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**Managing the impact of NeuroLeadership during organisational change**

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# Managing the impact of NeuroLeadership during organisational change

## ABSTRACT

*NeuroLeadership focuses on individuals in a social environment making decisions and solving problems, regulating their emotions, collaborating with and influencing others, and facilitating change; NeuroLeadership engages “people” and is emerging with developments in research technologies providing researchers the ability to observe brain activity. During organisational change staff are unsure about their job security; this stress factor can have a negative effect on the organisation; it is important to manage stress as an important factor; it has to be addressed. By managing stress while providing a better work environment and support, effective leadership will provide support to staff to be able to perform more effectively. A quantitative research method included 12 organisations; key implications, recommendations and conclusions form the last sections.*

**Key words: Human Resource Management, NeuroLeadership, organisational change, stress**

## INTRODUCTION

In a competitive business environment, organisations rely upon their leaders to facilitate the changes and innovations required to maintain competitive advantage. Leaders are perceived as persons who can single handed create order out of chaos, navigate organisations through unthinkable environmental turbulence, bring mightiness out of mediocrity, and thrive where lesser mortals will quickly fade away. Leadership has been altered over time, with the change in employee requirements resulting in a demand for change in the relationship between a leader and their subordinates (Du Plessis, 2015a; Naidoo, 2012). Leaders influence followers in many ways, including coordinating, communicating, training, motivating, and rewarding.

In spite of the fact that management and leadership research in the previous century has altogether improved our understanding of human work environment conduct, recent developments in neuroscience with the possibility to fundamentally progress that research remain generally undiscovered. Remaining upon this fast creating collection of neuroscience exploration, and especially social cognitive

neuroscience research, recommendations to formalise a particular new field committed and focused on investigating the methodologies inside the brain that underlie or impact human choices, practices, and communications in the work environment is constantly being developed (Naidoo, 2012).

NeuroLeadership, a saying initially authored by one of the founders, David Rock, in 2006, (Rock,2006) are growing in recognition and acceptance. It has now been more than two decades since the first fMRI (functional magnetic resonance imaging) paper was published. Whether from an administration, authority, or individual point of view, much of the initial research on the impact of NeuroLeadership during organisational change has concentrated on researching the mental nature of behaviour (Rock, 2009a). An understanding of supporter behaviour was thought to give pioneers the capability to suitably inspire individuals in light of a legitimate concern for hierarchical change and execution. Concerns about how inspiration takes place created extensive research on the procedure of inspiration, underscoring desires, input, honesty, objective-setting, and implementing the different methodologies utilised by pioneers within achieving behavioural change.

While neuroscience has totally erased the thought that after a certain level of advancement the mind is no longer capable of change, significant research is as of now being carried out on how rapidly the brain changes and the degree to which those progressions are economical. One area of emerging research focuses on the preparation to change, which has a solid effect on numerous choices in a change process, for example, arranging, execution, correspondence and systematisation. Notwithstanding, the expression "preparation" still makes disarray as it is exhibited in a short-sighted manner (Vakola, 2013). This research project on NeuroLeadership is the first of its kind executed in New Zealand. Throughout this research the researchers' objective is to expand the understating of the preparation effect on change accomplishment by looking at different levels of this idea, in particular, micro-individual readiness, meso-group readiness and macro-organisational readiness, and their progress. Furthermore, available literature has been reviewed on NeuroLeadership and Organisational Change and what impact NeuroLeadership

could have on employees during Organisational Change. The problem statement, aims and objectives of this study with the methodology and analysis of the results form the following sections before implications and some recommendations are given and the conclusion as the last section.

## **PROBLEM STATEMENT**

Understanding NeuroLeadership, which is depicted as a specialty of synchronising the art of the brain with leadership behaviours, offers the best hope for effecting genuine change in a leader. That is because understanding NeuroLeadership helps comprehend the effect that feelings and behaviours – and the behaviours of other people in the organisation have on prosperity and disappointment. The problem, therefore, is to better understand the various factors that can enhance NeuroLeadership within an organisation especially during organisational change and how to motivate the employees to improve their performance; how the new emerging field of NeuroLeadership can improve an organisation's efficiency. The main research question is: **How to manage the impact of NeuroLeadership during organisational change** and the sub-research questions are:

1. How does organisational change impact staff performance? 2. How can NeuroLeadership abilities be enhanced to improve staff performance during organisational change? 3. How does emotions relate to staff performance during organisational change? Also three hypotheses have been derived:

*H1- Organisational change does have an impact on staff performance.*

*Ho1 – Organisational change does not have an impact on staff performance.*

*H2- NeuroLeadership abilities can be enhanced to improve staff performance.*

*Ho2 – NeuroLeadership abilities cannot be enhanced to improve staff performance.*

*H3 - Emotions relate to staff performance during organisational change.*

*Ho3 – Emotions do not relate to staff performance during organisational change.*

## **AIM OF THE STUDY**

The aim of this research is to help management, staff and organisations to get an insight on the various situations that have an impact on them during organisational change. This study recommends guidelines to improve leadership effectiveness within institutions and organisations by developing a science for leadership and -development that directly takes into account the physiology of the mind and the brain.

## **LITERATURE REVIEW**

NeuroLeadership focuses on how individuals in a social environment make decisions and solve problems, regulate their emotions, collaborate with and influence others, and facilitate change; that is, NeuroLeadership engages the “people,” as opposed to the functional side of business (Ringleb & Rock, 2009). As a sub-discipline, NeuroLeadership is emerging in parallel with developments in research technologies which provide researchers with the ability to directly observe brain activity. Those technologies are providing researchers with confirmation of and new insights into long-held theories and concepts, which to date have largely focused on social psychology theories. The adaptation of this research to other social sciences in general, and to leadership and leadership development more specifically, is moving much more slowly (Ringleb, Rock & Cosner, 2010).

### **NeuroLeadership**

The formalisation of NeuroLeadership is driven by the overarching need worldwide for the efficient and effective development of leaders and of processes for continuous improvement in leadership quality (Ringleb, Rock & Cosner, 2010). In the on-going search for alternative solutions to this leadership crisis, the underlying subtleties and complexities of the leadership development process due to individual differences in the efficiency and sensitivity of brain structures are increasingly becoming understood and appreciated (Lieberman, 2009). Much of this new comprehension is flowing from a rapid expansion in research on the biological underpinnings of social processes driven by the advent of functional neuro-

imaging and other technologies. In this light, there are clearly significant benefits to reframing traditional leadership and leadership development theories and concepts through the lens of neuroscience.

### **Neuroscience**

Neuroscience provides evidence-based, ‘hard’ science to assist leadership theorists in the development of those leadership skills traditionally considered ‘soft’ skills or ‘soft’ science. As a ‘soft’ science, leadership skills development has typically been ignored as being beyond the reach of traditional business education and training, with managers and leadership educators making limited use of the significant and substantial “hard-science” evidence provided by neuroscience and psychology on behaviours relevant and applicable to effective organisational and leadership practices (Rousseau, 2012). Secondly, by identifying the active, biological “ingredients” in leadership interventions, the efficacy of those leadership development efforts can be significantly improved. Lastly, neuroscience provides the necessary scientific rigor to promote the discovery of new and important insights into the leadership development process going forward.

### **Organisational Change**

Change is a departure from an existing process or way of doing something, to a new process or a different way of doing the same thing. A process change can be an amendment to existing processes, an introduction of a new process or both (Du Plessis 2015a). For example, a manual system can be redefined or automated, or an automated system can be upgraded, complemented or replaced entirely with new packages. These changes are also known as business process reengineering (BPR). Changes in any form are intended to better the organisation over the short term and/or long term. However, no matter how marketable change ideas are, they can be frustrated purposefully or inadvertently if they are not well managed during all stages according to the 1951 study of Kurt Lewin (Naidoo, 2012).

Poor leadership often causes huge investments in the change process and the high expectations that come with the ideas to turn to huge disappointments. Some changes are introduced with fanfare, but not long

after commencement of their implementation, they meet impediments that would have been avoidable or surmountable if they had been identified and managed promptly in the early stages (Du Plessis, 2015b). Instances abound where organisations' accounts remain irreconcilable due to process automation, system upgrade or introduction of entirely new packages. There is no doubt that such a process changes at the point of conception, evaluation and/or implementation requires a great deal of financial resources and management time and leads to high expectations. Therefore, any failure can be disastrous. To prevent such a failure, attention should be given to organisational changes at all stages (Lewin, 1951 as cited in Naidoo, 2012). Change must be realistic and attainable. The cooperation of all stakeholders is a matter of necessity. Instead of forcing a change, it is better to ensure that a reasonable number of stakeholders buy into the change and the process of effecting the change. Criticism should be encouraged from the proponents and opponents of the change and should be objectively analysed (Du Plessis, 2015a).

### **NeuroLeadership and organisational change**

More recently, theorists have focused on the processes and key characteristics of leaders who accomplish successful change projects (Marriott, Du Plessis, Nielsen, Sukumaran, 2013). In drawing a distinction between leading for change and leading for stability, a "transformational leader" has been defined by theorists as a leader with the ability to bring about significant change by focusing on such qualities as vision and shared values in order to build relationships rather than on the use of rules, directions, and incentives (Du Plessis, Sun & Marriott, 2012). The principles of NeuroLeadership encourage people to focus attention on the practices that will genuinely make a difference and to explore new territories for change and growth. It is especially helpful when your staff read their first articles about how emotions are involved in decision making, even when using complex calculations. At this point, the beginning, the door to learning something new is wide open (Kiefer, 2011; Rock 2009b).

NeuroLeadership has the potential to replace complex competency models, assessment procedures and training roadmaps with a few simple but key principles. It has the potential to bring the intention in line

with the tools used in HR functions: How to attract and retain top talents and improve their performance. It is an approach which works and it is based on strengths instead of fear – an approach which could turn out to be quite simple but highly effective; and it is an approach which continues to develop and evolve, generating further questions and reinforcing close collaboration between science and business to answer these questions (Kiefer, 2011).

## **METHODOLOGY**

A quantitative research method approach was implemented by carrying out surveys. This study is based on the three hypotheses stated above in the Problem Statement section. The descriptive evaluative research methodology was used for analysis where data was collected through surveys. This methodology relies on responses from people that are written down in order to be subsequently analysed by carrying out surveys.

### **Data collection**

Data was collected by carrying out surveys. It was completed by respondents. The survey questions developed by the researchers were in plain English, thus making it easy for participants to understand and encouraging them to complete the survey. The survey comprised of a series of Likert scale questions. The participants had the option of not answering questions they consider unsuitable. The primary data sources included 12 organisations with a workforce between 8 and 100 employees. The main data collection techniques used was the literature review and a three section questionnaire. Questionnaires have the advantage of taking it to a wider audience compared to interviews.

**Quantitative methods** involve collecting data which can be quantified and analysed using statistical methods (Collis & Hussey, 2014).

**A qualitative study** involves collecting and analysing qualitative data using interpretative methods (Collis & Hussey, 2014).

### **Validity of the data collection instruments**

Validity means ability of the research method to find accurate reality. If the research is said to be valid then it really means that what was intended to be measured has been measured accurately. The validity of this research is calculated by sending a questionnaire to 100 employees of 12 organisations. The required results to conclude the research are found through the online questionnaire response of the employees. The study includes an online questionnaire link sent to CEO's and GM's and then forwarded to the employees of the organisation. There were 100 questionnaires distributed to the 12 organisations and 91 responded. Hence, the response rate is 91% and therefore the research is indicative.

### **Reliability of the data collection instruments**

Reliability means to measure consistency in producing similar results on different but comparable occasions (Ritchie et al., 2014). The reliability of the research is also said to have been proven as the researchers pre-tested the questionnaire. A pilot questionnaire was sent to a sample size of employees at a few organisations to check the reliability before the final work was sent to the respondents.

## **ANALYSIS OF THE RESULTS**

### **Insert: Table 1: Respondents by gender**

It shows that the majority, that is, 51 (56%) of the respondents were male, while 40 (44%) were female.

### **Insert: Table 2: Respondents by age**

The majority (59%) of the respondents were between the ages of 26 and 42

### **Insert: Table 3 Respondents by level in their organisation**

The majority (79%) of the respondents is in a management or executive position in their organisation.

### **Insert: Table 4: Respondents length of service in their organisation**

The above Tables have provided a clear picture of the respondents involved in this research project. It has given clear information on the gender, age, level, experience, and responsibility of the respondents. This study seeks to identify if the position a person holds in an organisation, which is treated as the dependant variable, has an impact on their attitude and effects on work and self towards organisational change are the independent variables.

**Insert: Table 5: ANOVA results for the total sample**

The ANOVA table above indicates, the significance (0.000) is smaller than .05. The 74% of variance can therefore be concluded as meaningful and significant.

**Insert: Table 6: Beta coefficients for the total sample**

Each independent variable contributes significantly to the variance in Position in Organisation, as they are both smaller than .05.

**Insert Table 7: Model summary of the total sample**

Regression analysis was performed where the dependent variable was Position in Organisation and the independent variables were the loyalty and adapt to changes.

These two variables, when entered into the model, explained 52% of the variance in Position in Organisation.

The following three hypotheses are of concern: H1 - Organisational change does have an impact on staff performance; H2 - NeuroLeadership abilities can be enhanced to improve staff performance and H3 - Emotions relate to staff performance during organisational change. Regression analysis found that attitude and effects on work and self towards organisational change contributed 74% and resolve disagreements and consider people's skills and interests contributed 71% of the variance in Position in Organisation and that this result was both meaningful and significant. All four variables contributed significantly to the

74% & 71% of variance in Position in Organisation. Fifty-two percent of the variance in Position in Organisation was contributed by loyalty and adapt to changes and sixty-three percent was contributed by encourage and own actions, according to the regression analysis. As for Position in Organisation, this result was significant and meaningful and all four variables contributed significantly to the 52% of variance in Position in Organisation.

Finally, regression analysis found that Encourage and Successful contributed just 20% and Understand and Successful contributed 43% of the variance in Position in Organisation. This result was both meaningful and significant. The contribution by the Encourage and Successful, Understand and Successful variables were significant in explaining the 20% & 43% variance in Position in Organisation. **Therefore, all three hypotheses are accepted.** The main research question: How to identify and manage the impact of NeuroLeadership during organisational change, could therefore be confirmed and answered.

The responses for all the respondents in the survey questionnaire support **sub research question 1**, where it is asked how to effectively engage the support and creativity of an organisation's employees at the moment these attributes are most needed during an organisational change. Referring to **sub research question 2**: How NeuroLeadership abilities can be enhanced to improve staff performance during organisational change and **sub research question 3**: How does emotions relate to staff performance during organisational change, most of these ideas discussed above have implications in the field of neuroscience. The responses for all the respondents in the survey questionnaire also support sub research question 2 and 3 based on the need that to create a burning platform atmosphere at work can trigger a limbic response in employees. Instead of motivating people to change in a positive way, a burning platform makes them uncomfortable — thrusting change upon them. In another example, driving change from the top can trigger fear within employees because it deprives them of key needs that help them better navigate the social world in the workplace. The dynamics of organisational change can result in employees feeling quite threatened and resistant to change – just at a time when the organisation most

needs creativity and great decision-making from its employees. Managers gained a greater understanding of the role of the limbic system as it tracks emotional responses common in change such as anxiety, fear, anger and uncertainty.

### **KEY IMPLICATIONS OF THE RESEARCH FINDINGS**

The implications of the current research are particularly relevant for organisational leaders. Human behaviour in the workplace doesn't work the way many executives think it does. Many leadership efforts and organisational change initiatives fall flat. The following implications have a significant impact on NeuroLeadership development: **Managing organisation-wide change:** To deliver successful reorganisation, it has to be designed effectively. Organisations that implement cohesive programmes of complementary change across organisation structures, business processes and support systems achieve biggest improvements in performance. **Project- and people-centred reorganising:** Striking the balance between applying a clear focus and discipline and managing the people aspects are critical to successful reorganisation. **Effective leadership:** Key influences shaping and influencing the nature and conduct of reorganisation is the experience of those in senior management positions. **Learning from others:** Learning from external consultants, seminars and courses are significant between a third and a quarter of organisations.

### **RECOMMENDATIONS FOR HUMAN RESOURCE MANAGERS AND MANAGERS**

The research that has been executed has highlighted a number of topics for leaders, HR managers and change managers to better understand NeuroLeadership and to find ways to improve the impact of organisational change on employee performance. The distinct value add of this research project is the recommendations below:

- **Understanding the brain's organising principle** of minimizing danger and maximizing reward will help managers gain a better appreciation of how difficult change can be for

individuals. Organisational change is a complex topic and requires a lot of conceptual thinking about future events – a task that requires a lot of cognitive resources.

- Successful organisational change requires that employees **create new mental maps** for how to move forward with a fresh perspective.
- The active ingredient in facilitating change is **supporting others** to generate their own insights about how to move forward. Learning through insight is also more memorable than non-insight.
- Organisational change constantly presents managers with **new situations and challenges** that they have not experienced in the past.
- **The conversation framework** is designed to structure the thought processes and interactions of a team so that the threat response of a challenging meeting is offset for both the manager and employees during organisational change.
- **The “solution focus”** of the meeting framework creates certainty for a team that the conversation has a useful, positive direction.
- **Giving feedback** to others in order to improve performance and facilitate change often results in a strong threat reaction unless handled well during organisational change.

## CONCLUSIONS

NeuroLeadership research is clearly expanding rapidly with the growth in brain imaging technology. As research in neuroscience expands, the linkages with leadership and leadership development are providing fertile grounds for the development of better and better tools and techniques that allow us to increase the managerial and leadership productivity and effectiveness during organisational changes. It is important that we identify these linkages and provide input to neuroscientists as to the kind of research that would be most beneficial to leaders and leadership development.

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**Table 1: Respondents by gender**

		Frequency	Percentage
Valid	Male	51	56%
	Female	40	44%
	Total	91	100%
Missing		9	
Total		100	

**Table 2: Respondents by age**

	Frequency	Percentage
26-33	21	23%
34-42	33	36%
43-50	11	12%
50 and over	26	29%
Total	91	100%

**Table 3 Respondents by level in their organisation**

	Frequency	Percentage
Admin	19	21%
Management	47	52%
Executive	25	27%
Total	91	100%

**Table 4: Respondents length of service in their organisation**

	Frequency	Percentage
Less than 1 year	11	12%
1 – 3 years	18	20%
3 – 5 years	28	31%
5 – 10 years	21	23%

Longer than 10 years	13	14%
Total	91	100%

**Table 5: ANOVA results for the total sample**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47503.232	2	23751.616	304.500	.000 <sup>a</sup>
	Residual	16302.444	89	78.002		
	Total	63805.677	91			
a. Predictors: (Constant) Attitude, Effects on work and self						
b. Dependent Variable: Position Organisation						

**Table 6: Beta coefficients for the total sample**

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Standard Error	Beta		
1	(Constant)	4.634	2.018		2.297	.023
	Attitude	.536	.110	.369	4.872	.000
	Effects on work and self	.739	.108	.519	6.858	.000
a. Dependent Variable: Position Organisation						

**Table 7: Model summary of the total sample**

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.720 <sup>a</sup>	0.518	0.513	11.40325
a. Predictors: (Constant), Loyal, Adapt to changes				