of them. Thirdly, and most importantly, rationality involves choosing among all possible alternatives up to the point where the cost of search is marginally equal to the benefit expected to be derived from additional search.⁸³ The first two reasons are not particularly important for the present discussion. However, the third reason is really crucial, because this is the one feature which distinguishes many apparently similar concepts of rationality; and it is criticism associated with this which can be levelled at Chambers’ concepts because the marginal search decision plays such a vital role in his model.⁸⁴

Behavioural theorists present evidence to show that man does not consider *all* possible alternatives, but that he considers only a limited number of alternatives, and that the scope of the alternatives which he does consider is extremely limited.⁸⁵ Thus, when making a decision, man adopts a narrow point of view which excludes all but similar alternatives. For example, a clerk who becomes dissatisfied with his prospects of future earnings may aspire to undertake further study to become an accountant, secretary or manager; but he would seldom consider becoming a solicitor, draughtsman, or politician, irrespective of his talents.

Chambers, therefore, does not recognize this peculiarity of human behaviour, and it cannot be explained by reference to the cost of search either. As a result, Chambers postulates a flexibility of behaviour in direct contrast to the rigidity of behaviour which is evident in the real world:

But for any individual person holding money, the market for instruments of credit is also part of the market for all goods, services, and claims. His choice of assets—money, securities, or consumers’ goods—depends on his evaluation of the satisfactions obtainable, directly or indirectly from the alternative open to him; his choice within the class, securities, is similarly dependent.⁸⁶

This ignores man’s reluctance to consider the full range of alternatives which are available to him and his adoption of a defence mechanism to avoid a complex decision process. Man does not consider that he is free to operate in all markets at all times because of his lack of knowledge of most of those markets, and because of his lack of ability to become acquainted with even a few of those markets. Thus, irrespective of the number of markets in which a particular individual could operate, he sees action in only a few of those markets as representing alternatives available to him. The only alternatives which he sees lie in those markets of which he has acquired a high degree of experience. This, in turn, means that it is rare for man to go beyond his usual set of alternative markets, so that his behaviour is *not* characteristically flexible.⁸⁷

The type of rationality postulated by Chambers lends itself to precision when incorporated in a model to explain and predict behaviour. However, once it is accepted that man’s limitations make it impossible for him to act in a completely rational manner, some difficulty is experienced in substituting an alternative hypothesis concerning rationality in such a model. If the model is to include an alternative rationality hypothesis, it must give explicit recognition to the determinants of man’s less-than-fully-rational behaviour. Thus, the model must contain factors to explain man’s consideration of only a limited number of alternatives and his criteria for selecting a particular alternative. March and Simon recognize this distinguishing feature of theories which incorporate a model of less than rational man:

The classical organization theory . . . like classical economic theory, failed to make explicit this subjective [*sic*] and relative character of rationality, and in so doing, failed to examine some of its own crucial premises. The organizational and social environment in which the decision maker finds himself determines what consequences he will anticipate, what ones he will not; what alternatives he will consider, what ones he will ignore. *In a theory of organization these variables cannot be treated as unexplained independent factors, but must themselves be determined and predicted by the theory.*⁸⁸

Thus, the theory must include consideration of factors influencing consequences and alternatives which are ignored, evaluated, and/or accepted. This March and Simon accomplish by demonstrating that man accepts the limitations of his ability to make decisions and adopts a particular approach to decision making. They show that the decision maker creates a simple model of the real world and acts in accordance with this model, even though he is fully aware that the decisions which may be made under the simplified model are not necessarily the optimal choices in the actual situation.⁸⁹ Simon provides a succinct precis of this type of theory:

*The central concern of administrative theory is with the boundary between the rational and the non-rational aspects of human social behavior. Administrative theory is peculiarly the theory of intended and bounded rationality—of the behavior of human beings who *satisfice* because they have not the wits to *maximize*.*⁹⁰

This, then, is the central issue—it is the *simplified model*, used by man the decision maker because of constraints on his rationality, which must be the centre of an analysis of human behaviour. Chambers neglects to consider this simplified model or those constraints on rationality. At the risk of anticipating the following section, it is contended that this leads Chambers to incorporate into his model a process of optimizing (maximizing) that is not possible in the real world—rather than satisficing. Thus, he incorrectly assumes that man is more flexible than he is; and, further, that man *seeks* to be far more flexible than he does in the real world.

Conclusions

The particular assumption of rationality adopted by Chambers may be either normative, idealistic, or descriptive. Unless it is descriptive it has no place in his theory. In the event that it is normative, it would be rejected because it is either a tautology or not necessarily useful or valid. In the event that it is used in an idealistic sense, Chambers' theory cannot be applied to the non-idealistic real world.

If the assumption is used in a descriptive sense (and in the opinion of this writer, it is evident that Chambers uses it descriptively), it is in open conflict with empirical evidence presented by behavioural theorists. It must be remembered that Chambers' model is supposed to be built on assumptions drawn from the environment.

The major points where exception is taken by this writer are those relating to the decision process. Man does *not* consider *all* alternatives, and he is *not* continuously searching for better positions. Instead, man considers only a limited number of alternatives when, and if, he becomes dissatisfied with his present position. The behaviour of Chambers' man is extremely flexible, and he assumes that man is continuously acting or adapting to maximize his utility. Empirical evidence shows that the behaviour of man is rather inflexible, with man acting to achieve a satisfactory position only. It appears that Chambers falls into the very error against which Leavitt cautions:

The rational model began as a description of how people *ought* to solve problems rather than how they do solve them. Somewhere along the line this distinction became blurred; researchers and even industrial problem solvers now sometimes treat the rational model as though it were a description of the way people actually behave in problem situations. The rational model, of course, assumes that people will behave rationally—that is, in terms of our two phases of

problem solving, that they will first perform a complete and rational search and that they will then select the optimal alternative from among the alternatives evoked by the search.

To borrow an apt analogy, the distinction between the rational and the satisficing models is made clear when one thinks of a man looking for a needle in a haystack. The "rational" man searches all through the haystack collecting all the needles he can find there. He then measures the sharpness of each needle and selects that one needle which is the sharpest. The satisficing man searches through the haystack until he finds a needle; then he tries it and if it is sharp enough to sew with he gets on with his sewing; and that's the end of it. If not, he searches some more until he finds one that is satisfactory.

It seems quite clear that most of us do behave more like the second man than the first, whether we ought to or not.⁹¹

The investigation in this section on rationality and in the previous section on homeostasis is sufficient to reveal significant weaknesses in Chambers' model of individual behaviour. Further attention need not be given to Chambers' model of individual behaviour as such. It is now necessary to consider the actions of individuals collectively in entities, and to consider the relationships between models of individual behaviour and models of entity behaviour. Attention can then be given to providing information to individuals as members of entities. This is the theme of the next section.

IV. BEHAVIOUR OF AN ENTITY

The model of individual behaviour which Chambers postulates is characterized by a high degree of flexibility. It has been shown in the previous sections that this degree of flexibility is the result of Chambers' use of the principle of homeostasis to explain human behaviour and his contention that the individual is capable of acting, and in fact does act, in a highly rational, and even optimizing, manner.

By using this model of flexible individual behaviour, Chambers is able to develop a model of the behaviour of entities⁹² which is also marked by a high degree of flexibility.⁹³ Thus, his model of entity behaviour inherits the same defects which are present in his model of individual behaviour and which were the subject of criticism in sections II and III.

This section is an attempt to relate the model of individual behaviour which Chambers proposes to his model of entity behaviour so that the defects of the latter model can be made evident. It is shown that, as a result of these defects, the information requirements which Chambers postulates as necessary for users of accounting statements are not generally relevant.

The implications of the links between the behaviour of individuals, the behaviour of entities, and information requirements of individuals can best be drawn out by a consideration of the following three questions:

1. What is an entity?
2. How does an entity act?
3. What part does accounting play in the acting of entities?

The nature of an entity

Entities may be viewed in many different lights according to the purposes of the investigation.⁹⁴ In the present context, the features of importance are those associated with the behaviour of entities, and with individuals connected with entities, which can be observed in the environment. Therefore, attention must be directed to those concepts of an entity which provide a basis for the explanation of interactions between an entity, individuals associated with it, and the environment.

A suitable starting point is provided by Barnard's discussion:

An organization [entity] comes into being when (1) there are persons able to communicate with each other (2) who are willing to contribute action (3) to accomplish a common purpose. The elements of an organization are therefore (1) communication; (2) willingness to serve; and (3) common purpose.⁹⁵

These three characteristics of an entity are essential to an understanding of the relationship between an entity and individuals. An entity can continue to exist only as long as there are individuals who can derive some benefits from its existence because of their association with that entity. If they are to derive any benefits from its existence, there must be some degree of mutual interest among those associated with the entity (its members) so that entity achievements have value to those members. Unless the members of the entity and the entity itself are able to exchange information concerning expectations and achievements it is unlikely that the entity will act in a manner expected of it by its members.

The point to be taken is that, because of the nature of an entity, its behaviour is inexorably bound up with the behaviour of those individuals associated with it—its “participants”,⁹⁶ and any explanation of actions which are taken in the name of the entity must take into account that those actions are the result of an interaction of decisions made by the various participants.

A similar concept of a firm or entity is recognized by Chambers when he discusses the relationship between an entity and its constituents and other participants:

Firms are voluntarily established entities. They arise from the decisions of persons to devote part of their personal resources, in money or kind, to productive or trading functions. We have spoken of such persons as the constituents of firms. A firm may have one or more constituents. The role of constituents is to decide whether firms shall be established, and when established, whether and to what extent firms shall be permitted to grow, and whether or not they shall be liquidated.⁹⁷

This is further amplified by him:

As a voluntarily established entity, the firm operates, therefore, under the constraints imposed by society at large; more directly it operates under the constraints of its constituents *and all other persons associated with it*.⁹⁸

The accounting literature reveals a fairly extensive dispute regarding the relationship between an entity and its participants, particularly with regard to the ownership of the assets of an entity. This is, of course, the centre of the proprietary-entity controversy which plagues attempts to develop theories of accounting.⁹⁹ It is not proposed to enter into the dispute at this point, except to contend that there is no absolute solution to the question of identifying the owners of assets of an entity because the controversy revolves around perception and its behavioural causes.¹⁰⁰

The question of ownership really considers only one of the many variables associated with the analysis of the relationship between participants and an entity. Of prime importance are the questions revolving around why individuals become participants, what causes them to relinquish their membership, and what actions they can and/or will take as participants to alter their relationship with the entity or to alter the course of action of the entity. In this context it is imperative to realize that the definition of “participants” is very broad. For example, the participants of a public company would include the shareholders, creditors, employees, directors, managers, suppliers, and customers. Furthermore, the classes of participants are not mutually exclusive so that it is possible to discover participants who are, for example, employee-shareholders, employee-customers, and management-shareholders. As a result of this overlap in definitions of the classes, it is difficult to characterize the behaviour of any one group of participants as such. However, it is possible to point to the decisions and alternatives facing a particular participant as a member of an individual class of participants, without becoming concerned with the more intricate explanation of the process

which that participant employs to resolve any personal conflicts arising from membership of more than one class.

Before any explanation of an entity's behaviour can be given, it is first necessary to investigate the types of people who form part of the entity and the behaviour which is characteristic of those people. March and Simon provide a three-way classification of the possible propositions which can be made concerning the behaviour of participants of an entity or organization:

1. Propositions assuming that organization members . . . are primarily *passive instruments*, capable of performing work and accepting directions, but not initiating action or exerting influence in any significant way.
2. Propositions assuming that members bring to their organizations *attitudes, values, and goals*; that they have to be motivated or induced to participate in the system of organization behavior; . . .
3. Propositions assuming that organization members are *decision makers and problem solvers*, and that perception and thought processes are central to the explanation of behavior in organizations.¹⁰¹

Although March and Simon maintain that "human beings are all of these things, and perhaps more",¹⁰² the third set of propositions is of overwhelming importance for the present purposes. Any theory of accounting for entities must be involved with such propositions because only individuals as decision makers can use the information provided. If information is not utilized (as with propositions (1) and (2) above), it need not be provided at all. Thus the discussion continues in an attempt to clarify the picture of an entity consisting of participants, all of whom are decision makers in their own right. Particular emphasis is given to the decision processes which these participants employ and to the impact of their decisions on the entity.

Entities and action

Chambers provides a clear description of the type of behaviour which, he believes, is characteristic of entities:

We have noticed that, where possible, individual persons will tend to hold a heterogeneous stock of means. To hold a mixed stock is obviously necessary to firms. A firm will hold means of differing specificities, divisibilities, durabilities, and so on. That combination of means will be chosen which in the particular context of technical knowledge, market opportunities, and total means available is expected to meet the tests of liquidity and rate of return on capital.¹⁰³

The basic characteristic of this model is obvious and Chambers states it explicitly:

But as fluidity is the dominant feature of the environment, so adaptation, not constancy or adherence to a past decision, is the dominant mode of economic behavior, of persons and firms alike.¹⁰⁴

The model therefore inherits the basic weaknesses of homeostasis and completely rational behaviour and therefore is not representative of the manner in which firms act in the environment because rigidity, *not* flexibility, is predominant in such behaviour.¹⁰⁵

Whilst, for general discussion purposes, it is adequate to speak of an entity acting in a particular fashion, detailed consideration can be given to that action only if it is realized that the action represents the culmination of a complex decision process involving various participants of the organization. Thus, to be able to explain action by an entity, it is first necessary to explain the decision process employed by the decision makers. It is then necessary to identify the decision maker or makers who can and do make particular decisions for entities.

Decision making in an entity

Ignoring, for the present, that the decision maker has not yet been identified, it is possible to analyse the decision process inherent in Chambers' model of entity action and to contrast this with empirical evidence of the decision process actually used by participants in entities. Because of the consideration already given to the decision process involved in Chambers' model,¹⁰⁶ little further discussion is necessary here, beyond reiterating that it is centred around an adaptive, rational man who is continuously acting to relieve strain by searching for, and evaluating, alternative courses of action.

It was proposed in the previous section that a model of man based on empirical evidence of man in the environment would revolve around a decision process characteristic of a satisficer rather than of Chambers' maximizer.¹⁰⁷

Further explanation of this concept of the "satisficer" decision maker is now warranted.

Many writers¹⁰⁸ develop a model of man as a satisficer by postulating a decision process consisting of two distinct types of behaviour—habitual behaviour and problem-solving behaviour.¹⁰⁹ The characteristics of each of these types are clearly presented by Katona:

1. Problem-solving behavior is a relatively rare occurrence . . .
2. The main alternative to problem-solving behavior is not whimsical or impulsive behavior . . .
3. Problem-solving behavior is recognized most commonly as a deviation from habitual behavior . . .
4. Strong motivational forces—stronger than those which elicit habitual behavior—must be present to call forth problem-solving behavior . . .
5. Group belonging and group reinforcement play a substantial role in changes of behavior due to problem solving . . .
6. Changes in behavior due to genuine decision making will tend to be substantial and abrupt, rather than small and gradual.¹¹⁰

The March and Simon model similarly gives explicit recognition to this bifurcation of decision making by postulating two essentially different types of decision processes. One of these processes is used when considering continuing an existing course of action (habitual behaviour), and the other is used when considering a change in the course of action (problem-solving behaviour). The dichotomy is basically equivalent to that of Katona and the characteristics of the classes are also similar.¹¹¹

These patterns of behaviour, furthermore, are based on empirical evidence of man's decision processes as observed in the environment, and it is from the environment that Chambers is attempting to deduce a theory of accounting.

Using the characteristics proposed by Katona and March and Simon, a lucid picture of man's decision processes and action can be drawn. Most problems which man encounters can be solved by mere reference to past experiences of similar situations, and man solves those problems by applying rules which he has acquired over the years. These solutions do not necessitate his taking action which deviates significantly from his current path of action. However, there are occasions when man is particularly disturbed so that he is no longer willing or able to apply the same learned solutions. In these comparatively rare cases he resorts to the second type of decision process—problem solving. The action taken as a result of this second process is significantly conditioned by the influence of the particular group to which that man belongs, so that, not uncommonly, the majority of members of a group are motivated to take similar action. When this action is taken, it usually diverges greatly from the current line of action.

This picture, however, still leaves several important factors obscured. One of these involves the underlying cause of man's emphasis on current activities and his reluctance to divert significantly from his current course of action. This can be explained. Because

of the complexity of the world which man faces, and because of the uncertainty regarding that world, man resorts to that type of action about which he has developed a fair degree of knowledge; and, in the majority of cases, this is inevitably restricted to the current path of action. Man is fortunate indeed if he can keep abreast of developments in his own field, let alone being capable of comprehending developments in allied fields, to say nothing of developments in unconnected fields. Thus, man's rigidity of behaviour can be explained in terms of a defence mechanism to offset his lack of ability and desire to cope with a complex world.¹¹² This does not explain why man sometimes *does* make drastic adjustments to his behaviour and switch from one course of action to another, often unrelated, field.

Such an explanation involves the other important factor which is obscured in the picture above—the determination of a minimum level of performance sufficient to satisfy man. Provided actual performance attains this level, man is not motivated to resort to problem-solving behaviour, and he will still continue along a similar path. Once performance slips below this minimum satisfactory level, man is motivated to consider divergent alternatives. The level of performance necessary to satisfy man is described as the “aspiration level”.¹¹³ It is not proposed in this study to give detailed consideration to characteristics of aspiration levels, except to note that the following questions are highly significant:¹¹⁴ What determines aspiration levels? How do motivational factors change aspiration levels? How is achievement or failure reflected in a person's subsequent actions and aspiration level? Katona's summary of research in this area suffices:

1. Aspirations are not static, they are not established once for all time.
2. Aspirations tend to grow with achievement and decline with failure.
3. Aspirations are influenced by the performance of other members of the group to which one belongs and by that of reference groups.¹¹⁵

Once it is appreciated that the decision maker in an entity is equipped with a decision process as described above, it becomes clear that the entity's actions must be characterized by a high degree of rigidity, rather than by a high degree of flexibility as proposed by Chambers.¹¹⁶

The behaviour postulated by Chambers is not consistent with that observable in the environment, and his following statement is an important example:

The changes that do, in fact, occur are the consequences of choice; they depend on the valuations of existing and alternative assets and obligations made by the firm's agents. There is, thus, no foundation in business or economic reasoning for drawing a distinction between “fixed assets” and current assets on the ground that the former are “not held for sale or for conversion into cash”.¹¹⁷

The contention in this study is that such a distinction *is* well founded because it is clearly observable that entities *do* retain fixed assets for several periods before selling them; and that, once capital or fixed assets have been purchased, there is seldom any consideration given to selling them before the end of their planned life. Chambers' incorrect line of reasoning with regard to this becomes obvious when he says that “every purchase of an asset is potentially a short-term investment”,¹¹⁸ because the available evidence points to the fact that businessmen do *not* regard them as such. Chambers is quite at liberty to argue that they *should* regard them as short-term investments, if he is giving advice to management; but this is completely outside his scheme of argument for providing information to external parties. What is relevant is that, as has been shown above, decision makers do not, and probably cannot, behave in this fashion.¹¹⁹

This is not to deny that, if internal decision makers did have ready access to information concerning the selling prices of fixed assets,¹²⁰ they would be more capable of making decisions to adapt *when, and if, their attention was directed towards adapting*. However, management's attention is not directed towards the possibility of adapting

until actual performance deviates significantly from an expected satisfactory level. Only when this significant failure occurs is management jolted sufficiently to consider alternative courses of action, and only *then* does the type of information produced by Chambers' model become relevant. Even then it is only one of the necessary pieces of information which should be provided by an accounting system. Knowledge of the selling prices of particular assets can make management better informed when it decides to adapt but it cannot enable management to overcome psychological barriers to constant adaptation.

Simon appropriately defines the phenomenon of rigidity of behaviour postulated here as "behavior-persistence",¹²¹ and he provides further support for the argument:

Attention and behavior, once initiated in a particular direction, tend to persist in that direction for a considerable interval of time. This is true even when the original choice of activity was a matter of relative indifference.¹²²

Simon attributes behaviour persistence to several mechanisms, the most important of them being due to the fact that any course of action results in a flow of information redirecting attention to itself, often to the exclusion of information about other courses of action.¹²³ This has also been postulated above.¹²⁴

It is interesting to notice that the outcome of this argument has already been anticipated by those theories of accounting which include a going concern assumption,¹²⁵ because that assumption is really only an explicit recognition of the comparative rigidity of behaviour of most entities.

Now that consideration has been given to describing a decision process characteristic of man in an entity, attention can be turned to identifying the decision makers in an entity.

Decision makers in an entity

When looking to the environment to decide who the decision makers in an entity are, the relevant observations concern those decisions which different classes of participants *do* make, not those which they are legally able to make. Merely because a particular class of participants has the legal power to take certain action does not mean that it is a relevant consideration unless it can be shown that members of that class are in the habit of making use of this power.

One major difficulty becomes obvious immediately. Before the decision maker can be identified, it is necessary to be able to nominate levels of the structural hierarchy at which decisions are made. In actuality, the action which is eventually taken may represent the culmination of an extensive bargaining and influence process. Thus, there may not necessarily be any one person in the entity who can be regarded as having made the decision of his own accord, because any decision which he makes reflects the judgments, influences and biases of those who advise or instruct him. Nevertheless, the different participants of an entity exert various influences on the decision process, and it is quite sufficient to analyse decision making within an entity with a view to describing the influence which each group of participants brings to bear on the final decision.¹²⁶

When investigating decision making by participants, the crux of the matter is whether all of the participants can be regarded as decision makers in the same degree or whether it is valid to differentiate between different types of decision makers concerned with different types of decisions. Chambers makes no such distinction between the decisions made by various participants, and he would supply them all with the same information about the entity to enable them to make their decisions.¹²⁷ He does recognize that, in this regard, his argument relies "on one or both of the assumptions that (a) the mobility of participants as between firms is effective, and (b) the capacity of one group to bring pressure to bear on management is effective within firms".¹²⁸ These assumptions appear to be particularly critical because exceptions to both of them can be observed to assume importance in the environment-as a

result of the ever widening gulf between management and shareholders. Chambers does not provide an adequate explanation of why he is able to ignore the fallacy involved in accepting these assumptions because, despite the "corrective mechanisms"¹²⁹ which he mentions, the lack of mobility and incapacity to influence management are present in the real world.

Chambers develops a picture of a *general* class of decision makers who are concerned with making decisions to change the course of the entity, and, in so doing, he ignores the important distinction between personal decisions of the participants and those decisions of the participants which are designed to control the entity. In short, Chambers postulates a model of an entity decision maker approximating the entrepreneur of classical economics. Once again it is contended that this postulation is in open conflict with observable features of decision makers who are participants in organizations.

Mention has already been made of the members of various classes of participants in entities¹³⁰ and specific attention can now be directed to members of two of those classes—shareholders and management. The selection of these two classes has two implications: firstly, that the entity is incorporated and, secondly, that it is possible to identify the management group. Although the first implication appears to rob any subsequent discussion of a degree of generality, this is not really the case. The absence of a shareholder group¹³¹ associated with an entity implies that there is an owner or closely knit ownership group so that ownership and management become synonymous. The other implication, that the management group can be identified, is not particularly restricting because there is no requirement that, even if it were possible, it is necessary to distinguish between policy-making and policy-implementing officers of an entity.

Keeping in mind that it is the type of decisions which these classes actually make, not those which they could make, which are relevant, the typical decision programme of the classes can be formulated.

Shareholders are characteristically passive, if not apathetic, decision makers. The decision they are accustomed to making is whether to retain or relinquish their holdings in the entity, and this is a personal decision. Whether they choose to hold or sell depends on their beliefs concerning the future prospects of the entity. If it appears to promise to offer a satisfactory return (in terms of dividends and/or capital growth), they are not motivated to sell their holdings. When the return offered appears unsatisfactory, their first and easiest remedy, apart from adjusting their level of satisfaction, is to look for an alternative investment which offers the satisfactory return. Only in rare cases in our environment does a less than satisfactory performance induce shareholders to consider using their power to "control" the entity. Despite the lack of any comprehensive research in this area, it appears that such action is contemplated only when a shareholder outside the management group has a significant holding and can command substantial support from other shareholders. For the present purposes it is not necessary to specifically identify the causes of this type of behaviour. It is sufficient to notice that it is rarely utilized. Also of importance is that, when such unusual behaviour is initiated, the action taken as a result usually brings about a drastic change of events; for example, replacement of several members of management, major policy changes, or liquidation. This pattern is in keeping with Katona's characteristics of decision making.¹³²

Shareholders are not active decision makers involved in the day to day operations of the entity. This lies in the realm of management decision making and includes decisions concerning, for example, the purchase and disposal of fixed assets, reorganization programmes, and budgeting. Management makes the decisions which influence the operations of the entity, whereas shareholders make decisions affecting their personal state of affairs, except in those rare instances where the shareholders are motivated to make decisions which drastically alter the conduct of the entity.

In summary, therefore, it is contended that it is misleading to talk of decision makers associated with an entity in general terms, because the participants of an entity

fall into several classes, each of which is concerned with an entirely different set of decisions. It is freely admitted that participants *may* have the legal *power* to make many decisions affecting the entity, but it is the type of decisions which they are observed to make which is relevant. Clearly their failure to use the power indicates a lack of desire on the part of those participants to be involved in the complexity of processes with which they are not, and probably could not be, familiar. Because of the rapid technological developments and increase in the number and sizes of entities in our environment, prevalence of this neglect by participants of their legal powers can only increase.

Accounting and decision making in entities

In view of the preceding outline of decision making in entities, there is no certainty that the information requirements of all groups of participants will correspond. In particular, distinctive requirements for at least two classes of entity participants—the internal users and external users of accounting information—can be distinguished.

Internal users of accounting information are those who are concerned with the routine operations of the entity. These users are in a particularly favoured position because they have ready access to a wide variety of recorded information, and the authority to request additional information on specific aspects of problems. Coupled with this, they have a more intimate knowledge of the operations of the entity and of any problems and prospects associated with it. These are the decision makers who guide the entity, and the information which they expect from the accounting system will reflect their whims and capabilities.

External users of accounting information, amongst whom shareholders are chief, are not concerned with normal operating decisions facing the entity. They are not in a particularly favoured position with regard to the receipt of information about the entity because of the well-constructed veil of secrecy surrounding the affairs of most entities. Moreover, they are not particularly interested in, or capable of, making decisions associated with the running of the entity because of their lack of knowledge of technical and financial problems facing the entity and lack of knowledge of alternatives available to the entity. Since the decisions they are making are, in the normal line of events, personal decisions rather than decisions designed to alter the course of the entity, they have no use for this type of knowledge. What is more relevant to them in this regard is the opinion of a person who has an intimate knowledge of the entity's affairs so that they can incorporate this information in their decision process concerning personal action.

This involves reporting information for personal decisions of external users *after* entity decisions have been made. Whether this results in providing advice rather than information is of little concern, provided it meets the needs of the users. It is contended here that such information or advice does meet the needs of the external users because of their lack of ability and desire to cope with a continuous decision process to guide the entity, and because of environmental constraints revolving around the cost and timeliness of information necessary for that continuous decision-making process. Furthermore, it is proposed that such a conclusion is a natural outgrowth of the deductions from the environment which have been made in this study.

As would be expected, Chambers' writings contain little evidence of agreement with the above argument. One of the prime reasons for the disagreement arises from Chambers' mistrust of management:

The assumption that management is in the best position to know what is in the best interests of investors disregards the consequence of the independent position of the management of corporations, namely that the management group has an interest of its own to promote and protect. Prestige, power, and perquisites are not wanted by corporations. They are wanted by the persons who manage them. The management group is no less a competing group within a system of

cooperative groups than is any other. The concealment or distortion of information may be viewed as one expression of this. The assumption indeed disregards the abundant evidence of the ineptitude of individual managers and boards of directors which has culminated in company failures.¹³³

This ignores two offsetting arguments. Firstly, shareholders can be given a degree of protection from management's deliberate or innocent distortions by instigation of a management audit in addition to the existing financial audit. There is no way of ensuring that shareholders cannot be deceived by management, irrespective of the type of information given to them. All that can be done is to take steps to ensure that they are reasonably protected. The detection of elaborate schemes to defraud shareholders can never be completely guaranteed and some of those schemes will undoubtedly be successful. Provided the information to be reported is useful, it is the responsibility of the statute makers and of the professional accounting bodies to minimize the possibility of its being used as a vehicle for deception. Secondly, Chambers does not refute the claim that members of the management group are, with rare exceptions, in a better position to form opinions about the operations of an entity than are external parties and that such opinions would be, in most cases, of assistance to external decision makers.

Another of Chambers' reasons for disputing the inclusion of the type of information proposed above is that it could involve "anticipatory calculations"¹³⁴ which fail to meet his tests of objectivity¹³⁵ and neutrality.¹³⁶ However, the tests of objectivity and neutrality are constraints only because of the docile role of the accountant in Chambers' model. Chambers' accountant is concerned solely with providing restricted independently verifiable data to decision makers of whose requirements the accountant is quite oblivious. Managerial accountants concerned with supplying information to internal decisions makers with whom they are closely associated certainly do not fit this description. On the other hand, the accountant reporting to external parties does encounter the difficulty of not knowing what information those parties require. This does not necessarily mean that the accountant can neglect his responsibility for providing information relevant to their decisions. The solution to the problem lies in extensive research into decisions which external parties can make with the assistance of accounting reports and into the decision processes involved in making those decisions. As a result of this type of research, accountants would be able to prepare reports specially tailored for the decision processes in which those reports were to be used. Reliance on objectivity and neutrality ignores the challenge which a solution to this problem offers.

The final source of disagreement arises from the limitations imposed by Chambers on the "domain of accounting".¹³⁷ These limitations arise from Chambers' reference to the *Shorter Oxford English Dictionary* meaning of "account":

The word "account" has a commonly understood meaning which has persisted since its early appearance in the English language. It means 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, and something, indeed, which may not happen even if one sets out to procure its happening. To speak about accounting for the future is abuse of the language.¹³⁸

"Account" does not, unfortunately, have any unequivocal meaning, and the definition to which Chambers refers is not necessarily universally accepted. For example, *Chambers' Twentieth Century Dictionary* includes the definition "account == to reckon: to judge, value", which clearly conflicts with Chambers' concept of accounting. In any event, there is no reason why a dictionary should be an authoritative source to determine the boundaries of a particular field of knowledge. Chambers ignores the writings of leading academics and publications of the professional bodies when he limits the field of accounting in this fashion. Although these sources show little evidence of widespread agreement, they do at least represent the judgments of men with

experience of accounting and experience of what users of accounting expect from it.¹³⁹

It is beyond the scope of this study to give further consideration to the boundaries of accounting. It is sufficient to conclude that Chambers' boundaries are arbitrarily established. The only justification for them vanishes when it is shown that his models of man the decision maker, and the process of decision making by participants of entities, are not consistent with observations of the environment.

Chambers, therefore, does not provide a satisfactory solution to the problem of discovering the relationship between accounting and decision making in entities. Further research into this problem is warranted.

Conclusions

As a result of the deductions which Chambers makes about men acting in the environment and in entities, he is able to propose a universally desired output of the system of accounting which he develops:

We propose, therefore, that the single financial property which is uniformly relevant at a point of time for all possible future actions in markets is the market selling price or realizable price of any or all goods held. Realizable price may be described as *current cash equivalent*.¹⁴⁰

There is no dispute in this study that this is the logical conclusion of the assumption and deductions which Chambers makes. It is compatible with, and dependent on, his fundamental theme:

But as fluidity is the dominant feature of the environment, so adaptation, not constancy or adherence to a past decision, is the dominant mode of economic behavior, of persons and firms alike.¹⁴¹

Since fluidity is not freely observable in the environment, the model of behaviour proposed by Chambers is in open conflict with the environment. Because behaviour is characterized by rigidity and because, in the normal run of events, members of management are the entity decision makers, the implementation of a model of accounting with an income determination process based on the selling prices of all assets would serve little purpose that could not be served by providing a supplementary schedule of asset selling prices and would probably be misleading as well.

Providing shareholders with sets of accounting statements merely with assets measured in terms of their current cash equivalents is insufficient to enable them to operate the entity and to switch entity assets—even *if* it is assumed that shareholders *do* exert control over the entity. To provide those shareholders with sufficient information to enable them to make decisions concerning the operations of the entity would involve reports incorporating the entire set of technical, financial, and behavioural explanations of the operations of the entity and of the problems which it faces and of the minute details which concern specific assets under consideration.

Although it is a conclusion of this study that Chambers does not present a rationale which is sufficient to justify the adoption of current cash equivalent as a universally relevant accounting measure for reporting to external users of accounting statements, no attempt is made to offer firm suggestions concerning the type of information which is relevant. The objective of the study was to examine the validity of Chambers' behavioural assumptions and his reasoning from those assumptions. To go beyond this and attempt to formulate a different theory lies outside the scope of this study.

V. SUMMARY AND CONCLUSIONS

Summary

The aim of this study was to critically analyse the behavioural assumptions underlying Professor Chambers' model. This aim arose from two factors—firstly, the importance of *Accounting, Evaluation and Economic Behavior* in the accounting literature

and, secondly, the paucity of comment made by critics concerning the underlying foundations of that work.

Consideration was first given to Chambers' use of *homeostasis* as a unifying principle of human behaviour. A brief historical review of the origin of the concept of homeostasis in physiology was carried out. Its gradual extension to an explanatory principle in psychology and its later use as a unifying principle in psychology were traced. Evidence was discovered which proved that homeostasis is not a general theory of psychology and that its usefulness for explanation purposes is also limited. The major criticisms were:

(i) Homeostasis can explain only how some people act some of the time, not how all people act all of the time.

(ii) Homeostasis emphasizes explanation of states of rest whereas an understanding of disturbing and restoring forces is more crucial.

(iii) Homeostasis, adaptation, and survival are not necessarily synonymous and may even be in conflict.

(iv) There are doubts whether man could ever, or would ever wish to, achieve the equilibrium position.

Thus it was shown that Chambers has attempted to build a general theory of accounting on an assumption which is not generally accepted in its own field. His model has inherited the defects of that assumption, the main one being the supposition that people maintain a continuous decision-making process.

Attention was then directed to Chambers' use of an assumption of *rationality* of human behaviour. This commenced with an account of the contexts in which such an assumption could be used, i.e. in either a normative, idealistic, or descriptive context. It was shown that, because Chambers attempted to deduce a theory of accounting from the environment, his assumptions would be required to be representative of the environment. Therefore, he would have to describe man as he was, and so he would have to use the assumption of rationality in a descriptive context. It was then shown that Chambers did, in fact, use the assumption in this context. Because of this, only brief consideration was given in the study to the problems involved in using an assumption of rationality in normative and idealistic contexts. Major attention was given to problems involved in using the assumption in a descriptive context, and emphasis was placed on the importance of testing such an assumption by reference to empirical evidence.

A detailed analysis of the assumption of rationality employed by Chambers was then undertaken. It was shown that Chambers postulated a type of rationality which resulted in a decision process oriented towards optimization. The chief feature revealed in that process was a decision concerning extensive analysis of the estimated costs and benefits of future search which was substituted for the original decision.

This was followed by a review of some models of behaviour incorporating different views on rationality based on empirical research. These models were in marked contrast with Chambers' model because they incorporated several vital environmental constraints which Chambers had overlooked. The essential feature of these empirical models was shown to be the way in which they recognized the natural limitations of man as a decision maker in an extremely complex and uncertain environment. These models revealed that, to combat the uncertainty and complexity in the face of his limitations, man adopts a simplified model of his environment which he employs in his decision process. Most significantly, it was shown that this leads man to consider only a small number of alternatives and to concentrate on his current course of action so that he is, at best, a "satisficer" rather than a "maximizer". In brief, the section revealed that there is adequate empirical evidence to suggest that man's behaviour is characteristically rigid; and that, since Chambers' rationality assumption involved highly flexible behaviour, that assumption was in conflict with the environment from which Chambers was to deduce his theory of accounting.

Once this review of the determinants of individual behaviour was completed, attention was turned to the *behaviour of entities* and to the relationship between entity behaviour and accounting. The explanation developed in three stages—(1) the nature of an entity, (2) characteristics of entity behaviour, and (3) the place of accounting information in entity decision making.

1. *The nature of an entity*

For the purposes of the study it was important to consider an entity as a collection of people deriving some benefit from combined action. The behaviour of such an entity could then be considered in terms of the behaviour of its members or participants. Because the area of concern in this study involved providing accounting statements to decision makers, it was shown that attention should be directed to participants as decision makers.

2. *Characteristics of entity behaviour*

Exception was taken to the essential feature of Chambers' model of entity behaviour, i.e. the flexibility involved in that behaviour, because this was based on a model of individual behaviour incorporating the principle of homeostasis and an assumption of completely rational behaviour. The flexibility of behaviour inherent in Chambers model of an entity was shown to contrast sharply with the rigidity of behaviour observable in entities in the environment.

Initially, no attempt was made to identify the decision maker. Instead, attention was directed to analysing how decisions are made by individuals who are participants in an entity. This consisted of further amplification of the contrast between the Chambers' model of a constantly adapting maximizer and the empirical observations of a satisficing man. The satisficing process was further explained in terms of a bifurcated process involving man in adherence to his current course of action until he is sufficiently dissatisfied in terms of his aspiration level to look elsewhere. Once these considerations were taken into account, it became clear that an entity's behaviour would also be characterized by a high degree of rigidity rather than flexibility because men make decisions in entities. Even giving the decision makers the information advocated by Chambers would not make the behaviour more flexible because the environmental barriers to flexible behaviour remain. A side effect of this analysis was the discovery that the traditional going concern assumption of accounting has substantial behavioural support.

Once the decision process had been outlined in this way decision makers in an entity became the subject of attention. When viewing decision makers, it was emphasized that the relevant criterion was the type of decision which entity participants *did* make in the environment, not necessarily those decisions which they were legally entitled to make. Chambers did not distinguish between types of decisions made by different classes of entity participants because he regarded them all as equivalent decision makers in their own right. In effect, he overlooked the distinction between personal decisions of participants and their decisions concerning the entity, and, as a result, described the actions of participants as being similar to those of entrepreneurs. It was revealed that this conflicts with observable features of the environment. As an example, reference was made to the decisions made by shareholders who are passive satisficers. Their usual reaction to unsatisfactory performance is to sell their shares and only rarely do they interfere with the management of an entity. They are by no means active decision makers concerned with entity operations and with the switching of entity assets as Chambers has imagined. As the size and complexity of entities in our environment increase, the reluctance (and inability) of shareholders to interfere in the normal course of events can only become more pronounced.

3. *The place of accounting information in entity decision making*

As a result of the essentially different types of decisions with which internal and external decision makers deal, it was obvious that there could be no guarantee that

the same information from the accounting system would satisfy members of even these two broad classes. External decision makers would be concerned with the future prospects of the entity; and, in view of the complexity of entity operations, man's limitations, and shareholders' apathy, this information could come chiefly from management via the accounting statements, after entity decisions had been made by the internal decision makers. Chambers' grounds for refuting this contention concerning the role of accounting with relation to external parties were then examined. His refutation was not accepted because it was based on a mistrust of unrestrained management, an unnecessary reliance on neutrality, and an arbitrary restriction of the domain of accounting.

Little attention was given to the types of information required by *internal* decision makers since this was explicitly excluded from the scope of the study. It was sufficient to note that Chambers' model could supply only *one* of the many types of accounting information relevant for internal decision making once the internal decision makers were motivated to consider some switching of fixed assets.

Conclusions

The universal validity of current cash equivalent as an accounting measure is not established by the arguments employed by Chambers because those arguments are based on several behavioural assumptions which are in open conflict with the environment.

There may be other arguments which could be used to justify this use of current cash equivalent, and there is no claim that these arguments have also been refuted in this study. However, any theory employing current cash equivalent as a general measure would be required to explain how the information it produces can be relevant in view of the behavioural conflicts, even if they were implicit conflicts.

An alternative output of the accounting process could not be specified in the present context because of the limited nature of this study. There is a remarkable paucity of behavioural investigations relating accounting and external decision makers. Future progress towards a general theory of accounting is heavily dependent on further extensive research in this area.

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NOTES TO TEXT

- ¹Raymond J. Chambers, *Accounting, Evaluation and Economic Behavior* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966), p. 15.
- ²Paul Grady, *Inventory of Generally Accepted Accounting Principles for Business Enterprises*, Accounting Research Study No. 7 (New York: American Institute of Certified Public Accountants, 1965), p. 4.
- ³Committee to Prepare a Statement of Basic Accounting Theory, *A Statement of Basic Accounting Theory* (Evanston, Illinois: American Accounting Association, 1966), p. 1.
- ⁴Basil L. Branford, "Accounting in Micro-Economics: Determination of Financial Position" (Unpublished paper, Department of Accountancy, University of Queensland, 1967), p. 1.
- ⁵Chambers, *op. cit.*, p. 99. Chambers undertakes a comprehensive consideration of the boundaries of accounting at pp. 96-99.
- ⁶For a scathing comment see Raymond J. Chambers, "A Matter of Principle", *Accounting Review*, XLI (July 1966), 443-57.
- ⁷Chambers reveals the inadequacy of this framework in "Conventions: Doctrines and Commonsense", *Accountants' Journal (N.Z.)*, XLII (February 1964), 182-87.
- ⁸For a short outline of some recent examples see William P. Birkett, "Communication—The Profession and Its Clients", *Chartered Accountant in Australia*, XXXVIII (February 1968), 643-44.
- ⁹Raymond J. Chambers, "Prospective Adventures in Accounting Ideas", *Accounting Review*, XLII (April 1967), 246.
- ¹⁰*Supra*, pp. 217-19.
- ¹¹Included in the stream are:
- (i) Maurice Moonitz, *The Basic Postulates of Accounting*, Accounting Research Study No. 1 (New York: American Institute of Certified Public Accountants, 1961).
 - (ii) Robert T. Sprouse and Maurice Moonitz, *A Tentative Set of Broad Accounting Principles for Business Enterprises*, Accounting Research Study No. 3 (New York: American Institute of Certified Public Accountants, 1962).
 - (iii) Committee to Prepare a Statement of Basic Accounting Theory, *op. cit.*
 - (iv) Richard Mattessich, *Accounting and Analytical Methods: Measurement and Projection of Income and Wealth in the Micro- and Macro-Economy* (Homewood, Illinois: Richard D. Irwin, Inc., 1964).
 - (v) Yuji Ijiri, *The Foundations of Accounting Measurement: A Mathematical, Economic, and Behavioral Inquiry* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967).
 - (vi) Study Group at the University of Illinois, *A Statement of Basic Accounting Postulates and Principles* (Illinois: Center for International Education and Research in Accounting, 1964).
 - (vii) Norton M. Bedford and Vahe Baladouni, "A Communication Theory Approach to Accountancy", *Accounting Review*, XXXVII (October 1962), 650-59.
- ¹²Raymond J. Chambers, "Blueprint for a Theory of Accounting", *Accounting Research*, VI (January 1955), 17-25.
- ¹³Raymond J. Chambers, *Towards a General Theory of Accounting*, Annual Endowed Lecture at the University of Adelaide (Australian Society of Accountants, 1961).
- ¹⁴*op. cit.*
- ¹⁵These reviews include:
- (i) W. T. Baxter, "Accounting Values: Sale Price Versus Replacement Cost", *Journal of Accounting Research*, V (Autumn 1967), 208-14.
 - (ii) Rex B. Cruse, Review of *Accounting, Evaluation and Economic Behavior*, by Raymond J. Chambers, in the *Accounting Review*, XLII (January 1967), 207-8.
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- ¹⁶Chambers, *Accounting, Evaluation and Economic Behavior*, pp. 20-21.
- ¹⁷Walter B. Cannon, *The Wisdom of the Body* (1st ed. rev. New York: W. W. Norton & Company, Inc., 1960), p. 24.
- ¹⁸Claude Bernard, *Les Phénomènes de la Vie* (Paris: J. B. Baillière, 1878).
- ¹⁹*Ibid.*, cited by Cannon, *op. cit.*, p. 38.
- ²⁰In the language of cybernetics this constitutes negative feedback. A common example of another device exhibiting negative feedback is the thermostat. Feedback is said to be negative because action is not called for until a disturbance is experienced. Positive feedback involves anticipation of disturbances and search for more favourable positions.
- ²¹Cannon, *op. cit.*, p. 24. Emphasis added.

- ²²C. N. Cofer and M. H. Appley, *Motivation: Theory and Research* (New York: John Wiley & Sons, Inc., 1964), p. 309.
- ²³Cannon, *op. cit.*, pp. 305-6. Cannon discusses the concept of social homeostasis on pp. 306-24.
- ²⁴John M. Fletcher, "Homeostasis as an Explanatory Principle in Psychology", *Psychological Review*, XLIX (January 1942), 80-87.
- ²⁵*Ibid.*, pp. 83-84.
- ²⁶*Ibid.*, pp. 82-83.
- ²⁷*Ibid.*, p. 83.
- ²⁸Ross Stagner, "Homeostasis as a Unifying Concept in Personality Theory", *Psychological Review*, LVIII (January 1951), 5-17.
- ²⁹*Ibid.*, p. 5.
- ³⁰*Ibid.*, pp. 5-7.
- ³¹*Ibid.*, p. 12.
- ³²Ross Stagner and T. F. Karwoski, *Psychology* (New York: McGraw-Hill Book Company, Inc., 1952), p. 18.
- ³³Stagner, *op. cit.*, p. 6.
- ³⁴Stagner and Karwoski, *op. cit.*, p. 16.
- ³⁵C. A. Mace, "Homeostasis, Needs and Values", *British Journal of Psychology*, XLIV (August 1953), 200-10.
- ³⁶An outline of four such models is given by Cofer and Appley, *op. cit.*, pp. 329-64.
- ³⁷Stagner, *op. cit.*, pp. 5-6.
- ³⁸J. R. Maze, "On Some Corruptions of the Doctrine of Homeostasis", *Psychological Review*, LX (November 1953), 412.
- ³⁹R. C. Davis, "The Domain of Homeostasis", *Psychological Review*, LXV (January 1958), 8-13.
- ⁴⁰*Ibid.*, p. 8.
- ⁴¹*Ibid.*, p. 9.
- ⁴²*Ibid.*, p. 8.
- ⁴³*Ibid.*, p. 12.
- ⁴⁴*Ibid.*, p. 13.
- ⁴⁵*Ibid.*
- ⁴⁶Magda B. Arnold, "Physiological Differentiation of Emotional States", *Psychological Review*, LII (January 1945), 35-48.
- ⁴⁷*Ibid.*, p. 40.
- ⁴⁸Christian O. Weber, "Homeostasis and Servo-Mechanisms for What?" *Psychological Review*, LVI (July 1949), 234-39.
- ⁴⁹*Ibid.*, p. 234.
- ⁵⁰*Ibid.*, p. 236.
- ⁵¹*Ibid.*, p. 238.
- ⁵²Frederick Herzberg, *Work and the Nature of Man* (Cleveland, Ohio: World Publishing Company, 1966), p. 56.
- ⁵³*Ibid.*
- ⁵⁴Chambers, *Accounting, Evaluation and Economic Behavior*, p. 49. Emphasis added.
- ⁵⁵*Infra*, pp. 232-36 and 239-41.
- ⁵⁶Chambers, *Accounting, Evaluation and Economic Behavior*, p. 45.
- ⁵⁷*Ibid.*, footnote 8.
- ⁵⁸Ludwig von Mises, *Human Action: A Treatise on Economics* (London: William Hodge and Company Limited, 1949), pp. 18-19.
- ⁵⁹Patrick Suppes, "The Philosophical Relevance of Decision Theory", *Journal of Philosophy*, LVIII (October 1961), 607. Emphasis added.
- ⁶⁰Kenneth J. Arrow, "Mathematical Models in the Social Sciences", in *The Policy Sciences*, ed. Daniel Lerner and Harold D. Lasswell (Stanford, California: Stanford University Press, 1951), pp. 129-54.
- ⁶¹*Ibid.*, p. 135.
- ⁶²*Ibid.*, pp. 135-36.
- ⁶³*Infra*, pp. 233-36.
- ⁶⁴Ernest Nagel, "Assumptions in Economic Theory", *American Economic Review*, LIII (May 1963), 214-15.
- ⁶⁵*Infra*, pp. 233-35.
- ⁶⁶Nagel, *op. cit.*, pp. 214-15.
- ⁶⁷*Infra*, pp. 232-33.
- ⁶⁸*Supra*, p. 229.
- ⁶⁹Chambers, *Accounting, Evaluation and Economic Behavior*, p. 6. Emphasis added.
- ⁷⁰*Ibid.*, p. 35.
- ⁷¹Maynard W. Shelly and Glenn L. Bryan (eds.), *Human Judgments and Optimality* (New York: John Wiley & Sons, Inc., 1964), pp. 14-15.
- ⁷²Joseph W. McGuire, *Theories of Business Behavior* (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1964), p. 237.
- ⁷³Chambers, *Accounting, Evaluation and Economic Behavior*, footnote 9, p. 46.
- ⁷⁴*Ibid.*, p. 45.
- ⁷⁵*Ibid.*
- ⁷⁶*Ibid.*

⁷⁷*Supra*, pp. 231-32.

⁷⁸Chambers, *Accounting, Evaluation and Economic Behavior*, pp. 19-20. Emphasis added.

⁷⁹*Ibid.*, pp. 35-37.

⁸⁰*Infra*, pp. 233-35.

⁸¹*Infra*, pp. 234-35.

⁸²Herbert A. Simon, *Administrative Behavior* (2nd ed. New York: Macmillan Company, 1961), p. 79.

⁸³*Ibid.*, pp. 80-96.

⁸⁴*Supra*, pp. 232-33.

⁸⁵For some excellent examples of this see "Four Case Studies in the Use of Expectations" in Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963), pp. 47-66.

⁸⁶Chambers, *Accounting, Evaluation and Economic Behavior*, p. 269.

⁸⁷Detailed consideration of man's inflexible behaviour is given in section IV, pp. 238-41. The serious consequences of Chambers' disregard for man's limitations are most obvious when the resultant model of flexible entity behaviour is discussed.

⁸⁸James G. March and Herbert A. Simon, *Organizations* (New York: John Wiley & Sons, Inc., 1958), p. 139. Emphasis added.

⁸⁹*Ibid.*, pp. 137-71.

⁹⁰Simon, *op. cit.*, p. xxiv.

⁹¹Harold J. Leavitt, *Managerial Psychology: An Introduction to Individuals, Pairs, and Groups in Organizations* (2nd ed. Chicago: University of Chicago Press, 1964), p. 89.

⁹²Although Chambers distinguishes between entities which are unincorporated (firms) and those which are incorporated (corporations), the distinction is not maintained here. Firms, corporations, clubs, and other organizations are classed as entities.

⁹³The entity behaviour model is developed by Chambers at pp. 197-98 and pp. 275-84 of *Accounting, Evaluation and Economic Behavior*.

⁹⁴For an extensive review of the various concepts of an entity or firm see McGuire, *op. cit.*, pp. 16-45.

⁹⁵Chester I. Barnard, *The Functions of the Executive* (Cambridge, Massachusetts: Harvard University Press, 1962), p. 82.

⁹⁶Taken from Simon, *op. cit.*, p. 16.

⁹⁷Chambers, *Accounting, Evaluation and Economic Behavior*, p. 187.

⁹⁸*Ibid.*, pp. 187-88. Emphasis added.

⁹⁹Paul Garner includes it among his "numerous treacherous rocks in the path of anyone who starts out to formulate a set [of accounting principles]". See "The Development of Accounting Principles or Standards" in *Readings in Accounting Theory*, ed. Paul Garner and Kenneth B. Berg (Boston: Houghton Mifflin Company, 1966), pp. 95-109.

¹⁰⁰For a review of the literature on this controversy and an explanation of it in terms of behavioural influences, see Reginald S. Gynther, "Accounting Concepts and Behavioral Hypotheses", *Accounting Review*, XLII (April 1967), 274-90.

¹⁰¹March and Simon, *op. cit.*, p. 6.

¹⁰²*Ibid.*

¹⁰³Chambers, *Accounting, Evaluation and Economic Behavior*, p. 6.

¹⁰⁴*Ibid.*, p. 200.

¹⁰⁵*Infra*, pp. 239-41.

¹⁰⁶*Supra*, pp. 232-33.

¹⁰⁷*Supra*, pp. 233-36.

¹⁰⁸For example: (i) Leavitt, *op. cit.*, (ii) March and Simon, *op. cit.*, and (iii) George Katona, "Rational Behavior and Economic Behavior", *Psychological Review*, LX (September 1953), 307-18.

¹⁰⁹The terminology is that of Katona, *op. cit.*, pp. 309-13.

¹¹⁰Katona, *op. cit.*, p. 310.

¹¹¹The mode is described in March and Simon, *op. cit.*, pp. 172-210.

¹¹²See Julius Margolis, "The Analysis of the Firm: Rationalism, Conventionalism, and Behaviorism", *Journal of Business*, XXXI (July 1958), 191-92.

¹¹³An early reference is Kurt Lewin, *A Dynamic Theory of Personality: Selected Papers*, trans. Donald K. Adams and Karl E. Zener (New York: McGraw-Hill Book Company, Inc., 1935).

¹¹⁴The lack of consideration given should not be taken to imply a lack of importance of the determination of factors influencing the level of satisfaction. In future developments of accounting, research in this area could be vital.

¹¹⁵Katona, *op. cit.*, p. 316.

¹¹⁶*Supra*, p. 238.

¹¹⁷Chambers, *Accounting, Evaluation and Economic Behavior*, p. 198.

¹¹⁸*Ibid.* p. 200.

¹¹⁹For an example of another author's opinion on this rigidity of behaviour, see Simon, *op. cit.*, p. 68.

¹²⁰Chambers' accounting model is built around measurement in terms of selling prices or, as he calls it, current cash equivalent. *Infra*, p. 245.

¹²¹Simon, *op. cit.*, p. 95.

¹²²*Ibid.*

¹²³*Ibid.*

¹²⁴*Supra*, pp. 239-40.

¹²⁵For example, W. A. Paton and A. C. Littleton, *An Introduction to Corporate Accounting Standards*,

American Accounting Association Monograph No. 3 (Columbus, Ohio: American Accounting Association, 1940), pp. 9-11.

¹²⁶This precision of terminology is not continued, and future reference is to participants "making" decisions rather than "influencing" them.

¹²⁷Chambers, *Accounting, Evaluation and Economic Behavior*, particularly pp. 280-84.

¹²⁸*Ibid.*, p. 283.

¹²⁹*Ibid.*, p. 284.

¹³⁰*Supra*, pp. 236-38.

¹³¹The discussion uses "shareholder" to symbolize any membership interest in an entity where ownership is divorced from control and includes members of clubs and societies, etc.

¹³²*Supra*, pp. 239-40.

¹³³Chambers, *Accounting, Evaluation and Economic Behavior*, p. 282.

¹³⁴*Ibid.*, pp. 96-99.

¹³⁵*Ibid.*, pp. 148-49.

¹³⁶*Ibid.*, p. 156. The principle of neutrality is clearly set out in Raymond J. Chambers, "Why Bother with Postulates?" *Journal of Accounting Research*, I (Spring 1963), 3-15.

¹³⁷Chambers, *Accounting, Evaluation and Economic Behavior*, pp. 96-99.

¹³⁸*Ibid.*, p. 98.

¹³⁹Section I includes a brief review of the literature on this topic.

¹⁴⁰Chambers, *Accounting, Evaluation and Economic Behavior*, p. 92.

¹⁴¹*Ibid.*, p. 200.

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