

**An Examination Of How Styles Of Information Processing Are Related To  
Perceptions of Transformational Leadership and Organisational Influencing  
Tactics.**

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*This thesis is presented in partial fulfilment of the requirements for the degree of  
Bachelor of Arts (Honours), Murdoch University, (2013)*

*I declare that this thesis is my own account of my research and contains as its main content work which has not been previously submitted for a degree at any tertiary educational institution.*

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*Tove Asplund*

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Full name of Degree: Bachelor of Psychology (Honours)

Thesis title: An Examination Of How Styles Of Information Processing Are Related To Perceptions of Transformational Leadership and Organisational Influencing Tactics.

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Year: 2013

### Abstract

Transformational leadership is considered a desirable leadership style producing many positive organisational outcomes. This study investigated individual differences in information processing, influencing behaviours and transformational leadership ability. Sixty pairs of participants, (leaders and subordinates) completed on-line surveys measuring information processing style (through the REIm and the CTI), leadership style (MLQ5-x) and preferences for influencing tactics (IBQ). Results showed some unexpected results, for example, thinking style was not correlated to either influencing tactics or transformational leadership. However, elements of constructive thinking were, as expected, related to both transformational leadership and a preference for the core four influencing tactics. Further analyses partially supported the conclusion that transformational leadership mediates the relationship between behavioural coping and influencing tactics. An implication of this research includes the practical importance of considering the impact of elements of constructive thinking and the relationship to transformational leadership. Groups and organisations looking to employ or train a leader to be transformational thus ought to test for constructive thinking ability.

*Keywords: transformational leadership, information processing, influence tactics*

## **ACKNOWLEDGMENTS**

I would like to thank my supervisor Dr. Guy Curtis for all his selflessness in time, help, encouragement and excellent SPSS whispering skills. All your help has truly been appreciated.

I would also like to thank the data collection team, Sammy Parker, Rhia Saggars, Rowan Parekh, James White, Thuy Dong, Dion Elliott, Christine Swee, Eamonn Leaver, Nick Kerr, Arabella Haddon-Casey, Daphne Simoens, Antonella Alvaro and Hayley Jones for all their help collecting the data. I could not have done it without you.

I am also thankful to all the participants who took time out of their day to complete the online surveys.

A very big thank you to my dear friend Bridget Trainor who offered me endless support, company and encouragement throughout the year.

Also a big thank you to my mum, Mari Asplund and my grandma Gerd Sjogren for all their support throughout this difficult time. It has been invaluable to know that you were there, backing me the whole way to the finish line.

Finally, much love to my partner Joshua Burdon who provided me with much emotional support as well as practical support in the form of making me copious amounts of tea and coffee.

## INFORMATION PROCESSING, LEADERSHIP AND INFLUENCE

### An Examination Of How Styles Of Information Processing Are Related To Transformational Leadership and Influencing Tactics.

Dwight Eisenhower once defined leadership as the act of convincing someone else to do something because they want to do it (Society for Personnel Administration, 1954). It seems as central to good leadership is the art of influence. That is, being able to employ organisational influence tactics to produce desired behaviour in others. Leadership has been linked to effective organisational commitment and work engagement (Bass, 1997), which in turn has been linked to desirable organisational outcomes such as employee engagement and commitment (Avolio, Bass, & Jung, 1995). Employees who are committed to, and engaged with the organisation have higher levels of job-satisfaction, motivation and positive attitudes relative to those who are not (Harter, Schmidt, & Hayes, 2002; Kular, Gatenby, Rees, Soane, & Truss, 2008). In a meta-analysis comprised of 7,939 business units in 36 companies, Harter et al. (2002) found that engaging and motivating employees through leadership is imperative to the profit of the organisation. Therefore, effective leadership and accompanying influencing tactics are essential to organisational success.

Influence lies at the heart of leadership (Yukl, 2002). Leaders ought to be able to exercise influence in order to be effective (Yukl, 2002). Although leaders have the choice to employ a range of influence tactics to effectively influence employees, not all types of influence tactics are effective (Falbe & Yukl, 1992). In fact, some have been shown to foster commitment and compliance whereas others instead promote resistance (Falbe & Yukl, 1992; Yukl, Kim & Falbe, 1996). It is clear that an influence tactic that fosters commitment is the most desirable one. Leadership qualities and influence tactics can therefore make or break an organisation and it is of great value to organisations to

understand the underlying mechanisms associated with leadership and choice of influencing tactics.

Due to extensive research within the field of organisational psychology, many well established theories of leadership and influence have been suggested. The leadership theory of transformational leadership has emerged as one of the most effective styles (Avolio et al., 1995). Transformational leadership has been said to inspire morale, motivation and performance amongst followers (Avolio et al., 1995). Although the extent of research considering transformational leadership practices is substantial, the underlying psychological mechanisms producing transformational leadership behaviours are not well understood (Bass, 1997). The same is true for influence. Multiple influence tactics have been suggested (e.g., Yukl, 2002), although a comprehensive theory of underlying mechanisms seems to be lacking. Individual differences in information processing styles may provide a framework for understanding preferences for leadership styles and tactics of influence in the workplace.

Almost a decade ago, Epstein (1994) suggested that the way a person thinks may predict the choice of influence tactic employed. Epstein's argument followed the assumption that all behaviour can be explained by the Cognitive-Experiential Self-Theory (CEST). According to this theory, behaviour is guided by a rational and an experiential information-processing system, that is, a logical and analytical system contrasted to a practical and emotional system (Epstein, 1998a). It seems logical that an interaction between both systems may be relevant to leadership. The relevance is important because leadership is not merely about technical skills controlled by the rational system, but also the management of people, situations and emotions which require utilisation of the experiential system (Berger, 2007).



Since the CEST is assumed to account for all behaviour including leadership behaviours, knowledge concerned with the two systems' impact and regulation may enable leaders to be more effective leadership practitioners (Berger, 2007). Leadership practices and behaviours are well explained by the full range leadership theory (Antonakis, Avolio & Sivasubramaniam, 2003). The full range leadership theory comprises three leadership styles, transactional, transformational and laissez-faire leadership. In order to test Epstein's (1994) assumption of the CEST accounting for leadership behaviour, Cerni, Curtis and Colmar, (2008; 2010; 2012) tested the relationship between the CEST and the full range leadership theory. The authors found that the rational and the experiential system were both related to transformational leadership and to styles of conflict management.

Although researchers have examined information processing, leadership theories and influencing tactics, less is known about the actual behaviour preceding transformational leadership as well as antecedents of transformational leadership. The following sections will describe a number of theoretical frameworks and thereafter linking them together.

### **Information Processing**

CEST is a global theory explaining how individuals process information (Epstein, 1991; 1994). On the one hand, the rational system operates at a conscious level and is analytical, verbal and mainly affect free. The rational system operates slowly and is effortful (Epstein, 1998b). The experiential system, on the other hand, is a rapid information processing system which considers information holistically. Notably, it is nonverbal and dependent on experience and emotions (Denes-Raj & Epstein, 1994; Epstein, 1998b). Individuals with a preference for using the experiential system have been associated with high behavioural coping that is, taking action in the face of problems

rather than ruminating, acceptance of others, being optimistic and being able to form secure relationships (Epstein, 1998c, Epstein, Pacini, Denes-Raj & Heier, 1996). Notably, the rational system has demonstrated a positive correlation with high levels of intelligence, low stress, low levels of depression and low levels of anxiety (Epstein, 1998a). According to CEST, the rational and the experiential system, together accounts for all behaviour and thought (Epstein, 1994).

It has been argued that although the experiential system is an unconscious processor of information, it influences behaviour (Epstein, 1994). The experiential system is concerned with affect and underlying emotions may therefore cause one to act in accordance with their emotions (Epstein, 1998c). Although the experiential system unconsciously affects behaviour, the rational system is on occasions able to detect and correct behaviour (Epstein, 2003). For example, in a leadership situation where a leader has a hunch or a feeling about someone or something, the leader can act on the intuition or correct their behaviour by realising the impact of the experiential system. Interestingly, Sadler-Smith (2004) found that leaders who act on their intuition are more successful than leaders who override their intuition and correct their behaviour. Therefore, it may be worthwhile for leaders to realise the impact and value of adhering to the experiential system.

An additional element to the CEST is that information processing in the experiential system can be either destructive or constructive (Epstein & Meier, 1989). Constructive thinking involves dealing with emotions effectively with minimum stress and an ability to engage in behavioural coping (Epstein, 1998b; 1998c) Epstein (1998c) found that leaders who engage in constructive behavioural coping are far more effective leaders than those who did not engage in constructive behavioural coping. On the contrary, destructive thinking is when the individual does not deal with emotions

effectively and engages in, for example, superstitious thinking which unconsciously affects behaviour in a negative way (Epstein & Meier, 1989).

### **Influencing Tactics**

As previously mentioned, behaviours are driven by the way people think (Epstein, 1994). The way people think may therefore be linked to the choice of influencing tactic they employ. A number of influence tactics and their definitions have been established through more than 25 years of research. For example, Kipnis, Schmidt and Wilkinson (1980) originally suggested eight influence tactics and summarised them in the Profile of Organizational Influence Strategies. Later, Yukl and Tracey (1992) proposed nine influencing tactics but later expanded and refined the nine tactics to eleven tactics (Yukl & Chavez, 2002). Table 1 depicted below demonstrates the most recent set of eleven influence tactics, their definition and their likelihood of success as suggested by Yukl and Chavez. Although Yukl and Chavez estimated success rates of tactics employed, it should be noted that many factors may affect the success of an influencing tactic. Such factors include, but are not limited to; the direction of the attempt, the objective and the political skill of the influencer (Falbe & Yukl, 1992; Yukl & Chavez, 2002; Yukl & Tracey 1992).

Table 1  
*Influence tactics, definitions and success in organisations*

Tactic	Definition	Success
Rational Persuasion	Use of logical and factual arguments and evidence to persuade	High
Consultation	Seeks suggestions for improvement or help to plan activity	High
Inspirational Appeals	Appeal to values and emotions	High
Collaboration	Offer assistance and support	High
Apprising	Explains personal benefit with supporting a request	Moderate
Ingratiation	Praise and flattery	Moderate
Personal Appeals	Personal favours based on friendship	Moderate
Exchange	Offers to do something for the target if request is supported	Moderate
Legitimizing Tactics	Appeal to formal authority	Low
Pressure	Threats, checking and reminders	Low
Coalition	Involves others to influence target	Low

Sources: Falbe & Yukl (1992); Yukl & Chavez (2002); Yukl, Seifert, & Chavez (2008)

### **Leadership**

Although previous literature have proposed multiple leadership theories, one theory that is particularly influential is the Full-Range Leadership Theory (Bass & Avolio, 1997). The Full-Range Leadership Theory consists of three leadership styles; laissez-faire, transactional and transformational leadership (Bass & Avolio, 1994). Laissez-faire leadership can be described as ‘non-leadership’, whereas the transactional leadership style emphasises and places worth in exchanges between supervisors, colleagues and employees (Bass & Avolio, 1994). The third leadership style is transformational leadership. Transformational leadership has been defined as “moving the follower beyond immediate self-interests through idealised influence (charisma), inspiration, intellectual stimulation, or individualised consideration” (Bass, 1999, p.11). It has been argued that transformational leaders “transform” followers by pinpointing the importance of task outcomes and prioritising the organisation’s interests over one’s own interests (Yukl,

2006). There are four behaviours that together account for the key components of transformational leadership; transformational leaders motivate their followers through idealised influence, that is, acting in ways that elicit respect and admiration.

Transformational leaders provide individualised consideration that stimulates a supportive climate where followers feel appreciated and valued on an individual basis.

Transformational leaders' present followers with an inspirational vision for the future, in other words, they provide inspirational motivation. Lastly, they encourage intellectual stimulation where followers are enabled to rethink situations and be innovative (Bass, 1985; Bass, Avolio, Jung, & Berson, 2003). Accumulated evidence over the past two decades has demonstrated a strong positive relationship between transformational leadership practices and job motivation (Bogler, 2001) and organisational effectiveness (Bass & Avolio, 1994). Potential for transformational leadership practices by leaders are therefore very desirable in organisational settings.

### **Information Processing and Influencing Tactics**

It seems logical that the way one thinks may be related to the way one tries to persuade others. For example, an individual who has a preference for thinking logically may also have a tendency to use logical arguments when persuading others. To date, only one study has examined if such a link between information processing and influencing tactics exists. Curtis and Lee (in press) found a positive correlation between behavioural coping as described by CEST, rational thinking and a rational influencing tactic as measured by both the Profile of Organisational Influence Strategies measure and a self-reported measure of influencing strategies (IBQ). Curtis and Lee also found that behavioural coping and rational thinking accounted for 31% of variance in the preference of using the rational persuasion tactic. In sum, Curtis and Lee demonstrated the logical

link between the constructive elements of the CEST, rational thinking and influencing tactics.

### **The Experiential System and Influencing Tactics**

The relationship between rational thinking and the use of a rational influencing tactic is both intuitive and empirically demonstrated (Curtis & Lee, in press). What is less clear is what role the experiential system plays in predicting influencing tactics. Epstein (1998a) explained that the experiential system comprises intuition, emotion and imagination. The factors that constitute the experiential system are related to the ease of interpersonal relationships. It should be noted that the ease of interpersonal relationships may be explained by the intelligence of the experiential system, that is, how constructive an individual's thinking style is (Epstein & Meier, 1989). For example, Epstein and Meier (1989) found a positive association between the global constructive thinking scale as measured by the Constructive Thinking Inventory and success in love, work and social relationships. Although there is a theoretical link between the experiential system and influence tactics, Curtis and Lee did not find strong consistent results between the experiential system and the choice of influence tactics, and the relationship thus remains unclear. Although the association between information processing and influencing tactics remains unclear, the relationship between transformational leadership and influencing tactics are of a different nature.

### **The Relationship between Transformational Leadership and Influencing Tactics**

Transformational leaders have been celebrated because they enable employees' commitment to the organisation as well as to the task at hand (Bass & Avolio, 1994). Since commitment is a driving factor of transformational leadership, previous literature hypothesised that the use of influence tactics that foster commitment to the task may also foster commitment to an organisation. Such influence tactics may therefore be preferred

by transformational leaders (Charbonneau, 2004). In Charbonneau's study, a military sample was used where participants were instructed to rate their peers in transformational leadership behaviours as well as the frequency of influence tactics used. Four influence tactics that are theoretically believed to foster commitment and linked to transformational leadership were selected for measurement (Charbonneau, 2004). The four influence tactics examined by Charbonneau were; rational persuasion, consultation, inspirational appeals and collaboration. Apprising was excluded from analysis on the basis of the similarity to exchange (Charbonneau, 2004). Accordingly, apprising was thought to share more properties with transactional leadership than transformational leadership. The four influence tactics that were selected for examination, in relation to influence tactics are from here on referred to as the four core influence tactics. The results indicate that the four core influence tactics together accounted for 35% of variance in perceptions of transformational leadership behaviours. Notably, amongst the four core influence tactics examined, only the rational influence tactic emerged as a significant predictor of key transformational leadership behaviours. Therefore, not all influence tactics seem contribute to perceptions of transformational leadership.

Even though the conclusion drawn by Charbonneau (2004) might have been accurate, it should be noted that Charbonneau measured transformational leadership and influence tactics from a lateral perspective. That is, the sample consisted of peers rating each other rather than subordinates rating leaders. Therefore, the direction of the relationship may have affected the use and perception of influence tactics. For example, collaboration and consultation within a lateral peer relationship may be considered as exchange, something that is expected by peers (Charbonneau, 2004). If Charbonneau's sample regarded consultation and collaboration as an exchange or simply a favour between colleagues, they might not have considered the influence tactics as properties of

transformational leadership. The distinction between perspectives of influence tactics become apparent when one considers consultation and collaboration from a vertical perspective. This is because a subordinate will likely value being consulted and/or collaborated by their superior and thus attributes the influence tactic(s) as properties of transformational leadership rather than an exchange or a favour.

### **Information Processing and Transformational Leadership**

Transformational leadership is supported by emotional intelligence (Daus & Ashkanasy, 2005). Emotional intelligence refers to the ability to recognise feelings in oneself and others, knowledge of emotions, and ability to regulate emotions in the self and in others (Goleman, 1995; Mayer & Salovey, 1997). The experiential system is closely linked to emotions and plays an essential part in interpersonal relationships (Epstein, 1998c, Epstein & Meier, 1989). In fact, Epstein (2001), described the constructive use of experiential thinking as the basis of emotional intelligence. In relation to transformational leadership, Bass (1990) argued that high levels of emotional intelligence are essential in order to inspire and motivate followers. Therefore, given the importance of emotions to transformational leadership, and the proximity of the experiential system and emotions, it seems plausible that the experiential system is related to transformational leadership. Although there seems to be a logical link between the two, Cerni et al. (2008) only found a weak correlation between the experiential system and transformational leadership. In a second study, Cerni et al. found strong positive correlations between the constructive thinking aspect of the experiential system and transformational leadership. The results therefore indicate that individuals' capacity for constructive thinking may moderate the relationship between the experiential system and transformational leadership.



### **Limitations of the Previous Research**

There appears to be some limitations in the literature that has previously examined information processing in relation to transformational leadership, and in turn to influencing tactics. For example, a common limitation in empirical research is the risk of common method bias (Siemsen, Roth & Oliveira, 2010). Common method bias refers to the shared variance amongst variables that are assessed through common methods (Spector & Brannick, 2009). It has been argued that common method bias may inflate the relationships between variables and the results may thus be unreliable (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). For example, John Campbell, a previous editor of the *Journal of Applied Psychology* stated that self-report measures have little to offer in relation to empirical findings (Campbell, 1982). More recently, Podsakoff et al. (2003) summarised the main sources of common method bias into four categories; a common rater effect, item characteristic effects, item context effects and measurement context effects. Taken together, there are many causes of common method bias that previous studies may have suffered from.

Common method bias, in relation to the topic at hand, may have influenced results when asking participants to consider influencing tactics and leadership style. This is because participants may have been inclined to answer the self-reported questionnaires in a way that portrayed them in a positive light. For example, the participants may have answered the questions based on what they believe was the 'correct' or most appropriate answer, rather than evaluating their actual behaviour. The results of the Cerni et al. (2008) and the Curtis and Lee (in press) studies may therefore have been subjected to the first principle (the common rater effect) as suggested by Podsakoff et al. (2003). This study therefore built on the Cerni et al. and Curtis and Lee studies and both self-reports and other-report measures were taken for leadership practices and influencing behaviour. The

study's methodology was thus aligned with Podsakoff and colleagues' suggestion of how to minimise common method bias. The practical implication is that the results may overcome the limitations of previous studies.

### **Aims of the Present Study**

There were two major aims of this study. The first aim is to investigate the relationship between subordinate ratings of transformational leadership practices and influencing tactics and relate the subordinate ratings to self-rated reports of information processing style. This study built on previous studies' methodological weaknesses and reduced the risk of common method bias by employing other-ratings for transformational leadership practices and influencing tactics rather than solely relying on self-reports. The second aim of this study is to examine whether there were explanatory factors explaining the relationships between information processing and influencing tactics. To achieve this aim, two potential mediational pathways were suggested.

### **Information Processing and Influencing Tactics**

H<sub>1</sub>: Based on Curtis and Lee's (in press) results relating information processing to influencing tactics, it is hypothesised that there will be a positive correlation between leaders' rational thinking style and a preference for using rational persuasion as an influencing tactic.

Although Curtis and Lee's (in press) studies were the first to examine the relationship between experiential processing, constructive thinking scales and a preference of influencing tactics, one should note that the measure employed was the rational experiential inventory (REI; Pacini & Epstein, 1999). The REI defines experiential processing merely as intuitive-experiential processing. Therefore, the REI neglects to measure the emotion and imagination aspects of experiential processing as defined in Epstein's (1994) original theory (Norris & Epstein, 2011). It is therefore

possible that the previously unconsidered aspects of the experiential system may demonstrate stronger correlations to influencing tactics than intuition, as measured by the REI and demonstrated by Curtis and Lee (in press). For example, emotionality of the experiential system may be more effective at predicting the use of inspirational appeals, a persuasion technique that appeal to the target's personal values and emotions, than an intuitive style of processing. In order to measure not only intuitive processing but also emotion and imagination, the present study employed the newest version of the multimodal Rational Experiential Inventory (REIm; Norris & Epstein, 2011).

Since this is the first study to investigate the relations between experiential processing as measured by the REIm and influencing tactics, an open research question is pursued; which aspects of the experiential system are related to which influencing tactics?

H<sub>2</sub>: Based on previous literature, it is hypothesised that constructive thinking, especially behavioural coping will demonstrate a positive correlation with reason based influencing tactics.

### **Transformational Leadership and Influencing Tactics**

Charbonneau's (2004) study concluded that only rational persuasion is a predictor of perceptions of transformational leadership behaviours. Although such a conclusion might be rightfully drawn, this study's methodology is different to that employed by Charbonneau because the present study measures influence tactics between leaders and subordinates, rather than between peers. It is thus expected that all four core influencing tactics that share theoretical properties with transformational leadership will be related to perceptions of transformational leadership behaviours.

H<sub>3</sub>: Although previous literature has not conclusively demonstrated that the four core influence tactics are related to perceptions of transformational leadership, this study's methodology is different and it is hypothesised that there will be a positive

correlation between the use of the core four influencing tactics and perceptions of transformational leadership behaviour.

### **Information processing and Transformational leadership**

Previously discussed evidence has linked experiential thinking to transformational leadership practices. This study aims to overcome previous studies' weaknesses and measured information processing with the previously discussed REIm instead of the REI. It is believed that the new subcategories of the REIm may demonstrate new and stronger relationships to transformational leadership than previous literature. For example, since previous research has demonstrated that emotional management is an essential part of transformational leadership (Bass, 1990), it seems likely that the emotion part of the experiential system as measured by REIm will be positively correlated to transformational leadership.

Given the lack of research in the area and that this study is the first to examine the relationship between the experiential system as measured by the REIm and transformational leadership, an open research question was posed; which aspects of the experiential system are related to factors of transformational leadership.

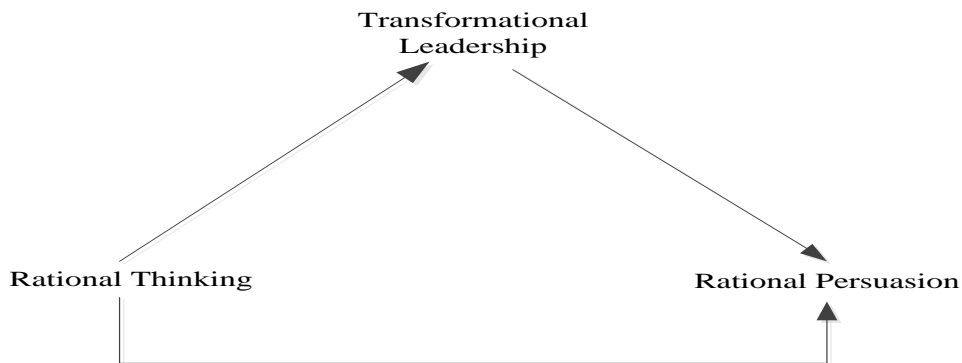
Based on previous literatures' demonstration of a relationship between elements of constructive thinking and transformational leadership, this study set out to examine whether the relationship continues to be stable when measured through other-reports rather than as previously measured self-reports.

H<sub>4</sub>: It was hypothesised that all elements of constructive thinking would be positively correlated to transformational leadership.

Given the suggested relationship between transformational leadership and information processing as measured both through the REIm and the CTI, this study set out to provide depth to the field of information processing and investigate how constructive

thinking is related to rational and experiential thinking. It was expected, based on the results found by Cerni et al. (2008) that all elements of constructive thinking will be related to experiential thinking.

Finally, as a second aim of this study, explanatory factors affecting changes amongst predicted relationships were examined through two suggested figures. It was expected that based on the above described relationships, transformational leadership will mediate the relationship between rational thinking and rational persuasion as illustrated in Figure 1.



*Figure 1*, Mediational model for the relationships between rational thinking, transformational leadership and rational persuasion.

In addition, it was predicted that transformational leadership will function as an explanatory variable mediating the relationship between behavioural coping and the core four influencing tactics, see Figure 2.

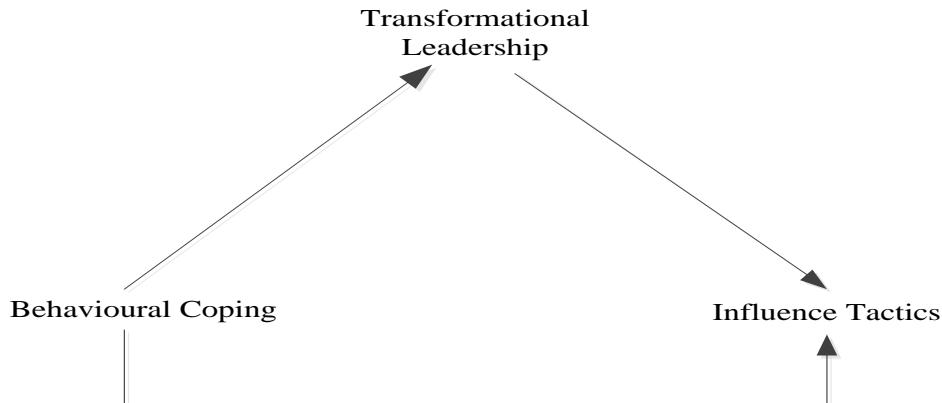


Figure 2, Mediational model for the associations between behavioural coping, transformational leadership and influencing tactics.

## Method

### Design

This study was part of a larger study's data collection and only data that were relevant to this study's purposes were reported. Data was mainly collected through an online survey although participants had the option of completing the survey by hand.

### Participants

The participants were a convenience sample, that is, each participating student researcher in the research team recruited friends, family, work colleges and so on. The leaders and the subordinates industry of work ranged from administration, business, engineering, education, general management, healthcare, hospitality, real estate, sport and others. The sample were divided and paired into two groups of participants, depending on their position as a leader or a subordinate. The total sample originally consisted of 206 participants. To partake in the study, leaders and subordinates were required to be 18 years of age or older and have worked together for a minimum of 3 months. After pairing subordinates and leaders and excluding participants based on abnormal scores of the validity and lie scale as measured by the Constructive Thinking Inventory (CTI), the total amount of participants tallied to 120. The leader group consisted of 60 participants

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including 31 males (51.7 %) and 29 females (48.3 %). The leaders mean age was 44.18 ( $SD = 9.85$ ) and average number of months in their current position was 68.89 ( $SD = 82.17$ ). The subordinate group also consisted of 60 participants, 24 (40 %) males and 36 (60 %) females. The subordinate groups mean age was 34.73 ( $SD = 11.19$ ) and average number of months worked in the current position was 27.97 ( $SD = 24.57$ ).

### **Measures**

Four questionnaires were used to measure influence tactics, leadership style, and information processing.

#### **Constructive Thinking Inventory (CTI)**

The CTI (Epstein, 1990) is a 108-item self-report measurement. The CTI examines differences in automatic constructive and destructive thoughts as well as interpretations of events. The leaders rated themselves on questions such as “There are basically two kinds of people in this world, good and bad “ and “Most people regard me as a tolerant and forgiving person” on a scale from “1= definitely false to 5 = definitely true”. Epstein (1990) demonstrated that the CTI has high levels of validity and reliability, with alpha levels of .80 to .90. All questionnaires are attached in Appendix A.

#### **Extended Influence Behaviour Questionnaire (IBQ)**

The Extended Influence Behaviour Questionnaire (IBQ) was used to assess influence tactics used over eleven subcategories. The measured subcategories include; inspirational appeals, rational persuasion, exchange, legitimacy, appraising, pressure, collaboration, ingratiation, consultation, personal appeals and coalition (Yukl et al., 2008). The IBQ is made up by 44 items. The items on the IBQ are divided under subheadings to avoid confusion or a mix-up of each tactic (Yukl et al., 2008). An example question under the influence tactic of rational persuasion is; “Explains clearly why a request or proposed change is necessary to attain a task objective”. In comparison, an

example question of consultation is; ‘Asks you to suggest things you could do to help him/her achieve a task objective or resolve a problem.

The IBQ is a well-established questionnaire with high levels of internal consistency (Yukl et al., 2008). In addition, according to Yukl et al. (2008) the IBQ demonstrates a high level of discriminant validity. The three samples in Yukl et al.’s study did not exceed the 49 % shared variance point of resemblance between tactics and the results are therefore supportive of the notion of a high measurement of discriminant validity. All items on the IBQ were rated by the subordinates on a 5-point frequency scale ranging from 1 = “ I can’t remember him/her ever using this tactic with me”, to 5 = “He/she uses this tactic with me very often”.

### **Multifactor Leadership Questionnaire (MLQ-5X)**

The subordinates rated their leader’s leadership style through the Multifactor Leadership Questionnaire (MLQ-5X). The MLQ-5X consists of 45 items measuring three types of leadership as well as leadership outcomes. An example of a question the subordinates were asked to answer reads “Spends time teaching and coaching”. The subordinates rated their leaders behaviour on a 5-point scale from “0 = not at all, to 4 = frequent or always” for each item. The MLQ-5X measures of leadership styles are: transactional leadership, transformational leadership and laissez-Faire leadership. Each leadership style consists of several factors. The structure of the MLQ-5X is illustrated in Table 2.



Table 2.

*Leadership styles and factors in the MLQ-5X*

Leadership style	Factors
Transformational Leadership	Idealised influence Inspirational motivation Individualised consideration Intellectual stimulation
Transactional Leadership	Management by exception Active Management by exception Passive Contingent reward
Laissez-Faire Leadership	Laissez-Faire
Outcomes	Extra Effort Effectiveness Satisfaction

The factor loading structure of the MLQ-5X has been supported by previous literature (Anatokonis et al., 2003). Reliabilities for each of the subscales within the MLQ-5X in previous studies has ranged from .76 to .89 (Bass & Avolio 1997). Bass and Avolio (1997) also demonstrated high internal consistency between the scales.

**The Rational Experiential Multimodal Inventory (REIm)**

The REIm is built on the CEST and measures rational and experiential (intuitive) thinking patterns. The REI was first developed by Epstein, et al. (1996) and later expanded upon by Norris and Epstein (2011). The REIm asks participants to rank their own behaviour on a scale ranging from “0 = definitely false, to “5 = definitely true” on

questions such as “My emotions don’t make much difference in my life”. The REIm consists of 42 items, 30 of which make up the experiential scale and 12 of which construct the rational scale. The experiential scale is divided into three subscales of 10 items each: imagination; emotionality and intuition. The rational and the experiential scales have demonstrated adequate reliability coefficients, with Norris and Epstein (2011) finding values from .86 for the rational scale and .84 for the experiential scale. Furthermore, the REIm has improved discriminant validity between the subscales in comparison to the original REI (Norris & Epstein, 2011) and is thus a superior measurement to the REI (Norris & Epstein, 2011).

### **Procedure**

Prior commencing data collection, ethics approval was obtained from Murdoch University Human Research Ethics Committee (see Appendix B). Informed consent was obtained from all participants prior to commencing the surveys, (see Appendix C). As an incentive to complete the surveys, each participant had the choice to go into a price draw of five \$50 Myers vouchers, (see Appendix B). Each student researcher contacted approximately ten potential pairs of participants. After participation was agreed upon, the participant, (whether a leader or a subordinate) received an email encouraging them to nominate a subordinate or a leader (depending on what position they currently held), and thereafter contact the research team. The researchers then contacted the nominated participant as well as the initially recruited participant to provide them with a unique personal code and link to the survey(s). The recruitment emails for both leaders and subordinates are attached in Appendix E. The unique codes sent to the participants were later used to match leader and subordinate data. Surveys were conducted online during the participants own time. It was estimated that the questionnaires took about 35-45 minutes to complete. In cases where participants preferred to respond on a hard copy, hard copies

were sent out with a stamped, return addressed envelope. Returned hard copies were manually entered in to SPSS for data analysis. Data was collected between April and August 2013.

### **Results**

#### **Analysis Plan**

Firstly, data screening was performed to determine normality assumptions. Secondly, bivariate correlations were calculated to determine associations between information processing, transformational leadership and influencing tactics. Third, a regression analysis was performed to determine variance explained by influence tactics on transformational leadership. Based on the unexpected findings, a comparison of the sample's constructive thinking ability and previous studies constructive thinking ability was conducted. Comparisons were performed through one sample t-tests. Finally, regression analyses were used to test for mediating relationships using the guidelines by Baron and Kenny (1986). When mediation was established, the significance of the mediated effect was investigated using the Sobel (1982) test based on the guidelines from McKinnon, Lockwood, Hoffman, West and Sheets (2002).

#### **Data screening**

Data were screened for statistical assumptions. Participants that were 1.5 standard deviations above the mean for the lie scale and 1.5 standard deviations below the mean for the validity scale of the CTI were excluded from further analyses. For the IBQ, exchange, pressure, personal appeals and coalition were significantly negatively skewed. All scales with violated normality assumptions were reflected and transformed. All scales met normality assumptions for correlational purposes after transformation according to Draper, Smith, and Pownell (1996). For ease of interpretation, untransformed descriptive statistics and correlations are reported in the untransformed direction. Overall, the

incidence of missing values of the used scales and subscales accounted for 2.48%, missing data were not replaced. Missing data was attributed to the participants' misinterpretation of the importance to attend to all questions, or alternatively, time constraints to complete the survey.

### **Descriptive statistics**

Table 3 depicts per item scale means, standard deviations and internal consistency alpha reliabilities for information processing, transformational leadership and influencing tactics. Alpha reliabilities ranged from .71 to .88 for the subscales of the CTI, .66 to .84 for the subscales and subscale totals of the REIm, .81 to .93 for the IBQ and .70 to .89 for the transformational leadership scale of the MLQ. Some subscales did not demonstrate satisfactory Chronbach's alpha levels at .7 as suggested by (Klein, 1999) and were excluded from further analysis. The subscales that were excluded from analyses were; personal superstitious thinking and categorical thinking from the CTI, and emotionality from the REIm. Although imagination fell under the cut-off line of .7, it was included in the analyses based on the proximity to .7. Klein (1999) stated that the .7 cut-off level should not be considered a strict inclusive/exclusive criteria but instead that the .7 level should be considered as a guide. It should be noted that the reason not all subscales were included in analyses was because it was estimated that deleting questions in a questionnaire with few numbers might jeopardise the validity of the scale without necessarily improving alpha reliabilities.

A list of Chronbach's alpha levels, including the subscales that were removed from further analysis is presented in Table 3 and 4, and can be seen on the next page(s). Note that although the emotionality thinking scale in the REIm was excluded, a total for experiential thinking was calculated with a satisfactory alpha level and thus deemed appropriate to analyse.

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Table, 3

*Mean, standard deviation, Chronbach's alpha level and number of participants for scales and subscales of the CTI, REIm, and IBQ.*

Scale	M	SD	$\alpha$	N
Global Constructive thinking	3.49	.38	.83	58
Emotional Coping	3.44	.48	.89	57
Behavioural coping	3.96	.41	.75	58
Personal superstitious thinking	2.70	.41	.22	58
Categorical thinking	2.95	.35	.40	58
Esoteric thinking	2.13	.81	.90	58
Naïve Optimism	3.14	.44	.71	58
Experiential Thinking	3.34	.38	.79	59
Intuition	3.43	.49	.73	59
Imagination	3.41	.55	.66	59
Emotionality	3.18	.41	.45	59
Rational Thinking	3.92	.45	.84	59
Rational Persuasion	3.93	.90	.85	60
Consultation	3.69	1.01	.91	60
Inspirational Appeals	3.41	1.08	.87	60
Collaboration	3.42	.95	.86	60
Apprising	3.02	1.25	.92	60
Ingratiation	3.37	1.03	.89	60
Personal Appeals	.72	.24	.83	60
Exchange	.72	.31	.93	60
Legitimizing	2.96	1.19	.87	60
Pressure	.73	.23	.86	60
Coalition	.72	.22	.81	60

Table 4,

*Mean, standard deviation, Chronbach's alpha and number of participants for the MLQ.*

Scale	M	SD	$\alpha$	N
Transformational	2.89	72	90	60
Attributed Charisma	2.98	80	71	60
Inspirational Motivation	3.09	75	80	60
Intellectual stimulation	2.71	83	71	60
Idealised Influence	2.83	93	74	60
Individual Consideration	2.85	81	71	60

### **Influence tactics and Information processing**

Correlations examining the relationship between influence tactics and preference for rational and experiential thinking are presented in Table 5. Note that the four core influencing tactics theoretically linked to transformational leadership and likely to produce commitment to the task are the first four in the Table.

In regard to the open research question examining the relationships between the experiential system inclusive of subscales and influencing tactics, none of the four core influencing tactics were significantly correlated to experiential thinking. Imagination was surprisingly correlated to appraising. The experiential system total, as well as intuition, was significantly negatively associated with pressure. Additionally, Table 5 unexpectedly demonstrates that exchange was significantly correlated to: intuition, imagination and the experiential system scale total. Pressure was also significantly negatively correlated to intuition and the experiential system total scale.

Table 5.

*Influencing tactics and thinking style as measured by the IBQ and REIm,*

Influence tactic	Experiential thinking	Intuition	Imagination	Rational thinking
Rational Persuasion	-.05	-.06	.02	.19
Consultation	.16	.20	.16	.20
Inspirational Appeals	.17	.13	.25	.15
Collaboration	.08	.10	.16	.10
Apprising	.19	.15	.33*	.15
Ingratiation	.11	.12	.22	.09
Personal Appeals	.16	.15	.11	-.27*
Exchange	.40**	.44**	.33*	-.15
Legitimizing	-.18	-.08	-.08	.05
Pressure	-.27*	-.26*	-.17	-.10
Coalition	-.05	-.04	.03	-.07

*Note: N = 59, \*p < .05, \*\*p < .01 (2-tailed).*

Table 6 and 7 adds depth to the research and considers the relationship between the constructive and destructive aspects of thinking and their respective relationships to influencing tactics. The factors of constructive thinking and the relationship to influence tactics indicate that, as expected, behavioural coping emerged as demonstrating a significant positive correlation with rational persuasion. Behavioural coping was also significantly positively related with consultation and inspirational appeals. Surprisingly, global constructive thinking was not significantly related with any influencing tactics.

Table 6  
*Constructive thinking and coping measures as measured by the CTI and influence tactics.*

Influence tactic	Global constructive thinking	Behavioural coping	Emotional Coping
Rational Persuasion	.24	.29*	-.19
Consultation	.19	.40**	.08
Inspirational Appeals	.11	.30*	.05
Collaboration	.01	.09	-.02
Apprising	-.06	.05	-.04
Ingratiation	-.06	.03	-.12
Personal Appeals	-.16	-.15	-.21
Exchange	.01	.10	-.09
Legitimizing	.04	.11	.02
Pressure	.01	-.05	.04
Coalition	.12	-.06	.16

*Note: N = 57, \* $p < .05$ , \*\* $p < .01$  (2-tailed).*

Table 7 demonstrates only one significant positive correlation. Esoteric thinking was positively significantly related to apprising. Given the number of correlations, this may be a chance result.



Table 7

*Influencing tactics and sub categories of the CTI (destructive thinking scales)*

Influencing tactic	Esoteric thinking	Naïve Optimism
Rational Persuasion	.04	.04
Consultation	-.02	.13
Inspirational Appeals	.01	-.02
Collaboration	.10	.04
Apprising	.32*	.06
Ingratiation	.01	-.07
Personal Appeals	.22	.04
Exchange	.14	.20
Legitimizing	-.04	-.03
Pressure	-.01	-.01
Coalition	.19	-.22

Note:  $N = 58$ , \* $p < .05$ , \*\* $p < .01$  (2-tailed)

### **Influencing tactics and Transformational Leadership**

Table 8 shows the relationships between influencing tactics and transformational leadership. As expected, the core influencing tactics, rational persuasion, consultation, inspirational appeals, and collaboration were positively related to transformational leadership. Apprising and ingratiation were also positively correlated with transformational leadership. Some other correlations were found between legitimating, pressure and scales of transformational leadership although only legitimating and idealised influence were correlated over the .3 level.

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Table 8

*Influencing tactics and total score of transformational leadership as well as factors comprising transformational leadership practices.*

	Transformational leadership	Inspirational motivation	Attributed charisma	Intellectual stimulation	Individual consideration	Idealized influence
Rational persuasion	.58**	.50**	.53**	.55**	.36**	.58**
Consultation	.75**	.60**	.64**	.71**	.55**	.76**
Inspirational Appeals	.76**	.70**	.60**	.72**	.53**	.76**
Collaboration	.50**	.40**	.47**	.37**	.60**	.36**
Apprising	.54**	.46**	.48**	.54**	.40**	.47**
Ingratiation	.49**	.44**	.44**	.38**	.50**	.39**
Personal Appeals	.04	-.02	.15	.10	-.01	-.05
Exchange	.14	.14	.11	.08	.21	.08
Legitimizing	.31*	.12	.21*	.33*	.28*	.34**
Pressure	-.26*	-.24	-.22	-.14	-.34**	-.20
Coalition	-.03	-.03	-.03	.05	-.04	-.08

*Note:*  $N = 60$ , \* $p < .05$ , \*\* $p < .01$  (2-tailed).

**Regression analysis**

Standard multiple regression was conducted to estimate variance explained by the four core influencing tactics and perceptions of transformational leadership behaviours. To ensure normality assumptions were met, normality, linearity and homoscedasticity residuals assumptions were examined. Mahalanobis distance did not exceed the critical  $\chi^2$  for  $df = 4$  ( $\alpha$  at  $=.001$ ) of 18.47 for any cases in the data file, thus indicating that multivariate outliers were not an issue. As discussed by Draper, Smith, and Pownell (1996), high tolerance levels indicated that multicollinearity was not a concern to the interpretation of the results. Together, rational persuasion, collaboration, consultation and inspirational appeals accounted for a significant 72% of the variance in perceptions of transformational leadership practices,  $R^2 = .721$ , adjusted  $R^2 = .701$ ,  $F(4, 55) = 35.52$ ,  $p = .001$ . Unstandardised (B) and standardised ( $\beta$ ) regression coefficients, and semi-partial correlations ( $sr^2$ ) for each predictor are reported in Table 9, below. Note that amongst the four variables contributing to variance in perceptions of transformational leadership practices, only inspirational appeals and consultation emerged as significant predictors.

Table 9  
*Unstandardised (B) and Standardised Regression coefficients, and Squared Semi-Partial Correlations ( $sr^2$ ) for Each Predictor in a Standard Regression Model Predicting Transformational Leadership*

Influence tactic	B (95 % CI)	$\beta$	$Sr^2$
Rational persuasion	.08	.07	.01
Consultation	.27**	.38	.07
Inspirational Appeals	.28**	.41	.09
Collaboration	.09	.12	.01

Note.  $N = 60$ . CI = Confidence interval. \* $p < .05$ , \*\* $p < .001$

**Transformational Leadership and Information processing**

Table 10 shows the relationships between transformational leadership and the transformational leadership subscales to information processing.

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Table 10,  
*Transformational leadership as measured by the MLQ and information processing as measured through the REIm*

Transformational leadership	Experiential total	Intuition	Emotionality	Imagination	Rational thinking
TFL total	.08	.10	-.09	.19	.09
Inspirational Motivation	.07	.10	-.07	.15	.08
Attributed Charisma	.09	.14	-.02	.11	.09
Intellectual stimulation	.08	.04	-.14	.26*	.01
Individual consideration	.05	.10	-.15	.16	.13
Idealized influence	.04	.06	-.06	.13	.09

*Note:*  $N = 59$ , \* $p < .05$ , \*\* $p < .01$  (2-tailed).

Table 10 shows one significant correlation between transformational leadership and thinking styles. There was a positive relationship between intellectual stimulation and imagination. The lack of significant relationships amongst variables was unexpected. Given that there were 30 correlations in the Table, the one significant correlation demonstrated may be a chance result.

Transformational leadership was correlated to elements of constructive thinking. Relationships between variables are shown in Table 11.

Table 11

*Transformational leadership, transformational leadership practices and constructive thinking subscales.*

Leadership	Global constructive thinking	Behavioural coping	Emotional coping
Transformational total	.22	.39**	.15
Inspirational Motivation	.17	.35**	.17
Attributed Charisma	.11	.27*	.08
Intellectual stimulation	.26*	.40**	.17
Individual consideration	.09	.25	.06
Idealised influence	.29*	.43**	.17

*Note: N = 58, \*p < .05, \*\*p < .01 (2-tailed).*

Table 11 demonstrates that behavioural coping was, as expected, related to transformational leadership and transformational leadership practices. The Table also demonstrates that out of the positive relationships between behavioural coping and leadership practices, the only non-significant relationship was to individual consideration. Global constructive thinking, on the other hand, only demonstrated weak positive relationships with idealised influence and intellectual stimulation.

Elements of constructive thinking were correlated with thinking styles.

Relationships are shown in Table 12.

Table 12

*Information processing styles as measured by the REIm and constructive thinking as measured by the CTI.*

REIm	Global constructive thinking	Behavioural coping	Emotional Coping
Intuition	-.09	.05	-.21
Imagination	.07	.18	-.02
Experiential total	-.11	.04	-.24
Rational thinking	.18	.17	.09

*Note.*  $N = 57$ . CI = Confidence interval. \* $p < .05$ , \*\* $p < .001$

Table 12 demonstrates that there are no significant correlations between constructive thinking measures and thinking styles. Since the results were unexpected, the decision was made to conduct one-way t-tests to determine statistical significance compared to past literature's results. The global constructive thinking scale was significantly different amongst this study's participants  $t(57) = -8.08, p = .001$  compared to previous research mean ( $M = 3.89, SD = .37$ ). Similarly, behavioural coping demonstrated a significantly different mean to previous research ( $M = 4.19, SD = 4.85$ ),  $t(57) = -4.33, p = .001$ . Emotional coping demonstrated a t-statistic of  $t(56) = -5.65, p = .001$ , thus a significant difference, ( $M = 3.80, SD = 12.19$ ). All means presented in brackets are previous literatures, that is, Cerni et al. (2008) subscale averages. Means for this study's subscales are presented in Table 3. Taken together, the means demonstrate that the participants in the present study scored significantly lower scores on all elements of constructive thinking compared to previous literature.

### **Mediated regression**

Given that rational thinking was not related to rational persuasion, the statistical assumptions for a mediated regression were not satisfied and thus, Figure 1 was not

tested. On the contrary, Table 6 and 8 demonstrate significant relationships between behavioural coping, transformational leadership and influencing tactics and subsequently, a mediated regression testing relationships of Figure 2 was performed. It should be noted that since collaboration was not significantly correlated to influencing tactics, it was not included in the total factor of ‘influencing tactics’. The total score of influencing tactics therefore consists of three out of the four core influencing tactics.

The findings showed that in step one, behavioural coping significantly accounted for a small proportion of variability in the combined influencing tactics,  $F(1, 56) = 10.15$ ,  $p = .002$ . Similarly, in step two, transformational leadership significantly accounted for variance explained in behavioural coping,  $F(1, 56) = 10.30$ ,  $p = .002$ . Further analysis showed that when the mediating factor of transformational leadership was controlled, the strength of the relationship between behavioural coping and influencing tactics was reduced, therefore indicating a partial mediation. A follow-up analysis as suggested by Baron and Kenny (1986) was conducted<sup>1</sup>. The Sobel test was non-significant (Sobel  $z = 1.75$ ,  $p = .08$ ) therefore indicating a lack of evidence for transformational leadership as a mediational variable. The relationships amongst variables are presented in Table 12 and coefficients are presented in Figure 3.

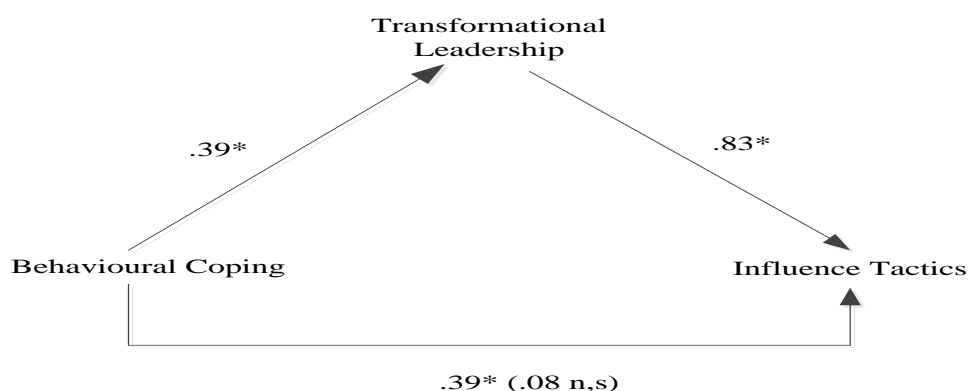


Figure 3, \* $p < .05$ , \*\* $p < .01$

Table 12,

*Mediated regression relationships between behavioural coping, transformational leadership and influencing tactics.*

	<i>R</i>	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> <sub>change</sub>	Beta
Influence on BC	.33	.15**		.39**
TFL on BC	.39	.15**		.39**
Step1	.83	.69**		.80**
Influence on TFL				
Step 2:	.83	.69	.01	.08
Influence on BC				

*Note: BC = Behavioural coping, TFL = transformational leadership, influence = influence tactics.  
\*p < .05, \*\*p < .01.*

### Discussion

The present study examined the relationships between information-processing styles, transformational leadership and influencing behaviour. In the following sections, research questions and hypotheses are divided into categories and analysed separately before the factors are linked together.

#### Information Processing and Influencing Tactics

##### The rational system.

It was hypothesised that a preference for a rational thinking style would be related to the rational persuasion influencing tactic. This hypothesis was not supported as rational thinking did not demonstrate a significant correlation to the rational persuasion influence tactic. The results are interesting because they are contrary to previous research. For example, Curtis and Lee (in press) found that a preference for the rational system was correlated to the use of rational influence tactics. It was theorised that leaders who are rational thinkers are analytical and logical, and since they have a preference for rational



thinking, they also employ a related influencing tactic when persuading subordinates. Although the present study's result contradict previous research, it is important to note that there are differences between the Curtis and Lee study and the present study. The Curtis and Lee study measured influence tactics through self-reports rather than other-reports, and the differing results could potentially have a few explanations.

First, self-reports may be biased and the subordinates' perception of frequency of leaders' influence tactics may have differed in comparison to the leaders' own recall of influence tactics used. Yammarino and Atwater (1997) state that although there is some overlap between self and other-reports, there is also disparity that affects validity. For example, self-reports are often positively biased, that is, individuals have a tendency to evaluate their own behaviour as more positive than what is demonstrated by actual behaviour, or alternatively, rated by others. It is possible that there are differences between perceptions of influencing behaviour as rated by leaders and subordinates based on such positive bias. Leaders may be inclined to rate themselves as employing a socially-desirable influencing tactic such as rational persuasion more frequently than what they actually do. The disparity between self and other-reports may therefore explain why this study's result did not demonstrate a correlation between rational thinking and rational persuasion.

With the disparity between the results of previous literature's self-rated results and the present study's other-ratings in mind, it might be worthwhile to consider the impact of gender, age and education. Barbuto, Fritz, Matkin, and Marx (2007) showed that subordinate rater perceptions of leaders influencing tactics are partially dependent on the leader's personal demographics. For example, women were considered to employ hard influencing tactics such as pressure more often than men. This is even if the actual frequency of such influencing tactics may be low. Barbuto et al.'s (2007) results,

therefore, point towards the conclusion that subordinate perception of leaders are essential because there may be false positives and negatives that are based on perception and not actual behaviour. Unfortunately, the present sample size was not sufficiently large to confidently conduct sub-group analysis of gender effects. Future studies would benefit from administering rater perceptions from a panel of subordinates rather than just one in order to determine the impact of differing perceptions between for example, men and women.

Second, although the results showed that there was no significant relationship between rational thinkers and rational persuasion, a possible explanation for the non-significant result may be the relationship between the leader and subordinate. To explain, leadership behaviours cannot be accurately measured without considering the relationships amongst leaders and subordinates (Graen & Uhl-Bien, 1995). The leader-member exchange theory poses that the quality of the relationship between leaders and subordinates affects leadership outcomes (Graen & Cashman, 1975). The quality of the relationship between leaders and subordinates is dependent on mutual trust, respect and obligations (Graen & Uhl-Bien, 1995). Therefore, if the relationship between the leader and subordinate is of a low quality, it is possible that certain types of relationships hinder traditionally effective influence tactics and instead renders the tactics ineffective.

Studies examining the leader-member exchange theory's relationship to influencing tactics found that high quality relationships were related to rational persuasion (Yukl & Michel, 2006). The results were not surprising because rational persuasion is dependent on the credibility of the agent (Yukl & Michel, 2006). That is, since the definition of rational persuasion entails that the leader is able to describe benefits concerned with compliance to the requested task without factual evidence, the trustworthiness and credibility of the leader is of utter importance to gain commitment to

the task (Yukl & Michel, 2006). Therefore, a possible explanation to the present study's results is that the relationship between leaders and subordinates might not have been of high quality in some cases. Consequently, if there was a lack of trust between the leader and the subordinate, the subordinate could potentially be less inclined to perceive and rate the leader's rational persuasion attempts as rational persuasion but instead consider the attempt as false pretence. Although it was out of the scope of this thesis, it would be worthwhile to measure the quality of relationships between leaders and subordinates as a potential mediating variable in future studies.

Fourth, it is possible that not all influencing tactics were considered appropriate in all work-environments and thus not employed. Yukl et al. (2008) asserts that the core influencing tactics are effective over many different work environments. Cheng (1983), on the other hand, specified that some influence tactics are better suited in certain situations. Therefore, if rational persuasion was not deemed appropriate, leaders who think rationally may have employed other influence tactics than rational persuasion and subordinates ratings of influence tactics thus demonstrate non-significant results. The interpretation of the current study's findings are limited and do not necessarily imply that rational thinkers do not have a preference for rational persuasion, but rather that the work-environment needs to be controlled or accounted for to accurately determine the relationship between rational thinking and rational persuasion.

When considering the relationship between rational thinking and influencing tactics, one finding was that rational thinking was significantly negatively associated to personal appeals. In fact, the only significant finding between rational thinking and influencing tactics was this finding. The finding shows that a preference for rational thinking in the present sample means that the leaders were less likely to use personal appeals when persuading subordinates compared to other tactics. The finding was

surprising because it had not been demonstrated in previous literature. Curtis and Lee (in press) did not find a significant relationship between rational thinking and personal appeals.

Although other correlations could have been expected between the rational system and influencing tactics, it seems logical that rational thinkers should be less inclined to use personal appeals. This is because the rational system requires logic and evidence-based justification for decisions (Epstein et al., 1996). Personal appeals are instead concerned with emotions through appealing to the target's feelings (Yukl et al., 2008). Personal appeals are, therefore, theoretically unlikely to be employed by rational thinkers and the negative relationship is therefore not theoretically surprising, although it has not been demonstrated in previous research.

### **The experiential system.**

To add depth to the study, an open research question examining the relationship(s) between the subscales of the experiential system and influencing tactics was pursued. The results demonstrated positive relationships between imagination and apprising, as well as to exchange. In addition, intuition was correlated to exchange and the experiential systems total score was positively correlated with exchange and negatively correlated with pressure. The present study's result did not replicate previous findings. Curtis and Lee (in press) found four weak correlations between the intuitive-experiential system as measured by the REI and influencing tactics. Although the present study found that leaders who engage in experiential thinking have a preference for certain influence tactics, there should be some similarities between the intuitive scale as measured by the REI and the intuitive scale as measured by the REIm. This was, as illustrated above, not necessarily the case. The relationship between the experiential system and influencing tactics thus remains unclear.

A potential explanation for the unexpected result of the experiential thinkers' preference to employ exchange as an influencing tactic may be explained by the concept of reciprocity. Reciprocity means that a favour, or alternatively a negative deed, is remembered and responded to accordingly in antecedent situations (Gouldner, 1960). That is, anything that anyone does for one should be remembered and repaid. The definition of reciprocity is therefore built on exchanges. Reciprocity is essential for societal function and could be seen as an essential moral code of conduct (Gouldner, 1960). According to Cialdini (2007), reciprocity is an influence tactic that is instilled in humans through socialisation, and becomes an automatic response over people's lifetime. Therefore, reciprocity applied to the current study means that since the experiential system is concerned with experience and reciprocity is a societal norm instilled in all humans, exchange may be the default influence tactic experiential thinkers employ, because they act automatically based on experience.

Another possible consideration for the weak and unexpected results between the experiential system and influence tactics may lie within the definition of the experiential system. The experiential system is concerned with affect and acts on experience to produce immediate positive affect rather than considering long-term goals (Epstein, 2003). It is therefore possible that experiential thinkers adapt their influencing tactics not based on appropriateness or likelihood of success but instead to the context as well as experience. Although participants in this sample demonstrated a relationship to exchange, it is noteworthy that it may not be the case for all experiential thinkers. After all, a leader who has previously employed the influence tactic of exchange and consequently experienced negative affect might be deterred from choosing that influence tactic again at a later occasion. It may therefore be advisable to consider the overlap between context and

experience in future studies, to further investigate the relationship between the experiential system and influencing tactics.

Based on previous literature, it was hypothesised that behavioural coping, as a constructive element of the experiential system, would be positively related to rational persuasion. The hypothesis was supported and demonstrated that behavioural coping was significantly positively correlated with rational persuasion, collaboration and inspirational appeals. The present study's results are thus aligned with the results found by Curtis and Lee (in press) for behavioural coping and core influencing tactics.

It is noteworthy that there was a weak, albeit significant, correlation between esoteric thinking and apprising. The finding is contrary to previous literature. Curtis and Lee (in press) did not find a correlation between esoteric thinking and apprising, although they did find some other correlations between subscales of destructive thinking and influencing tactics. The present study's findings therefore demonstrate that the relationship between the destructive elements of the experiential system and influencing tactics remain unclear.

A possible explanation for the unexpected result may be that the finding is a Type I error, that is, a false positive (Neyman & Pearson, 1928). The proposal of a Type I error is plausible when considering the sheer amount of correlations conducted without adjusting the alpha level. It should be noted that the purpose of this thesis was exploratory since it was the first to examine relationships between information processing, transformational leadership and influencing tactics through vertical other-rating reports and it was thus deemed appropriate not to alter the alpha level. Future studies may like to adjust alpha levels depending on amount of correlations. Adjusting the alpha level will reduce the risk of a Type I error and determine if the presented relationships have been replicated.

An additional consideration to the lack of correlations between influencing tactics and destructive thinking subscales may be that destructive thinkers have a tendency to act irrationally and thus do not have a preference for a particular influence tactic. Although the above mentioned significant correlation were unexpected, one could theorise that paired with the expected significant correlations between behavioural coping and influencing tactics, the relationship of constructive and destructive thinking patterns to influencing tactics are supportive of the underlying theory of the CEST. This is because the constructive element of the CEST is meant to enable one to correct and chose context-appropriate behaviour, while the destructive elements cause ones behaviour to be influenced by unhelpful thoughts (Epstein, 2003). Therefore, constructive thinking ought to be related to the core four influencing tactics because they are most likely to enable commitment, whereas destructive thinking should theoretically not demonstrate consistent relationships to influence tactics. The lack of significant relationships and especially the lack of consistently significant relationships over the Curtis and Lee (in press) studies and the present study points to the accuracy of the underlying theory of CEST.

### **Transformational leadership and influencing tactics**

It was hypothesised that transformational leaders would have a preference for employing the four core influence tactics that are most likely to enhance commitment to the task and organisation. The hypothesis was supported. Transformational leaders demonstrated strong positive correlations to rational persuasion, collaboration, consultation and inspirational appeals. In addition to the four core influence tactics, transformational leadership was also positively correlated with apprising and ingratiation. Each subscale of transformational leadership was positively and significantly correlated with the four core influence tactics as well as apprising and ingratiation. Positive significant correlations were also found between legitimating and transformational

leadership totals, as well the subscales of transformational leadership. In addition, a negative correlation was found between pressure and transformational leadership.

The results in the present study are partially consistent with Charbonneau (2004) who found that not all of the four core influencing tactics were related to perceptions of transformational leadership. This study found that all of the four core influencing tactics were related to perceptions of transformational leadership. Interestingly, although Charbonneau excluded the influence tactic of apprising based on the theoretical similarity to transactional leadership, this study found significant relationships between apprising as well as ingratiation, pressure, legitimating and transformational leadership. An explanation for the significant relationship may be that transformational leadership is not a distinct entity from transactional leadership, but rather an extension of it (Bass & Steidlmeier, 1999). That is, a transformational leader is able to shift between behaviours associated with transactional and transformational leadership, depending on the requirements of the situation (Bass, 1985; Bass & Steidlmeier, 1999). The distinction between transactional and transformational leaders then lies in the ability to demonstrate transformational leadership behaviours rather than only demonstrating transactional leadership behaviours. With that in mind, one could theorise that there may not be a direct relationship between transformational leadership and specific influencing tactics because work contexts may, from time to time, require transformational leaders to act in transactional ways and employ influencing tactics not theoretically linked to transformational leadership practices.

The four core influence tactics were regressed to estimate the extent each tactic accounted for variance in perceptions of transformational leadership behaviours. It was found that only collaboration and inspirational appeals were significant predictors to perceptions of transformational leadership. The results differ to Charbonneau (2004) who



found that rational persuasion was the only significant predictor to perceptions of transformational leadership behaviour. Given the differing results between studies, the results of this study points to the importance of considering the direction of influence attempts and how direction effects perceptions of leadership. Yukl and Falbe (1992) state that direction and the goal of an influence attempt is important when considering impact and success rate. Given that Charbonneau's measurement on perceptions of transformational leadership were taken from a lateral direction (peer ratings) and the present study measured transformational leadership perceptions from a vertical direction (subordinate ratings), it is evident that the direction, as suggested by Yukl and Falbe, impacts not only the success of influence tactics but also perceptions of leadership behaviour. This is because, clearly, the subordinates in the present study perceived transformational leaders as employing the four core influence tactics whereas the peer-ratings in the Charbonneau study showed differing results.

### **Information processing and Transformational leadership**

The present study set out to examine the relationships between the new subscales of the REIm and transformational leadership. The results demonstrated only one significant, although weak, correlation between imagination and intellectual stimulation. A related observation by Cerni et al. (2008) showed significant relationships between transformational leadership and rational and experiential thinking, as measured by the REI. The lack of significant relationships between the experiential system and transformational leadership was therefore surprising.

Cerni et al. (2008) theorised that the experiential system's relationship to transformational leadership may be moderated by individuals' ability to think constructively. It is therefore possible that an explanation for the lack of significant results within this study may lie within the extent to which leaders are constructive in their

information-processing. Epstein and Meier (1989) stated that when experiential thinkers do not think constructively they act irrational. The present study surprisingly did not demonstrate any relationships between thinking style and elements of constructive thinking. This is contrary to previous literature that has found relationships between rational and experiential thinking and elements of constructive thinking (Cerni et al., 2008). It is therefore possible that if the leaders in the present sample consisted of low scorers then it seems logical that there would be little relationship between experiential thinking and transformational leadership. After all, an individual who is engaging in destructive thinking is theoretically unlikely to exhibit transformational leadership behaviours.

Based on the surprising results that elements of constructive thinking was not correlated with rational or experiential thinking, follow-up analyses compared the results between constructive thinking elements in the present study to that of previous studies. The results showed that there were significant differences between this study's participant's constructive thinking ability and the ability of the Cerni et al. (2008) sample. Therefore, the results support the theory that for experiential thinking to be related to transformational leadership practices, it is essential that the experiential thinkers are constructive in their thinking (Cerni et al., 2008).

An examination of the constructive thinking elements of the CEST and the positive relationship to transformational leadership demonstrated support for the hypothesis. Elements of constructive thinking, namely behavioural coping and global constructive thinking were significantly positively related to transformational leadership behaviours. Although the present study employed other-ratings of transformational leadership behaviours and previous studies have employed self-rated measurements of transformational leadership, this study's results are supportive of previous research

findings (Cerni et al., 2008; Humphreys & Zettel, 2011). Taking previous research and the present study's findings together points to the importance of constructive thinking when determining transformational leadership ability.

A model for mediated regression tested the relationships between behavioural coping, transformational leadership and influencing tactics. It was predicted that transformational leadership would mediate the relationship between behavioural coping and influencing tactics. A mediated regression technique based on Baron and Kenny (1986) steps demonstrated support for the hypothesis. The strength of the relationship between behavioural coping and influencing tactics was reduced when controlling for transformational leadership. Although the strength of the relationship decreased when controlling for transformational leadership, the follow-up Sobel test was non-significant, therefore indicating that controlling for transformational leadership did not significantly affect the relationship between behavioural coping and influencing tactics. It should, however, be noted that the Sobel test is low in statistical power and that it is most effective in large sample sizes (McKinnon et al., 2002). It is therefore possible that a larger sample size may obtain significant results. Future studies should increase sample size in order to more accurately determine the effect of transformational leadership as a mediator.

### **Implications and Strengths**

The present study sought to advance the field of organisational psychology and leadership studies through overcoming previous studies' shortcomings and investigate perceptions of leadership and influencing tactics through other-reports rather than self-reports. The present study also employed a new, untested measure of thinking style and the relationship to transformational leadership and influencing tactics.

The present study was the first to date to examine the relationship between information processing, transformational leadership and influencing tactics through other-rated reports rather than self-reports. The results of the present study showed that there are some clear differences between previous studies' self-reports and the present study's results. Therefore, although the results were in part surprising, they are interesting because they shed light on how subordinates perceive influencing attempts and how they relate influencing attempts to leadership perceptions. The present study clearly demonstrates that the previously consistent results linking thinking style and leadership behaviours ought to be reconsidered because subordinate ratings of leadership behaviours are not consistent with self-reports.

An additional strength to the present study is that it was able to extend the method from a correlational design to a mediated regression. The results of the present study suggest that transformational leaders' have a preference for using effective influence tactics but that thinking style is not related to transformational leadership perceptions. It was also found that constructive thinkers are perceived as transformational leaders and as leaders who employ effective influence tactics.

With that in mind, it is possible that constructive thinking is the key to effective leadership behaviours rather than a particular thinking style. The implication of the findings in the present study therefore points to the importance of acknowledging the worth of constructive thinking ability in leaders. Organisations or groups looking to hire or train a successful leader should consider testing for constructive thinking ability.

### **Limitations and Future Research**

Although the present study attempted to overcome previous literature's limitations through examining influence tactics through other-reports rather than self-reports, there is a possibility of common method bias. For example, common method bias is a potential

problem when subordinates rate the same leader over multiple measures (Podsakoff et al., 2003). It is possible that subordinates' global evaluation of the leader's behaviour produced a halo-effect in ratings. That is, that the subordinate rated the leader as exhibiting overly positive behaviours based on specific attributes such as friendliness rather than actual behaviour (Nisbett & Wilson, 1977). The implication of a halo-effect becomes evident when applying it to measurements such as influencing tactics. It is possible that the subordinates did not consider rational persuasion as an influencing tactic and instead rated their supervisor on more overt influencing tactics. To explain, rational persuasion might have been perceived as communication rather than the subordinate acknowledging rational persuasion as an influencing tactic. It would be interesting to replicate the present study but to measure not only one subordinate's ratings of influencing tactics but instead a panel of subordinates. A panel of subordinates would potentially provide a more objective measure of leadership behaviour.

Another limitation to the present study is the sample size. Although the raw sample consisted of a substantial amount of participants, after screening for normality assumptions, removing participants' based on lie and validity criteria, and pairing of the participants, the sample size was drastically reduced. It is important to consider the small sample size because it is essential that samples used in psychological research are representative of the population. This is because the purpose of quantitative research is to be able to make inferences about populations based on the statistics of smaller groups (Holton & Burnett, 1997). Unfortunately, small sample sizes may lead to reduced effect sizes as well as reduced power. Therefore, there is a chance that there are Type I and II errors and the small sample size may lead to difficulty of replicating the present study's results. Future research should, however, consider increasing the sample size to improve

power and effect. This is in line with Cohen's (1962) suggestion that the best and easiest ways to improve power and effect sizes in studies are to increase the sample size.

### **Conclusion**

The present study advanced the field of organisational psychology through an investigation of the relationships between information processing, transformational leadership and influencing tactics. This study demonstrated that other-rated perceptions of influencing tactics and leadership are different than self-rated perceptions. The results demonstrated that leaders who are experiential thinkers often use exchange as an influence tactic. Constructive thinkers illustrated preferences for three of the four core influence tactics, whereas destructive thinkers did not demonstrate any significant relationships to influence tactics other than to apprising.

Transformational leaders inclusive of subscales were strongly associated with the core four influencing tactics as well as some other moderately effective influencing tactics. Interestingly, information processing was not related to transformational leadership although elements of constructive thinking were. Results also demonstrated that constructive thinking was not related to thinking styles. The present sample demonstrated significantly different constructive thinking ability to the results of previous studies. Taken together, constructive thinkers in the present sample did not have a preference of experiential or rational thinking and as such, thinking styles were found to be irrelevant when associated with transformational leadership. Instead, behavioural coping is essential when considering subordinate perceptions of leadership behaviour.

Future research should replicate the present study's results since the sample size was rather small. In addition, measurements of the REIm and MLQ in future studies could be obtained from several subordinates where the quality of the relationship is controlled to investigate potential differences between answers. The take home message

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of this study is that organisations and groups looking for a transformational leader should acknowledge the importance of elements of constructive thinking, especially behavioural coping and potentially measure or provide training in constructive thinking ability.

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**Footnotes**

<sup>1</sup> The Sobel test was calculated on 16/10/2013 on an online calculator, retrieved from:

<http://quantpsy.org/sobel/sobel.htm>

## Appendix E

### Instructions to contributors

# The Australian and New Zealand Journal of Organisational Psychology

## General

*The Australian and New Zealand Journal of Organisational Psychology* is a peer reviewed journal of the College of Organisational Psychologists of the Australian Psychological Society (APS). It accepts original articles in the study and practice of organisational psychology encompassing the disciplines of: industrial and organisational (I/O) psychology; work psychology; occupational psychology; personnel psychology; human resource management and development; ergonomics, and vocational psychology; managerial psychology including coaching; and consumer psychology. *ANZJOP* is published online-only in continuous annual issues.

Manuscripts submitted to the journal must represent reports of original research. Manuscripts will be sent for anonymous review either by members of the editorial board, or by individuals of similar standing in the field.

All articles are refereed. Papers submitted to the journal must not previously have been published nor submitted for publication to any other journal.

## Online Submission Instructions

1. To be reviewed for possible publication in this journal authors must follow the instructions below. At least two separate files need to be submitted online via the Journal Submission Manager at [https://www.australianacademicpress.com.au/cup\\_jsm/](https://www.australianacademicpress.com.au/cup_jsm/)

1. a **Title Page** document. The name of this file must be constructed as follows:

[first 20 characters of the title]\_[ddmmyear]\_ANZJOP\_Title.doc

2. an **Article** document. The name of this file must be constructed as follows:

[first 20 characters of the title]\_[ddmmyear]\_ANZJOP\_Article.doc

3. all **Figure** documents should be supplied with the name of the file constructed as follows:

[first 20 characters of the title]\_[ddmmyear]\_ANZJOP\_Figure# (with # being the number of the figure)

2. The Title Page and Article documents should be saved as a Microsoft Word document, double-spaced with minimum margins of 25 mm on both sides and in A4 page size.

3. The **Title Page** document should contain the full **title of the article** as well as the full **names and affiliations** of all authors followed by **full postal and e-mail addresses** for the corresponding author. A **word count** and suggested **running head** of no more than 50 characters including spaces should also be provided, along with a maximum of 6 **key words**.

4. The **Article** document should include the complete article **without any identifiable author details** but including the title and an abstract not exceeding 200 words that provides a brief overview of the aims, method and major findings without any citations.

5. **TABLES**

Tables should be created in Word and included at the end of the article Word document after the references with their approximate positions in the text indicated by the words, "Insert Table X here". Horizontal and vertical lines should be used sparingly.

6. **FIGURES, GRAPHS, ILLUSTRATIONS, PHOTOGRAPHS, SPECIAL CHARACTERS**  
**To ensure optimum quality, please follow the guidelines below when submitting artwork.**

Figures, graphs, illustrations and photographs (but NOT Tables) should be prepared to the correct size and each one supplied as an individual file, separate to the manuscript Word file. Include placement instructions in the Word document, such as "[Insert fig 1

here]".

Figures created in Microsoft Word, Excel or PowerPoint need to be saved as PDFs. Figures created in a drawing program such as Adobe Illustrator, CorelDRAW, Freehand, Microsoft Publisher or similar should be saved as EPS (encapsulated postscript) files. Figures created in Photoshop or with other photographic software should be saved with a minimum resolution of 600 dpi and in TIF format. Minimum resolution for scanned graphics is 300dpi for halftone work (e.g., photographs) and 600 dpi for line art, and these should also be in TIF format. All figures and graphs should be in black and white line art (artwork that has only text and lines, no shades of grey or blocks of colour). All photographs should be supplied as separate files in JPEG or TIFF formats for a minimum 300 dpi resolution. (As a rough guide, the file size of each photograph should be above 200KB).

Manuscripts which contain special characters (equations, Chinese characters, etc.) need to be supplied as a high resolution PDF file (print or press format) with all fonts embedded as well as the Word or RTF document.

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1. Contributions should follow the format and style described in the Publication Manual of the American Psychological Association (6th ed.). Spelling and punctuation should conform to The Macquarie Dictionary (4th ed.). For matters of style not covered in these two publications the Style manual for authors, editors and printers (6th ed.) should be consulted.
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### Examples of citations are:

The theory was first propounded in 1970 (Larsen, 1971).

Larsen (1971) was the first to propound the theory.

### Examples of references are:

Larson, P.J., & Maag, J.W. (1998). Applying functional assessment in general education classrooms. Issues and recommendations. *Remedial and Special Education, 19*, 338–349.

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