

## Precedent predictions and present practice: a stakeholder theory account of safety communication significance for the mining and construction industries of South Africa

### ABSTRACT

The economic reality of South Africa is that the industries responsible for the greatest contribution to the country's Gross Domestic Product are also those responsible for the greatest loss of life among their employee population. The South African mining and construction industries are notoriously dangerous and were responsible for the loss of more than 200 employees' lives in 2011 – an improvement over previous years. This notwithstanding, many organisations still think that occupational safety is an ethical consideration that either impedes or hampers business outputs. This notion is one that stakeholder theory regards to be a fallacy, specifically the *separation fallacy*, one that is in need of rejection and replacement by the integrated thesis, which proposes that the term *business ethics* no longer be seen as an oxymoron but rather as tautology. In this article, the significance of this proposition will be outlined, as empirically tested within the mining and construction industries of South Africa at two organisations – the *Gautrain Project* (predominantly located within the construction industry) and *Diesel Power Opencast Mining* (predominantly located within the mining industry).

## **INTRODUCTION**

In 1984, Freeman wrote his renowned book, *Strategic management: a stakeholder approach*, which stated that organisations needed to be heedful of more groups than simply their *stockholders*; that they needed to consider all *stakeholders* – groups that impacted on the functioning of the organisation, though not necessarily contributing in monetary terms. The input of these stakeholder groups was made in terms of **value contribution** to the organisation, which facilitated organisational goal attainment (Freeman, 1984; Freeman, Harrison, Wicks, Parmar & De Colle, 2010:52; Laplume, Sonpar & Litz, 2008:1153).

Supporting stakeholder interests is therefore in the best interests of an organisation, as the value that the organisation receives from these constituencies hangs in the balance. In terms of this, supporting stakeholder interests should **not** be seen as a matter of social responsibility – it is a matter of capitalism in that it is in the hands of these stakeholders that an organisation's corporate objectives are achieved. Having said this, for an organisation to sequentially create value for its stakeholders, it "must understand that business is fully situated in the realm of humanity ... [that] stakeholders have names and faces and children" (Freeman et al., 2010:29). Unless the needs or interests of these stakeholders are understood, an organisation is not in a position to formulate corporate objectives "which would receive the necessary support for the continued survival of the organisation" (Jensen, 2010:32).

Within organisations in the mining and construction industries of South Africa, employees (as a primary stakeholder group) hold one very distinctive interest and need: that their safety be heeded and attended to in the organisation. The reason for this is that these industries are notoriously dangerous, being responsible for the greatest loss of life in the employee population: it accounted for the loss of more than 200 employees' lives in 2011 alone – roughly one employee every working day that year (Davenport, 2005; DMR, 2009; DoL, 2012).

Still, in many organisations within the mining and construction industries of South Africa, safety is deemed to be an ethical consideration and one that, in their lexis, directly opposes the reaching of projected 'business' targets or production outputs. This is due to the popular stance that (mindful of the dangerous nature of work in these industries) when safety is heeded, production is hampered, while, when production targets are exceeded, safety is compromised.

Freeman theoretically predicts that this is a fallacy in need of rejection, and one that needs to be substituted by an integrative thesis in which working safely (the ethical item) and being productive (the business item) should be seen in an assimilated manner, as one and the same thing (Freeman, 1984; Freeman et al., 2010: 52; Laplume et al., 2008:1153).

This article explores the realisation of the above prediction in practice in the South African mining and construction industries. In so doing, it will unpack the communication to and stakeholder relationship with employees in two organisations: the *Gautrain Project* (predominantly located within the construction industry) and *Diesel Power Opencast Mining* (predominantly located within the mining industry).

Before this is done, however, a brief contextualisation of the South African mining and construction industries will be given so as to elucidate the importance and place, not only of safety, but also of production in the operations of these industries.

## **1. CONTEXTUALISATION**

Since the discovery of gold in South Africa at the turn of the 19th century, the mining and construction industries have been the backbone of the South African economy (Davenport, 2005). The mining industry, at this time, revolved around independent diggers disjointedly managing small-scale opencast operations in search of their own fortunes (Feinstein, 2005:99). However, the economic logic of underground mining rapidly led to radical changes, the most notable of these being the ownership by the late 1880s of mining and mining rights in South Africa by a few large joint-stock companies (Feinstein, 2005:99; Harlow, 2003:224). The revenues from mining provided the means of establishing infrastructure that largely gave rise to the construction industry. The mining and construction industries can be said subsequently to have determined the growth rate of the South African economy (Trapido, 1971:311; Trapido, Mqoqi, Williams, White, Solomon, Goode et al., 1998:306; Yudelman, 1983:311). In 1886, Johannesburg – the town that was to become “the industrial and financial centre of the new industry and South Africa” – was founded (Feinstein, 2005:100). Individuals from all over the country, and even the world, hastened to Johannesburg and to mining towns like it, to be part of the newly established yet immensely lucrative industry. This expansion was coupled with construction for the mines themselves and for the development of the mining towns. From this time onwards, labour in both of these industries came in abundance and positioned itself as being very cheap in terms both of monetary value and of human capital. This aspect was intensified by the government of the day’s stance that the black man’s presence was merely one of a labour unit (Feinstein, 2005:100; Harlow, 2003:224; Trapido et al., 1998:306; Yudelman, 1983:311). In terms of this view, little attention was devoted to the conditions in which workers in these industries operated and the focus was rather on how their labour amounted to profit for the operation. Put differently, from the outset, when these industries were established, the stance was that production was foremost, with safety being an ethical afterthought that faded in comparison with the importance of the business outputs brought on by production.

As to the current situation in the mining and construction industries, little has changed in terms of their contribution to the South African economy. For example, in the first quarter of 2011, these industries contributed a combined 8.5% of the South African Gross Domestic Product (SSA, 2011a:15), outstripping all other industries in their class, while the sector also expanded as an employment-creating sector (Camco & Trade and Industrial Policy and Strategies, 2011:1; SSA, 2011b:3). Conversely, a complete shift is evident in how the labourers of these industries are regarded – a shift as polar as the shift in government that accompanied it.

In 1996, two years after the democratisation of South Africa, the current Mine Health and Safety Act 29 of 1996 was published as a control measure aimed at improving the working conditions of labourers in these industries. For its formulation, it was realised that this industry was one of

the most notoriously dangerous industries in this country, as the work done by most employees inherently implied hazardous conditions (Creamer, 2009:2; SAGI, 2008; South Africa, 1996a:29). For this reason, the Department of Mineral Resources (previously the Department of Minerals and Energy), together with the Department of Labour, which oversees the safety practices of these industries, applied strict laws and guidelines in order to regulate the safety standards of the said industries (DME 2009; DoL 2012).

In recent years, government's sentiments regarding issues of safety in these industries have been intensified. In 2010, Chief Inspector of Mines, Thabo Gazi, noted that "Government is determined to ensure that safety measures in South Africa ... are improved and we will not compromise on achieving that objective" – even if doing so is detrimental to the economic or business objectives of the operation (Prinsloo, 2010:1).

These pressures from government to operate safely create challenges for the organisations in these industries in that government holds power in the issuing of the mineral rights and permits that allow operations within these industries to function. It is clear that government's stance on the matter is that if organisations within these industries want to survive, be successful or even just want to be allowed to operate, they should be able to operate safely.

The above therefore makes it apparent that the presuppositions or predictions made by stakeholder theory are now beginning to be reflected in the reality of the mining and construction industries. Failing to heed the safety needs of employees is potentially impacting on organisations' bottom line. With a view to investigating how this is packaged in terms of the tenets of stakeholder theory, a brief overview will be given of the theoretical background of this article.

## **2. THEORETICAL BACKGROUND**

### ***2.1 Freeman's stakeholder theory and the notion of value contribution***

At the most basic level, stakeholder theory was proposed as an alternative to the dominant stockholder-based theories of the time. It sees organisations as managing their business in such a way as to take the interests of all their constituencies, not only their shareholders or stockholders, into consideration (Freeman, 1984; Freeman et al., 2004, 2010; Jones, Wicks & Freeman, 2006; Lamplume et al., 2008). Working from this point of view, Freeman (1984) classified the then radical notion (now widespread) that organisations needed to be heedful of more groups than just those who offered the organisation compensation in monetary terms. The notion subsequently emerged that different groups existed within organisations, groups that added value and contributed to the workings of an organisation and thus had some kind of a stake in the organisation irrespective of whether they owned any company stock. Freeman resultantly offered "a pragmatic approach to strategy that [urges] organizations to be cognizant of stakeholders to achieve superior performance" (Lamplume et al., 2008:1153). It implied that the interests of stakeholder groups and those of the organisation were aligned as these groups jointly created value in the organisation. The

organisation, in turn, additionally had to focus on how “value gets created for each and every stakeholder” (Freeman et al., 2010:9).

Stakeholder theory frames the alternative of not managing stakeholder relationships as low-value contributions, which not only results in poor or failed goal attainment but also in the emergence of issues within the organisation – something that any organisation can scarcely afford. So as not to see this happen, stakeholder theory proposes an *integration thesis* – the answer to the *separation fallacy* upheld in organisations with low value contribution.

### 2.1.1 *The separation fallacy and the integration thesis*

At the onset and conceptualisation of stakeholder theory – a time when “capitalism became the dominant means of organizing value creation and trade” (Freeman et al., 2010:4), the effects and impacts of capitalism on other realms and spheres of society came into the forefront of investigation and exploration. Stakeholder theory makes allowance for the view that capitalism needs to take into consideration aspects of morality and ethics – in an integrative fashion – as capitalism impacts on human beings that have “names and faces and children” (Freeman et al., 2010:29). Once more, an understanding of economics, of business and of the general impact of organisations can only be complete once the stakeholder relationships of that organisation are understood.

In light of this, Freeman et al. (2010:6) propose that organisations need to view the separation of these aspects as a fallacy and that they need rather to focus on integrating these aspects in organisational management. This statement will be unpacked below by focussing on the *separation fallacy* and the *integration thesis* as explicated by Angle, Donaldson, Freeman, Jensen, Mitchell & Wood (2008:163); Freeman (2000:172), Freeman et al. (2010:6) and Jones et al. (2006:33).

#### *The separation fallacy and the integration thesis*

The separation fallacy (or separation thesis as it is referred to in some – especially earlier – literature) is a fallacy that, so stakeholder theory claims, courses from deep within our erroneous understanding of business and of some spheres of society. According to Freeman (2000:172), this fallacy states that “the discourse of business and the discourse of ethics can be separated so that sentences like ‘x is a business decision’ have no moral content and ‘x is a moral decision’ have no business content”. The fallacy thus created is that there is an inherent separation between business actions or decisions and moral or ethical actions or decisions. This ‘fallacy’ lies in the fact that the terms *business morality* or *business ethics* are, by nature, oxymorons.

Stakeholder theory counters this statement with the *integration thesis*, which proposes that “it doesn’t make any sense to talk about business without talking about ethics and that it doesn’t make much sense to talk about ethics without talking about business” (Angle et al., 2008:163). In its simplest form, the integration thesis affirms that aspects of business and ethics need to be seen and practised in an integrative fashion in that it

makes business sense to act in an ethical manner because of one clear-cut reason: both business and ethics have at their core human beings who need to be considered in both instances.

An embodiment of this situation emerges in terms of safety in the mining and construction industries of South Africa. Often, in these industries, the separation fallacy is witnessed where organisations might view safe work procedures as an ethical action that either hampers or impedes business outputs (mostly in terms of production – as mentioned above). Therefore, a decision to work safely is often immediately regarded as being at odds with production or business outputs. Stakeholder theory considers this a fallacy that needs to be rejected and one that needs to be substituted by an integrative thesis, one in which working safely (the ethical item) and being productive (the business item) should be seen in an assimilated manner, as one and the same thing. In practice, the negative business consequences of not working safely have been seen, not only in organisations having their right to operate revoked by the governing bodies of these industries or having fines levied against them, but also in the considerable output losses when employees 'down tools' as a result of unsafe conditions.

In essence, therefore, stakeholder theory conjectures that operational management within organisations in the mining and construction industries needs to uphold the principles of two-way symmetrical communication management (*cf.* Grunig, Grunig, Sriramesh, Huang & Lyra, 1995; Guth, 1995; Morsing & Schultz, 2006) so as to maintain a relationship between the organisation and this particular stakeholder group. Yet, this theory, even when all of the insights discussed are considered, is not exhaustive in terms of what managing this relationship should specifically entail. What needs to be discussed so as to understand this aspect completely, is the relationship management theory, which focuses on the communication management of the organisational-stakeholder relationship that stakeholder theory both describes and prescribes.

## **2.2 The relationship management theory**

As is the case with stakeholder theory, relationship management theory looks to explain organisational effectiveness through communication management as the latter relates to the reaching of organisational goals. It realises that the "complete answer to the question of what makes an organization effective" (Grunig & Hon, 1999:7) lies not only in measuring the achievement of organisational goals, but also in the organisation's relationship with stakeholders, which makes it possible for the organisation to achieve these goals (Brønn, 2007:377; Grunig & Hon, 1999:7).

More understandably, Grunig and Hon (1999:8) state that organisations that maintain relationships with their stakeholders are generally able to make better decisions regarding goal setting and goal attainment. This is generally because such organisations "listen to and collaborate with stakeholders before they make final decisions rather than simply trying

to persuade them to accept" it after the fact. This statement clearly reflects the influence of stakeholder theory, as it is stakeholder theory that allows stakeholders to be involved and moreover to be consulted regarding organisational goals and to be comfortable with organisational goals. Relationship management theory, however, enhances this particular supposition of stakeholder theory by adding the clarification that it is only through communication that this kind of relationship is possible. The aspect of building relationships and achieving organisational goals through communication to stakeholders is encapsulated by Brønn (2007:378) when he states:

Organisations that communicate effectively with publics develop better relationships because management and publics understand one another and because both are less likely to behave in ways that have negative consequences on the interests of the other.

In the same vein, Ledingham (2003:183) maintains that communication can be viewed as the strategic management function that facilitates the organisation-stakeholder relationship, which in turn affects the organisational mission, goals and objectives. According to Grunig and Hon (1999:11), the effect of this is experienced not only in terms of both parties deciding on and being involved in the process of goal setting, but also in the fact that a good relationship between the organisation and its employees is sure to "increase the likelihood that [stakeholders] will be satisfied with the organization and their jobs, which makes them more likely to support and less likely to interfere with the mission of the organization".

#### 2.2.1 *Elements of organisational relationships*

The elements of organisational relationships (or the relationship indicators or relationship outcomes as they are also referred to in selected literature) are *control mutuality*, *trust*, *satisfaction*, *commitment* and the types of relationships, explicitly *exchange relationships* and *communal relationships*. In terms of this article, the specifically germane elements are control mutuality and the types of relationships, as these are the aspects directly related to the suppositions made by stakeholder theory in terms of the organisational-stakeholder relationship that seeks the rejection of the separation fallacy in favour of the integration thesis. These elements will now be discussed based on Brønn (2007:380), Brunner (2008:74), Grunig (2000:41, 2002:2; 2006:166), Grunig and Hon (1999:3), Grunig and Huang (2000:42) and Ledingham (2003:185).

##### *Control mutuality*

Control mutuality in an organisational relationship is concerned with the agreement of power or control designation between the parties to the relationship. This is to say that this element looks into the control or power balance between the parties in the relationship and whether or not both parties agree to this power or control allotment. *Control mutuality* is therefore defined as "whether the contending parties in a relationship agree that one or both may rightfully influence the other ... or whether partners agree on the power balance in the relationship" (Grunig & Huang, 2000:43).

What is important to note here, is that this element does not simply examine the power or control balance in the organisational relationship, but rather whether or not the parties to this particular relationship **agree** on this balance or distribution. This is largely so because, in reality, no organisational relationship will ever truly experience a completely equal balance of power or control. In terms of employees as a stakeholder group, there is consensus that the organisation will, in most cases, hold the lion's share of the power or control in the relationship, while the employees' share, in some instances or at certain times (for example in special circumstances like strikes or litigations) might proliferate.

From the vantage point of stakeholder theory, control mutuality in organisational-stakeholder relationships become increasingly important when goals are set in the organisation. For the purposes of this article, this would mean that employees need to be consulted and their needs to be heeded when organisational strategies are devised or goals regarding their safety are set. It is only once there is agreement regarding control **mutuality** that employees will be in a position to attain excelled value contribution.

#### *Types of relationship*

Whatever the agreement regarding control allotment in the organisation, there are two broad categories of organisational-stakeholder relationships, namely *exchange relationships* and *communal relationships*. Though the two types of relationships might seem to be theoretically polar, a combination of the two is likely to be experienced in practice in organisational-stakeholder relationships (with one of the two taking either slight or substantial precedence).

*Exchange relationships* are defined as relationships in which the parties thereto provide benefit to one another, because benefit has been extended to them in the past and the expectation thus is that it will be repeated. Simply put, each of the parties in an exchange relationship will only give benefit to the other if it is felt that this other will give benefit in return, and will continue to do so in future.

In theoretical opposition, *communal relationships* are defined as those relationships that are characterised by both parties giving benefit to each other because they are each concerned for the other's welfare. In terms of stakeholder theory, it is seen that communal relationships mostly prove to be more successful for organisations because once employees feel that their needs are fully understood and taken into consideration in an organisation these employees will enhance the value creation of the organisation. Likewise, Greeff (2010:89) states that, when an organisation is genuinely concerned with its employees' welfare (as in communal relationships), safety and safety communication in the organisation will be excelled to a greater extent than when the organisation only wants a return on its safety investment (as would be the case in an exchange relationship). Organisations should therefore maintain and build a relationship with employees that shows the organisation to be genuinely concerned about their welfare. Implementing safety measures and then practising safety communications should be done in such a

way as genuinely to take care of employees' needs and not merely be the result of the organisation expecting something in return for having done so. If this is the case, then – according to the principles of stakeholder theory – employees will be prompted to the generation of better outputs by means of value creation, which could potentially lead to better goal attainment for the organisation.

For organisations in South Africa's mining and construction industries, the sentiments displayed above are still only a theoretical presupposition, yet to be proved or disproved. This article proposes to cross this empirical breach with an explorative investigation of which the methodology will now be discussed.

### **3. RESEARCH METHOD**

As alluded to above, the primary research objectives of this article are to explore and investigate the theoretical association between excelled goal attainment within organisations and the purposeful management, in practice, of stakeholder relationships. The mining and construction industries with their prominent need for safety offer a unique opportunity to explore this theoretical association. The two main reasons that affect this unique situation is that safety is, arguably, a universal need among employees in these industries, while managements consider it to be an 'ethical' item in that it stands in opposition to production or output. By investigating how organisations manage stakeholder relationships around aspects of safety and safety communication within the industries in question, we could therefore provide practical examples of the theoretical assumptions of stakeholder theory and of relationship-management theory.

Having said this, empirically testing the **relationship** between the dependent variable of excelled goal attainment and the independent variable of stakeholder relationship management is not altogether feasible, as neither of these variables can, statistically or otherwise, be isolated from other organisational and communication endeavours. Therefore, the empirical research for this article rather focusses on surveying the opinions of the workforce as a stakeholder group regarding the aspects of relationship management and excelled goal attainment through value contribution in terms of the two relevant theories. Although neither generalisations nor direct relational assertions can be made between these two variables, the opinions of employees within these industries do offer insight into how, in practice, this stakeholder group perceives the two variables. Simply put, this research has the objective of exploring stakeholder perceptions regarding organisation-stakeholder relationships and value contribution for excelled goal attainment, framed within the circumstances of safety and safety communication management within the mining and construction industries of South Africa. It therefore has the aim of exploring the theoretical assumptions and assertions of stakeholder theory in this practical circumstance, which is of such paramount significance to South Africa's current economic landscape.

As this exploration necessitated investigation into a large population – the entire staff complements of organisations within the mining and construction industries – a quantitative methodology was employed to ensure that more respondents could be included in the empirical testing

(after Keyton, 2006:7; Stewart, 2002:132). Herein, the quantitative measuring instrument that accompanies Grunig and Hon's relationship management theory (1999) was utilised in this study by specifically focussing on the items that reflect on the types of relationships (either exchange or communal) and the control mutuality (in terms of employees' control over safety decisions and strategy). This was supplemented by questions dealing with value contribution, framed as items dealing with motivation and general goal attainment and speaking to the variable of excelled goal attainment, as from the stakeholder theory. In line with the existing, standardised questionnaires in literature (*cf.* Downs, DeWine & Greenbaum, 2004:114; Francis & Woodcock, 1994; Grunig & Hon, 1999), both semantic differential items and Likert-scale items were utilised, which enabled the researcher to draw both descriptive and inferential statistics from the questionnaire in that statistical validity and reliability could be tested by making use of factor analyses and calculation of the Cronbach's alphas (to be elaborated upon below) (Basham, Jordan & Hoefer, 2009:53). This quantitative approach resulted in the inclusion of the perspectives of employees at all levels within the organisation – from the proverbial factory floor to those in the dominant coalition. Yet, before discussing the population and sampling to this effect, I shall clarify the choice and sampling of organisations within the mining and construction industries to participate in this study.

Organisations to take part in the study were chosen by means of theoretical sampling (David & Sutton, 2004:152). The appropriateness of the organisations for the purposes of the study was the main deciding factor. *The Gautrain Project* and *Diesel Power Opencast Mining* (DPOM) were appropriate choices for three main reasons: firstly, both of these organisations are organisations that were established in South Africa (unlike other organisations in these industries that have merely *branched out* to South Africa). This means that the strategies formulated in these organisations are not 'inherited' from a larger parent company – one operating in other circumstances with different stakeholder groups – but rather in the unique context of this country's mining and construction industries.

Secondly, the appropriateness of the *combination* of these two organisations lies in the fact that these organisations manage operations in both the mining and the construction industries, and as such have the proverbial foot on each side. Still, the Gautrain Project, notwithstanding its mining operations (for example underground drilling and blasting for tunnels), falls mainly under the construction industry, while DPOM, notwithstanding its construction operations (for example piling), falls mostly under the mining industry. Lastly, these organisations were chosen for their excelled safety performance (goal attainment) in that both of these organisations have nearly perfect safety records, with DPOM even being described as an organisation that is led by its safety department (SAMining, 2011:1) – something quite remarkable for this industry.

Because these two organisations were fairly large, not all employees could be included in the survey. Convenience sampling was thus used. At the Gautrain Project, their Precast Yard was chosen as were all seven DPOM opencast mining sites. The employees at these sites were chosen by means of systematic sampling. This sampling method, part of the probability sampling category, sees every person in the population as having an equal and known chance of being included in a research project (David & Sutton, 2004:152). This makes systematic sampling a

random sampling method, which eliminates any researcher bias. As such, the findings of the measuring instrument are generalisable to the accessible population of the study (in this case the Precast Yard of the Gautrain Project and the opencast mining sites of DPOM) (Gravetter & Forzano, 2006:74; Keyton, 2006:54).

The validity and reliability of the quantitative questionnaire items needed to be tested within this population, even though standardised questionnaires from literature were utilised, as the items were adapted for the specific testing of the stakeholder theory's assertions. To this end, the statistical reliability of the items was tested by means of calculating their Cronbach's alpha coefficient, and the validity by means of factor analyses.

*Cronbach's alpha* is the most commonly employed and universally accepted scale of reliability in quantitative measurement (Basham et al., 2009:53; Field, 2009:674). This value (the  $\alpha$ ) ranges between 0 and 1. If the items tested have a score of 0.7 and higher, they are reliable (Roberts, Priest & Traynor, 2006:44). *Factor analysis* is a method employed to identify groups or clusters of variables, with three main aims in view: firstly, to understand the structure of a set of variables; secondly, to aid in the construction of a questionnaire to measure an underlying variable by recognising and categorising variables as being statistically related; and/or, thirdly, by reducing a data set by combining collinear variables (Field, 2009:628; Montgomery, 2009:185). As this research dealt with two mainly latent variables, forged by theory, it was important to ensure the validity of these variables both in practice and in these specific populations. The next section reports on these validity and reliability measures by unpacking the findings from the items themselves.

## **4. FINDINGS**

### **4.1 General demographics, reliability and validity**

The accessible population, in the case of both organisations, comprised only employees who were actively involved in the production endeavours of the organisation. Support departments, such as the administrative personnel, were not included in the sampling, as the aim of this research was to survey the perceptions of those employees whose work involves hazardous working conditions. Permission having been granted to sample between 70 and 80 employees of DPOM (roughly ten per opencast mining site) systematically, the response yielded 74 completed and useable questionnaires. As for the Gautrain Project's Precast Yard, however, the researcher had access to all employees. This yielded a response of 281 completed and useable questionnaires. In Tables 4.1 and 4.2 on the following page, the demographic groupings of respondents are summarised.

**Table 4.1 Employee demographics: Gautrain Project**

Gender					
Male: 95% (n= 267)			Female: 5% (n= 14)		
Age					
Younger than 20: 2.1% (n= 6)	20–29: 13.6% (n= 38)	30–39: 38.6% (n= 108)	40–49: 7.5% (n= 21):	50–59: 37.5% (n= 105)	60 and older: 0.7% (n= 2)
Classification					
Asian: 0.7% (n= 2)		Black: 85.9% (n= 237)	White: 4.3% (n= 12)		Coloured: 9.1% (n= 25)
Job level					
Operator: 84.6% (n= 237)		Supervisor: 12.5% (n= 35)	Middle management: 0% (n= 0)	Management: 2.9% (n= 8)	
Education – highest qualification					
None: 4.3% (n= 12)		Primary school/ABET 1–3: 9.4% (n=26)	High school/ABET 9: 74.6% (n= 206)		Tertiary: 8.7% (n= 24)

**Table 4.2 Employee demographics: DPOM**

Gender					
Male: 91.8% (n= 67)			Female: 8.2% (n= 6)		
Age					
Younger than 20: 1.4% (n= 1)	20–29: 23.9% (n= 17)	30–39: 46.5% (n= 33)	40–49: 16.9% (n= 12):	50–59: 11.3% (n= 8)	60 and older: 0% (n= 0)
Classification					
Asian: 2.9% (n= 2)		Black: 78.6% (n= 55)	White: 1.4% (n= 1)		Coloured: 17.1% (n= 12)
Job level					
Operator: 76.1% (n= 54)		Supervisor: 4.2% (n= 3)	Middle management: 11.3% (n= 8)	Management: 8.5% (n= 6)	
Education – highest qualification					
None: 1.4% (n= 1)		Primary school/ABET 1–3: 9.9% (n=7)	High school/ABET 9: 59.2% (n= 42)		Tertiary: 29.6% (n= 21)

Before interpretation of the content items could commence, the validity and reliability of these, mostly standardised items needed to be tested. Firstly, the *reliability* of the questionnaire items was tested as they relate to the variables of excelled goal attainment through value contribution and relationship management by means of determining their Cronbach's alpha value. As mentioned above, the values of Cronbach's alpha range between negative infinity and 1, with values below 0.6 being unacceptable (in that they are indicative of unreliable questions/items) and items above 0.6 being acceptable. The items for this research at both

organisations ranged between 0.708 and 0.922 – well above the benchmark for reliability (Field, 2009:666; Santos, 1999:7).

Furthermore, for this research an exploratory factor analysis, which statistically tested the *validity* of the questionnaire items, was done. For the purposes of this study, the communalities of the items are the most important aspect that points to the validity of the questionnaire items. For *communalities*, the factor analysis indicates the extent to which an individual item correlates with its variable and collegial items. If the communality of an item is below 0.2, the item needs to be reconsidered because it does not fit into the overall factor or variable (Field, 2009:675). For this research, only one item under the variable of excelled goal attainment failed to meet this benchmark and was therefore rejected, i.e. not included in the interpretation of the variable findings.

In the next section, the two variables are interpreted by unpacking the findings of this research in terms of both the theoretical grounding and the objectives of this study.

#### **4.2 Interpretation of variables**

Two variables are important in this research: excelled goal attainment through value contribution, and relationship management. In researching these two variables, stakeholder theory's integration thesis (opposing the separation fallacy) was tested by looking at, firstly, the type of relationship that the organisations have with their employees as a stakeholder group, secondly, the control mutuality experienced in the relationships and, thirdly, the employees' perceived motivation and commitment to achieving organisational goals.

In the process, the consequences of the relationship that the organisation enjoys with its workforce regarding the value contribution of those employees are explored. Theoretically, it was seen that employees would be more prone to improve their value contribution if the organisation showed itself to be truly committed to the relationship and moreover sincerely concerned about the welfare of its employees. Therefore, for improved value contribution and thus, by proxy, excelled goal attainment, the organisation should establish a communal rather than an exchange relationship with its employees. Within this relationship, employees should feel that there is some form of control mutuality in that their needs are deemed important and acted upon within this organisation. Within the focus of this study, this would mainly translate to employees' need for safety and feeling that the organisation is truly concerned for their safety.

The theoretical premise therefore hinges on the fact that when employees – as a stakeholder group – feel that their safety needs are heeded by the organisation, they will align themselves to the safety goals of the organisation and will endeavour to uphold or achieve them. In the context of the South African mining and construction industries, achieving safety goals – that hinge on operating and production regulations – impacts positively on an organisation's bottom line. The empirical research of this study tested this premise in terms of the perceptions

of employees within these industries with a view to exploring whether this point of view is upheld in practise.

In light of this, the first aspect to be tested empirically was the kind of relationship that existed between employees and the organisations researched. As summarised below in Table 4.3, in the first organisation, the Precast Yard of the Gautrain Project, employees perceived their relationship with the organisation to be more of an **exchange relationship**. Items in the questionnaire dealing with this aspect had an average response rate of 72% (with  $N=281$  av.) and aspects dealing with communal relationships averaged 30% ( $N=281$  av.). Fundamentally, therefore, employees at the Precast Yard of the Gautrain Project felt that their organisation only heeded their safety needs because the organisation was expected to or expected something in return for it. Simply put, the organisation's heeding of employees' safety needs was not motivated by a genuine concern for its employees.

Conversely, DPOM employees perceived their relationship with the organisation to be more of a **communal relationship** where this construct yielded a 76% average ( $N=73$  av.) and the exchange relationship items a 55% average ( $N=73$  av.). Employees of this organisation perceived their relationship with the organisation not to hinge as much on the exchange of favours, but rather more on genuine concern for their shared needs.

**Table 4.3 Relationship types**

	<b>Communal relationship</b>	<b>Exchange relationship</b>
<b>Gautrain Project (Precast Yard)</b>	30% ( $N=281$ av.)	72% (with $N=281$ av.)
<b>Diesel Power Opencast Mining</b>	76% ( $N=73$ av.)	55% ( $N=73$ av.)

Relying on the suppositions made in literature, it would therefore firstly be safe to assume that the organisation-employee relationship experienced at DPOM would be more likely to be built on control mutuality than the one at the Gautrain Project's Precast Yard. Furthermore, one can assume that DPOM's communal relationship would engender a higher level of motivation for value creation and, by extension, the attainment of organisational objectives.

When empirically tested, this was indeed found to be the case. Positive responses to control mutuality at the Gautrain Project's Precast Yard were, on average, nearly half of those of DPOM. As indicated in Table 4.3, the Gautrain Project's Precast Yard, with its exchange relationship, saw employees responding cumulatively positively to control mutuality at respectively 32%, 24% and 27%. By comparison, the communal relationship at DPOM had a positive response in terms of control mutuality, lying respectively at 67%, 68% and 64%.

Employees of DPOM therefore felt that they had had input into the relationship and that the organisation did not dictate the entire process without their being privy to decision-making progressions. These responses not only correlate with the findings as discussed above – that

perceptions of this kind are likely to lead to the establishment of a more communal-orientated relationship – but also with what was found in the literature, where control mutuality is said to be a prerequisite for establishing this kind of relationship.

**Table 4.4 Control mutuality and relationship type**

<b>Control mutuality</b>			
	The organisation takes employees' <b>opinions</b> into account during decision making	The organisation takes employees' <b>needs</b> into account during decision making	The organisation truly listens to what employees have to say
<b>Gautrain Project (Precast Yard): exchange relationship</b>	32% (N=281)	24% (N=281)	27% (N=281)
<b>Diesel Power Opencast Mining: communal relationship</b>	67% (N=73)	68% (N=73)	64% (N=73)

The final theoretical advance in terms of goal attainment through the discussed fallacy and thesis of stakeholder theory is that employees who feel that they have input into their relationship with their organisation and who feel that their needs are regarded as genuine and legitimate, will contribute more value to the organisation's objectives. Based on the foregoing findings, it is therefore expected that the employees of DPOM would be more motivated in respect of helping to attain organisational objectives in that they have been privy to the setting of the said objectives. Empirically consistent with this, as reflected in Table 4.5, although the motivation and value-creation levels – as per the perceptions of employees – were high at the Gautrain Project's Precast Yard at 74% and 76%, they were much lower than the 82% and 95% recorded at DPOM.

**Table 4.5 Value contribution and relationship type**

<b>Motivation to attain goals and to contribute value</b>		
	Extent to which communication and relationship inspires motivation towards goal attainment	Management perception: value contribution by employees
<b>Gautrain Project (Precast Yard): exchange relationship</b>	74% (N=281)	76% (N=281)
<b>Diesel Power Opencast Mining: communal relationship</b>	82% (N=73)	95% (N=73)

It can thus be argued that, although employees of both organisations would exceed the organisation's safety objectives (arguably because their personal safety is enhanced in the process), in the particular instances of the two populations and organisations tested above, employees who share control mutuality with the organisation are more likely to experience added value creation for the organisation. Likewise, the organisation that enjoys a communal relationship with its employees (DPOM) shows an average advantage of 13% in terms of motivation to meet organisational objectives.

The quantitative testing in respect of the two populations referred to above shows two different stakeholder relationships: while the one organisation enjoys an exchange relationship with its employees, the other enjoys a communal relationship with its employees. The organisation that has an exchange relationship with its employees experiences lower levels of motivation and value creation from its employees because these employees simultaneously have a lower positive response rate to the items dealing with control mutuality than do employees of the organisation that fosters the communal relationship. From this it can be inferred that (as in the two cases above) there is an association between motivation, value creation and, by proxy, goal attainment both in these organisations and in the organisation-stakeholder relationship experienced in these organisations. The organisation that has a communal relationship with its employees – one based on control mutuality that takes the employees' needs into consideration – will thus be more likely to experience higher levels of value creation, though not in terms of the perceptions of the organisation but in terms of the perceptions of the employees themselves.

In this instance it is thus seen that the business outputs of the organisation will improve when the organisation 'ethically' takes the safety needs of employees as a stakeholder group into consideration. When this is coupled with the fact that the governing bodies of mining and construction industries will not allow organisations to operate unless they attain the safety standards set for them, the prediction made by stakeholder theory is seen to apply in this specific case. It can thus be said that Freeman's separation fallacy (1984) should also be rejected by the mining and construction industries of South Africa as the 'ethical' consideration of safety is one that enhances both the 'business' outputs of the organisation and a healthier bottom line.

## **5. CONCLUSION**

From stakeholder theory literature, the theoretical concepts of the separation fallacy and the integration thesis were employed, which, when interpreted in the current and dominant stance of organisations within the South African mining and construction industries, reveal the need for organisations not to regard safety and production as opposing directives – with production working towards achieving the business objectives of the organisation while safety works against it – but rather, so it was theorised, to view safety (a purely ethical consideration) as a factor that contributes to the attainment of business objectives once stakeholders' interests are accommodated in the organisation.

Empirical testing revealed (in the specific instance of the two populations investigated) a strong association between the organisational-stakeholder relationship and goal attainment by means of value contribution and motivation. This further proved that Freeman's theoretical 'predications' (1984) regarding the interest and significance of safety within organisations in the mining and construction industries have an empirical basis, specifically in the present state of these industries. This is exacerbated by the fact that the significance and consequence of safety is intensified by the governance of the Department of Mineral Resources and the Department of Labour, which unequivocally links production and business outputs to this aspect that was previously (and as from the findings of this paper) erroneously held to be a purely ethical matter.

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