
Differential Perceptions of Auditing Terms

Dr. Pearl Tan, Nanyang Technological Institute, Singapore
Dr. Hian Chye Koh, Nanyang Technological Institute, Singapore
Dr. Aik Meng Low, Nanyang Technological Institute, Singapore

Abstract

This paper investigates the differences in the relative perceptions of auditing terms among groups of accountants, bankers and students. Perceptual models were constructed using multi-dimensional scaling and cluster analysis techniques. The models derived therefrom indicate that there are no major inter-group differences in the relative perceptions of auditing terms. This study does not therefore support the hypothesis that the "expectation gap" between users and preparers of the audit report are caused by semantical problems.

Introduction

The "expectation gap" between auditors and users of the audit report has become one of the more problematic issues facing the accounting profession and one which still awaits a solution. Many factors may have contributed to this gap but one which merits special attention is the communication process between auditors and users. This communication process has been the subject of much criticism over the years. In particular, the main vehicle of audit communication - the auditors' report - has been found to be unsatisfactory in its function of educating and informing users on the auditors' role and responsibilities (Cohen Commission [1978]).

An evaluation of the communication process must take into account the subject matter of communication - words and phrases used by the communicator. As in other disciplines, auditing has its repertoire of words and phrases, some of which are uniquely "auditors' words of art" while others are of common usage. The "auditors' words of art", a phrase coined by the Cohen Commission [1978], are essentially made up of ordinary words but whose meaning are technical in nature.

Auditing terminology are generally charac-

terized by their parsimonious use of words. Yet, in their brevity, they communicate entire concepts which need to be understood if the scope and limitations of an audit are ever to be grasped by users. An understanding of these terms is not an optional matter because users of the audit report need considerable comprehension of auditing terms if the report is to be of any use to them in their decision making.

How well are auditing terms understood by users? Are they perceived in the same manner by both auditors and users? It is crucial to address these issues as the usefulness of the audit function is in part dependent upon the fidelity of the audit communication process. High fidelity is said to occur when a receiver of a message translates the symbols into an idea which is intended by the communicator (Berlo [1960]).

High fidelity in communication is facilitated if the symbols in a code possess unique meanings. In auditing, however, there are a large number of words and phrases that defy precise definition. Examples include "present fairly", "true and fair", "in conformity with generally accepted accounting principles" and "materiality". While these phrases are composed of common

usage words, their literal definitions are insufficient to explain the phrases' inherent meaning.

The essence of auditing is the exercise of sound professional judgement. Auditing terminology mirrors this characteristic by requiring professional judgement in the interpretation of its words and phrases. The circumstantial nature of auditing requires a form of definition which allows scope for a reasonably wide interpretation. This is an inevitable situation and not necessarily an undesirable one. The simplification of auditing terms into rigid absolutes may introduce an unhealthy element of legalism and inflexibility. The liberty of individual interpretation, however, gives rise to possible differences in perceived meaning among persons.

This paper is dedicated to examining the "mind-sets" of auditors and users to determine if there is congruity in the perception of auditing terms among groups. In particular, it compares the relative perceptions of auditing terms among three groups: accountants, bankers and final-year accountancy undergraduates. The experiment was conducted through the administration of a Likert-scale type of questionnaire to respondents. The questionnaire focused on the paired comparison of twelve auditing terms. Multidimensional scaling was used to "map" the relative perceptions of auditing terms on two dimensions, after which cluster analysis was used to form sub-groups on the maps to facilitate a clearer analysis of the configurations.

Brief Review of the Literature

Studies of a similar nature have been carried out by, among others, Libby [1979] and Belkaoui [1980]. One primary difference between the earlier studies and this experiment is the stimuli in question. The stimuli used in the Libby study were the different types of audit reports while Belkaoui studied differences in perceptions of selected accounting concepts. This study hopes to expand on the Libby experiment by including a broader range of terms that characterize the audit function.

The Libby study resulted in two-dimensional bankers', auditors' and all-subjects' model. The overall similarity between the bankers' and auditors' models were found to be high. In the other study, three-dimensional models were constructed from the responses of accounting professors, chartered accountants and accounting students. Belkaoui's conclusions were that there were intergroup perceptual differences on two of the three dimensions.

Methodology

Auditing Terms Considered

Twelve auditing terms were selected for inclusion in this study. As paired similarity ratings were used, a restriction had to be made on the number of terms included in the study. The number of auditing terms (n) leads to a significantly larger number of pairs [$n(n-1)/2$] to be examined by the respondents. Hence, twelve selected terms led to sixty-six similarity pairs to be considered. It was felt that any further increase in terms would have led to an extremely large number of similarity pairs which would render the questionnaire onerous to the subjects.

A scan was made of auditing textbooks and guidelines to identify suitable terms for inclusion in the questionnaire. To be suitable, the terms must first be familiar, even if vaguely, to the subjects. Bearing in mind that one group of subjects, the bankers, generally do not have formal training in auditing, the inclusion of deeply technical words may confound the study as subjects may either abstain from ranking certain similarity pairs or do so haphazardly. Second, the terms chosen must be reasonably significant in their impact on the audit function and the public understanding of the role of auditors to render this study worthwhile.

The twelve terms selected were: (1) true and fair (TANDF), (2) clean opinion (COPIN), (3) disclaimer of opinion (DISCL),

(4)conformance to generally accepted accounting principles (GAAP), (5)qualified opinion (QOPIN), (6)going concern (GCON), (7)skill and competence (SANDC), (8)independence (INDEP), (9)due audit care (DACARE), (10)professional judgement (PJUDG), (11)confidentiality (CONF), and (12)objectivity (OBJ).

The first six terms are essentially "auditors' words of art" - they are unique to auditing (and accounting) literature and primarily relate to the auditors' opinion. They are familiar to the respondents because they are words to be found on the auditors' report. Even an apparent outlier, "going concern" frequently finds its way to the auditors' report in disclaimer and qualified reports. They are significant in that they communicate audit conclusions on reported accounts.

The latter six terms are words of common usage but they have significance in auditing because they deal with auditor attributes. Unlike the first six terms which are components of specific messages of the auditing language, these latter six terms are not expressed messages but reflect basic principles underlying an audit. They rank high on the familiarity scale as users of financial statements would recognize these terms as being tenets of the auditing profession.

Subjects

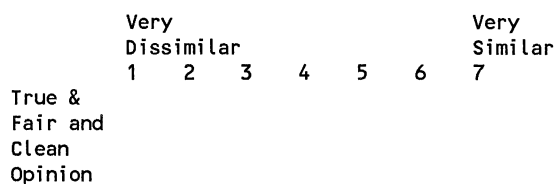
Participants were selected from three distinct groups representing different levels of knowledge of and experience in auditing. The accountants' group represented preparers of accounting statements and the auditors' report. Two hundred accountants were randomly selected from the Singapore Society of Accountants' list of one thousand and eight public accountants and registered accountants. The bankers represented one group of users. Two hundred and nine bankers from the Singapore Credit Club were sent the questionnaires. The third group of subjects were final year accountancy students from the Nanyang Technological Institute, Singapore. Forty-eight students were

given the questionnaires. At the time the study was carried out, the students had undergone two complete 30-week courses in auditing. Undergraduates were involved in this experiment to determine if practical experience was a critical influence in the perceptual framework. The response rates for the three groups are shown in **Table 1**.

Table 1
Response Rates

	Number of Questionnaires Sent	Number of Replies	Number of Usable Replies
Accountants	200	37 (18.50%)	37 (18.50%)
Bankers	209	37 (17.70%)	36 (17.22%)
Students	48	42 (87.50%)	42 (87.50%)

Figure 1
Sample Illustration



Procedure

Participants from the three groups were presented with questionnaires which requested them to assign similarity judgements to all pairs of the twelve selected auditing terms. Each participant was asked to rate the similarity of terms on a scale of equal intervals ranging from 1 (very dissimilar) to 7 (very similar). The criteria used to evaluate similarity of terms were left to individual judgement. A sample illustration of a similarity scale is shown in **Figure 1**.

This study used the direct method of data collection which essentially involved the evaluation of the similarity of a set of objects without reference to any prespecified criteria. A major advantage of the direct method is that it places few constraints on the subjects' responses. Subjects are given the liberty to evaluate the "sameness" of objects using their individual perceptual framework rather than the researchers' preconceived framework. A disadvantage

of this method is that the questionnaire can be unwieldy as the number of paired comparisons increases significantly with an increase in the number of objects.

Multidimensional Scaling and Cluster Analysis Techniques

Multidimensional scaling (MDS) is a mathematical tool that spatially represents objects (as in a map) according to a measure of similarity that has been computed for all pairs of objects. MDS enables researchers to measure and understand the relationships among objects when the underlying dimensions are not known. MDS is therefore used in a wide variety of disciplines where researchers need to investigate perceived similarity or dissimilarity among a set of objects. Examples of the use of MDS in research include the study of perception of Morse code signals (Kruskal and Wish [1978]) and study of perceived similarity of market brands in market research (Green and Rao [1972]).

Cluster analysis on the other hand can be described as a dimension-free classification procedure which attempts to sub-divide or partition a set of heterogeneous objects into relatively homogeneous groups. The objective of cluster analysis is to develop subgroupings such that objects within a particular subgroup are more like other objects within that subgroup than they are to objects in a different subgroup (Berenson et al [1983]).

In this study, two-dimensional perceptual "maps" from the similarity ratings were initially constructed using nonmetric multidimensional scaling. A Statistical Analysis System (SAS) multidimensional scaling algorithm, MLSCALE, was used for this purpose. MLSCALE performs a multidimensional scaling analysis of a set of symmetric or nearly symmetric data using maximum likelihood estimation (Schiffman et al. [1981]).

Coordinates generated from the MLSCALE

routine were "standardized" so that they can be plotted on scales of 0 to 1. (Incidentally, this procedure facilitates the comparison of relative perceptions of the auditing terms among the three groups). The SAS CLUSTER procedure was then utilized to perform a hierarchical clustering analysis on the standardized coordinates of the objects represented on the spatial maps. The subgroupings of objects generated on the maps of the three groups were visually examined for similarity of patterns amongst groups. To reinforce these observations, correlation analysis was used to determine the degree of "sameness" of the two dimensions among the three models.

Results

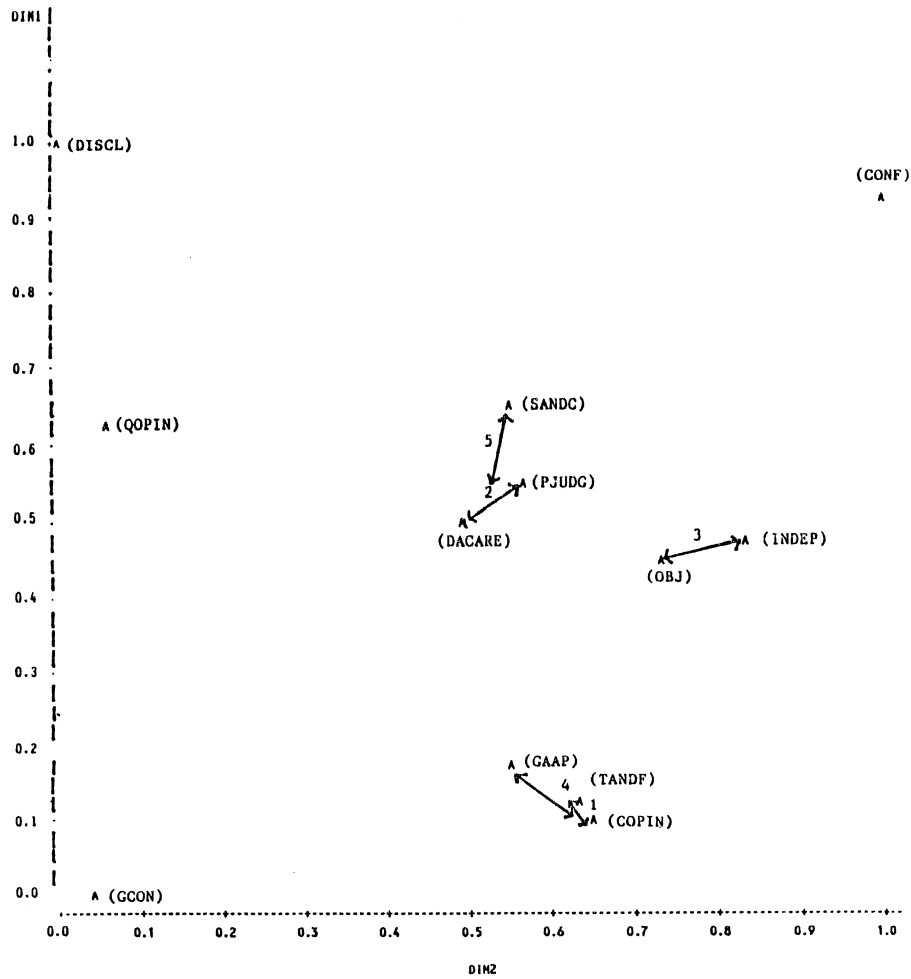
The accountants', bankers' and students' perceptual models are shown in Figures 2, 3 and 4 respectively. Their standardized coordinates on dimension 1 (Dim1) and dimension 2 (Dim2) are shown in Table 2.

Table 2
Table of Standardized Coordinates

Object	Accountants		Bankers		Students	
	Dim1	Dim2	Dim1	Dim2	Dim1	Dim2
TANDF	0.11865	0.63327	0.36197	0.90623	0.06294	0.33800
COPIN	0.10249	0.65230	0.28561	1.00000	0.00000	0.37636
DISCL	1.00000	0.00000	1.00000	0.79621	1.00000	0.69687
GAAP	0.17372	0.55389	0.31040	0.82490	0.04497	0.42955
QOPIN	0.62386	0.06036	0.75624	0.45714	0.67200	0.93556
GCON	0.00000	0.04235	0.00000	0.47979	0.22280	1.00000
SANDC	0.64767	0.54907	0.39623	0.40355	0.57765	0.36260
INDEP	0.47799	0.83338	0.54589	0.78080	0.47363	0.12662
DACARE	0.49373	0.49379	0.45872	0.53542	0.60649	0.26699
PJUDG	0.55007	0.56835	0.39013	0.55819	0.50807	0.43944
CONF	0.91729	1.00000	0.49223	0.00000	0.80786	0.00000
OBJ	0.44929	0.73650	0.46923	0.75574	0.41446	0.28654

A visual inspection of these models indicate that they are, in many respects, very similar. In particular, there is a very close similarity between the accountants' and students' models. The fact that the students' model is the inverse of the accountants' model is not important as this study is concerned with the relative and not the actual positions of the terms. The high degree of similarity between the two models may indicate that the "making" of an auditor begins

Figure 2
Plot of Concepts - Accountants

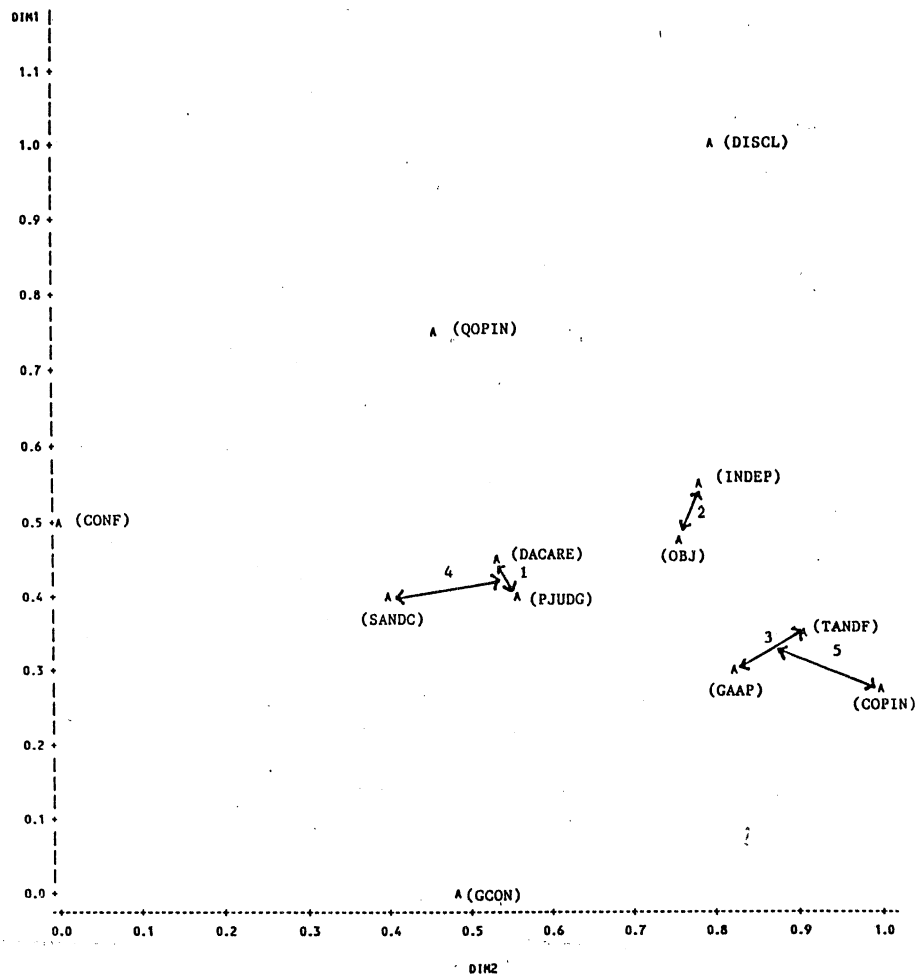


well before he or she commences a professional-career and that the concept formation process takes place largely in the universities and colleges.

The bankers' model is generally similar to the other two models but there is less of a congruity than that indicated in the other two models. Generally, the items are clustered in similar fashion and the outliers are the same as in the other two models. However, the positions of the clusters tend to differ on dimension 2. Further, the bond in the "GAAP", "true and fair" and "clean opinion" cluster is not

as strong as in the accountants' and students' models. These differences are not deemed significant enough to support the hypothesis that there is a substantial gap between the perceptual framework of bankers and accountants. In fact, the similarities between the two models are strong enough to provide persuasive evidence that bankers, a sophisticated user group, have a good understanding of the phraseology of the accounting profession and the oddities of this phraseology. One should not, however, infer from this study that no "expectation gap" exists between users and preparers of audit reports. The presence of the "expectation gap" has been

Figure 3
Plot of Concepts - Bankers



the subject of many empirical studies which provide evidence of its existence. It is suggested in this study that the "expectation gap" is not materially caused by semantic problems.

Further support of the conclusions derived from visual inspection is found in the results of the correlation analysis performed on the dimensions of the three models. Tables 3 and 4 indicate that significantly high correlations exist among the three models on dimension 1 and between the accountants' and students' models on dimension 2. There is however very little correlation on dimension 2 between the

bankers' model and the other two models.

Table 3
Correlation Coefficients - Dimension 1

	Accts	Bankers	Students
Accts	1.00000 (0.0000)	0.79783 (0.0019)	0.94899 (0.0001)
Bankers	0.79783 (0.0019)	1.00000 (0.0000)	0.75322 (0.0047)
Students	0.94899 (0.0001)	0.75322 (0.0047)	1.00000 (0.0000)

Figure 4
Plot of Concepts - Students

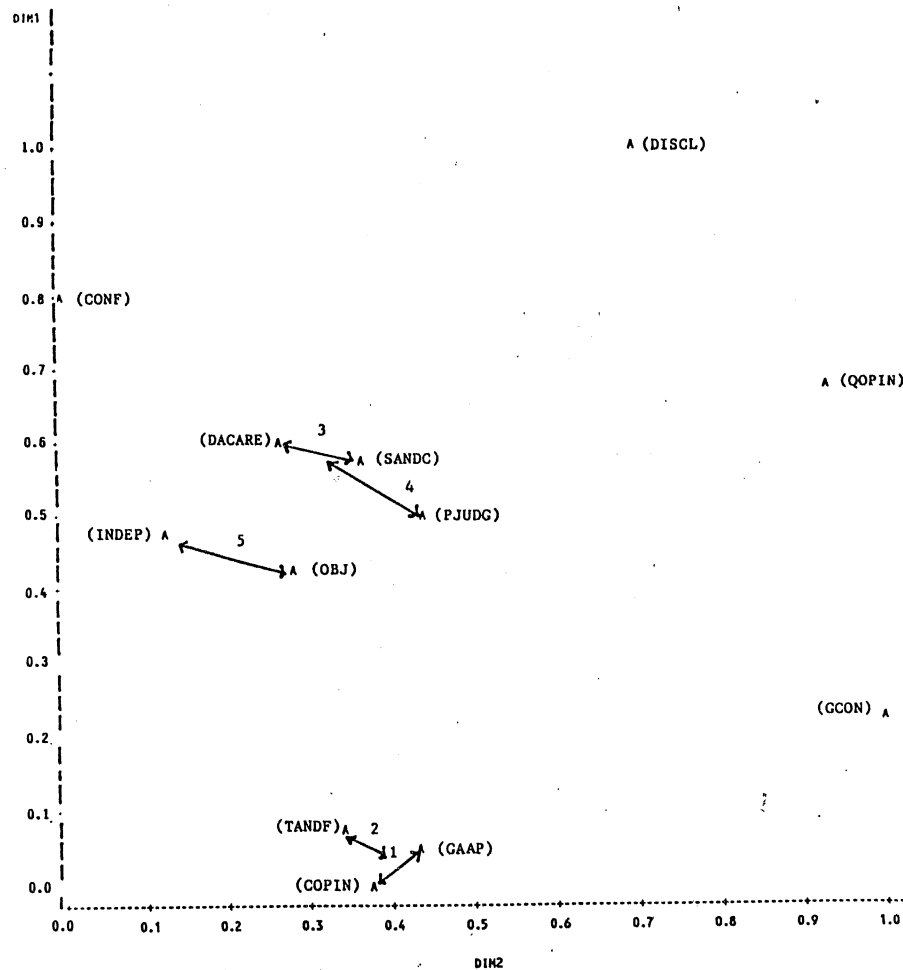


Table 4
Correlation Coefficients - Dimension 2

	Accts	Bankers	Students
Accts	1.00000 (0.0000)	-0.08755 (0.7867)	-0.93968 (0.0001)
Bankers	-0.08755 (0.7867)	1.00000 (0.0000)	0.07007 (0.8287)
Students	-0.93968 (0.0001)	0.07007 (0.8287)	1.00000 (0.0000)

(Note: Figures in parenthesis indicate level of significance; "Accts" denotes "Accountants").

Given fairly similar models among the three groups, it is feasible to analyse the pattern of clustering of the terms. Three clusters are evident on the models. "True and fair", "GAAP" and "clean opinion" are clustered together, probably on the basis that they relate to the reporting function. "Due audit care", "skill and competence" and "professional judgement" are in another cluster. These may be seen as key attributes affecting the technical quality of an audit. A third cluster links "independence" with "objectivity", probably because both have ethical implications. Outliers

common to all the models are "confidentiality", "disclaimer", "qualified opinion" and "going concern".

Limitation of Study

Experimental data in this study provide basis for the evaluation of the subjects' relative perceptions of auditing terms i.e. the relationships among terms. The study does not provide information on the meaning of individual audit terms as understood by the subjects. It is theoretically possible therefore that, although there are no significant differences among the groups' perceptual models, interpretation of the absolute meaning of individual terms may differ. In spite of this limitation, it is felt that a measurement of relative perceptions of auditors and non-auditors provides insightful information on the mind-sets of different groups of subjects and facilitates an overall view of the extent of the much publicized problem of the communication gap between auditors and users.

Conclusion

An important characteristic of the auditing service is that users of the audit report need to have considerable understanding of auditing terminology if the audit function is to be of any use to them in their decision making. It is, therefore critical that users and preparers of the audit report have similar perceptual frameworks with regard to auditing terminology. The measurement of human perception is facilitated by multidimensional scaling techniques. In this study, MLSCALE (a multidimensional algorithm) is used to construct perceptual models for accountants, bankers and students. The models depict the positions of selected auditing terms on a "mental map" for each of these three groups. Cluster analysis provides further clarity to the "maps" by grouping terms that are closer to each other on these "maps". The conclusion of this study is that there are no significant differences in the relative perceptions among these three groups. Hence, while other studies have

indicated the presence of an "expectation gap" between users and preparers of the audit report, this study indicate that users (as represented by bankers) are fairly knowledgeable about auditing terminology and that the "expectation gap" is, therefore, caused by other factors.

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