# DIFFERENT SALVES FOR DIFFERENT SORES: INTERNATIONAL RESEARCH REMEDIES FOR A SOUTH AFRICAN COMMUNICATION CONTEXT

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#### **ABSTRACT**

A fact so widely accepted as to be considered common sense is that communication is influenced by the context in which it functions. It is for this reason that there is no single communication-related measurement scale suitable for all circumstances (Le Roux 2008: 264; Devlin 2003: 27). Yet, communication researchers continually make use of existing communication research methods in order to strengthen reliability and validity in research and to standardise measurement instruments for comparability of results. In most cases, these methods originate in the international arena. Le Roux (2008) proposed methods for adapting Communication Satisfaction and Relationship scales to the South African, third-world context specifically for use within the mining industry of South Africa. This article reports on a study testing Le Roux's (2008) adapted versions alongside those of the original questionnaires at the Gautrain project. The study confirmed Le Roux's adaptations, and adds additional recommendations for the distribution and administering of internationally generated questionnaires within the mining and construction industry of South Africa specifically, and the third-world context in general.

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#### INTRODUCTION

According to Carol K. Goman (as cited by Cutlip, Center, Broom & Du Plessis 2002: 1), "Our organisations are living systems existing in a turbulent environment that constantly tests their abilities to survive." This survival of organisations is tested by its means of reaching organisational objectives (Cutlip *et al.* 2002: 21; Steyn & Puth 2000: 19). Simply put, this amounts to the fact that an organisation will only be able to reach its objectives (survive) if it adapts to the environment and community that finds itself in (Van der Walt 2006: 116; Cutlip *et al.* 2002: 21; Steyn & Puth 2000: 19). In much the same way, Le Roux (2008: 264) and Devlin (2003: 27) argue that, in order to be successful and reach its set objectives, research measurement scales used in organisations need to adapt to the environment and community of that organisation as well. Still, Le Roux (2008: 264) states that very little mention is made as to *how* this measurement scale for research needs to be adapted.

In order to fill this void, Le Roux (2008) proposed methods and guidelines for adapting Francis and Woodcock's (1994) Communication Satisfaction and Grunig and Hon's (1999) Relationship questionnaires (among others) to the South African, third-world context. These guidelines were based on empirical research conducted at a mine in the North-West Province (Le Roux 2008: 265; cf. Le Roux, Naudé, Fourie & Van Heerden 2004). In this study, however, only the adapted questionnaire items were included and tested, and not the original questionnaire items as from the two aforementioned questionnaires which, naturally, did not offer the opportunity of comparing the manner in which employees answered these two sets of items (the original, international; and the adapted, localised questionnaire items).

This article attempts to build on the contribution of Le Roux (2008) by framing and testing the proposed guidelines in a new (but corresponding) context as it relates the answers given by respondents in the original questionnaire items to those of its adapted counterparts. Herein, insight will be gained into the manner in which established, international communication questionnaires should be administered in order to be valid and reliable within one of the most unique communities in South Africa – the community of workers in the mining and construction industry.

Specifically, the focus of this article is to:

- provide a brief background of the theoretical underpinnings that guided the formulation of the Communication Satisfaction and the Relationship questionnaires, as well as its adapted equivalent;
- report on the challenges and subsequent changes encountered in the piloting and administering of the questionnaire (that included original questionnaire items as well as adapted questionnaire items);
- contextualise the community and environment of the organisation where the questionnaire was administered;
- evaluate the reliability and validity of the original questionnaire alongside its adapted version; and
- build forth on the guidelines offered by Le Roux (2008) for the future adaptation of measuring scales for use in communities in a third-world context.

#### THEORETICAL BACKGROUND

Before discussing the adaptation of the two questionnaires, an understanding of what these questionnaires were designed to measure, and how they were designed to measure this, should be sought. Broadly speaking, Francis and Woodcock's (1994) as well as Grunig and Hon's (1999) questionnaires were designed within the field of Corporate and Organisational Communication. In this, Francis and Woodcock's (1994) questionnaire was designed with the goal of auditing (in a quantitative manner) the effectiveness of an organisation's communication efforts. According to Grunig and Hon (1999: 3), where there is communication in an organisation, there will be a relationship that ensues – and this is what their questionnaire aims at researching (also in a quantitative manner).

#### Francis and Woodcock's (1994) audit of communication effectiveness

With the goal of auditing the effectiveness of an organisation's communication efforts, Francis and Woodcock (1994: 4) constructed a conceptual model with four main sections. Each section is divided into three subsections, as illustrated in Figure 1.

According to Francis and Woodcock (1994) effective communication in an organisation has to account for the fulfilment of these four main factors, namely the sharing of the compelling vision; effective integration of efforts; sustaining a healthy community; and intelligent decision making.

Persuasive Integrating management Mechanisms Compelling Helpful Geography vision Sensitivity to Sharing the Effective Downward the external compelling integration of Flow environment vision efforts Intelligent Sustaining decision Communication healthy High trust making community skills Lack of Apt Administration prejudice Upward Supportive flow teamwork

FIGURE 1: THE CONCEPTUAL MODEL

Different salves for different sores: International research remedies for a South African communication context These factors include the following (Francis & Woodcock 1994: 4):

- Communication for sharing the compelling vision: This section proposes that, in order for communication to be seen as effective, a feasible identity has to be strategised for the organisation and then be communicated in a persuasive manner. Herein it is seen that managers must possess the necessary communication skills to be persuasive in communicating the compelling vision of the organisation to all stakeholders.
- Communication for the effective integration of effort: For this, the organisation has to ensure that the energy and efforts of the workforce are pushing in the same direction. Very important is that communication from the top of the organisation (management) has to be clear and consistent, as it is management that sees the "big picture" of the organisation's operations, as well as how each employee's work fits into this "big picture". In this, all efforts need to be integrated to reach the objectives set out.
- Sustaining a healthy community: In order to sustain a healthy community, all communication at an organisation has to be free of prejudice. Francis and Woodcock (1994: 6) state that: "Healthy communities are based on the principle of fairness. The most common kinds of prejudice are racial, sexual, religious and between social classes. Prejudice is destructive because it increases the distance between social groups and individuals." This in its turn hinders the organisation in doing the work it sets out to do.
- Communication for intelligent decision making: This aspect looks at efficiently
  collecting, structuring and transmitting relevant information to those with power.
  Upward communication from subordinates to supervisors and to managers is
  researched, taking the communication skills of subordinates into consideration.

Although Grunig and Hon's (1999) questionnaire also looks at communication as generated by an organisation (from different sources) this questionnaire focuses more on the outcomes of communication endeavours than the effort that goes into it, as in Francis and Woodcock's (1994) questionnaire. It is in this instance that Grunig and Hon (1999) focus on the relationship that is established between an organisation and its constituencies (in this case the employees).

#### Grunig and Hon's (1999) Relationship questionnaire

Although numerous ways have been proposed to measure short term outputs of communication, a method of measuring long term worth still escaped the profession of Corporate Communication until Grunig and Hon (1999) constructed their questionnaire, designed to measure the long term intent of corporate communication (in this case internal communication) which is to build long term relationships with the organisation's key constituencies (in this case employees). This questionnaire consists of six key elements of which a relationship comprises. These elements are (Grunig & Hon 1999: 3):

- Control mutuality: This alludes to the degree to which the parties in the relationship agree over who has the right to influence whom. Stable relationships expect that both the organisation as well as the employees (the two parties relevant to this research) have some form of control over the relationship although some imbalance is inevitable.
- Trust: This aspect looks at the willingness of each party to open themselves up to the other party. This element differentiates between integrity, dependability, and competence.
- Satisfaction: The degree to which each party feels favourable towards the other, based on the positive expectations that are upheld by the other, points to satisfaction. A satisfactory relationship is one where the advantages outweigh the costs.
- Commitment: This refers to the degree to which each member of the relationship feels that the relationship is worth the energy spent on it.
- Two relationship styles: Between an organisation and its constituencies (for example the employee group) one or a combination of the following relationship styles can be seen:
  - Exchange relationship: In this relationship, one member of the relationship offers advantage or gain to the other member, only if the latter feels that the former has given advantage to them in the past, or is expected to do so in future.
  - <sup>o</sup> Communal relationship: In this relationship, both parties provide an advantage to the other, based on the fact that the parties are concerned with the other's wellbeing.

In order to test the above, both questionnaires make use of closed-ended questions, tested quantitatively by means of a Likert scale. Francis and Woodcock's (1994) questionnaire proposes 62 questionnaire items to be tested on a five-point scale, where Grunig and Hon (1999) proposes a nine-point scale to test the potential 46 items.

The combination of these two questionnaires in totality can present a very intense questionnaire by any standards. The intensity of this is felt even more in communities in a third-world context, according to Le Roux (2008: 266), which makes the adaptation of measuring scales important. Before this adaptation can be explored, however, the context that guides the adaptation should first be investigated.

#### CONTEXTUALISATION

Although Le Roux's (2008) study talks to the third-world context, the research was undertaken specifically within the mining industry of South Africa which faces specific and unique environmental challenges. In the introduction above, it was stated that this current research was empirically tested in a related context to that of Le Roux (2008). This is due to the fact that the research was done at the Gautrain project, which is an

operation that falls under the mining as well as construction spheres (Greeff 2009: 76; Van Tonder 2008). Herein, the community of employees and the organisation are facing the same obstacles that influence the measuring scales and research conducted therein, the most pertinent of which can be said to be cultural diversity, language, and illiteracy.

#### **Cultural diversity**

"South Africa is extremely heterogeneous with an abundance of cultures and subcultures in the country" (Rensburg 2003: 159). This is intensified in the mining and construction industries by the migration of workers, not only from the various provinces within the country, but also from neighbouring countries and the rest of the world (Le Roux 2005: 3). As a result, communications (for example through questionnaires) that are sent to employees could be interpreted in various ways (Lustig & Koester 2003: 12). It is for this reason that Le Roux (2008: 266) states that, in order for the measurement to be consistent, any cultural-specific references and content has to be adapted in questionnaires administered in this context.

#### Language

Very closely related to the different cultures inherent to the employee groups of these industries, are the varying languages spoken therein. The language diversity in this community culminates in the use of the pidgin *mining language* Fanakalo (also spelled Fanagalo). This language was created due to the fact that so many different cultures and languages were thrown together in the mining and construction industries, as to see the mixing of these languages to make up a new language particular to these industries and communities (Holtzhausen & Fourie 2008: 84; Naudé & Le Roux 2005: 6; Githiora 2002: 164). In recent years, however, this language has been ruled as racist, and English has replaced it as the *lingua franca* of these industries (Githiora 2002: 164) – although the *de facto* language can still be seen to be a relation to Fanakalo.

It is in this instance that Le Roux (2008: 266) states that adaption is needed. This does not only refer to the translation of the questionnaire items. In these industries, not only are there many different languages spoken and read on many different levels, but there are also numerous dialects of the same language. For example, the Zulu word that originally inspired a Fanakalo word might have different connotations in different dialects and different communities, and might still have an entirely different connotation in Fanakalo.

#### **Illiteracy**

Both cultural diversity and language barriers are intensified by the third obstacle, namely illiteracy. According to Creamer (2002: 2) a low level of literacy is one of the greatest qualms faced by the community of workers in the mining and construction industries. The Leon Commission for Health and Safety reports that 84% of general labourers and machine operators are totally or functionally illiterate and can, therefore, not be reached through communication channels that require them to read or write (Stanton 2003: 70; Leon 1995: 70).

This aspect is indeed an immense obstacle to overcome when administering a written quantitative questionnaire in these industries. Le Roux (2008: 266) proposes that the length and complexity of the scales be adapted to accommodate the literacy level of employees, where semi-literate and illiterate employees be assisted by interpreters to complete the questionnaire.

#### RESEARCH METHODOLOGY

The research for this article was conducted at the Gautrain project during 2009, as this organisation saw a need, and was willing to participate in the study that sought to research their communication endeavours and the subsequent employer-employee relationship. This organisation, as stated before, is seated within both the mining as well as the construction industries, as its operations are legislatively governed by both (Van Tonder 2008).

Within the operations of this project, the research was conducted at the Gautrain project's Precast Yard. This selection was based on the principles of the convenience sampling method, which, according to David and Sutton (2004: 151), as well as Keyton (2006: 126), takes place due to the ease of access to units of analysis. This selection was based on the fact that, at the Gautrain project, there are many different operations, or sites, that run on a temporary basis. These sites have only a few employees at a time, and mostly have no full hierarchical structures.

The Precast Yard, however, is a more permanent establishment that has a hierarchical structure ranging from managers down to general labourers. This site is responsible for the manufacturing of the precast cement segments for the bridges on which the Gautrain runs. As such, this operation functions mostly as a self-governing operation with, as mentioned before, its own structures (including a safety department, industrial relations department, and more). Due to this, as well as the fact that this operation has 807 employees working on one site, the Precast Yard amounts to a convenient selection. Needless to say, this selection of operation within the Gautrain project hampers representativeness of, and to, the project as a whole. The findings can therefore not be generalised to the entire Gautrain project, but only apply to the Precast Yard (Keaton 2006: 126; Gravetter & Forzano 2006: 117; David & Sutton 2004: 151).

Having said this, this organisation and its community of employees are influenced by the context of the mining and construction industries as set out above. Using this operation's employees as population (as opposed to the entire Gautrain project) therefore still served the purposes of this research.

The sampling method used for the questionnaire was systematic sampling. Systematic sampling is part of the probability sampling category. Every person in the population has an equal and known chance of being included in the research. This makes systematic sampling a random sampling method, which excludes any bias from the researcher's side. As such, the findings of the measuring instrument are generalisable

to the broader population – in this case the entire Precast Yard (Gravetter & Forzano 2006: 74; Keyton 2006: 54; Berg 1995: 178).

With the full population at 807 employees, the desired sample of 350 (allowing for a good response rate) determined n to be 2.48, converted to 3. With this, the response rate of the questionnaires turned out to be 281, which gives the sample a confidence level of over 95%, which thus has a satisfactory sampling error of under 5% (Keyton 2006: 122; Du Plooy 2002: 104).

The questionnaire (containing original and adapted items) was administered to these respondents, followed by focus groups and semi-structured interviews with managers in order to contextualise the findings of the questionnaires (after Le Roux 2008). This stage was preceded by a pilot study to test the questionnaire items.

The pilot study was conducted on two levels, namely by means of a conventional pretesting pilot study, as well as through the use of an expert panel. According to Keyton (2006: 175), the latter involves including experts in research methodology or in the survey's content to read through the questionnaire (Keyton 2006: 175).

For the pilot study of this questionnaire, both experts in research methodology, as well as in the survey contents were used. The experts included Le Roux – an academic from the North-West University, one from the University of South Africa (knowledgeable in the field of research methodology), as well as an expert from the Gautrain project (knowledgeable of the content of the survey). After these experts examined the questionnaire, it was administered to ten employees (who did not form part of the final sample) in order to complete the conventional pre-testing as mentioned above.

It is in this pilot testing and administering phase that the findings of the research, as far as the adaptation of the questionnaire is concerned, featured.

#### **FINDINGS**

Le Roux (2008) speaks to adaptations to the original Grunig and Hon (1999) as well as Francis and Woodcock (1994) questionnaires in the form of practical problems and solutions encountered in research. These general adaptations (not yet speaking to the contents of the questionnaire items) will be dealt with first, as they were experienced in the research at the Gautrain project.

#### **General adaptations**

In the first instance, Le Roux (2008: 266) discusses that adaptations to the questionnaire had to be made so as to take the literacy levels of the respondents into account. In this, the complexity and length of the questionnaire as well as the item ratings on the Likert scale had to be reduced. In the piloting phase, as well as in the administering of the questionnaire at the Gautrain project, this was found to be the case as well.

Firstly, during the piloting phase, the respondents showed difficulty in interpreting the five- or nine-point Likert scales suggested by Grunig and Hon (1999), and Francis and Woodcock (1994) respectively. For this reason, the scale was reduced to a four-point

scale which proved easier for the respondents to interpret – as was also found by Le Roux (2008).

Over and above this recommended adaptation of Le Roux (2008), it was also found that the "neutral" or indecisive rating (usually in the middle) on the Likert scale had to be removed. The main reason for this is the aspect of translation. Some of the languages used for the administering of the questionnaire make no provision for a word or concept that corresponds to "neutral". In terms of the questionnaire, this aspect would have to be translated along the lines of "this is not something I care about" or in some cases as "sometimes yes, but sometimes no". Through this kind of explanation and translation it was seen that most of the employees opted for this option every time – which is not as indicative of their perceptions as other options on the scale would be.

Secondly, during the pilot study, the complexity of the questions proved to be a problem. This is in line with what was found by Le Roux (2008: 266), as respondents were found to "lack basic numeric, business, technological and business-language skills". This resulted in having to simplify the wording of the items, whilst ensuring that the meaning remains unchanged. During the administering of the questionnaire, the length thereof also proved problematic (consistent to Le Roux's (2008) findings). The length of the combined questionnaire – taken alongside existing questionnaires of the same length – should not have taken respondents longer than 20 minutes to complete. Some respondents at the Gautrain project, however, took considerably longer (some did not even fully complete the questionnaire after spending close to an hour on it) whilst others needed translator assistance, which prolonged the process even more. This leads to the conclusion that the length of the questionnaire to respondents in this community and industry has to be very succinct.

This last aspect points to the next adaptation mentioned by Le Roux (2008) where it was found that a translated questionnaire would be unsuccessful due to the fact that there is a vast diversity in terms of the languages spoken in organisations within this context. Furthermore, these languages are read on different levels, and many different dialects of the same language exist. In order to bridge this obstacle, Le Roux (2008) suggests the use of translators who, in a one-on-one situation, are able to aid those respondents who are not comfortable with answering the English questionnaire on their own. This was found to be the case in the current research as well, where the translation of aspects had to be done in such a fashion as to allow elaboration. For example, in the contextualisation it was mentioned that Fanakalo is still the *de facto* language of the industry. In Fanakalo, however, there is no word for "relationship" – the only word close to this is "thandi" which, directly translated, means "love". This can prove to be an insurmountable problem when a relationship questionnaire is being administered. It was found that translators who are able to elaborate on aspects in different languages (as suggested by Le Roux 2008) should be employed.

Not directly suggested by Le Roux (2008), however, is the fact that the questionnaire – both in layout and construction – has to be structured in such a way as to allow the translators to easily facilitate respondents' answering of the questionnaire. At the

Gautrain project, it was found that the layout of the questionnaire has an influence on the way that respondents fill out the questionnaire. Due to the fact that respondents in this industry, in many instances, have to fill out the questionnaires *on site* – meaning not in an office, or in a space where they have use of a desk or the like – the questionnaires need to be physically easy to handle. It is for this reason that the questionnaire administered at the Gautrain project ended up being laid out in A5 format which is easier to handle and answer on one's lap, for example.

With the general adaptations as from Le Roux (2008) being discussed alongside the additional findings as from the Gautrain project, the specific adaptations of the two existing questionnaires can now be focussed on. This will be done by firstly focussing on the items of Francis and Woodcock's (1994) questionnaire and thereafter that of Grunig and Hon (1999). In order to do this, the data from the questionnaire completed by employees at the Gautrain project was subjected to factor analysis and the calculation of the Cronbach alpha coefficient – as these were the two predominant methods employed by Le Roux (2008: 276) to determine validity and reliability.

Also in line with Le Roux (2008) the findings were triangulated with qualitative methods, namely in-depth interviews with managers and focus groups with employees, in order to contextualise the findings from the questionnaires. In this it was found that some concepts, found in existing literature to be interpreted one way, was interpreted by employees in this context in an entirely different way. It is for this reason that triangulation of the quantitative questionnaire should be done with qualitative measurements in this environment – if valid and reliable inferences are to be made from the research. In order to give specific account of the foregoing, the two questionnaires will now be discussed respectively.

## Adaptations of Francis and Woodcock's (1994) audit of communication effectiveness

The first aspect that Le Roux (2008) discusses under the adaptations of Francis and Woodcock (1994)'s questionnaire is the Cronbach alpha coefficient found in the questionnaires. The Cronbach alpha can be described as a coefficient of reliability, as it measures how well a set of questions measure a single variable. This measurement ranges between 0 and 1. If the question tested has a score of 0.7 and higher, the measurement of that question is valid (UCLA 2006; Roberts, Priest & Traynor 2006: 44; Santos 1999: 7).

The coefficient found in Le Roux's (2008) study ranged between 0.68 and 0.76 for this questionnaire (it is not mentioned what the overall Cronbach alpha for the entire question dealing with Francis and Woodcock's (1994) items was). In the questionnaire administered at the Gautrain project, the Cronbach alpha for the entire question set dealing with Francis and Woodcock's (1994) questionnaire was determined by looking at the adapted items and the original items disjointedly. Although the Cronbach alpha was found to be generally higher than was found in Le Roux's (2008) study, this is not really a relevant point as the questionnaires were administered to two different

populations with different numbers of questions. Rather, the remarkable aspect in this instance is the fact that the Cronbach alpha for the adapted questionnaire items was very close to, but still higher than those of the original questionnaire items. For the adapted (Le Roux 2008) items, a Cronbach alpha of 0.898 was found, whilst the original items (Francis & Woodcock 1994) yielded a Cronbach alpha of 0.883.

The lower score for the original items might be attributed to the fact that the original items were harder to understand by employees. This was echoed by the facilitators, who believed these questions – the original items – took longer to explain (mostly due to the fact that they included abstract terms).

Next, a factor analysis was done on the questionnaire. This factor analysis was not confirmatory, but rather exploratory due to the fact that this analysis allows loadings that are not pre-empted in any way by means of a factor model. In lieu of this, neutral inferences could be made with regards to the correlation between loadings as reported on the original questionnaires, and those by Le Roux (2008) in adaptation. For these exploratory factor analyses the extraction method was a principal component analysis with a Promax with Kaiser Normalization rotation to determine the statistical variation. The principal component analysis, which begins with communalities of 1, allowed for all factors to be retained (and thus not discarding any information) (Field 2009: 641). Furthermore, in terms of the substantive importance of the factor loadings, only loadings yielding an absolute value of more than 0.4 was considered (with most ranging between 0.6 and 0.8) – well above the benchmark of 0.3 (Field 2009: 644).

The factor analyses findings showed some difference to what was found by Le Roux (2008), as is to be expected, since factor analyses are population specific (Field 2009: 667). Le Roux (2008) found that in the factor analysis, items originally belonging to upward communication were attributed to persuasive management by respondents, whilst downward communication was grouped with items dealing with prejudice. This was not found to be the case in the current study, where the respondents at the Gautrain project attributed downward communication and prejudice to persuasive management, whilst upward communication stood disconnected to this grouping (in the original as well as adapted questionnaire items). Le Roux (2008) also found that respondents made a distinction between prejudice as it pertains to communication, and prejudice as it pertains to equal employment – this distinction was not seen at the Gautrain project.

In lieu of the factor analysis findings from the adapted Francis and Woodcock (1994) questionnaire, Le Roux (2008: 277) made the recommendation that the "concepts defined by Francis and Woodcock ... may need to be renamed for this particular environment". Although the findings from the Gautrain project tend to show an agreement with this recommendation, these findings also indicated that fewer distinctions are made than that found by Francis and Woodcock (1994). This is due to the fact that the respondents from the Gautrain project grouped all communication from management (whether it could be attributed to the dimension of prejudice or downward communication) as one aspect – not three as suggested by Francis and Woodcock (1994). The distinction found in the factor analysis was therefore discovered to be more

simplistic as all upward communications and all downward communications (as pertaining to these items) were grouped together, where smaller differences or nuances in the questionnaire items did not seem to feature. On the back of Le Roux (2008)'s statement that the concepts need to be renamed, this study found that some of the concepts should rather be combined for this environment.

Although the respondents did not make fine distinctions when it came to the concepts of Francis and Woodcock's (1994) questionnaire, one distinction was, however, made in the items themselves. In the pilot phase of the study at the Gautrain project, employees indicated a change that would be needed before the questionnaire could be administered. This change was in the form of dividing a few questions from Le Roux's (2008) questionnaire – which was originally one question into two.

For example, in Le Roux (2008)'s questionnaire, item 30 reads "Management / team leaders / supervisors are convincing when communicating to me". When this question was piloted at the Gautrain project, the recommendation was made to split this question to read: "Supervisors are convincing when communicating to me", followed by a separate question reading: "Management are convincing when communicating to me" (there are no team leaders at this operation). This was explained to be due to the fact that employees make a distinction between top management, middle management and lower management. In the focus groups with employees, this sentiment was echoed, where employees stated that, due to the fact that many employees are illiterate and/or not proficient English, all communication has to filter through a very strict hierarchical system, verbally. Put differently, this means that top management communicates a message to middle management, who communicates to lower management, who in turn then has to communicate to employees at the bottom of the hierarchy. Employees thus felt that a distinction needs to be made between management communicating directly to them (which they found to be lacking), and their supervisors communicating to them (which is considered to be abundant).

Simply put, at the Gautrain project it was found that not all "sources" (management, supervisors, etc.) of downward communications can be grouped together, as was done in Le Roux's (2008) study, as different "sources" meant different perceptions with regard to communication.

### Adaptations of Grunig and Hon's (1999) Relationship questionnaire

As was found to be the case in testing the Francis and Woodcock (1994) questionnaire at the Gautrain project, Le Roux (2008) found, in the administering of the Grunig and Hon (1999) questionnaire, that respondents could not make a distinction in the small semantic differences in the questions.

Related to this, it was found at the Gautrain project, during the factor analysis, that employees did not perceive six factors in Grunig and Hon's (1999) questionnaire but only three. Herein, employees grouped the element of trust together with control mutuality as commitment was grouped with satisfaction and communal relationship, whilst exchange relationship is an aspect that stood alone. This finding supports the

results found in the administering of the Francis and Woodcock (1994) questionnaire, namely that some concepts of the questionnaire could be combined when the questionnaire is administered to respondents and interpreted within this environment.

Remarkable here is the fact that Le Roux's (2008) study found much of the same. In this study, exchange relationship was also an aspect that stood alone after the factor analysis, whilst the statement (only one was included) of control mutuality was paired with communal relationship. Herein, the study at the Gautrain project echoes the findings of Le Roux (2008) that "the concepts of trust, control mutuality, commitment, relationship satisfaction, and communal relationship were not as clearly distinguished from one another... the uniqueness of the respondents could have influenced the matching of the findings to the previously defined aspects".

Furthermore, Le Roux (2008) found here that negatively phrased questions should be excluded from the questionnaire as employees did not seem to understand how to interpret these questions. Yet again, in support of Le Roux (2008), this was found to be the case for negatively phrased questions in the questionnaire to the Gautrain project employees as well. For example, the following item shown in Table 1, from the adapted Le Roux (2008) questionnaire, was included alongside its negatively phrased counterpart from the original Grunig and Hon (1999) questionnaire. As these items measure the same aspect, it would be expected that they yield a similar response from respondents, in an inverse pattern, as the one is positive and the other is negative. Seeing as they did not, this points to the fact that negatively phrased questions cannot always be considered in this environment.

TABLE 1: NEGATIVELY AND POSITIVELY PHRASED QUESTIONS

	Adapted Le Roux (2008) questionnaire:	Original Grunig and Hon (1999) questionnaire:	
Item:	This organisation can be relied upon to keep its promises.	This organisation cannot be relied upon to keep its promises.	
Phrased:	In the positive.	In the negative.	
Response from respondents: cumulatively disagree	70.1% (N=281)	66.5% (N=281)	
Response from respondents: cumulatively agree	29.9% (N=281)	33.5% (N=281)	

In Le Roux's (2008) questionnaire the Cronbach alpha coefficient for the entire question dealing with Grunig and Hon's (1999) questionnaire is not mentioned, but for the factors derived from it, a range between 0.63 and 0.81 can be seen. Yet again (probably due to the inclusion of more items) the range found on this from the questionnaire administered at the Gautrain project was higher. However, it should be pointed out here that the adapted version as from Le Roux (2008) again included a higher rating than that of its original counterpart – this time a noticeable difference (the

adapted questionnaire items with 0.913 and the original items with 0.825). This points to the fact that the questionnaire adapted to the environment (as after Le Roux 2008) proved to be more reliable in its testing in this environment.

#### **CONCLUSION**

At the onset of this article, it was mentioned that communication in an organisational setting has to be adapted to the environment thereof, if this organisation is to be successful. In the same way, questionnaires (that can be argued to form part of organisational communications) need to be adapted to the environment of the organisation as well, if it endeavours to reach its research goals. This aspect is intensified by the fact that most of the well known and generally respected Corporate and Organisational Communication questionnaires originate from within an international arena, from which African, third-world countries can vastly differ. This diversity is intensified in South Africa's mining and construction industries, which have some of the most diverse workforces to be found, especially in terms of cultural diversity, language diversity, as well as differing levels of literacy, thus forming a unique community to communicate with.

This diversity poses obstacles to the administering of communication questionnaires (especially if they are designed to be self-administered). In lieu of this, Le Roux (2008) proposed various recommendations and adaptations for the South African, third-world context. The contribution of this article lies in the fact that Le Roux's (2008) adaptations were, for the first time, empirically tested alongside the original items of the (international) questionnaires. It was found that the adaptations of Le Roux (2008) were valid in every instance – especially the general adaptations which included the reduction of the length of the questionnaire, as well as the number of items on the Likert scale. In the testing of the questionnaire items, it was found that the adapted questionnaire items were more reliable, as it yielded a higher Cronbach alpha coefficient (overall). Although all adaptations and recommendations suggested by Le Roux (2008) were therefore found to be of merit, the following additional recommendations can be made over and above those proposed by Le Roux (2008) for the distribution and administering of internationally generated questionnaires within the mining and construction industry of South Africa specifically, and the third-world context in general.

#### RECOMMENDATIONS

Exclusion of the neutral option: When responding to quantitative questionnaire items, many respondents in this environment (especially when making use of a translator) opts for the "neutral" or "indecisive" option on the Likert scale for many or most of the questions. As this item on the scale (when chosen significantly) does not offer a decisive reflection of respondents' perceptions, it should be considered to exclude this item in the administering of questionnaires in this kind of environment.

Design of the questionnaire to ease translation: As translators will inevitably be used in many instances when administering questionnaires in this environment, the questionnaire should be designed in such a way as to take translation thereof into account. In line with this, the layout of the questionnaire should also be of such a kind as to allow respondents to answer it on site – that is to say not only at a desk or the like.

The importance of hierarchy should be noted: In this environment (due to the illiteracy and non-proficiency of English of many respondents) communication messages have to filter verbally through a strict hierarchy in many cases. The supposition that management or top management is viewed as one entity in questionnaires should be rethought.

Triangulation: Due to the diversity of respondents in this environment, quantitative items are sometimes interpreted by different respondents in very different ways. It is for this reason that it is strongly recommended that the findings from quantitative questionnaires, such as that of Grunig and Hon (1999), and Francis and Woodcock (1994), be triangulated with qualitative research methods in order to improve the validity and reliability of the study.

Factor groupings: It was found in Le Roux's (2008) study, based on the factor analysis, that groupings of constructs (for example the elements of relationships as from Grunig and Hon's (1999) questionnaire) might have to be renamed for this context. In this study, it was found that respondents do not group items differently, just that less distinction is made between smaller nuances (for example in relationships). It is therefore rather recommended that these constructs, in the form of factors, be combined in this environment to form larger groups of items – which will inevitably impact positively on the Cronbach alpha coefficient.

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