Chapter 7-Objectivity and the accounting concept of measurement

7.1. Introduction

The concept of objectivity is fundamental to all measurement. Boyce *et al.* (1994) points out that measurement should be objective in its communities of discussion. Measurements must be made in the same way by all the individuals in a specific community of reference. It follows from this that measurements are socially constructed. Luce *et al.* (1971:13) also point out that the empirical relational structure and its associated empirical properties formulated as axioms should be invariant. They contend that a set of axioms leading to the representational and uniqueness theorems of fundamental measurement may be regarded as a set of qualitative (that is, non-numerical) empirical laws. It can be inferred from this that the objects of measurement themselves should be viewed in the same way by all individuals, irrespective of their frame of reference. This also means that, given the structure of physical attributes, any physical law that is defined in terms of these attributes must also be invariant. Numerical representations of objects of measurement must therefore be objective in the same way as the underlying object of measurement.

However, given that there is consensus (see chapter 1) that the accounting discipline has not succeeded in creating a theory of accounting measurement from the observation of accounting practices of measurement, it can be inferred that the objectivity of the accounting concept of measurement is questionable.

The purpose of this chapter is to investigate whether the accounting concept of measurement can be considered objective in the light of the principles of the representational theory of measurement.

In this chapter a discussion of the role of perception in accounting measurement is provided in section 7.2, followed by an exploration of the objectivity of cost and value in section 7.3. In section 7.4, an examination of the objectivity of the qualitative structures of accounting phenomena is conducted. The chapter goes

on in section 7.5 to discuss the implications of the concepts of public objectivity and empirical objectivity on accounting measurement, in section 7.6. A discussion of the implications of the concept of formal objectivity in accounting measurement is provided in section 7.7. The chapter closes in section 7.8 with the conclusion.

7.2 The role of perception in the concept of measurement in accounting

The phenomenon of vagueness and ambiguity has been observed in the accounting discipline by many accounting researchers. For example, authors such as Zebda (1991), Stephens *et al.* (1985), Cooley and Hicks (1983), Kaplan (1982), Horngren (1982), Maher (1981), Nurnburg (1977), Reckers and Stagliano (1977) and Vatter (1963) have noted that accounting concepts are vague and ambiguous because of their imprecise meanings. It is clear from this that vagueness and ambiguity are terms that describe a phenomenon that is unclear and has multiple meanings. Black (1963) argues that ambiguity exists when a word or concept has multiple meanings, while vagueness exists when the word or concept lacks precise shape and boundaries. Both terms imply the imprecision and inexactness of meanings of definitions and concepts. It follows that, in the accounting discipline, the meanings and descriptions of accounting phenomena are relative to a specific frame of reference. The meanings of accounting concepts, definitions and phenomena are thus dependent on the intuition and perception of the accountant.

According to Hornby (2005:1079), perception refers to the idea, belief or image that one has as a result of how one sees or understands something. Perception is relative to an individual. It is clear that there is no standard perception of reality. Consequently, different individuals will hold many views about reality. In chapter 2 it was noted that the meaningfulness of a measurement is dependent on the position taken by the measurer. The meaningfulness of a measurement is therefore dependent on the intuition of the measurer. In the accounting discipline

it is believed that the concept of measurement is dependent on the perception of an accountant and his social setting (Flanders, 1961; Ijiri, 1975). It follows that the perception of the accountant plays a fundamental role in the construction of accounting measurements. Gouws and Rehwinkel (2004:82) put it as follows:

> By acknowledging the concept of contingency, it is virtually impossible to make verified empirical propositions about systems, since, given different circumstances, both systems and propositions are prone to adaptation. This contingent element is also transferred to the accounting system, confirming that it could never fall in the realm of pure classical science, being founded upon pure classical accountancy theory.

This quotation points to the opinion that accounting is not a natural science. It follows that accounting values cannot be accorded the same objectivity or empirical testability as can natural phenomena. The excerpt also highlights the fact that the accounting concept of measurement is dependent on the intuition of the accountant. It should also be noted that in representational measurement every pair of the representation and uniqueness theorems involves a choice of numerical relational structure (Luce *et al.*, 1971:12). These researchers argue that this choice of a numerical relation structure is essentially a matter of convention, and that conventions are strongly affected by considerations of computational convenience. It is clear, then, that the choice of a numerical relational structure onto which accounting phenomena can be mapped depends on how well the accountant can construct scales of measurement that can map the empirical relational structures of accounting phenomena onto the numerical relational structure. Unless the intuitions of different accountants are identical, it is unlikely that different accountants would make an identical choice of numerical relational structure for an identical pair of representation and uniqueness theorems.

The perception of a measuring accountant is also influenced by the entity concept. Staubus (1985), in his attempt to find a theory of accounting measurement, points out that the “entity “ concept is a theory which suggests

that accounting activities are specific to an entity. This means that the accounting entity is generally viewed as an economic unit under one management. The scope of the management's power determines, in a general way, the boundaries of the entity. Staubus (1985) also points out that this may be one of the reasons there is no simple statement that describes accounting measurement in a general way. It can also be inferred that the intuition of the accountant is influenced by the scope of management's power. It also follows that the judgements of the accountant with regard to accounting measurement are determined by the power of the management. The measurement perception of the accountant is thus strongly influenced by the perception of management.

Michell (1995:245) claims that the representational theory equates measurement with numerical coding (albeit a complex variety where relations are numerically coded along with attributes). This suggests that representational measurement is equated to a coded message. According to Hornby (2005:274), a coded message or coded information is written or sent using a system of words, letters or numbers that are understood by only a few people. Only persons who are familiar with the code used in constructing the message will understand it. This means that representational measurements will only be understood by persons who are familiar with their construction. If accounting measurements are relative to a specific entity, these measurements will also be coded relative to a specific entity. Consequently, the concept of accounting measurement is dependent on the entity concept. It can be further inferred from this that current accounting measurements are not comparable beyond the boundaries of a specific accounting entity.

Flanders (1961) argues that accounting measurements are dependent on the judgments of the accountant. It is clear from this that the concept of accounting measurement is also dependent on the judgment of the accountant. If this concept of measurement is dependent on the intuition of the accountant the selection of the attributes of accounting phenomena that are of use and interest to measure, their empirical identities and the empirical testability of the attributes will also be

dependent on the intuition of the accountant. Since from the entity concept perspective, the intuition of the accountant is dependent on the management of a particular entity, it would follow too that the empirical identities of the attributes of accounting phenomena that are of use and interest to measure are also dependent on the operating environment set by the management of a specific entity.

7.3 The objectivity of cost and value in accounting

This section discusses the objectivity of the objects of measurement in accounting. The IASB (2006) identifies cost and value as the phenomena in accounting which must be measured for the recognition of an item that meets the definition of an element of financial statements. It was noted in chapter 2 that the principles of measurement that are applicable to the accounting discipline are those of the representational theory of measurement. If cost and value are the objects of measurement, then, for accounting measurement to occur, these qualities of cost and value must be in harmony with the principles of the representational theory of measurement.

The IASB (2006: Para 83) framework for financial reporting states the following about cost and value:

"An item that meets the definition of an element should be recognized if:

- It is probable that any future economic benefits associated with the item will flow to or from the entity; and
- The item has a cost or value that can be measured with reliability. "

This definition indicates that proof of expected future economic benefits is necessary for the recognition in the financial statement of an item that meets the definition of an element of the financial statement. The definition also implies that the measurement of the attributes of future economic benefits is not a necessary condition for the recognition of an item that meets the definition of an element. It is only the expectations of future economic benefits that will flow from the item that should be measured. The object of measurement in accounting is cost or

value. This excerpt provides a choice to accountants. Accountants can choose whether to measure cost or value and they will still achieve the same results; that is, accountants can still achieve the recognition of an element of the financial statement in the financial statement. It can be inferred that cost and value can substitute each other: the properties of cost and the properties of value are similar and consequently one can be used to substitute another.

However, Littleton (1929) makes the point that cost and value are unrelated. He argues that cost furnishes the limiting factor to prices while value is subjective. This indicates that cost determines how high or how low the price of commodities should be, while value cannot be defined precisely. It is evident from this that there is confusion in the accounting discipline about the nature of cost and value and how they should be defined.

Furthermore, it should be pointed out that the current concept in accounting of cost and value is not in harmony with the principles of the representational theory of measurement. Consequently, cost and value are not currently measurable. An analysis of the definition of cost provided below indicates this. IAS 38 (2006, Para 8) defines cost as follows:

> Cost is the amount of cash or cash equivalents paid or the fair value of other consideration given to acquire an asset at the time of its acquisition or construction…

Cost is the numerosity of cash or the numerosity of cash equivalents paid or the numerosity of the units of fair value of other consideration given to acquire an asset. Cost is used as the value of the measurement function. Yet, earlier in this section (IASB, 2006 Para 83), cost was referred to as the object of measurement in accounting, and as the domain of the measurement function. This indicates that the accounting discipline has not fully recognized the distinction between the preformed theoretical constructs of the empirical relational system, the measurement function and the value of the measurement function. It is clear that the nature of cost cannot be objectively determined in accounting. In chapter 2 it

was noted that it is only objective phenomena that are measurable. Consequently, it follows that cost is not measurable.

It is also not known exactly what the amount of monetary units represents in accounting (see, Willet, 1987). It is evident from this that cost can be neither the value of a measurement function nor a measurable attribute. The value of a measurement function is supposed to represent the properties of the domain of the measurement function. But, in the case of monetary units in accounting, it is not known exactly what they represent and as a result monetary units cannot be known as a value of the measurement function.

It should also be noted that the concept of value is a subjective concept, and as a result value cannot be measured. Stamp (1981:23) makes the following remark about value and income:

> Value and income, unlike mass and length, are not unambiguous and intrinsic properties of an accounting entity. Whereas all physicists agree on what they mean by “length” there is no general agreement among accountants on the meaning or relevance of “value” or “income”.

According to this, value cannot be empirically tested. Value does not have characteristics that are identical to those of natural phenomena. The concept of value has also been identified in this excerpt as a subjective concept on which accountants cannot agree. It is clear then that the concept of value that is the basis of accounting measurement cannot be determined with absolute certainty. Zebda (1991) adds that an ambiguous concept is unclear, unstructured and has multiple meanings. Consequently, the concept of value is unstructured, unclear and has multiple meanings. It should be kept in mind that measurement presupposes something to be measured and, unless we know what that something is, no measurement can have any significance (Caws, 1959). Consequently, if value is an ambiguous concept as outlined in the

extract above, then current accounting measurements of value cannot have any significance at all.

Moreover, Decoene et al. (1995) contend that magnitudes are historically and theoretically determined reflections of quantitative aspects of objectively existing entities and not merely the outcome of metricization or measuring procedures. In this case, value cannot be determined objectively and therefore it not possible to have measurements of value that satisfy the principles of the representational theory of measurement. As a result, accounting value or cost is not currently measurable in accounting.

7.4 The objectivity of the qualitative structures of accounting phenomena

This section discusses the objectivity of the qualitative structures (see chapter 2) of accounting phenomena. In chapter 2 it was noted that, in a measurement space, a precise definition of the empirical relational structure is necessary. Luce *et al.* (1971:12) assert that the empirical relational structure and its empirical properties should be invariant. This suggests that a qualitative structure and its properties should be objectively determinable. It follows that the properties of the empirical relational structure that is the subject of measurement should be empirically testable.

Luce *et al.* (1990) argue that a set of axioms leading to the representation and uniqueness theorems of fundamental measurement may be regarded as a set of qualitative empirical laws. The empirical relational structure and its properties should have an objective denotation. It is important to note that, in this case, something that is invariant is not necessarily a physical law. In the case of statistical analyses of measurements, the result should exhibit invariance appropriate to the structure underlying the measurements (Luce and Suppes, 2001). It follows that the numerical relational should be objective relative to the empirical relational structure it is representing. That is, the numerical relational

structure should exhibit the properties of the empirical relational structure. In other words, it should be possible to deduce the empirical relational structure from the numerical relational structure.

However, the evidence in the accounting literature suggests that accounting phenomena do not have qualitative structures (see chapter 2) that are objective relative to the abstract structure used to represent them. Value (see IASB, 2006) is currently regarded as the phenomenon the properties of which the accounting discipline currently aspires to measure. It is clear that the qualitative structure of value should be objective. Vickrey (1970) contends that there is no agreement relating to the amount of monetary units paid to acquire a commodity and its value. It is evident that in statistical analysis monetary units cannot be considered to be invariant relative to the underlying value of an accounting phenomenon. Furthermore, as Willet (1987) points out, it is not known with certainty what the monetary units represent in accounting. The underlying structure that monetary units represent cannot be precisely specified. It follows that monetary units cannot be considered to be objective relative to an unknown phenomenon the properties of which they purport to be measuring. Consequently, the qualitative structure of value cannot be considered to be objective.

Stevens (1951) asserts that a measure is a scaled-down value of the phenomenon itself. It is clear that there must be a precisely defined and clear, empirically testable relationship between the measure and the phenomenon that is being represented by the measure. Since, as has been pointed out (Ryan et al., 2002), it is not known what the monetary units represent in accounting, it can be inferred that the amount of monetary units paid to acquire a commodity is a presumed effect or correlate bearing an unknown relation to the value of the commodity. The amount of monetary units paid to acquire a commodity can only become a measure of value once the quantitative relation between the amount of monetary units and the value of a commodity is known. That is, monetary units can only become a measure of value when they are a scaled-down value of the units of the value of a commodity.

It has also been noted that some accounting phenomena do not have legitimate properties that can be empirically verified. Gouws and Van der Poll (2004) point out that some accounting transactions are based on simulated reality. This means that these transactions are not real, but a creation of the mind. Such transactions are dependent on the opinion of the accountant and they do not represent reality. According to Decoene *et al.* (1995), magnitudes are historically and theoretically determined reflections of quantitative aspects of objectively existing entities and not merely the outcome of metricization or measuring procedures. This assertion highlights the point that measurement is only possible with objectively existing entities. Thus, numerical representations of simulated reality in accounting cannot be considered to be objective. This justifies the conclusion that the qualitative structures of simulated accounting reality are not objective as required by the principles of representational measurement.

The nature of the accounting discipline is such that the characteristics of accounting phenomena cannot be given a common empirical identity. Gouws and Rehwinkel (2004) believe that accounting is an art. They argue that art is not necessarily concerned with presenting an accurate portrayal of an object, but, in fact, different representations of the same object are not only acceptable but also desirable. These arguments suggest that, because accounting is an art, it is acceptable in the accounting discipline to have varying views about identical accounting phenomena. Varying descriptions of the qualitative structures of accounting phenomena are encouraged in the accounting discipline.

Tinker (1985:106) believes that accounting is a social artifact. This suggests that different social settings may use the principles differently. It can also be inferred that different social settings may produce different accounting measurements. Goldberg (2001) contends that each unit of experience has a unique experience of reality. There might be as many descriptions of accounting phenomena as there are units of experience. There may be as many measurement methods as there are units of experience. Mitchell (1995) makes the point that the

representational theory equates measurement with numerical coding (albeit a complex variety where relations are numerically coded along with attributes). A code is a system of communication that is specific to a particular group of people. If, as outlined earlier, accounting is an art, different ways of measuring the attributes of accounting phenomena are acceptable in the accounting discipline. Hence, in order to compare such varying ways of measuring the same attribute, it is necessary to convert them to a standard form of measurement.

Sorter (1969), Johnson (1970), Cushing (1989) and Goldberg (2001) all point out that accounting transactions that are based on predicted or foreseen happenings are not real. They argue that such transactions are classified as book entries as they do not represent reality. Predicted happenings are not reality, as they have not yet happened. Therefore the attributes of book entries cannot be determined objectively as they have not yet happened. Decoene *et al*. (1995) assert that it is only the attributes of objectively existing entities that are measurable. In other words, objects that do not exist do not have measurable attributes. In the same way, predicted happenings do not have measurable attributes, as they do not exist. Therefore, the possibility of accounting measurement is limited to only those transactions that represent reality.

7.5 The concept of measurement in accounting and the concept of public objectivity

The concept of objectivity in accounting measurement can also be investigated from the perspective of public objectivity. Public objectivity means being valid to the general public. According to Heelan (1965:82), the concept of public objectivity is based upon the presence of pure synthetic *a priori* features in the subject's knowledge of an object. Thus, the features that describe a public object should be the same for all observers in the same community of discussion. Brown (2000) also points out that such features are the axioms of intuition, the anticipations of experience, the analogies of experience and the postulates of empirical thought in general. The features that are used to identify an object as a public object should result from true identical statements from the intuition of the

observers. Consequently the thinking of the observers in the same community of discussion about the object should be identical. Hence it can be concluded that the experiences of the observers in the same community of discussion as the object should be identical and should be empirically verifiable.

There are two kinds of public objectivity. One belongs to an idea (or concept), and the other to a reality in its world (Heelan, 1965). The implications of these two kinds of objectivity for the concept of measurement in accounting are discussed in this section. It was noted in chapter 2 that measurement is applicable only to objectively existing phenomena. Consequently, the focus of the paragraphs that follow is on determining whether accounting phenomena exhibit either public objectivity of a reality or public objectivity of a concept (idea), or both.

Heelan (1965) argues that the objectivity of an idea or concept is that property which is possessed by an exact and precise definition. The definition of the idea or concept should be independent of particular places, times and factual occurrences. It does not belong to the world of the real but to the realm of ideas. The concept of public objectivity of a concept exists in the accounting discipline. The existence of this kind of objectivity is reflected in accounting definitions. For example, Vorster *et al*. (2008:14) define a liability as follows:

> A liability of an entity:
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> - Is a present obligation;
> - arises from past events;
> - is the settlement which is expected to result in an outflow of resources embodying economic benefits from the entity.

This definition indicates that before a liability can be classified as such, a present obligation must exist. The obligation to part with resources must exist currently. It follows that before a liability can be classified as a liability, it has to be shown that the obligation exists currently. Furthermore, the definition makes clear that the obligation must have arisen from past events. It is evident from this that the occurrence of a past event that gave rise to the liability must be proved before a

liability can exist. Moreover, the settlement of the obligation must be expected to result in an outflow of resources from the entity. Before an obligation can be classified as a liability, evidence must be provided to support an expected outflow of resources at a future date as a result of the obligation. It is clear from this that a demonstration of the three aspects mentioned above is necessary for the existence of a liability irrespective of the location of the accountant. It can therefore be argued that a liability has an exact and precise definition that is independent of particular places and factual occurrences. That is to say, every accountant has to be familiar with the same concept of a liability, irrespective of his or her opinion and location. It can therefore be concluded that the definition of a liability exhibits the public objectivity of an idea (concept).

On the other hand, it can also be argued that the concept of a liability is an ambiguous concept. From the definition above, it is evident that there is no clear specification of a present obligation, or a clear specification of which past events give rise to a liability. Nor is there a clear definition of an expected future outflow of resources embodying economic benefits from the entity. This indicates that different individuals may attach different meanings to the definition of a liability. It can be argued that the definition of a liability involves ambiguity because of the imprecise meaning of its phrasing.

Zebda (1991:119) also reveals that ambiguity exists in many accounting concepts when he notes the following phrases: “the financial statements present fairly the financial position of the firm”, “the internal control system is strong or weak”, “if there are material weaknesses in the internal control, expand sample size”, “investigate large or significant variances”, “allocate overhead costs by using fair bases”, and “joint products are classified as by-products if they have a small sale value.”

The use of phrases such as “present fairly”, “strong or weak”, “material weaknesses “, “large or significant variances”, “fair bases”, and “small sale value”, imply that accounting concepts have multiple meanings. These words could mean different things to different people. For instance, what is fair for one individual

might be unfair for another, and what is large or significant, material or small for one could have a completely different meaning for another. Zadeh (1965) argues that ambiguity and vagueness deal with classes of objects with no sharp or exact boundaries between what is and what is not. Consequently, if these statements are to be considered unambiguous, it is necessary to have a sharp or precise meaning of what they mean. It can therefore be concluded that there is evidence in the accounting discipline that accounting concepts do not exhibit the public objectivity of an idea or concept.

According to Peacocke (1996), the objectivity of a reality in its world belongs to a shared world of real things. It can be inferred from this that a reality in its world should be capable of being viewed or experienced by all the observers in the same community of discussion. A reality in its world is also part of other realities in that particular world. It participates in forming that particular world. Moreover, Heelan (1965:81) states that “it is the object of factual judgments, founded upon perception and – unlike the precision of an idea – it is accompanied by an irreducible element of impreciseness and indeterminateness”.

This quotation stresses that the identity of a public object is also dependent on what the observer sees and makes of the object. The use of the phrase “it is the object of factual judgments, founded upon perception” implies that a public object is a reality that is known to exist in a particular world whose characteristics depend on the perception of the observer. This means that the empirical properties that are used to identify a public object are dependent on the observer. For observers to agree on the empirical properties of a public object, there has to be a convention that determines what constitutes the empirical features of a public object and what does not. A public object is accompanied by an irreducible element of impreciseness and indeterminateness. It is evident from this that there is no precise way of describing how one sees an object. There is no precise way of determining a public object. It follows that each observer has a personal and subjective view of the object, although the object is real. Therefore, it can be

concluded that public objectivity is universal in a well-defined domain. That is, it is socially constructed.

The concept of public objectivity of a reality in its world is implied in current accounting practice. The IASB framework (2006) for financial reporting points out that users must be able to compare the financial statements of different entities in order to evaluate their relative financial position, performance and changes in financial position. It is expected in the accounting discipline that accounting measurements be common across different companies. That is, users should be capable of interpreting measurements from different companies in the same way. Therefore, there must be an agreement that determines the production of accounting measurements by accountants and the interpretation of financial statements by users. This agreement must specify exactly what it is that accountants measure and how the users of financial statements should interpret measurements. Consequently, it makes sense to assume that if financial statements are to be comparable, accounting phenomena must have the property that makes them valid for general users of financial statements.

It should be noted, however, that accounting measurements do not exhibit public objectivity of a reality in its world. This is because the property that is currently being measured in accounting does not have the qualities that allow it to exhibit public objectivity of a reality in its world. Value or cost is currently the object of measurement in accounting (IASB, 2006). According to the IASB framework (2006) for financial reporting, an item that meets the definition of an element of financial statements should be recognized if it has a cost or value that can be measured reliably. In section 7.3 it was established that cost and value are not measurable, as they are subjective and do not have a precise definition or an objective existence. This means that value or cost do not have the characteristics that can make them publicly objective. Ryan *et al*. (2002) also point out that value does not have characteristics that can be empirically tested. They argue that there is no general agreement among accountants on the meaning or relevance of value. This means that the concept of value does not have the exact and precise

definition that is necessary for a phenomenon to exhibit public objectivity. It follows that value and cost are not objects of factual judgments. Therefore, it can be concluded that value and cost are not physical objects and cannot be observed directly.

7.6 The accounting concept of measurement and the concept of empirical objectivity

The concept of objectivity in accounting measurement can also be investigated from the perspective of empirical objectivity. The concept of empirical objectivity refers to the objectivity that is based upon the exteriority of subject and object (Heelan, 1965:82). This viewpoint suggests that objectivity can be established if the subject and the object are two distinct entities. The object of experience must be separate from the observer in order for it to be experienced. It follows that the concept of empirical objectivity is based on the viewpoint that knowledge is uniquely determined by experience. Ryan *et al*. (2002:12) describe the concept of empiricism as follows:

> Traditionally, classical empiricists accept that:
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> - Certainty of belief in what we know can only be approached through perception.
> - Ultimately, all knowledge is derived from perception through our senses.
> - In the realm of discourse, statements are either true or false because of the way the world is or because of some formal properties of the language we use.

This description points out that one can acquire knowledge about the world only through perception. According to Hornby (2005: 1078), perception refers to the way an individual notices things with the senses. An individual acquires knowledge about the world only through the senses. This explanation also points out that the truth of an individual's perceptions about the world can be judged against what the world really is or against the formal consensus in the world of

what the truth is. Beliefs about the world cannot be justified by reason alone, but should also be justified in terms of the experiences derived from the objects under study. It can be inferred from this explanation that the objects under study should possess space-time coordinates that are independent of the observer. That is, the objects being studied should occupy space that is separate from the observer at a particular point in time. This implies that the observer and the object have an existence that is independent of each other. Therefore, it can be concluded from this that the concept of empirical objectivity can only be exhibited by an entity that is a subject of physical properties that can be verified independently of the observer.

The concept of empirical objectivity is implied in the current accounting measurement literature. The IASB framework (2006) for financial reporting states that an item that meets the definition of an element of financial statements should be recognized if it has a cost or value that can be measured with reliability. This implies that an item that meets the definition of an element of financial statements should be recognized if it has a cost or value that is measurable. In chapter 2 it was pointed out that the concept of measurement is only applicable to empirical phenomena. Thus, for value to be measurable, it must have an existence that is independent of the accountant. Both value and the accountant must have an existence that is independent of each other. This justifies the conclusion that the accountant must have an empirical experience of value or cost through his senses in order to be able to measure cost or value.

The claim that accounting measurements are empirically objective is unfounded, however. This is because value and cost, the properties that are subject to measurement in accounting, are not empirically objective. In Chapter 6, section 6.2 it was noted that value is an ambiguous concept that is variant. This suggests that value cannot occupy space at a specific point in time. Moreover, value cannot be located in space at a specific point in time independently of the accountant. Value does not lie outside the observer's mind, but occupies the same space as the observer. In section 7.4 it was noted that cost is currently referred to as both

the domain of a measurement function and the value of that measurement function. This indicates that cost does not have sharp or distinct boundaries. As was stated in section 7.5 (Zadeh, 1965), concepts that do not have sharp or distinct boundaries are vague and ambiguous. This suggests that cost and value are vague and ambiguous. It can thus be concluded that both cost and value are ambiguous concepts that are not invariant, and which cannot be empirically objective.

7.7 The accounting concept of measurement and the concept of formal objectivity

In this section the concept of formal objectivity in accounting is discussed. This concept is implied in the accounting discipline in some instances, while in others it is not. Its absence is particularly notable in accounting quantifications, while its presence is noted in some accounting definitions. According to Heelan (1965:83), formal objectivity is an objectivity that is constituted by an affirmation, which releases an object from dependence on a knowing subject. The use of the word "affirmation" means that there is an express agreement in the objective world of the observer about the knowledge the observer has of the object. The subject's knowledge about the object is not determined by perception and appearance but through express agreement. This implies that the interaction between the subject and the object in their world is predetermined. It can be concluded that the community or the societies in which the object and the subject resides determine the interaction between the subject and the object.

Sayre (1976) asserts that formal logic is the employment of artificially formulated symbols and arbitrarily defined relationships to provide the norms by which reasoning is regulated. This indicates that in formal logic there has to be an agreement on what can be described as the interaction between the subject and the object. It follows that formal logic prevents the proliferation, in a community, of what can be considered as the interaction between the subject and the object. Consequently, the subject attributes characteristics to the object not as a result of

his experiences with the object but of what the community decides should be the nature of the interaction.

Formal objectivity in the accounting discipline is evidenced by the definition of the elements of financial statements. The definition of an asset is constituted by an affirmation that releases it from dependence on a knowing subject. The IASB framework (2006: Para 49) for financial reporting defines an asset as: “An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.”

An economic resource must have three characteristics prior to being considered an asset. That is, the resource should provide future economic benefits, these benefits should be within the control of the enterprise, and the event giving rise to the company’s right to the resource and control over future benefits must already have occurred (i.e., a past event). It can be inferred from this that the objectivity of the definition of an asset belongs to whatever is affirmed as a virtually unconditioned definition of an asset on the basis of the evidence outlined. Therefore, in order to determine whether an event in an accounting world is an asset, a process of testing and verification must be carried out to confirm the presence of evidence confirming the definition of this asset. The existence of the definition of an asset is not dependent on the subjective view of the observer, but its existence (asset) is absolute and unquestionable. The evidence that is used to test the existence of the definition of an asset is standard. It is not dependent on the circumstances of the observer. Public understanding, use and definition of an asset do not define the formal objectivity of an asset. It exists even without the knowledge of the public.

Strict evidence of the three characteristics mentioned above (IASB, 2006: Para 49) is required before an entity can classify an economic resource as an asset. Thus, an asset is an unconditioned object, and an object in the strict or formal sense. Its intention is simply to express what is (asset), independently of the act whereby I know it as an object (asset) for me. Therefore, it can be concluded that

in formal objectivity the concept of an asset is independent of the opinion of the observer.

However, the recognition of the elements of financial statements implies the non-existence of formal objects in accounting. For example, Vorster et al. (2008:17) state:

To be recognized as an element in financial statements:

- An item must meet the definition of one of the elements of the financial statement;
  - It should be probable that future benefits associated with the item will flow to or from the entity; and;
  - It must have a cost or value that can be measured reliably.

The above indicates that an element of financial statements should be recognized in the financial statements if an entity expects future economic benefits to flow from the element. An element of financial statements should be recognized if it has a cost or value that can be measured with reliability. It is evident from this that for an element of financial statements to be recognized, it must possess the characteristics specified above. However, in spite of the accounting discipline agreeing on the probability of future economic benefits flowing to the enterprise as a condition for recognizing an asset, there is no specification of the empirical identity of future economic benefits. Furthermore, since the future has not yet happened, its identity cannot be reliably specified. Thus, it is not possible to measure something that is based on expectation reliably. It is only the expectation of the phenomenon that can be reliably measured.

In section 7.4 it was mentioned that value is an ambiguous concept that is not invariant. This indicates that the characteristics of value vary with the opinion of the accountant. Consequently, accountants cannot agree on the characteristics of value. It should be pointed out that it is not possible to measure an ambiguous phenomenon. According to Stevens (1951), measurement is only possible with

empirical phenomena. This means that it is not possible to measure non-existent phenomena. It is therefore not possible to measure empirically characteristics of non-existent phenomena, as they cannot be specified. Each individual has his or her own opinion about the measurable characteristics of an asset. Therefore, it follows that the recognition criteria of an element of financial statements are not formally objective.

7.8 Summary and Conclusions

The concept of objectivity is fundamental to measurement. Its absence from a discipline is a clear demonstration that the discipline is not a measurement discipline. Accounting is regarded as a measurement discipline. All measurements should be objective. As a result, one would expect accounting practices of measurement to be objective. However, this chapter has found that current accounting measurement practices are not objective. This suggests that the current practices should not be referred to as practices of measurement. Furthermore, this casts doubt on the status of accounting as a measurement discipline. A recap of the conclusions drawn from this chapter indicate the following:

- The accounting discipline asserts that accounting measures are objective. Yet, accounting measurements are measurements by fiat. Consequently, they depend on the intuition of the experimenter. Therefore, the accounting discipline tends to encourage subjective accounting measurement practices assuming that they will be unbiased.

- In this chapter it was argued that some accounting definitions exhibit the public objectivity of a concept. The accounting definition of a liability is exact and precise and belongs to the realm of ideas. It has been noted in this chapter that accounting phenomena are not publicly objective. Furthermore, current accounting measurement practices are not publicly objective. It is evident that this prevents accounting values from being

objective beyond the borders of an accounting entity. As a result, accounting measures are not comparable.

- Accounting phenomena are not empirically objective. Furthermore, accounting measurement practices are not empirically objective. It follows that an individual‘s experience of accounting measurement is unique. Consequently, an individual’s interpretation of experience may vary according to changes in the state of his health, state of mind, and the kind of experience he is undergoing at the time. Therefore, one can see that the objectivity of current accounting measurements varies with the intuition of the accountant. In addition, the attributes of accounting phenomena are not specified in the accounting literature and as a result their empirical objectivity cannot be determined.

- The definitions of accounting phenomena are formally objective. But the attributes of accounting phenomena that are of use and interest to measure are not formally objective. Thus the current accounting measurement practices are not formally objective.

The discussion in this chapter has indicated that accounting phenomena are not objective. In chapter 2 it was noted that all measurable phenomena must be objective. Consequently, this means that accounting phenomena are not measurable.

Chapter 8- Representational measurement and the concept of relativism in accounting

"Measures are more than a creation of society, they create society" (Alder, 2004:342)

8.1 Introduction

In this chapter the relative nature of accounting measurements is discussed. According to Ryan *et al.* (2002), relativism is a term given to a group of ideas which argue that truth is relative to the beliefs of the observer. They argue that all belief is relative to the social value system and norms that transcend the individual level. This suggests that the beliefs of an individual are influenced by his environment and are a reflection of his or her learned experiences in this environment. It follows that before the beliefs of individuals from different frames of reference can be compared, they must be converted to a common frame of reference.

Measurement is considered to be a relative concept: according to Stevens (1951), measurement is relative in nature. He argues that measurement varies in kind and degree, in type and precision. All measurements are relative to a specific frame of reference. Luce *et al*. (1971) argue that the choice of a numerical relational structure for a particular empirical relational structure is a matter of convention. It is clear that measurements vary with respect to their frames of reference. Consequently, measurements from different frames of reference must be converted to a common frame of reference before they can be compared.

According to Mattessich (1964:79), accounting measurements are dependent on the intuition of the accountant. This suggests that accounting measurements are dependent on the opinion of the accountant. It follows that accounting measurements made by different accountants cannot be compared unless their different opinions are converted to a common frame of reference. However,

Chambers (1997) notes that the conditions under which different accounting measurements are made are not stated in the accounting literature. He argues that the lack of specified conditions under which measurements have been made leads to the comparison of measurements being made under non-standard conditions. This suggests that the accounting concept of measurement does not take into account the relative nature of accounting measurements.

In chapter 1 it was noted that accounting measurements are dependent on the opinion of the accountant. Thus, it follows that accounting measurements are relative to the opinion of the accountant. The purpose of this chapter is to investigate the implications of this concept of relativism in accounting measurement. The effects of the factors that cause relativism on the accounting concept of measurement will be discussed.

The structure of this chapter is as follows: a discussion of the implications of different frames of reference in accounting on representational measurement occurs in section 8.2 and a brief discussion of the implications of the concept of relativism on accounting measurement is presented in section 8.3. In section 8.4 a brief account of the sources of relativism in accounting measurement is given, followed by a discussion of the implications of cognitive relativism in accounting in section 8.4.1. The implications of cultural relativism are discussed in section 8.4.2. The chapter also covers the implications of the concept of linguistic relativism on accounting measurement in section 8.4.3 and the implications of contractual relativism on accounting measurement in section 8.4.4. The conclusion is presented in section 8.5.

8.2 Framing and representational measurement in accounting

In chapter 2 it was noted that the concept of representational measurement should be viewed with reference to a specific social context. This means that representational measurements are relative to a specific frame of reference. Stevens (1951) believes that the configurations of the immediate environment

affect the choice of variables to be measured as well as the measurement procedures. This suggests that the intuition of the individual who is measuring is affected by the configuration of his immediate environment. In the accounting discipline, the accountant conducts measurement. According to Mattessich (1964), accounting measurements are dependent on the opinion of the accountant. The intuition of the accountant is determined by his or her social situation. Goffman (1974) points out that social situations are subject to ordering by frames which establish the meaning of events and regulate the activities of participants. It is clear from this that the social setting determines how the empirical relational structures of accounting phenomena are represented by abstract structures. Similarly, Sayre (1976) argues that shared conceptual structures provide the basis of cultural identity and information for the guidance of individual behaviour in situations recurring within the cultural group. Individuals under the same conceptual structures share the same culture, thought process and behaviour. This suggests that the thought processes of accountants are determined by the conceptual structures under which they operate. Likewise, the judgments of accountants will be determined by the conceptual structures under which they operate.

Luce *et al*. (1971) point out that every pair of the representation and uniqueness theorems involves a choice of a numerical relational structure. They argue that this choice is essentially a matter of convention, although conventions are strongly affected by the considerations of computational convenience. This viewpoint suggests that the choice of a numerical relational structure is arbitrary. It follows that the context of computational convenience is determined by the social structures of the individual who is measuring. It can be inferred from this that the representation of an empirical relational structure by a numerical structure is a matter of conventions made in a social context. Consequently, representational measurements should be evaluated relative to their social contexts before they are used.

8.3 The concept of relativism in accounting measurement

The definition of the context in which information is objective is governed by the concept of relativism. Relativism is a term given to a group of ideas which argue that truth is relative to the beliefs of the observer (Ryan *et al*., 2002:16). In other words, beliefs of individuals are socially constructed. The idea of relativism is coherent only if one can make sense of the idea that different points of view have no common coordinate system on which they can be plotted (Sosa and Villanueva, 2002). If differences of conceptual schemes always have such a common underlying coordinate system, this will undermine the point of seeing them as different and, in turn, undermine the very idea of a conceptual scheme. Since Stevens (1951) indicates that measurements are relative to a specific frame of reference, it follows that seeing measurements from different frames of reference as identical would undermine the whole point of seeing them as being from different frames of reference. Mattessich (1964) considers accounting measurements to be relative to the opinion of the accountant. This implies that accounting measurements have to vary in accordance with the opinion of the accountant; if they did not vary it would undermine the whole viewpoint of seeing them as dependent on the opinion of the accountant.

Accounting is considered a social science, and the representational theory of measurement that is applicable to social sciences produces measurements that are considered to be relative. Accounting measurements should thus also be seen as relative. Michell (1995:245) describes the relative nature of representational measurement as follows:

> The representational theory of measurement equates measurement with numerical coding (albeit a complex variety where relations are numerically coded along with attributes), while the realist theory equates measurement with the discovery of empirical facts of a numerical kind. Numerical coding always involves a conventional component: the agreement to code certain empirical attributes with certain numbers, and certain empirical relations

with certain numerical ones. It is this component that is captured by the representation's uniqueness theorem.

This description points out that representational measurements are numerical codes. The term "coded" used in this context implies that representational measurements use a system of numbers or symbols to represent empirical phenomena that can only be understood by a specific group of individuals. Individuals who are not part of this specific group are unable to understand representational measurements. It can also be inferred from the above quotation that the choice of a numerical structure to represent an empirical relational structure is a matter of convention. It would follow logically that the choice of accounting empirical relational structures should also be a matter of convention. The above quotation also indicates that the domain in which representational measurements can be evaluated should be specified. Furthermore, proving the uniqueness theorem on a numerical representation of an empirical relational structure is also a matter of convention. Since accounting measurements are expected to be representational measurements, they should also have a conventional component, that is, the existence of an agreement among a group of people to measure particular accounting phenomena in a particular way.

Accounting literature also points towards the viewpoint that current accounting measurement practices should be evaluated with respect to a specific frame of reference. Mattessich (1964:79) states that most of the economic and accounting measures belong in the category of measurement by fiat, which is reflected in a certain definitional arbitrariness of the discipline. This point of view holds that measurement statements about accounting phenomena are highly dependent on the intuition of the accountant and should therefore be evaluated with respect to a specific frame of reference. In other words, the factors that influence an accountant should be taken into account when evaluating accounting measurements.

Tinker (1985:81) highlights the notion that accounting practice is a means of resolving social conflict. He argues that it is a device for appraising the terms of exchange between social constituencies, and an institutional mechanism for arbitrating, evaluating and adjudicating social choices. In this view, accounting was designed to describe relationships that are governed by social situations. Accounting information is seen as a reflection of a specific social situation. If accounting is a device for appraising the terms of exchange, then accounting information in financial statements reflects an appraisal of a specific system of social exchange. It follows that different financial statements reflect different systems of social exchange. Therefore, information in financial statements should be interpreted relative to the social environment that has produced it.

The nature of the accounting discipline also suggests that accounting measurements are relative to a specific frame of reference. Accounting is considered to be an art (Gouws and Rehwinkel, 2004). Gouws and Rehwinkel (2004) argue that different representations of the same object are not only acceptable but also desirable. Consequently, it can be argued that it is not possible for different frames of reference to view the measurement of accounting phenomena in an identical manner. Each occurrence is unique and should be treated as such. As a result, different companies are likely to have different economic experiences and consequently, to describe economic events differently. This means that if accounting measures are to be considered objective across different communities of discussion, there must be a convention that guides the measurement of accounting phenomena. An agreement in a community of discussion on how to measure an identical accounting phenomenon ensures that measurements are comparable throughout the community of discussion.

However, the accounting discipline does not recognize the relative nature of accounting measurements. For example, the IASB framework (2006:39) for financial reporting points out that:

> Users must be able to compare the financial statements of a company through time in order to identify trends in its financial position and performance, and to compare financial statements of different entities in order to evaluate their relative financial position, performance and changes in financial position. Hence, the measurement and display of the financial effects of like transactions and other events must be carried out in a consistent way throughout an entity and over time for that entity and in a consistent way for different entities.

This point indicates that accounting measurements can be compared across different time intervals and across different entities. It stresses that the attributes of accounting phenomena must be measured in a consistent way over time and across entities. This suggests a belief in the accounting discipline that there are attributes of accounting phenomena that are common across different accounting entities and accounting periods that can be viewed and measured in the same way. However, there are no specified attributes of accounting information that are common across different accounting periods and across different companies. Chambers (1997) notes that attributes that are the subject of measurement in the accounting discipline are not specified, yet every measurement scheme requires the specification of a property that is being measured. Such a specification ensures that identical properties are compared across different entities. Therefore, either this property is so well known in the accounting discipline that it does not need specification, or the discipline is not complying with the principles of measurement. If accounting phenomena can be viewed in the same way from different frames of reference, accounting phenomena must be laws of nature. This is in direct contrast to accounting's classification as a social science. The characteristics of phenomena in social sciences are dependent on the opinion of the observer. It is therefore necessary to determine the specific identity of the phenomenon that is being measured.

8.4 Sources of relativism in accounting

Accounting measurements are socially relative. Tinker (1985:89) supports this when he states that value and accounting are socially relative. It can be inferred from this that the measurement of value in accounting is also socially relative. Accounting measurements must be evaluated according to their social context. Some causes of relativism in accounting are discussed in this study to illustrate how accounting measurements are dependent on the learned relations of an observer in his environment. Belkaoui (1990) identified four major sources of relativism in accounting, namely, cognitive relativism, cultural relativism, linguistic relativism and contractual relativism. These forms of relativism are discussed and applied in the sections that follow.

8.4.1 Representational measurement and cognitive relativism in accounting

In this section the concept of cognitive relativism is discussed. Mattessich (1964) believes that accounting measurements are dependent on the opinion of the accountant. This means that accounting measurements are dependent on the intuition of the accountant. It is thus clear that the concept of cognitive relativism is central to the nature and interpretation of accounting measurements. Cognition refers to the gaining of knowledge by thought and perception (Hawker, 2003:110), in other words, the process by which knowledge and understanding is developed in the mind. It follows that accounting measurements are dependent on how knowledge and understanding are formed in the mind of an accountant. Gouws and Rehwinkel (2004:82) emphasize the importance of cognition to the creation and interpretation of accounting measurements:

> Accounting is often defined as an art. It is an artificial science consisting of knowledge about artificial objects and phenomena. Artificial refers to the non-natural.

.

This definition underscores the point that accounting values cannot be inferred through natural laws and should not be treated like natural phenomena. The definition also highlights the belief that accounting measurements are dependent on the opinion of the accountant. The use of the word “non-natural” implies that accounting attributes that are of use and interest to measure in accounting are not objects of physical experience. This leads to the belief that the empirical identities of the attributes that describe the empirical properties of accounting phenomena are dependent on the definitional arbitrariness (see, Mattessich, 1964) in the accounting discipline. As a result, the empirical significance and the meaningfulness of accounting measures are dependent on the intuition of the observer. Furthermore, if a particular definition is chosen then no conclusive argument need be invoked to defend this definition. In addition, the term “arbitrary” indicates that another definition could have been chosen instead. Therefore, a definition assigned to a phenomenon is dependent on the intuition of the accountant.

The concept of cognitive relativism draws particular attention to the context in which individuals perform accounting measurement practices. The individuals performing accounting measurement roles are members of particular organizations. These organizations would have established certain codes of behaviour in order to bring about a certain desired outcome in accounting measurement. As a result, organizational influence affects the cognition of an individual. Belkaoui, (1990:123) describes the situation as follows:

> The organizational culture to which an individual belongs ultimately determines the judgment or decision process in accounting, by providing the experimenter with schemas of good and bad solutions that will increase the ability to determine how to operate in the organizational culture or clan.

The extract points out that accounting decisions made by an accountant are determined by the organizational culture. The organizational culture also determines the way an accountant responds to accounting problems in the

organization. Because accounting measurement is dependent on the intuition of the accountant (Mattessich, 1964:79), it can be inferred that the measurement abilities of an accountant are shaped by the organizational culture that accountant experiences.

Decoene *et al*. (1995) assert that the choice of an appropriate qualitative axiom system of a reality depends entirely on a deep understanding of that part of reality one is studying. They also argue that if the research domain is poorly understood, it is impossible to arrive at an explanation that suggests appropriate qualitative axioms. Consequently, it can be inferred that the above passage suggests that the selection of the attributes that are of use and interest to measure in the description of the empirical properties of accounting phenomenon is dependent on the culture of the organization. The empirical identity of the attributes that are of use and interest to measure is thus dependent on the culture of an entity. Therefore, before accounting information is compared to similar information from other companies or to similar information from past periods in the same company as required by IASB (2006), it is necessary to specify what is considered to be similar about the information. The specification of such attributes ensures that similar measurements are compared across different entities.

8.4.2 Representational measurement and cultural relativism in accounting

The influence of the culture of a business entity on accounting measurements is discussed in this section. In section 8.4.1, it was noted that the accounting decisions made by an accountant are determined by the culture of an organization. Put another way, the opinions of the accountant are shaped by the culture of the organization. According to Hornby (2005:357), culture is a way of life of a particular group of individuals. The customs and beliefs of a group of individuals reflect how they co-exist with the environment. Belkaoui (1990) point out that in any organization, the organizational activities reflect the way of life of

an organization. This means that organizational activities reflect the habits, attitudes and traditions that help people in that organization to co-exist. Simons, Vazquez and Harris (1993:142) are also very clear about the nature of culture:

> It is developed and communicated by a group of people, consciously or unconsciously, to subsequent generations. It consists of ideas, habits, attitudes, customs, and traditions that help create standards for people to coexist. It makes a group of people unique.

This description points out that culture is developed by a group of people knowingly or unknowingly. The way people in a particular organization or society communicate reflects their culture. Since it was been noted in section 8.4.1 that the intuition of the accountant is determined by the culture of an organization, this indicates that the way the accountant communicates accounting information reflects the culture of an organization. It follows, too, that accounting measurements made by an accountant reflect the culture of an organization And that culture of an organization makes a group of people unique. If this is true, and measurement is part of culture, accounting measurement practices must be unique to a group of people or a business organization. It follows that accounting measurements should be interpreted with respect to a specific entity.

Tinker (1985:82) points out that accounting is part of the battery of belief-forming institutions, including the law, education, the media, religion, and the family. He argues that the exact function of any one belief-shaping institution, relative to others, may vary from one social context to the other. This indicates that accounting is part of these institutions that shape the beliefs of individuals in a social situation. The way accounting shapes these beliefs will depend on the nature of the social context. As has been pointed out above (Simons et al, 1993), each organization has its own unique culture, so it follows that the way accounting affects the beliefs of individuals in a specific organization is determined by their

culture. It can therefore be concluded that the production of financial statements is dependent on the culture of an organization.

According to Flamholtz (1983), organizational culture plays an important role in control systems design. He argues that control systems which are inconsistent with an organization's value system are likely to create resistance and to produce motivations aimed at defeating the purpose of the core control system. Prior attempts to create a theory of accounting measurement (e.g., Littleton, 1940; Littleton, 1953; Gilman, 1939; Staubus, 1985, 2004; Walker and Jones, 2003) that focused on the observation of accounting measurement practices from different business organizations implied that there are some common elements in the culture of different business entities. But the lack of success of these attempts to create a theory of accounting measurement suggests that there are no common points between the cultures of different business entities. As a result, it can be argued that accounting measurements cannot be common between different business organizations.

If culture creates a unique world, it can also be argued that each of these worlds represents some subject's sphere of reality. It follows that, in order to see it as such and to explore the richness of the reality revealed in its perspective and illuminated by its light, the universe of the facts of this reality should be defined. Furthermore, each culture creates taken-for-granted models of the world that are widely shared by members of their society and which are crucial in their understanding of that world and their behaviour in it (Belkaoui, 1990:121). Hence, one must be part of such a world in order to understand what is going on in that world. The failure to be part of such a world leaves individuals unable to draw appropriate conclusions about the true identity of such a world. This indicates that in order to understand accounting measurements one has to be part of the process of measuring: one has to be part of the culture of a business organization to understand accounting measurements produced by the business organization.

8.4.3 Representational measurement and the concept of linguistic relativism in accounting

Section 8.4.1 explained that an accountant's cognition with respect to accounting decisions is determined by the culture of a business organization. It was noted in section 8.4.2 that organizational culture is part of the communication process of the business organization. This suggests that culture forms part of the language of an organization. Culture varies from organization to organization (section 8.4.2). Therefore, if culture is part of the communication process of a business organization, the system of communication in business organizations will vary according to their culture.

According to Belkaoui (1990), accounting is a language. This suggests that accounting is used as a system of communication by business entities. If this is the case, it follows that accounting information varies with organizational culture. Goldberg (2001:70) describes communication as "the use of signs and symbols by which men influence each other". For communication to occur there is a need for common understanding between the people who are communicating. It follows from this that men can only influence each other through signs and symbols if all the parties communicating understand these signs and symbols. Goldberg (2001) argues that successful communication requires some commonness of experience between sender and receiver, and some agreement on the relationship between the signs or symbols to be used to refer to such experiences. For communication to occur, the parties communicating must be clear as to the meaning of the information. If, as outlined earlier (Belkaoui, 1990), accounting is a language, the failure of researchers in the field to develop a comprehensive and coherent theory of accounting measurement from the observation of accounting measurement practices (e.g., Gilman, 1939; Littleton, 1940; Littleton, 1953; Staubus, 1985) indicates that different organizations use different accounting languages to communicate. This underlines the point that accounting information is a language that is relative to a specific organization.

Goldberg (2001:70) contends that the process of communication comprises the functions of preparing, formulating or encoding a message, sending or transmitting it to another or others, and its reception by another who interprets or decodes it. This viewpoint indicates that communication is only possible if the parties communicating are familiar with the signs and symbols of communication. It can also be inferred that, if accounting is a language as outlined above (Belkaoui, 1990), then accounting information must be familiar among the parties communicating the accounting information.

Sayre (1976:222) highlights the dependence of language on social contexts when he states:

> By means of a shared language, individuals with common needs and interests can influence each other in the formation of conceptual structures without each participating in the full range of trial and error experience necessary to assure an enduring conceptual network.

This points to the fact that a common language among individuals creates a mode of communication that does not require formal structures for its existence. Individuals to whom the language is common unconsciously understand the informal mode of communication that is established by the common language. If organizational culture is part of the communication process of a business as outlined in section 8.4.2 (Belkaoui, 1990) it can be inferred that individuals who are not part of an organization cannot be considered to share a common language with individuals who do participate in it. This means that users of accounting information and accountants must be part of the same organizational culture and must agree on what the information produced by an organization means and what it may be used for.

8.4.4 Representational measurement and the concept of contractual relativism in accounting

The concept of contractual relativism supports the view that accounting information is relative to a specific frame of reference. According to Belkaoui (1990:123), the concept of contractual relativism in accounting is a point of view which suggests that contracts define permissible behaviour and actions that ultimately determine the judgment/ decision process in accounting. The contract in this case is considered to be the determinant of the intuition of the accountant. In section 8.4.3 it was indicated that the culture of a business organization determines the accounting decisions made by an accountant. If this is the case it implies that contractual relationships define the culture of a business organization. Baiman (1990:341) explains the agency relationship as follows:

> An agency relationship exists when one or more individuals (called principals) hire others (called agents) in order to delegate responsibilities to them. The rights and responsibilities of the principals and agents are specified in their mutually agreed upon employment relationship. Within the term employment relationship I include the chosen: compensation arrangement information systems, allocation of duties, and allocation of ownership rights.

This explanation points out that an agency relationship is specific and unique to a group of people: it is not universal. The interaction between the agent and the principal is also specified in the contract between them. This means that the agent's activities and judgments made in carrying out these activities are specified in the contract. If this is the case, each specific agency relationship will have its own specific rights and duties. As a result, the information needs of each principal are unique. Consequently, it is inappropriate to compare information from different agency relationships without adjusting for the differences in these relationships.

It is also important to note that accounting measurements produced under different agency relationships are not comparable. This is because such

measurements are not identical. This is reflected by the concept of value measurement in accounting. The IASB framework (2006) for financial reporting points out that an item that meets the definition of an element of financial statements should be recognized if the item has a cost or value that can be measured with reliability. This suggests that value can be independently verified. But, in fact, value measurement is relative to contractual agreement. Abdel-Magid (1979) notes that the amount of monetary units paid to acquire a commodity is a measure of its value. There is a relationship between monetary units and value that can be empirically verified. Yet, Ryan *et al.* (2002:118) also point out that there is no agreement relating the amount of monetary units paid to acquire a commodity and its value. This means that the nature of the relationship between monetary units and value is dependent on the interests of the parties to the transaction. If this is the case, the relationship between the amount of monetary units paid to acquire a commodity and its value is dependent on the contractual relationship between the agent and the principal.

The concept of contractual relativism has implications for the qualitative characteristics of financial statements. According to IFRS (2006), accounting information is useful if is comparable to similar information from other companies or similar information from past periods from the same company. Therefore, accounting information is comparable between companies if the contractual relationship between the agents and the principals of these companies is the same. Accounting information from different accounting periods will also be comparable if there is no change in the contractual relationships between the agents and the principals during the periods being compared.

The qualitative characteristic of relevance is also affected by the concept of contractual relativism. According to Kirk (2005:7), information must be relevant, i.e. up to date and current, and actually used by the reader. But, if as outlined above (Baiman, 1990), the rights and responsibilities of the principals and agents are specified in the mutually agreed-upon employment relationship, it can be argued that the relevance of the accounting information that is produced by the

agents is dependent on the agreement in the contractual relationship between the agents and the principals. That is, the agent has to produce the information that the principal wants. In order to ensure that the agent complies with this requirement the principal must include this requirement in the contract. Consequently, the relevance of the information is dependent on the contractual relationship.

Kirk (2005:7) also points out that the concept of understandability insists that the information that is provided by the reporting entity should be presented in such a way that it is as understandable as possible to the user. However, since the responsibilities and duties of agents are defined by the contractual relationship between agent and principal, the understandability of accounting information is also defined by this contractual relationship. Tinker (1985) points out that the purpose of accounting is to resolve social conflicts. In order to resolve social conflicts, accounting information must be understandable to the parties to whom it is communicated. Consequently, the principal must request information he can understand from the agent. Information that he cannot understand will be of no use to him in monitoring his relationship with the agent.

It should also be pointed out that most empirical tests on the agency theory suggest that employment contracts determine the permissible behaviour and actions of agents. For example, empirical tests generally support the assertion that capital investment decisions (Larcker, 1983), merger and acquisition decisions (Tehranian *et al*.., 1987; Walking and Long, 1984) and financial accounting procedure choices (Healy, 1985) are associated with managerial compensation plans. The empirical significance and meaningfulness of accounting measures appears to be dependent on the employment contracts of agents. As a result, the empirical identities of the attributes that describe the empirical properties of accounting phenomena are dependent on the employment contracts. Therefore, accounting measurements should not be seen as independent of particular places and factual occurrences, as implied in the

accounting literature. They are instead dependent on the contractual relationship between principal and agent.

8.5 Conclusions

Accountants believe that the concept of relativism does not hold on accounting information. Since accounting is a social science, this has cast doubt on its status as a measurement discipline. The discussion in this chapter has shown that the concept of relativism exists in accounting, and as a result the discipline should take cognizance of its effects.

The representational theory of measurement equates measurement to numerical coding. The accounting discipline should recognize that the theory of measurement that applies to it requires the recognition of the concept of relativism. It should also be noted that there is no agreement relating the concept of value to the amount of monetary units paid to acquire a commodity and as a result the relationship between this amount and the value of the commodity is relative to a particular frame of reference.

A summary of some of the main points from the analysis carried out in this chapter is given below:

- The accounting concept of measurement is not independent of particular places and factual occurrences as was previously thought. It is relative to a specific entity. Consequently, it follows that accounting measurements are incomparable without an adjustment for the differences in frames of references

- When the scientific concept of relativism is applied to the accounting concept of measurement, it indicates that the measurement of accounting phenomena is not a law of nature but rather a creation of the mind. This indicates that the judgments of an accountant are dependent on his intuition. It has been noted in this chapter that the cognition of an individual is influenced by the culture

under which he or she is operating. As a result, the culture of an organization plays a crucial role in the measurement of accounting phenomena.

- The specification of the attributes of accounting objects that are of use and of interest to measure is dependent on a specific entity. It is evident from this that the empirical identities of attributes of accounting phenomena are not independent of particular places or factual occurrences.

- The concept of contractual relativism in accounting suggests that contracts define permissible behaviour and actions that ultimately determine the judgment/ decision process. It is clear, then, that accounting quantifications are dependent on employment contracts.

The discussion in this chapter has highlighted the point that the empirical relational structures of accounting phenomena are relative to a specific entity. It has also been noted that accounting measurements are relative to a specific entity. It can thus be concluded that accounting measurement should be evaluated relative to a specific frame of reference.